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SHARIA-COMPLIANT DEPOSIT INSURANCE AND DEPOSIT FLOWS: EVIDENCE FROM A DUAL BANKING MARKET

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ABSTRACT

We investigate whether the introduction of Islamic Deposit Insurance (IDI) affects deposit flow of and the pricing by Islamic banks vis-à-vis conventional banks for the case of Indonesia. Using December 2014 announcement of a separate deposit insurance scheme for Indonesia's Islamic and traditional banks into two different funds as an exogenous event, we employ a difference-in-differences (DID) framework using matched bank-level data from 18 Islamic and conventional banks, comparing periods before and after the policy announcement. Our findings indicate that the announcement significantly boosts the growth of small deposits in Islamic banks compared to traditional banks, with an apparent increase in deposit growth after separating deposit insurance funds.

Keywords: Sharia-compliant, Deposit insurance, Dual banking.
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I. INTRODUCTION

This paper explores whether the introduction of Islamic Deposit Insurance (IDI) affects deposit flow and pricing by Islamic and conventional banks in Indonesia. The rapid growth and expansion of Islamic banks have become an important part of the financial system and have drawn the attention of international regulatory institutions. The International Association of Deposit Insurers (IADI) and the Islamic Financial Services Board (IFSB) have developed technical standards for implementing effective Islamic deposit insurance (IADI & IFSB, 2019). The lack of Islamic deposit insurance has been a longstanding problem in the Islamic banking industry since there is no clarity on profit-sharing investment account insurance, which is set to be worse due to incoming requirements from Basel III regulatory standards. In general, Islamic banks are thought to be well equipped to cope with Basel II requirements as their balance sheets are less exposed to monetary speculations. However, their deposit scheme could be a problem, particularly because of Basel III's new liquidity requirements. As Islamic banks are free of interest, they mainly obtain deposits from profit-sharing investment accounts (PSIA), which are considered to be more volatile than conventional deposits (Vizcaino, 2014). To comply with Basel III, Islamic banks are expected to offset that volatility by increasing the amount of high-quality liquid assets (HQLAs) they hold. To be considered a stable deposit, the insurance must cover specific numerical coverage limits under Basel's liquidity coverage ratio (Basel LCR) (Hdeel, 2015). Therefore, it will be a problem for Islamic banks as, in most jurisdictions, the PSIA contract is not covered.

Therefore, whether the introduction of sharia-compliant deposit insurance will complement the stability and soundness of Islamic banks remains debatable mainly because of the small size of the Islamic deposit insurance compared to that of conventional counterpart and lack of clarity on the insurability of profit-sharing investment accounts. The optimistic view sees the implementation of Sharia-compliant deposit insurance as stability-enhancing. In line with the rapid growth of Islamic banking and finance, a Sharia-compliant deposit insurance system could protect PSIAs where the conventional deposit system may be unable to do so. Therefore, protecting PSIA could create a level playing field between Islamic and conventional bank products and further boost the Islamic finance industry (Arshad, 2011).

This paper aims to understand how Islamic banks and their depositors respond to Sharia-compliant deposit insurance. In December 2014, the Indonesia Deposit Insurance Corporation (IDIC) announced a plan to create a separate deposit insurance framework for Islamic bank deposits (Hdeel, 2015; Reuters, 2014). This change allows us to identify the direct impact of the introduction of Islamic deposit insurance on deposit flow. This paper focuses, therefore, on the announcement effect of Sharia-compliant deposit insurance. We find that the announcement of Sharia-compliant deposit insurance significantly impacts deposit growth. Using a difference-in-difference (DID) approach and a detailed monthly dataset, we compare the growth of Islamic bank deposits, number of accounts, and prices with conventional banks as a control group. Our findings show that the announcement significantly boosts deposit growth for Islamic banks compared to conventional banks.

In further investigations, we test the depositors' behavior of Islamic banks and their sensitivity to the risk after the treatment effect. Since Islamic banks operate with equity-like savings and investments, they are subject to market discipline by their depositors. Deposit insurance can safeguard small depositors and help prevent bank runs, but it might also encourage riskier behavior by weakening market discipline (Anginer et al., 2014; Boyle et al., 2015; Demirguc-Kunt et al., 2008; Lambert et al., 2017). Literature on market discipline highlights the importance of price and quantity in regulating banks, especially when deposits are uninsured (Aysan et al., 2017). Our results show that the announcement positively and significantly impacts deposit growth for Islamic banks with low Zscore (higher risk). It implies that Sharia-compliant deposit insurance reduces the risk sensitivity of Islamic depositors.

