Alternative model of Islamic deposit insurance for the Islamic banking system

Burhanuddin Susamto
Department of Sharia Economic Law, Maulana Malik Ibrahim State Islamic University Malang, Malang, Indonesia, and
Akhmad Akbar Susamto
Department of Economics, Universitas Gadjah Mada, Yogyakarta, Indonesia

Received 8 September 2022
Revised 27 April 2023
24 July 2023
9 December 2023
Accepted 20 January 2024

Abstract

Purpose – This paper aims to develop a novel approach to Islamic deposit insurance, specifically addressing the deficiencies in the current prevailing models of Islamic deposit insurance.

Design/methodology/approach – The analysis in this paper adopts a qualitative content analysis approach to review the existing literature on Islamic deposit insurance and propose a new model.

Findings – The proposed model includes a revised scheme. In the event of a bank failure, the funds used to reimburse depositors of the failed bank are divided into two distinct categories. The first category includes nonrepayable premiums that have been previously paid by the failed bank and managed by the Islamic deposit insurance agency or Islamic deposit insurance corporation. The second category comprises qard hasan, an interest-free loan provided by the Islamic deposit insurance agency or Islamic deposit insurance corporation using the deposit insurance funds from the collective pool of premiums of other banks.

Practical implications – The proposed model ensures that well-managed banks are not unfairly burdened by the failures of their poorly managed counterparts, thus preventing a sense of unfairness and inefficiency. Implementing the proposed model may result in higher business practices and risk management standards, ultimately leading to better depositors' protection and banking system's stability.

Originality/value – This paper offers a significant contribution to the limited literature on Islamic deposit insurance. The proposed model enriches the discourse and offers valuable insights for the future development of Islamic banking.

Keywords Alternative model, Islamic deposit insurance, Moral hazard, Islamic banking system

Paper type Research paper

1. Introduction

The Islamic banking industry has witnessed remarkable and consistent growth, with an increasing number of banks offering Sharia-compliant banking products and services. Globally, there has been a growing acceptance of Islamic banking, leading to more countries permitting the operations of Islamic banks and establishing supportive regulatory frameworks (Iqbal and Molyneux, 2005; Khan and Bhatti, 2008; Komijani and Taghizadeh-Hesary, 2019). This expansion of Islamic banking has sparked a parallel demand for other Islamic financial products and services, including deposit insurance.

Based on the definition used by the International Association of Deposit Insurers (IADI), deposit insurance is "a system established to protect depositors against the loss of their

The authors thank anonymous reviewers and the editors for their suggestions on improving this article.

Journal of Islamic Accounting and Business Research
Vol. 17 No. 1, 2026
pp. 103-117

1759-0817
DOI 10.1108/JIABR-09-2022-0231

insured deposits in the event that a bank is unable to meet its obligations to the depositors" (IADI, 2014a). It is a sort of insurance that focuses on the funds that individuals or businesses have deposited in a bank. Deposit insurance is significant in Islamic banking for the same reasons as it is in conventional banking (IADI, 2010a; Kleftouri, 2014; Najeeb and Mustafa, 2016), i.e. to provide customers with a sense of security and confidence and to contribute to the banking system's stability as a whole.

Despite the importance of deposit insurance in Islamic banking, the nature and implementation of such insurance have received relatively limited attention in academic research. A few studies have discussed the permissibility of providing insurance for certain types of deposits in Islamic banks, with scholars like Ahmad (2000), Kahf (2005) and IADI (2010a, 2014b, 2014c) being notable contributors to this area. Kahf (2005) proposed an Islamic deposit insurance model based on the takaful principle, which comprises two portfolios – one for protecting current accounts and the uninvested portion of investment accounts and another for safeguarding the invested portion of the investment accounts. IADI (2014b) compared the practices of Islamic deposit insurance in Malaysia, Jordan and Sudan, while several other authors (Mikail *et al.*, 2014; Noor and Haron, 2011) focused on the case of Islamic deposit insurance in a specific country. On the empirical front, Grira *et al.* (2016) assessed the deposit insurance premiums for publicly and privately held Islamic banks and how such premiums differ from those for conventional banks. More recent studies attempt to improve the practices of Islamic deposit insurance by offering new models as an alternative, particularly with respect to fund segregation (Fendi, 2020), pricing (Sabah and Hassan, 2019) and modalities (Mustafa and Najeeb, 2018).

The evolving Islamic banking landscape, along with the ever-increasing complexity of financial products, necessitates the need for novel Islamic deposit insurance models that align better with the principles of Islamic finance. Such models should offer enhanced protection for depositors, foster confidence in banks and bolster the overall banking system's stability.

This paper aims to develop a novel approach to Islamic deposit insurance, specifically addressing the deficiencies in the current prevailing models. The prevailing Islamic deposit insurance models impose an undue burden on well-managed banks by forcing them to share in the losses of poorly managed banks, creating a sense of unfairness that runs counter to the deeply ingrained principle of fairness. The prevailing Islamic deposit insurance models also inadvertently create inefficiency by leading to suboptimal resource allocation within the banking sector.

The analysis in this paper adopts a qualitative content analysis (QCA) approach to review the existing literature on Islamic deposit insurance and propose a new model. QCA is a research method that systematically and objectively identifies specified characteristics within textual data (Neuendorf, 2002). The results derived from QCA can support the development of new theories and models, validate existing theories and provide detailed descriptions of specific settings or phenomena (Assarroudi *et al.*, 2018). The paper begins by elucidating the existence of deposit insurance before delving into ideas about Islamic deposit insurance. Subsequently, existing models will be critically reviewed and modified to formulate an innovative, implementable alternative model.

This paper is of significant importance, as it contributes to the relatively limited literature on deposit insurance in Islamic banking (Fendi, 2020; Mikail *et al.*, 2014; Mustafa and Najeeb, 2018; Noor and Haron, 2011; Sabah and Hassan, 2019). By proposing a new model, it seeks to enrich the discourse and provide practical insights that can shape the development of Islamic deposit insurance in the future.

Section 2 will briefly review the presence of deposit insurance. Section 3 discusses the ideas and models of Islamic deposit insurance currently available in the literature. Section 4 presents an alternative model. Section 5 concludes.

2. Brief review on deposit insurance basics

The roots of nationwide deposit insurance can be traced back to 1924, when Czechoslovakia founded a national deposit program to revive its banking sector following the First World War. In the USA, the federal deposit insurance system was founded in 1933 as a response to the wave of bank failures that occurred during the Great Depression (McCarthy, 1980). The system was initially funded by the US federal government but later evolved into a self-sustaining system. Deposit insurance systems have since been established in many other countries.

Deposit insurance systems are mostly implemented through a Deposit Insurance Corporation (DIC) or similar government agencies. These entities are responsible for overseeing and managing the deposit insurance system within a country. Banks are required to participate in the system and make regular premium payments to the DIC. The collected premiums form deposit insurance funds, acting as a reserve to protect depositors in the event of bank failures. The DIC sets a specified coverage limit, determining the maximum compensation a depositor can receive in case of a bank failure. By providing a safety net and maintaining confidence in the banking system, deposit insurance contributes not only to improve depositors protection, but also banking system's stability.

Deposit insurance has been justified on two separate grounds (Dale, 2000). The first is depositor protection. The protection of depositors can be viewed as an aspect of consumer protection. Some depositors are likely unable to assess the riskiness of banks in which they place their funds. With deposit insurance, they would be protected in the event of bank failures and could remain involved in the financial system without the fear of losing their deposits.

The second ground on which deposit insurance has been justified is the prevention of bank runs. This is based particularly on the view that the banking system is inherently fragile (Diamond and Dybvig, 1983; Gorton, 1988; Jacklin and Bhattacharya, 1988). This fragility stems from the fact that banks' primary assets in the form of commercial loans are valued less in liquidation than they are on a going-concern basis. Depositors, therefore, have a logical proclivity to flee at the first hint of difficulty, given certain bank features. Furthermore, a deposit risk run may swiftly become a solvency crisis, giving a reasonable foundation for running even against sound institutions. Deposit insurance decreases the chance of depositors withdrawing their funds in large numbers and helps to avoid bank runs by assuring depositors that their funds will be secured even if the bank fails. Deposit insurance thus lowering the danger of contagion from bank failures (Santomero, 1997).

Despite its widespread support, deposit insurance faces several criticisms. One of the primary contentions raised by critics is the argument that banking system's instability is not substantially higher than in other industries, questioning the necessity of deposit insurance altogether (Benston and Kaufman, 1998; Kaufman, 2007). These critics emphasize that the costs incurred from individual bank failures are relatively modest and comparable to the failure costs of nonbank firms of similar significance within the community. Consequently, they contend that the financial safeguards provided by deposit insurance might not be as indispensable as commonly perceived.

Moreover, even among deposit insurance proponents, concerns have been raised regarding the moral hazard it introduces into the banking sector. Insured depositors may be less incentivized to conduct rigorous due diligence on their bank's financial condition, assuming that their deposits are fully protected (Brewer, 1995; Merton, 1977). Likewise, banks, aware that their customers' funds are guaranteed, might adopt a more risk-tolerant approach in their investment and lending practices, potentially contributing to increased banking system's instability. This moral hazard phenomenon highlights the need for

striking a delicate balance between providing a safety net for depositors and incentivizing prudent risk management by financial institutions.

Furthermore, another noteworthy criticism pertains to the survival of poorly managed banks enabled by deposit insurance. Such a scenario can lead to suboptimal resource allocations and inefficiencies within the banking sector (Herring and Litan, 1995). The protection afforded by deposit insurance might impede the natural market forces that would otherwise compel poorly performing banks to exit the industry, thus hindering healthy competition and overall sectoral efficiency.

As a means to address these concerns, one strategic approach involves the implementation of a deposit insurance design that covers only partial deposits, with a cutoff point determined by deposit size (Dale, 2000). This approach aims to shield smaller depositors, whose capacity to assess the performance of a bank might be limited, while subjecting larger depositors to the risk of default. The approach encourages market discipline and promotes greater due diligence among wholesale depositors.

3. Islamic deposit insurance: existing ideas and practices

The permissibility of deposit insurance in Islamic banking is based on the argument that it protects the public from losing the money they place in a bank when the bank fails (IADI, 2010a). Deposit insurance assists the public, especially those with limited financial resources, in protecting their wealth. Islam urges its followers to prepare themselves to face any possible disaster, which includes finding a means to preserve their wealth. Islam also encourages its followers to help each other in good deeds.

Deposit insurance in Islamic banking is also permissible, as it helps reassure the public about the safety of their bank accounts and lessens the possibility of panic among depositors in the event of reported or actual bank collapses (IADI, 2010a). By reassuring the public about the safety of their bank accounts, deposit insurance could prevent the failure of a bank and contagion in the entire financial system, thereby contributing to banking system's stability.

Furthermore, recalling the presence of deposit insurance in conventional banking, deposit insurance in Islamic banking helps maintain the competitiveness of Islamic banks in comparison to their conventional counterparts. It prevents depositors from leaving Islamic banks for conventional banks and maintains the expansion of the Islamic banking industry.

However, the permissibility of deposit insurance in Islamic banking is contingent upon the insurability of different deposit types (IADI, 2010a). Each deposit type in Islamic banking is based on distinct contractual bases between depositors and Islamic banks, implying different levels of insurability (Fendi, 2020).

For instance, current account deposits, in which depositors place funds for daily transactions, are insurable based on the "yad dhamanah" principle. According to this principle, the bank, as the custodian of the funds, is responsible for the funds' security and safeguarding. The bank can use these deposits but is not required to provide returns as long as it can repay depositors when called upon.