This paper addresses the gap in the empirical literature on Islamic deposit insurance, a topic often overlooked in Islamic banking research (Abedifar et al., 2015; Hassan & Aliyu, 2018). Grira, Hassan, & Soumaré (2016) analyze the costs of deposit insurance for Islamic and conventional banks. Drawing from a broad dataset of over 200 countries, they observe that deposit insurance premiums for publicly listed Islamic banks are lower than those for conventional banks, indicating that conventional banks may carry more risk. Furthermore, they find that privately owned Islamic and conventional banks face higher premiums than publicly traded banks. According to a theoretical model by Sabah & Hassan (2019), government-backed deposit insurance with actuarially fair pricing can create a moral hazard by subsidizing Islamic banks, while private insurers with market-based pricing avoid this issue by eliminating subsidies. Closer to our paper, Aysan, Disli, Duygun, & Ozturk (2017) test the direct impact of a policy change in Islamic deposit insurance on deposit flows in Turkey. The paper finds that after a deposit insurance reform that unified Islamic deposit insurance and conventional deposit insurance, there is an increase in the market discipline of depositors. The reform increased market discipline among depositors but may have disrupted religiously motivated depositors and undermined Islamic banks' mutual supervision and support.

Our paper provides different insights on the effect of separating the deposit insurance system for conventional and Islamic banks, owing to detailed bank-level data on deposit quantity and price. It allows us to decompose deposits into several sizes: small, medium, and big depositors, with small depositors being fully covered by deposit insurance and medium partly covered, while big depositors are mostly not covered. This breakdown of deposits is new in the literature and enables us to assess the different behaviors of depositors relative to their size and insurance status. Therefore, this paper contributes to the limited Islamic bank literature by identifying the direct impact of Islamic deposit insurance on depositors' behavior. Moreover, focusing on the Indonesian banking sector is interesting because of its considerable market size and the dual banking market advantage. Hence, this paper adds to the ongoing discussion on whether or not to implement Sharia-compliant deposit insurance.

The remainder of the paper is structured as follows. Section 2 presents the sharia-compliant deposit insurance in Indonesia; Section 3 describes the data used

to conduct the empirical analysis; Section 4 describes the methodology; Section 5 provides and comments on the empirical results; and Section 6 concludes.

II. INSTITUTIONAL BACKGROUND

Indonesia is home to the largest Muslim population in the world, and Islamic banking has been experiencing significant growth, with a 65% increase in assets over the past five years (Rizvi et al., 2020). Indonesia is a bank-based financial system where banks contribute significantly to the economy. Based on the Otoritas Jasa Keuangan banking statistics report, as of September 2019, Indonesia had 110 commercial banks, including 14 Islamic commercial banks and 20 banks with Islamic windows. Consequently, the Indonesian banking system is dual, where both conventional and Islamic banks co-exist. Therefore, the financial authority on supervision and resolution oversees both types of banks, although there are some debates on the resolution scheme.

In response to the 1998 Asian financial crisis, the Indonesian government implemented a blanket guarantee to restore public confidence in the banking system, ensuring that all accounts were insured, regardless of size. In 2004, the government passed Law Number 24/2004 to create a resolution authority known as the Indonesia Deposit Insurance Corporation (IDIC), which began operations in September 2005. This law mandates that all banks in Indonesia, including branches of foreign banks and joint-venture banks, must participate in the IDIC's deposit insurance program (Saheruddin, 2013). The law requires the termination of the Blanket Guarantee program and gradually reduces the deposit insurance coverage. The IDIC imposes a fixed annual charge of 0.2% on each bank deposit to fund its operations. Following the global financial crisis in 2008, the IDIC raised its maximum coverage to 2 billion IDR, which has important consequences for the financial sustainability of the deposit insurance system. The IDIC covers various deposits, including Sharia-compliant deposits, but using the same fund for both conventional and Islamic banks raises concerns about Sharia compliance. To address this and accommodate the growing Islamic banking sector, the IDIC released a blueprint in December 2014 outlining the implementation phases and structure for a future Islamic deposit insurance system (Budiman et al., 2018).

Essentially, Islamic deposit insurance offers a unique arrangement that safeguards insured deposits in the event of an Islamic bank's failure. This system, distinct from its conventional counterpart, operates according to Sharia principles, requiring stakeholders to uphold stability and consistency in Sharia principles. The Islamic deposit insurance scheme (IDI) is a significant development in this context, designed to fully or partially protect deposits in Islamic banks in line with Islamic rules. It's not just about deposit insurance schemes that cover both conventional and Islamic banks but about deposit insurance systems that adhere to Islamic rules and standards. A survey by the International Association of Deposit Insurers (IADI) reveals that out of 19 countries with an Islamic banking system, only 10 have established an IDI scheme. (IADI, 2010). However, only Sudan and Malaysia have their Islamic deposit insurance system.

The main principle of Islamic banking transactions is that they must be free from elements Islam strictly prohibits. To put it in another way, dealing with

interest (riba in Islamic finance), making a risk-free profit (*masyir*), and making money from uncertainty (*gharar*) are not compliant with the Sharia (Grira et al., 2016). All the principles of Islamic banking transactions do not match the current deposit insurance. Therefore, the need for an Islamic banking safety net arises in jurisdictions with a significant presence of Islamic banks.