Meanwhile, investment account deposits, intended for profit-seeking while avoiding interest, operate under the mudharabah contract. This contract entails the bank acting as the mudharib (effort provider) and depositors as the shohibul maal (fund provider). The bank invests the funds and distributes profits to depositors, bearing no liability for losses beyond management efforts. The yad amanah principle prohibits the mudharib from guaranteeing a certain level of profits, bearing any portion of the losses, or even guaranteeing repayment of the deposit's initial amount, save in cases of demonstrated negligence. As a result, investment account deposits are uninsurable by the bank.

Investment account deposits, anyhow, remain insurable by depositors to cover the expense of insuring the invested share of the accounts.

It is highly probable that a portion of the investment account deposits remains uninvested. This practice of maintaining an uninvested portion is one of the risk management techniques to mitigate investment risks associated with banks' assets (Archer and Kareem, 2006). This uninvested portion should not be regarded as mudharabah funds because it does not fulfill the conditions stipulated in the mudharabah contract. The mudharib is unable to use these funds among investment options, even though depositors cannot withdraw this portion, as it serves as a buffer against potential investment risks (Archer and Karim, 2006). From an Islamic perspective, the treatment of the uninvested portion of investment accounts is similar to that of the current account deposits, earning no income during profit allocation. Consequently, ownership of the uninvested portion has already been transferred from the depositor to the Islamic bank. As the new owner, the bank assumes the responsibility and risk of insuring the repayment of these deposits (Sadr and Iqbal, 2001). Thus, the bank must account for the uninvested part of the investment account and adhere to the yad dhamanah principle, which requires banks to bear the expense of insuring this portion.

Scholars agree that an Islamic deposit insurance system should be based on a takaful contract (Arshad, 2011; Rahman, 2015). Takaful is a collective arrangement in which participants agree to support each other in the event of loss or damage resulting from specific risks. This contract is derived from the principles of tabarru' and ta'awun. Tabarru' involves each takaful participant contributing to fulfilling the obligations of mutual assistance and covering claims made by eligible beneficiaries. Ta'awun implies that participants agree to assist one another in times of losses arising from specified risks. Such an arrangement emphasizes cooperation and mutual support rather than pursuing profit-making motives (IADI, 2014b).

Given the variabilities in the insurability of different types of deposits, Fendi (2020) proposed a model of Islamic deposit insurance that segregates deposit insurance funds into different subfunds. The first subfund is the bank subfund (BSF), which is responsible for ensuring the current account deposits and the uninvested portion of investment account deposits. BSF will be financed by premiums, or according to IADI and IFSB (2021) called donations, that are paid by the bank. The second subfund is the depositors subfund (DSF), which is responsible for unrestricted investment account deposits. DSF will be financed by the depositors' premiums in the unrestricted investment accounts. Fendi (2020) further proposed that the reserve accumulated from restricted investment account deposits be treated and invested separately and not be comingled in any way with the previous two subfunds. This third subfund is called the restricted-investment account subfund. It further consists of two separated sub-subfunds called bank restricted-investment account sub-subfunds (BRSF) and depositors restricted-investment account sub-sub-funds (DRSF). BRSF will be financed by premiums that the bank pays, while DRSF will be financed by premiums paid by the depositors in the restricted investment accounts.

For Mustafa and Najeeb (2018), one of the most important challenges in the operation of Islamic deposit insurance is the inability of the takaful funds to have recourse to the insolvent bank to get back the financial assistance it provided. These authors, therefore, propose an additional modality based on the concept of cash waqf. They believe that such an additional modality has the potential to overcome the challenges in existing Islamic deposit insurance while complying with the rules set in Islamic jurisprudence and with contemporary regulations and standards of best practices for deposit insurance schemes.

Historically, Bahrain took the lead in introducing an Islamic deposit insurance system in 1993. Sudan, Turkey and Bosnia and Herzegovina followed Bahrain's lead in 1996, 2021 and 2002, respectively. The introduction of an Islamic deposit insurance system continued with Indonesia and Malaysia in 2005 and later Kuwait in 2008 (IADI, 2010b). Jordan, as of 2014, amended its law to introduce an Islamic deposit insurance system under which Islamic banks' participation is mandatory. Under the previous law, participation in the Islamic deposit insurance system was voluntary, but no Islamic banks opted to participate (Abdelhady, 2015).

There are variations in the insurers that administer Islamic deposit insurance in these countries. For instance, in Bahrain, the Central Bank manages the Islamic deposit insurance system. In Sudan and Turkey, the Islamic deposit insurance system is administered through a special fund, whereas in Bosnia and Herzegovina, Indonesia and Malaysia, the Islamic deposit insurance system is administered by a deposit insurance agency or deposit insurance corporation. There are also variations in how the Islamic deposit insurance system is established in relation to the conventional deposit insurance system. Because of its fully fledged Islamic banking system, Sudan's Islamic deposit insurance system is the only deposit insurance system in the country (Abdelhady, 2015; IADI, 2010b). In Indonesia and Malaysia, Islamic deposit insurance is established as a separate system, albeit administered by the same insurers as the conventional deposit insurance system. In other countries, Islamic deposit insurance is established as part of a single-deposit insurance system that covers both Islamic and conventional deposits.

Regarding funding arrangements, most countries' Islamic deposit insurance systems adopt an *ex ante* rather than *ex post* approach. The *ex ante* approach involves funding arrangements in which deposit insurance funds are built up beforehand, creating a financial reserve before any Islamic bank failure occurs. This approach typically entails member banks making periodic premium payments that are pooled collectively to form a financial safety net. The ex post approach, by contrast, operates on a reactive basis, with deposit insurance funds collected after a bank fails.

Despite these variations, the Islamic deposit insurance systems in the above countries share key fundamental elements. First, the systems acknowledge that the legitimacy of deposit insurance within Islamic banking depends on the insurability of varying types of deposits. Second, the Islamic deposit insurance systems in the above countries are all based on a takaful contract derived from the principles of tabarru' and ta'awun, under which all participating banks participate in making premiums into a collective pool to help any one of them that fails and requires the support of Islamic deposit insurance. Thus, in the event of bank failures, the takaful-based Islamic deposit insurance mechanism is activated. The insurer administering the Islamic deposit insurance system first assesses the amount required to cover the insured deposits. This process involves a detailed evaluation of the failed bank's liabilities to its depositors, ensuring that the payout aligns with the coverage limits predefined in the insurance agreement. Following this assessment, depositors of the failed bank are reimbursed using the deposit insurance funds from the collective pool of premiums up to the coverage limit.