The existence of deposit insurance is considered to be public interest (*maslahah*). It is considered good for the public since it protects depositors and could maintain financial stability and the depositor's confidence. This background makes the deposit insurance scheme acceptable under the Shariah (Hamisu & Hassan, 2017). As discussed above, Islamic deposit insurance is well implemented and developed in only two jurisdictions: Malaysia with the guarantee and fee structure (Kafalah bil Ujr) starting in 2004, and Sudan with tafakul structure, which is the cooperation between financial safety net institutions developed in 1996. In Indonesia, the IDIC, following the Majelis Ulama Indonesia Fatwa Number 118, implements sharia-compliant deposit insurance with a fee structure (*Kafalah*). The *Kafalah* principle covers all types of Islamic deposits, including the Profit Sharing Investment Account (PSIA).

Sharia deposit insurance is an evolving component of the Islamic banking ecosystem, designed to provide depositor protection while adhering to Islamic principles. Unlike conventional deposit insurance, sharia deposits insurance integrates Sharia tenets such as fairness, mutual assistance, and risk-sharing. These models differentiate between current accounts, which are typically insured under the "yad dhamanah" principle, and profit-sharing investment accounts governed by mudharabah contracts (Susamto & Susamto, 2024). Investment accounts present unique challenges due to their profit-and-loss-sharing nature, which limits traditional insurance coverage (Fendi, 2020). To address these gaps, new frameworks propose innovative mechanisms, such as segregated sub-funds for different deposit types and the inclusion of qard hasan (interest-free loans) to balance risk-sharing without penalizing well-managed banks (Mustafa & Najeeb, 2018). Empirical studies further highlight the moral hazard concerns and inefficiencies in prevailing IDI systems, urging for reforms that foster equity and operational sustainability. Contemporary propositions advocate for an independent Islamic Deposit Insurance Corporation to manage premiums, aligned with Islamic jurisprudence and regulatory needs (IADI, 2014).

III. HYPOTHESIS DEVELOPMENT

Islamic banks are influenced by market discipline (Abedifar et al., 2013; Aysan et al., 2017; Beck et al., 2013; Zins & Weill, 2017). The profit-sharing relationship between Islamic banks and depositors, particularly PSIA holders, may impose discipline by increasing bank run risk. As "quasi-shareholders," PSIA holders are motivated to control bank risk-taking. Empirical studies suggest a negative correlation between risk and deposit growth (Demirgüç-Kunt & Huizinga, 2004; Martinez Peria & Schmukler, 2001). However, to mitigate the risk of a bank run, banks provide relatively competitive rates of return to investment account holders, irrespective of their performance. They also offer more non-PLS accounts, inherently similar to conventional bank accounts (Abedifar et al., 2013). Islamic depositors motivated

by their faith take Sharia risk[1] into account when dealing with Islamic banks. Due to their greater risk aversion, religious individuals often prefer environments with minimal risk of Sharia non-compliance (Aysan et al., 2017; Kocaata, 2017). The introduction of Sharia-compliant deposit insurance reduces Sharia risk, potentially encouraging depositors to increase funds, accept lower returns, and attract new religious customers. It also alleviates depositor concerns about cross-subsidization in case of bank failure, as the IDIC may otherwise invest in interest-bearing assets. These points prompt us to examine the following hypotheses:

H1: The announcement of Sharia-compliant deposit insurance is expected to enhance the growth rate of deposits and accounts at Islamic banks compared to conventional banks.

H2: The announcement of Sharia-compliant deposit insurance is anticipated to lower the deposit interest rates of Islamic banks compared to conventional banks.

H3: The announcement of Sharia-compliant deposit insurance is likely to increase the deposits and account growth rate of Islamic banks with higher risk relative to conventional banks.

H4: The announcement of Sharia-compliant deposit insurance is expected to reduce the deposit interest rates of Islamic banks with higher risk than conventional banks.

IV. DATA

Our research focuses on Indonesia, where the IDIC announced the creation of Sharia-compliant deposit insurance in December 2014. We take advantage of a monthly dataset that comes from two sources. We get the detailed deposit structure data from the Indonesia Deposit Insurance Corporation statistic reports. These data provide detailed information on the number of deposits for several size categories, the number of accounts for each size category, and the associated deposit interest rate. Our thorough data allows us to explore the potential deposit flows from insured or uninsured deposit groups. For bank characteristics, we retrieve data from the Indonesia Financial Authority. After merging the two data sources, our final sample comprises 52 banks consisting of 43 conventional banks and nine full-fledged Islamic banks.

We consider three dependent variables, using the IDIC insurance threshold (two billion IDR) to define our variable of interest. Firstly, we use the growth rate of total deposits (**GTOTDEP**), which we also separate into three groups of deposits according to their size, defined as follows:

The growth rate of total deposits when depositors hold less than 1 Billion Rupiah (**GDEP1B**)[2], and the total number of accounts (**GACC1M**) for this type of deposit. We expect that Islamic banks will get more customers from religious-inspired depositors after the announcement.

1 Sharia risk is an operational risk of deviating from the rules of Islam in an Islamic financial activity (Kocaata, 2017).