4. A new model of Islamic deposit insurance

The model proposed in this paper builds on the arguments that deposit insurance is permissible in Islamic banking, not only to protect depositors from losing money they place in a bank when the bank fails but also to help reassure depositors about the safety of their bank accounts and lessen the possibility of panic in the event of a bank collapse. The proposed model also recognizes that different types of deposits in Islamic banking follow

different contractual bases between the depositor and the bank, and each contractual base implies different loss coverage permissibility.

In terms of the insurer administering the deposit insurance system, the proposed model advocates for an independent Islamic deposit insurance agency or Islamic deposit insurance corporation (IDIC) established by the government and governed by relevant laws. To mitigate conflicts of interest, the IDIC should operate as a noncommercial entity, funded by annual premiums from Islamic banks and supplemented by government support. The primary responsibilities of the IDIC would be to guarantee customer deposits in the event of bank failures and to uphold the overall banking system's stability. For countries with a dual banking system, wherein conventional and Islamic banking coexist, Islamic deposit insurance should be established as a separate system even though its operation may be administered by the same agency or corporation as the conventional deposit insurance system. Previous research indicates that adopting a hybrid deposit insurance scheme covering Islamic and conventional banks is recommended for countries with dual banking systems (Fendi, 2020).

In the proposed model, an *ex ante* approach is used, meaning that a deposit insurance fund is built up in advance to cover potential deposit insurance claims in the event of bank failures. The advantage of this approach lies in its ability to ensure that sufficient resources are available to address and cover depositor claims as soon as an Islamic bank fails. *Ex post* approach, by contrast, may pose difficulties in rapidly mobilizing sufficient funds, particularly during widespread financial distress when multiple banks fail simultaneously.

Regarding the insurance scheme, the proposed model aligns with the principles of takaful derived from the concepts of tabarru' and ta'awun. The use of a takaful-based contract underscores the collaborative and mutual nature of the insurance arrangement, in contrast to a profit-driven approach (IADI, 2014b).

The main point of departure of the proposed model is that it will address the deficiencies in the current prevailing models, which unfairly and inefficiently transfer risks from poorly managed to well-managed banks. It has been mentioned in the previous section that, in the event of bank failures, the insurer that administers the Islamic deposit insurance system will reimburse depositors of the failed bank using the deposit insurance funds from the collective pool of premiums up to the predefined coverage limit. In other words, the insurer uses participating banks' collective pooled premiums to cover the liabilities that should actually belong to the failed banks.

In a country where Islamic banks' participation is mandatory, the prevailing Islamic deposit insurance models place an undue burden on well-managed banks as they are forced to share in the loss of poorly managed banks. Empirical evidence shows that bank failures are mostly due to negligence or misconduct rather than difficult economic conditions. Under the prevailing Islamic deposit insurance models, well-managed banks are at peril of being penalized for the failures of other banks despite their efforts to maintain high business practices and risk management standards.

Thus, the prevailing Islamic deposit insurance models create a sense of unfairness that contradicts the deeply ingrained principle of fairness. Indeed, in Islam, every action must receive its due compensation, and every individual must face the consequences of their actions. No one should be free from the responsibility for their actions nor held responsible for the actions of others, not only in the metaphysical realm but also in real life.

The prevailing Islamic deposit insurance models also inadvertently create inefficiency by leading to suboptimal resource allocation within the banking sector. Firstly, well-managed banks, aware that they will shoulder the burden of losses from other banks' failures, may become less motivated to uphold their high business practices and risk management

standards. This is because their diligent efforts do not necessarily shield them from the financial repercussions of other banks' mismanagement. Secondly, poorly managed banks, aware that their liabilities will be absorbed by the collective pool of premiums and shared with other banks in the event of a failure, might be inclined to engage in riskier financial behaviors. Moral hazard reduces the incentive for these banks to improve their high business practices and risk management standards. When a bank failure does occur, the deposit insurance funds accumulated through collective pool of premiums, which could have been more effectively used for productive investments or growth opportunities, are instead redirected to address the consequences of the risky financial behavior. This cycle of resource misallocation and incentivized risk-taking underscores the inefficiency of the prevailing Islamic deposit insurance models.

In a country where Islamic banks' participation is not mandatory, the prevailing Islamic deposit insurance models can lead to adverse selection, wherein poorly managed banks with higher risks are more attracted to the Islamic deposit insurance system. The banks may see deposit insurance coverage as an opportunity to continue operating despite their inherent weaknesses. Meanwhile, well-managed banks may be discouraged from participating in the deposit insurance system since they will have to share in the loss of a poorly managed bank. Consequently, a disproportionate number of high-risk banks may enter the system, resulting in an imbalance and increased exposure to potential failures, ultimately affecting the banking system's stability.

The proposed model includes a revised scheme. Rather than treated as grants (hibah) like in the prevailing models, in the proposed model, the funds used to reimburse depositors of the failed bank are divided into two distinct categories. The first category includes nonrepayable premiums that have been previously paid by the failed bank and managed by the IDIC. The second category comprises qard hasan, an interest-free loan provided by the IDIC using the deposit insurance funds from the collective pool of premiums of other banks. This loan is designated for repayment later by the failed bank's shareholders, ensuring a more balanced risk-sharing and financial responsibility in the Islamic deposit insurance system.