2 About 70,000 USD. Exchange rate 1 USD equals to 15,160 IDR average rate as of Sept, 2024.

1) The growth rate of total deposits when depositors hold between 1 Billion to 5 Billion Rupiah (**GDEP1B5B**)[3] and the total number of accounts (**GACC1B5B**) for this type of deposit. This type of deposit is only partly insured by deposit insurance.
2) The growth rate of total deposit when depositors hold more than 5 Billion Rupiah (**GDEP5B**) and the total number of accounts (**GACC5B**) for this type of deposit. This type of deposit is not covered by deposit insurance and has a relatively higher interest rate.
3) Secondly, we consider the deposit interest rate (DEPRATE) level as a market discipline measurement. We calculate the implicit deposit interest rate for each Islamic bank and conventional bank by dividing the interest rate expense on deposit over the total deposit, following Meslier et al. (2017). It might be more appropriate to use the term deposit return rather than deposit interest rate since Islamic banks do not pay interest to their depositors. But this proxy has been widely used in the deposit insurance and market discipline literature (Demirgüç-Kunt & Huizinga, 2004; Martinez Peria & Schmukler, 2001; Murata & Hori, 2006). However, our dataset lacks information about the specific deposit interest rate for each type of deposit.

The main independent variables include an indicator for Islamic banks, a policy period indicator, and an interaction term between these two variables. The Islamic bank indicator (Islamic) is a dummy variable that differentiates Islamic banks (treatment group) from conventional banks (control group) in our difference-in-differences (DID) model, allowing us to isolate the effect of the Sharia-compliant deposit insurance reform. The policy period indicator (Post) captures the period after the policy announcement, enabling a comparison of outcomes before and after the reform. The interaction term (Islamic * Post) is the primary variable of interest, representing the combined effect of being an Islamic bank during the post-reform period. This term's coefficient directly measures the impact of Sharia-compliant deposit insurance on deposit growth and interest rates in Islamic banks relative to conventional banks.

To account for factors that may influence deposit behavior and bank stability beyond the policy change, we include several control variables: bank age (AGE), return on equity (ROE), Z-score, and branch (BRANCH). Bank age represents institutional maturity, which can influence depositor trust and market positioning (Laeven & Levine, 2009). Profitability (ROE) are critical in assessing risk and financial health, particularly in Islamic banking due to profit-sharing mechanisms that align depositors with equity stakeholders (Molyneux & Iqbal, 2016). The Z-score, as a risk measure, directly assesses stability and depositor security, which prior research links to deposit behavior (Demirgüç-Kunt & Kane, 2002). Finally, total bank branch (BRANCH) as a control variable acknowledges the role of accessibility and customer reach in attracting deposits (Allen et al., 2016).

Descriptive statistics for our sample are reported in Table 1. The average growth rate of the total deposit GTOTDEP is around 0.7%. The highest growth rate of small deposits (less than 100 Billion Rupiah, GDEP1B) is only 2.9 %, while on the

3 1 Billion IDR equal to 70,000 USD and 5 Billion equal 329,797 USD. 1 USD equal to 15,160 IDR average rate on Sept 2024.

contrary, the highest growth rate of medium-sized deposits (between 1 Billion and 5 Billion, GDEP5B) is 31.9 %. The average growth rate of big deposits (more than 5 Billion Rupiah, GDEP5B) is five times that of small deposits. Based on the IDIC report of January 2020, the IDIC insures almost 99.91 % of the registered accounts in the Indonesian banking system. However, the IDIC only insures 53.84 % of the total deposits in the banking system. Therefore, 0.09 % of the total accounts in the banking system cover 46.16 % of the total deposits in the Indonesian banking system.

Table 2 shows the correlation matrix between our variables. ZScore has a weak negative correlation with ROE (-0.1119), BRANCH (-0.3272), and AGE (-0.1536), suggesting that higher risk (lower ZScore) is slightly associated with higher profitability, more branches, and older banks. ROE shows a weak positive correlation with BRANCH (0.2605) and almost no correlation with AGE (0.0398). Last, BRANCH and AGE are moderately correlated (0.3589), indicating that older banks tend to have more branches.

Table 1.
Descriptive Statistics

Variable	Definition	Obs	Mean	Std. Dev.	Min	Max
GDEP1B	The growth of deposit size less than 1 Billion IDR	216	0.00133	0.01025	-0.0602	0.02876
GDEP1M5B	The growth of deposit size between 1 Billion to 5 Billion IDR	216	0.00103	0.01778	-0.0655	0.09444
GDEP5B	The growth of deposit size more than 5 Billion IDR	216	0.00555	0.05606	-0.3278	0.31873
GTOTDEP	The growth of total deposits	216	0.0079	0.06404	-0.3395	0.37953
DEPRATE	Deposit rate (fee expense over total deposit)	194	0.04645	0.03356	0.00229	0.13544
GACC1B	The growth of account size of less than 1 Billion IDR	216	0.00515	0.07459	-0.5974	0.74176
GACC1B5B	The growth of account size between 1 Billion to 5 Billion IDR	188	0.00018	0.01421	-0.0542	0.08027
GACC5B	The growth of account size of more than 1 Billion IDR	216	0.0088	0.11268	-0.415	0.51515
GACCTOT	The growth of total accounts	216	0.00524	0.07412	-0.5968	0.73388
Zscore	the risk variable calculated Z=((ROA+EQTA))/SDROA	234	1.79447	0.43144	1.03072	3.11296
Post	The treatment event, a dummy for one after announcement, 0 otherwise	234	0.53846	0.49959	0	1
Islamic	Treated group. A dummy variable for one for Islamic banks, 0 for matched conventional banks	234	0.5	0.50107	0	1
Lowzscore	A dummy variable for one for banks with Zscore below the median. 0 otherwise.	234	0.4145	0.493	0	1
ROE	Return on equity	195	0.072	0.16703	-0.3003	0.71199
BRANCH	Logarithm of total bank branch	234	4.64254	1.83377	2.3979	9.24918
AGE	Age of banks	234	3.55389	0.68735	2.19723	4.82028

Table 2.
Correlation Matrix

	ZScore	ROE	BRANCH	AGE
ZScore	1.0000			
ROE	-0.1119	1.0000		
BRANCH	-0.3272	0.2605	1.0000	
AGE	-0.1536	0.0398	0.3589	1.0000

V. METHODOLOGY

5.1. Propensity Score Matching Procedure

The difference-in-differences (DID) approach necessitates that the control group shares characteristics similar to those of the treated group during the pre-treatment period to ensure accurate estimations. This means that our outcome variables should display parallel trends over time. In the context of DID, some research in Islamic banking directly compares Islamic and conventional banks (Aysan et al., 2017; Kocaata, 2017). We construct a reliable control group using a propensity score matching approach, following Schepens (2016). To match the treated and control groups, we include all Islamic and conventional banks with data available for each month between June 2014 and June 2015. This period corresponds to six months before the announcement and six months after the announcement takes place. We limit the treatment period to six months before and after to reduce the possible other effects that could impact the deposit growth rate and to capture an immediate effect as the nature of the announcement effect.

We apply a nearest neighbor matching approach as suggested by Schepens (2016) and Bennouri et al. (2018). To begin, we estimate a Probit model for the period surrounding the policy announcement. The model is specified as follows:

$$Islamic_{i,dec2014} = \alpha + \beta_1 * Y_{i,sept2014} + \beta_2 * Y_{i,Oct2014} + \beta_3 * Y_{i,Nov2014} + \beta_4 * X_{i,t} + \varepsilon_i \quad (1)$$

In this model, "Islamic" is a dummy variable that takes the value of one for Islamic banks (the treated group) and zero otherwise. Y represents the outcome variables (GDEP1B, GDEP1B5B, GDEP5B, GTOTDEP, DEPRATE), for which we consider the lagged values from three months prior to the announcement. We also include control variables (Xit) to account for bank size. This Probit regression produces a propensity score for each bank, which we use to facilitate nearest-neighbor matching.

We then utilize this score for nearest-neighbor matching, linking each treated Islamic bank with the closest conventional banks in the control group). The matching is done with replacement. This selection leaves us with a final sample of 18 out of 52 banks, with 9 Islamic and 9 conventional banks. The quality of matching (Table 3) presents a comparison of the mean values for the treated and control groups before and after matching. The table shows that matching successfully reduces differences between the groups, thus enhancing the comparability of the samples:

Table 3.
Matching

Variables		Mean of Treated group	Mean of Control group	Difference p-value
GTOTDEP	Unmatched	0.0212	0.0186	0.002
	Matched	0.0212	0.0266	0.005
GDEP1B	Unmatched	0.00014	0.006	0.0058
	Matched	0.00014	0.071	0.0069
GDEP1B5B	Unmatched	0.0151	0.0117	0.0038
	Matched	0.0151	0.0184	0.0032
GDEP5B	Unmatched	0.0206	0.0081	0.012
	Matched	0.0206	0.014	0.006
DEPRATE	Unmatched	0.0596	0.0758	0.016
	Matched	0.0596	0.0707	0.011

Variables are outlined in Table 2. This table contrasts the characteristics of the matched and unmatched samples prior to treatment. The unmatched sample consists of banks before the matching process, while the matched sample includes banks after matching has been completed. The nearest-neighbor matching procedure is conducted with replacement, utilizing the propensity score for each conventional bank in the control group. Each treated bank (Islamic) is paired with the closest conventional bank in the control group based on the propensity score. Non-matched firms are excluded from the analysis.

Last, we use mean tests to examine whether there is a significant parallel trend between the treated and control firms for each dependent variable during the period before the reform (refer to Table 3). Our analysis shows no differences between the two groups of banks before the reform. These findings confirm that the parallel trend assumption for our dependent variables before the treatment period is valid.