The operation of an IDIC in the case of full-fledged Islamic banking is illustrated in Figure 1 as follows:

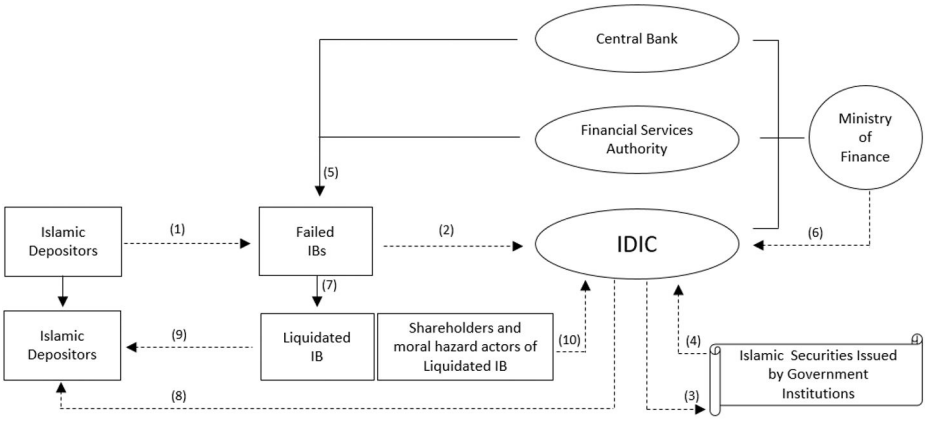

Figure 1.
The operation of the IDIC in the case of a full-fledged Islamic banking system

Source: Figure by authors

(1) Depositors place their funds in Islamic banks.

(2) Islamic banks pay premiums to the IDIC with a commitment to mutual assistance and risk-sharing among Islamic banks. The IDIC, acting on behalf of Islamic banks, manages the premium funds through a wakalah bil ujrah contract, constituting the Islamic deposit insurance funds.

(3) The IDIC invests the Islamic deposit insurance funds in Islamic securities issued by government institutions, such as Islamic securities by the Central Bank for monetary control instruments or sukuk issued by the central or local government for deficit budget financing.

(4) The investment returns from the Islamic deposit insurance funds support the functions of the deposit insurance corporation and bolster the amount of the deposit insurance funds.

(5) The deposit insurance corporation collaborates with the Financial Services Authority, the Central Bank, and the Ministry of Finance for the restructuring of distressed banks.

(6) In emergencies, the Ministry of Finance may allocate a budget to the deposit insurance corporation to address failed banks with systemic impacts.

(7) If a bank in financial distress cannot be rehabilitated, the deposit insurance corporation determines whether the bank should be liquidated or not.

(8) If the distressed bank is liquidated, the deposit insurance corporation reimburses all depositors according to the premium amount paid by the liquidated bank. If the premium is insufficient to cover all claims, Islamic deposit insurance funds may be used.

(9) If the funds used for reimbursing depositors originate from premiums paid by the bank and managed by the IDIC, then no repayment by the bank is required.

(10) If the funds used for reimbursing depositors come from qard hasan sourced from Islamic deposit insurance funds, then repayment is required.

In the case of a dual-banking system, the operation of the IDIC is illustrated in Figure 2 as follows:

(1) Depositors deposit their funds in both Islamic banks and conventional banks.

(2) Islamic banks pay premiums to the Islamic side of the IDIC. The IDIC manages the premium funds for Islamic banks through a wakalah bil ujrah contract, constituting Islamic deposit insurance funds, while the conventional side (DIC) manages premium funds for conventional banks separately, constituting conventional deposit insurance funds.

(3) The IDIC invests Islamic deposit insurance funds in Islamic securities, while the DIC invests conventional deposit insurance funds in conventional securities issued by government institutions.

(4) The investment returns from both Islamic deposit insurance funds and conventional deposit insurance funds support the respective functions of the deposit insurance corporation.

Regulations governing Islamic banking may specify a uniform premium payment amount for each Islamic bank (e.g. $Q\%$) based on the average amount of deposits within a defined period. The period for premium payment can be set annually or semiannually, depending on

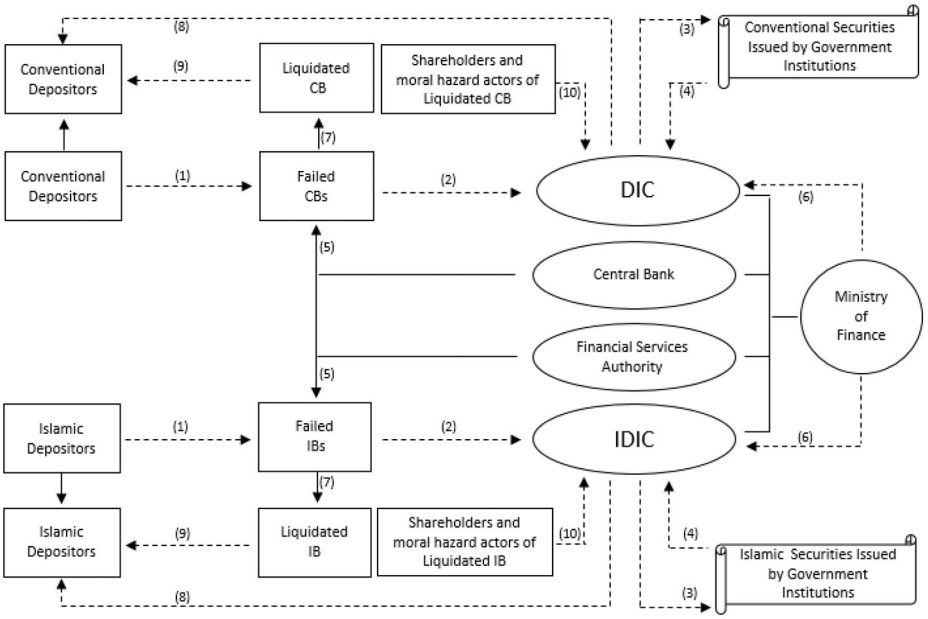

Figure 2.
The operation of the IDIC in the case of dual-banking system

Source: Figure by authors

government policy. An annual premium payment reduces the frequency of transactions, while a semiannual payment expedites premium updating in anticipation of potential risks and failures in Islamic banks.