5.2. Estimation Strategy

After performing the matching procedure, we use the difference-in-difference strategy to assess the impacts of Indonesia's deposit insurance system reform. We compare the impact of the deposit insurance reform on Islamic banks affected by the reform and conventional banks unaffected by the reform. We test Hypotheses 1 and 2 using the following specification:

$$Y_{i,t} = \alpha + \beta_1 Islamic_i + \beta_2 Post_t + \beta_3 Islamic_i * Post_t + \beta_4 Control_{i,t} + \varepsilon_{i,t} \quad (2)$$

Where $Y_{i,t}$ is one of our deposit and account growth rate measures, or any of the deposit interest rate measures. $Islamic_i$ is a dummy that equals one for Islamic banks (treatment group indicator) and zero otherwise. $Post_t$ is a dummy indicator that equals to one in the time after the announcement on December 2014. $Control_{i,t}$ is a set of control variables for bank i at time t. The main variable of interest is

$Islamic_i * Post_t$. The coefficient β_3 shows the impact of the announcement of the Islamic deposit insurance on the outcome variable $Y_{i,t}$. This setup aligns with treatment effects theory, which focuses on causal estimation by comparing treated and untreated groups and supports policy intervention theory by allowing analysis of targeted regulatory impacts on financial behavior (Lee & Sawada, 2020; De Chaisemartin & d'Haultfoeuille, 2024). Additionally, deposit insurance can promote depositor confidence (Demirgüç-Kunt & Kane, 2002), potentially affecting Islamic banks' deposit behavior and stability in a way that differs from conventional banks. Furthermore, This approach, as demonstrated in similar regulatory studies, mitigates bias by the permanent difference between the treatment and the control group or by shared trends (Schepens, 2016).

We then turn to the second part of the analysis to test whether our results are sensitive to the level of risk as stated under Hypotheses 3 and 4. Banks could offer higher interest rates to collect more deposits and increase their market share in lending activities by offering more loans. We can measure risk to determine whether a variation in the deposit interest rate or the growth rate of deposits represents a market discipline or a demand effect. A negative impact of the risk on deposit flows could reflect a discipline mechanism; otherwise, it reflects the demand effect (Aysan et al., 2017).

We use the Z-score as a measure of default risk as it is widely used in empirical banking studies, including Islamic banks (Abedifar et al., 2015; Beck et al., 2013; Zins & Weill, 2017). Following Beck et al. (2013) and Fu et al. (2014), the z-score is calculated as follows:

$$Z = \frac{(ROA + EQTA)}{SDROA} \tag{3}$$

ROA represents the return on assets at time t, EQTA refers to equity as a proportion of total assets at time t, and SDROA is the standard deviation of ROA over three months. The Z-score quantifies the number of standard deviations that a bank's return must decrease to deplete its equity completely (Fu et al., 2014; Schaeck & Cihak, 2014). Thus, a higher Z-score indicates a more stable bank.

To test whether the risk sensitivity matters after the announcement, we interact the risk variable with the Different-in-Different estimator as follows:

$$Y_{i,t} = \alpha + \beta_1 Islamic_i + \beta_2 Post_t + \beta_3 Islamic_i * Post_t * LowZscore + \beta_4 Control_{i,t} + \varepsilon_{i,t} \tag{4}$$

LowZscore is a dummy variable equal to one if the bank's Zscore is under the median value of the sample and zero otherwise.

We adopt the methodology of Aysan et al. (2017), Ibrahim & Rizvi, (2018) and Meslier et al. (2017) to define our group of bank-specific characteristics as control variables. We measure bank size using the natural logarithm of total assets (LnTA), assess institutional maturity through bank age (AGE), and use Return on Equity (ROE) as a proxy for the profit-sharing principle. Depositors in Islamic banks

function as investment account holders and are regarded as "quasi-shareholders" of the bank. Additionally, ROE can also serve as an indicator of profitability.

We use specific time fixed effects to account for variations over time, effectively capturing macroeconomic fluctuations. While macroeconomic variables are not included individually in our model, this approach is based on the assumption that the differences in these variables during the studied periods would not significantly affect the results. Therefore, the inclusion of time fixed effects allows us to control for time-specific variations and ensure that the analysis remains robust against unobserved time-varying factors.

5.3. Empirical Results

This section presents the baseline regression for our dependent variables using the matched sample. We are interested in the impact of the announcement effect of the deposit insurance system reform on the growth rate of deposits and the interest rate level on deposits of Islamic banks. Following Schepens (2016), we control for unobserved differences between Islamic and matched conventional banks for confounding time trends. We also account for bank-specific characteristics to ensure they do not influence the estimations. We employ panel data regression with robust standard errors, incorporating bank and time-fixed effects.

Tables 4 and 5 show the results for the difference-in-difference analysis of Equation (1) used to test Hypotheses 1 and 2. We compare the change in the different categories of deposit and account growth rate and the deposit interest rate of the Islamic banks with those of conventional banks. The key variable of interest is the interaction term between the post dummy and the Islamic bank dummy, as it reflects the actual impact of the announcement regarding the Islamic deposit insurance system on deposit inflows. We find a positive and significant coefficient for the interaction term Post*Islamic when analyzing the growth rate of small deposits (GDEP1B). This finding suggests that the average growth rate of small deposits has significantly increased compared to what would be expected in the absence of the announcement, supporting hypothesis 1. We further find that the announcement of the Islamic Deposit Insurance does not influence the growth rates of medium or large deposits, nor does it affect the growth rate of banking accounts regardless of size. The results also reveal a negative and significant coefficient for the deposit interest rate (DEPRATE), which aligns with our hypothesis 2 that the announcement of Sharia-compliant deposit insurance will lower the interest rates required on deposits at Islamic banks compared to conventional banks.

The reasoning behind our finding could be that the deposit insurance system protects small depositors (GDEP1B) for both Islamic and conventional banks, specifically those with deposits under 2 billion IDR. The introduction of Sharia-compliant deposit insurance could eliminate Sharia risk and increase depositors' deposit supply. It could attract new customers from religious-inspired groups to join Islamic banks. Regarding the other sizes of deposits (columns (2)-(4)), we could not find a significant result. One reason might be due to the loyalty of Islamic bank depositors. Abedifar et al. (2013) point out that Islamic depositors might strongly be loyal to their Islamic banks, thus numbing the sensitivity to their risk. Turning to our price variable (DEPRATE), the negative relationship with the

deposit rate, as we mentioned earlier in this paper, is because the dual deposit insurance framework gives clarity to Islamic bank depositors that the insurance is sharia-compliant thus will reduce the return to depositors.

Regarding control variables, our risk variable Z-score shows that Islamic and conventional banks' depositors are sensitive to risk. It is shown in the negative relationship with the deposit rate.

Table 4.
Announcement of a Sharia-compliance Deposit Insurance and Deposit Flow of Islamic Banks (Deposit Growth Rate and Interest Rate on Deposits)

	(1)	(2)	(3)	(4)	(5)
	GDEP1B	**GDEP1M5B**	**GDEP5B**	**GTOTDEP**	**DEPRATE**
Post	-0.0167***	-0.00713	-0.0265	-0.0504*	0.0264***
	(-4.11)	(-0.95)	(-1.14)	(-1.96)	(2.90)
Islamic	0.0255	0.0418	0.459	0.526	-0.288***
	(0.64)	(0.56)	(1.58)	(1.63)	(-3.76)
Islamic*Post	0.00866**	-0.00477	0.0218	0.0257	-0.0234***
Zscore	(2.24)	(-0.73)	(0.99)	(0.99)	(-3.78)
BRANCH	-0.00703	-0.00342	-0.131**	-0.142**	0.00836
	(-0.77)	(-0.19)	(-2.28)	(-2.27)	(0.67)
AGE	0.000377	0.0138	0.167	0.182	-0.117***
	(0.02)	(0.35)	(1.12)	(1.10)	(-2.66)
ROE	0.0122	-0.0305	-0.402	-0.420	0.251**
	(0.25)	(-0.30)	(-1.03)	(-0.98)	(2.19)
_cons	-0.0346	0.0239	0.645	0.634	-0.147
	(-0.53)	(0.18)	(1.18)	(1.06)	(-0.96)
N	177	177	177	177	187
N_g	18	18	18	18	18
r2	0.369	0.266	0.177	0.247	0.844
TIME FE	YES	YES	YES	YES	YES
BANK FE	YES	YES	YES	YES	YES

This table displays the baseline regression results from a difference-in-differences analysis conducted on panel data involving 9 treated banks and 9 control group banks from July 2014 to June 2015. We employ regression with robust standards to estimate the following equation:

$$Y_{i,t} = \alpha + \beta_1 Islamic_i + \beta_2 Post_t + \beta_3 Islamic_i * Post_t + \beta_4 Control_{i,t} + \varepsilon_{i,t} \quad (5)$$

GDEP1B is The growth of deposit size less than 1 Billion IDR. GDEP1M5B is The growth of deposit size between 1 Billion to 5 Billion IDR. GDEP5B is The growth of total deposits**.** DEPRATE is Deposit rate (fee expense over total deposit). DEPRATE is Deposit rate (fee expense over total deposit). GACC1B is The growth

of account size less than 1 Billion IDR. GACC1B5B is The growth of account size between 1 Billion to 5 Billion IDR. GACC5B is The growth of account size more than 1 Billion IDR. GACCTOT is The growth of total accounts. Zscore is the risk variable calculated Z=((ROA+EQTA))/SDROA. Post is The treatment event, a dummy for one after announcement, 0 otherwise. Islamic is Treated group—a dummy variable for one for Islamic banks, 0 for matched conventional banks. lnTA is Natural logarithm of total asset. ROE is Return on equity. BRANCH. Logarithm of total bank branch. AGEis Age of banks. Standard errors are shown in parentheses. *, **, *** indicate significance at the 10%, 5%, and 1% level, respectively.