The concept of premium payment in advance in Islamic banking is akin to an insurance scheme designed to cover future risks. However, the unique characteristic of the deposit insurance system lies in the approach to adjusting premium payments. The premium payments can be adjusted at the end of each period or at the time of payment for the next period's premium. To ensure efficiency, the adjustment premium should be paid at the same time as the estimated premium for the subsequent period.

Premium payments for each period are calculated based on the total customer deposits at the end of that period. Because the payments are made at the beginning of the period, the estimation method is used because the total deposits at the start of the period are not yet known. Islamic banks can calculate the amount by referring to the average estimated total deposits for the first payment of the estimated premium. For subsequent payments of the estimated premium, Islamic banks can use the average of the actual total deposits from the previous period. Because the estimated premium payment is the same as the real premium payment of the previous period, there is no need to recalculate or repay the estimated premium. At the end of each period, Islamic banks must compare the estimated premium with the real premium calculated from the average total deposits. If the real premium exceeds the estimated premium (due to the realization of higher total deposits than the previous period), the shortfall must be paid to achieve conformity. Conversely, if the real premium is lower than the estimated premium, the overpayment can be used as a reserve or returned to Islamic banks. Table 1 presents the basic formulation regarding the payment stage.

The IDIC should only guarantee the funds derived from customers' deposits in Islamic banks. Funds collected from creditors and shareholders should not fall under the IDIC's guarantee. Several reasons justify this approach: First, the IDIC's primary purpose is to provide guarantees to depositors, not creditors or shareholders. Second, the calculation of premium payments is based solely on funds from depositors. Third, restricting guarantees to depositors while excluding creditors' and shareholders' funds aims to prevent moral hazard.

Customers are considered depositors when they place money in a bank based on specific contracts through opening an account. According to the author, the most suitable contracts for collecting deposits from customers are the wad'iah and mudharabah contracts. The wadi'ah contract is designed for pure savings without investment, while the mudharabah contract is intended for customers' investment purposes. Both contracts can serve as the basis for fundraising products such as current accounts, savings accounts and time deposits. Customer deposits obtained from these products must be guaranteed by the IDIC.

In the contemporary banking system, deposits constitute the fundamental source of funding for banks. In the Islamic banking system, deposits are accepted based on Sharia principles (Rahman, 2015). Deposit products such as current accounts and savings accounts based on wadi'ah contracts must be guaranteed by the IDIC. Similarly, savings or deposits based on mudharabah contracts also need to be guaranteed by the IDIC. However, mudharabah-based deposit products cannot be guaranteed if the Islamic banks are not liquidated because they are part of the application of the principle of profit and loss sharing in business. The IADI states that profit-and-loss sharing investment accounts are noncapital guaranteed, profit-and-loss-sharing investment products that often involve an Islamic partnership between an Islamic bank and the account holder (IADI, 2014b). Some argue that profit-and-loss sharing investment account holders should be protected based on the following reasons:

- The profit-and-loss-sharing contract does not allow Islamic banks to protect the profit-and-loss sharing investment account holder, but protection by a third party, such as the deposit insurer, is allowable.
- The profit-and-loss sharing investment account holder is only protected in the event of an Islamic bank fails, not in the normal course of business.
- If the profit-and-loss sharing investment account holder is a major player in the financial system, their protection will contribute to the stability of the financial system (IADI, 2010a).

If the Islamic banks operate normally, the IDIC has no obligation at all to guarantee customer deposits. Under normal conditions, customer deposits are guaranteed by Islamic

No.	Premium payment stages	Premium calculation formula
1	Estimated premium payment	$Q\%$ × Estimated total deposits/6 months (for the first payment); or $Q\%$ × Total real deposits end of previous period/6 months (for the second and next payment)
2	Real premium payment	$Q\%$ × Total real deposits end of period/6 months)
3	Adjustment of premium payment	Estimated premium − Ral premium

Source: Table by authors

Table 1.
Basic formulation of payment stage

banks themselves, except for customer deposits based on profit and loss sharing, which must be borne jointly. The IADI stated that profit-and-loss sharing investment accounts are noncapital guaranteed, profit and loss sharing investment products that frequently are based on a form of Islamic partnership between an Islamic bank and the account holder (Abdelhady, 2015; IADI, 2014b).

Another alternative to make it easier to get investment profits and prevent losses for profit-and-loss sharing investment accounts is to use the profit equalization reserve (PER) and investment risk reserve (IRR) method. PER is needed to smooth the returns to provide the desired return to investment account holders. IRR is key to covering potential losses on assets invested with investment account holders' funds. The rationale behind using the two reserves is to avoid displaced commercial risk (DCR) rising from the shareholders' attempts to mitigate the withdrawal risk that arises from the low-profit Islamic banks' distribution to their depositors. In more detail, DCR refers to the risk that rises from assets managed on behalf of profit-and-loss sharing investment accounts, which is effectively transferred to the bank's capital because it forgoes part or all of its mudhārib's share (profit) on such funds (Affandi, 2019). Although Islamic banks can carry out this method to maximize profits and prevent risks, it is not appropriate to apply it in the system of deposit insurance run by the IDIC.

Upon receiving reports on total deposits from all branch offices, the head office of Islamic banks can calculate the premium. The premium calculation must be carried out objectively and accurately. As a government agency established by law, the IDIC can recheck or verify its calculations to ensure no errors or manipulations. In case of violations, the IDIC may impose administrative sanctions on the concerned Islamic banks in accordance with the stipulated regulations. Below is an example of the calculation for semiannual premium payment.

Example: Islamic Bank in Period I (1 January–30 June 2023) is estimated to have a total deposit balance of 180 billion. Therefore, the average balance is totaled $\frac{180 \text{ billion}}{6} = 30$ billion. If the IDIC determines the premium to be paid $= 0.1\% \times$ the average total deposit balance for one period, then the estimated premium that must be paid is $0.1\% \times 30$ billion $= 30$ million. Table 2 presents the real deposit balance at the end of June 2023.

Average real balance of deposits: $\frac{186 \text{ billion}}{6} = 31$ billion. Real premium payment is $0.1\% \times 31$ billion $= 31$ million. Premium payment adjustments $= 30$ million $- 31$ million $= -1$ million. Islamic banks do not need to pay premiums anymore; it is enough to add a shortfall of 1 million at the time of initial payment for period II in 2023.

Table 2.
Example of real deposit balance at the end of June 2023

No.	Months	Islamic deposits: *Wadi'ah*-based customer deposits (1)	Islamic deposits: *Mudharabah*-based customer deposits (2)	Total (1) + (2)
1	January	10,400,000,000	14,000,000,000	24,400,000,000
2	February	13,600,000,000	16,600,000,000	30,200,000,000
3	March	15,900,000,000	17,500,000,000	33,400,000,000
4	April	16,400,000,000	15,800,000,000	32,200,000,000
5	May	14,300,000,000	16,300,000,000	30,600,000,000
6	June	16,800,000,000	18,400,000000	35,200,000,000
Total deposits				186,000,000,000

Source: Table by authors

The estimated premium payment in Period II (1 July–31 December 2023) is the same as the previous period, namely, 31 million. Meanwhile, real premium payment depends on the real position of the deposit balance. Table 3 presents an example of a real deposit balance at the end of December 2023.

Average real balance of deposits: $\frac{174 \text{ billion}}{6} = 29$ billion. Real premium payment is $0.1\% \times 29$ billion $= 29$ million. Premium payment adjustments $= 31$ million $- 29$ million $= 3$ million. In Period II of 2023, Islamic Bank does not need to pay a premium. Meanwhile, the excess of 3 million can be withdrawn, or it can be used for a reserve of premium payments in Period I of 2024.

For countries that use the dual system, the calculation is the same as the single system. However, the principle is that there is a separation between the IDI system and the conventional deposit insurance system.

5. Conclusion

This paper proposes an alternative model for Islamic deposit insurance to address the shortcomings of existing Islamic deposit insurance models. The prevalent Islamic deposit insurance models impose an undue burden on well-managed banks by requiring them to share in the losses of poorly managed banks, instilling a sense of unfairness that contradicts the deeply ingrained principle of fairness. Inadvertently, the prevalent Islamic deposit insurance models create inefficiency by resulting in suboptimal resource allocation within the banking sector. A revised scheme is included in the proposed model. Rather than being treated as grants (hibah) as in previous models, the funds used to reimburse failed bank depositors are divided into two distinct categories in the proposed model. Nonrepayable premiums previously paid by the failed bank and managed by the IDIC are included in the first category. The second category includes qard hasan, an interest-free loan provided by the IDIC using deposit insurance funds from a pool of other banks' premiums.

The proposed model ensures that well-managed banks are not unfairly burdened by the failures of their poorly managed counterparts, avoiding the perception of unfairness and inefficiency. Implementing the proposed model may result in better business practices and risk management standards, ultimately leading to better depositor protection and the banking system's stability.

This paper has some limitations that should be acknowledged. First, the proposed model is conceptual and theoretical in nature. This paper does not delve into the explicit economic, legal and political requirements concerning the implementation of the model. Second, the paper primarily concerns the Islamic banking system. The paper does not discuss Islamic deposit insurance in a broader context of the financial system, particularly in dual-banking

		Islamic deposits		
No	Months	*Wadi'ah*-based customer deposits (1)	*Mudharabah*-based customer deposits (2)	Total (1)+(2)
1	July	12,600,000,000	14,600,000,000	27,200,000,000
2	August	14,600,000,000	16,200,000,000	30,800,000,000
3	September	10,700,000,000	12,500,000,000	23,200,000,000
4	October	13,400,000,000	15,600,000,000	29,000,000,000
5	November	14,300,000,000	17,300,000,000	31,600,000,000
6	December	15,800,000,000	16,400,000,000	32,200,000,000
Total deposits				174,000,000,000

Source: Table by authors

Table 3. Example of real deposit balance at the end of December 2023

systems where Islamic and conventional banks dynamically coexist. Future research should investigate the economic, legal and political opportunities and challenges for implementing the proposed model. Future research should also investigate the fairness and efficiency of Islamic deposit insurance in a broader context.

References

Abdelhady, H. (2015), "Deposit insurance frameworks for Islamic banks: design and policy considerations", *Butterworths Journal of International Banking and Financial Law*, February, pp. 99-102.

Affandi, M.T. (2019), "Profit equalization reserve and investment risk reserve: issues and its application", *Islamic Economics Journal*, Vol. 5 No. 2, pp. 295-315.

Ahmad, O. (2000), *Nizaam Himaayat Al-Wadaai' Ladaa Al-Maasaarif Al-Islaamiyyah*, The Islamic Research and Training Institute, Jeddah.

Archer, S. and Karim, R.A.A. (2006), "On capital structure, risk sharing and capital adequacy in Islamic banks", *International Journal of Theoretical and Applied Finance*, Vol. 09 No. 3, pp. 269-280.

Arshad, M.K. (2011), "Implementation of an Islamic deposit insurance system for the Islamic financial services industry", paper presented in the Fourth Islamic Financial Stability Forum, Kuala Lumpur, 17 November.

Assarroudi, A., Heshmati Nabavi, F., Armat, M.R., Ebadi, A. and Vaismoradi, M. (2018), "Directed qualitative content analysis: the description and elaboration of its underpinning methods and data analysis process", *Journal of Research in Nursing*, Vol. 23 No. 1, pp. 42-55.

Benston, G.J. and Kaufman, G.G. (1998), "Deposit insurance reform in the FDIC improvement act: the experience to date", *Economic Perspectives*, Vol. 22 No. 2, pp. 2-20.

Brewer, E. (1995), "The impact of deposit insurance on S&L shareholders' risk/return trade-offs", *Journal of Financial Services Research*, Vol. 9 No. 1, pp. 65-89.

Dale, R. (2000), "Deposit insurance in theory and practice", *Journal of Financial Regulation and Compliance*, Vol. 8 No. 1, pp. 36-56.

Diamond, D.W. and Dybvig, P.H. (1983), "Bank runs, deposit insurance, and liquidity", *Journal of Political Economy*, Vol. 91 No. 3, pp. 401-419.

Fendi, U.A. (2020), "Toward Islamic deposit insurance model", *Journal of Islamic Accounting and Business Research*, Vol. 11 No. 1, pp. 130-151.

Gorton, G. (1988), "Banking panics and business cycles", *Oxford Economic Papers*, Vol. 40 No. 4, pp. 751-781.

Grira, J., Hassan, M.K. and Soumaré, I. (2016), "Pricing beliefs: empirical evidence from the implied cost of deposit insurance for Islamic banks", *Economic Modelling*, Vol. 55, pp. 152-168.

Herring, R.J. and Litan, R.E. (1995), *Financial Regulation in the Global Economy*, The Brookings Institution, Massachusetts Avenue, Washington DC.

IADI (2010a), "Deposit insurance from the Shariah perspective", International Association of Deposit Insurers, Basel, available at: www.iadi.org/en/assets/File/Papers/ApprovedResearch-DiscussionPapers/DP-DI_From_Shariah_Perspective_(Final)_Sep2011_to_IADI.pdf

IADI (2010b), "Survey on Islamic deposit insurance: results", International Association of Deposit Insurers, Basel.

IADI (2014a), "IADI core principles for effective deposit insurance systems", International Association of Deposit Insurers, Basel, available at: www.iadi.org/en/assets/File/CorePrinciples/cprevised2014nov.pdf

IADI (2014b), "Shariah approaches for the implementation of Islamic deposit insurance systems", International Association of Deposit Insurers, Basel.

IADI (2014c), "Insurability of Islamic deposits and investment accounts", International Association of Deposit Insurers, Basel.

IADI and IFSB (2021), *Core Principles for Effective Islamic Deposit Insurance Systems*, International Association of Deposit Insurers, Basel.

Iqbal, M. and Molyneux, P. (2005), *Thirty Years of Islamic Banking: History, Performance and Prospects*, Palgrave Macmillan, London.

Jacklin, C.J. and Bhattacharya, S. (1988), "Distinguishing panics and information-based bank runs: welfare and policy implications", *Journal of Political Economy*, Vol. 96 No. 3, pp. 568-592.

Kahf, M. (2005), "Damaan Al-Wadaai' Fī Al-Masaarif Al-Islaamiyyah Fī Al-Urdun", unpublished paper presented to the Deposit Insurance Corporation in Jordan, Amman, November.

Kaufman, G.G. (2007), "Deposit insurance: the wrong policy for minimizing the costs of bank failures", *The Journal of Economic Asymmetries*, Vol. 4 No. 2, pp. 55-63.

Khan, M.M. and Bhatti, M.I. (2008), "Islamic banking and finance: on its way to globalization", *Managerial Finance*, Vol. 34 No. 10, pp. 708-725.

Kleftouri, N. (2014), "Meeting the rationale of deposit protection system", *Journal of Financial Regulation and Compliance*, Vol. 22 No. 4, pp. 300-317.

Komijani, A. and Taghizadeh-Hesary, F. (2019), "An overview of Islamic banking and finance in Asia", *Routledge Handbook of Banking and Finance in Asia*, No. 853, pp. 505-518.

McCarthy, I.S. (1980), "Deposit insurance: theory and practice", *IMF Economic Review*, Vol. 27 No. 3, pp. 578-600.

Merton, R.C. (1977), "An analytic derivation of the cost of deposit insurance and loan guarantees an application of modern option pricing theory", *Journal of Banking and Finance*, Vol. 1 No. 1, pp. 3-11.

Mikail, S.A., Bouheraoua, S., Ahmad, M.A.J., Shaikh Abdul Razak, S.H. and Abdullah, N.I. (2014), "Protecting takaful against the risk of failure: a critical appraisal of the takaful benefits protection system (TBPS) in Malaysia", ISRA Research Paper No 66/2014, International Shari'ah Research Academy for Islamic Finance, Kuala Lumpur.

Mustafa, M. and Najeeb, S.F. (2018), "Shariah-compliant deposit insurance scheme: a proposed additional modality", *International Journal of Islamic and Middle Eastern Finance and Management*, Vol. 11 No. 3, pp. 488-506.

Najeeb, S.F. and Mustafa, M.M. (2016), "Strengthening the financial safety net: the role and mechanisms of Sharīah-compliant deposit insurance schemes (SCDIS)", Working Paper No. WP-06/03/2016, Islamic Financial Services Board, Kuala Lumpur.

Neuendorf, K.A. (2002), *The Content Analysis Guidebook*, Sage Publications, Thousand Oaks, CA.

Noor, A.M. and Haron, M.N. (2011), "Charging fee for guarantee (al-kafalah bi al-ajr) and its application by deposit insurance corporation Malaysia (PIDM) for takaful benefits protection scheme", Proceedings of the 8th International Conference on Islamic Economics and Finance, Doha.

Rahman, H. (2015), "Guarantee of investment deposits in Islamic banks: a fiqhi analysis", *Journal of Islam, Law and Judiciary*, Vol. 1 No. 3, pp. 37-53.

Sabah, N. and Hassan, M.K. (2019), "Pricing of Islamic deposit insurance", *Economics Letters*, Vol. 178, pp. 91-94.

Sadr, K. and Iqbal, Z. (2001), "Choice between debt and equity contracts and asymmetrical information: some empirical evidence", in Iqbal, M. and Llewellyn, D.T. (Eds), Islamic Banking and Finance: New Perspectives on Profit Sharing and Risk, Edward Elgar, Cheltenham, pp. 152-154.

Santomero, A.M. (1997), "Deposit insurance: do we need it and why?", Center for Financial Institutions Working Papers No. 97–35, Wharton School Center for Financial Institutions, University of Pennsylvania, Philadelphia, PA.

Corresponding author
Burhanuddin Susamto can be contacted at: burhanuddin@syariah.uin-malang.ac.id