Table 5.
Announcement of a Sharia-compliance Deposit Insurance and Deposit Flow of Islamic Banks (Number of Accounts)

	(1)	(2)	(3)	(4)
	GACC1M	**GACC1M1B**	**GACC5B**	**GACCTOT**
Post	0.0227	0.000976	0.0319	0.0230
	(1.55)	(0.44)	(1.08)	(1.54)
Islamic	-0.0180	-0.00549	-0.0109	-0.0198
	(-1.20)	(-0.94)	(-0.30)	(-1.29)
Islamic*Post	-0.00393	-0.00119	-0.0199	-0.00335
Zscore	(-0.33)	(-0.28)	(-0.68)	(-0.29)
BRANCH	0.00354	-0.00285	0.0268	0.00181
	(0.16)	(-0.59)	(0.75)	(0.08)
AGE	0.00245	-0.00129	-0.00614	0.00218
	(1.13)	(-1.45)	(-1.10)	(1.02)
ROE	-0.00950	0.000527	0.00264	-0.00913
	(-0.71)	(0.21)	(0.17)	(-0.69)
_cons	-0.00575	0.00210	-0.0460	-0.00602
	(-0.12)	(0.24)	(-0.64)	(-0.12)
N	177	177	177	177
N_g	18	18	18	18
r2	0.0848	0.167	0.116	0.0832
TIME FE	YES	YES	YES	YES
BANK FE	YES	YES	YES	YES

This table displays the baseline regression results from a difference-in-differences analysis conducted on panel data involving 9 treated banks and 9 control group banks from July 2014 to June 2015. We employ regression with robust standards to estimate the following equation:

$$Y_{i,t} = \alpha + \beta_1 Islamic_i + \beta_2 Post_t + \beta_3 Islamic_i * Post_t + \beta_4 Control_{i,t} + \varepsilon_{i,t} \quad (6)$$

GDEP1B represents the growth of deposits under 1 billion IDR, while GDEP1M5B indicates the growth of deposits between 1 billion and 5 billion IDR. GDEP5B measures the overall growth of total deposits. DEPRATE refers to the

deposit rate, defined as fee expenses over total deposits. GACC1B denotes the growth of account sizes below 1 billion IDR, and GACC1B5B reflects the growth of account sizes between 1 billion and 5 billion IDR. GACC5B indicates the growth of account sizes over 1 billion IDR, while GACCTOT measures the growth of total accounts. Zscore is the risk variable calculated as Z = (ROA + EQTA) / SDROA. "Post" is a dummy variable indicating the treatment event, coded as one after the announcement and zero otherwise. "Islamic" is the treated group, represented as a dummy variable with one for Islamic banks and zero for matched conventional banks. lnTA stands for the natural logarithm of total assets, ROE is the return on equity, and BRANCH is the logarithm of the total number of bank branches. AGE indicates the age of the banks. Standard errors are provided in parentheses, with *, **, and *** denoting significance at the 10%, 5%, and 1% levels, respectively.

We then analyze the effect of the announcement of Sharia-compliant deposit insurance on deposit flows by considering the risk levels of Islamic banks. We interact the DID estimator with the default risk measure (Zscore). We create a dummy variable, LowZscore, which takes the value of one for riskier banks, to determine whether the Sharia-compliant deposit insurance influences the discipline of Islamic bank depositors due to the insurance coverage or loyalty. Our findings indicate that for banks with a lower Zscore (indicating higher risk), the impact of introducing Sharia deposit insurance on Islamic banks compared to conventional banks is significant. We find a positive and significant effect on deposit inflows for small deposits (less than 1 billion IDR) at banks with lower Zscores than would be expected without the announcement. However, for medium-sized deposits (1–5 billion IDR), we observe mixed results, with one specification showing a significant positive impact. In contrast, there is no significant effect for larger deposits (above 5 billion IDR). Furthermore, the results show a negative relationship between the interaction term in the DID estimator and risk concerning the deposit interest rate. Our findings imply that implementing Islamic deposit insurance reduces the risk sensitivity of Islamic banks compared to the conventional banks. In line with Aysan, Disli, Duygun, & Ozturk (2017), our results clearly show that Islamic bank depositors no longer worry about the source of the fund if the bank goes bankrupt because the new system ensures that the reimbursement fund is free from interest asset activity. Regarding banking accounts, we find almost no effect on the growth rate across different account sizes, except for medium-sized accounts (1–5 billion IDR), where a significant positive effect is observed in one specification. (see Table 6).

Table 6.
Announcement of a Sharia-compliance Deposit Insurance, Level of Default Risk and Deposit Flow of Islamic Banks (Deposit Growth Rate and Interest Rate on Deposits)

	(1)	(2)	(3)	(4)	(5)
	GDEP1B	**GDEP1M5B**	**GDEP5B**	**GTOTDEP**	**DEPRATE**
Post	-0.00699	-0.0125	-0.00549	-0.0250	0.0121
	(-1.38)	(-1.63)	(-0.21)	(-0.84)	(1.07)
Islamic	0.00544	0.0555	0.0284	0.0893	-0.191***
	(0.18)	(0.98)	(0.16)	(0.44)	(-3.59)
LowZscore	0.00315	0.00645	0.000552	0.0102	-0.0303***
	(0.67)	(1.02)	(0.03)	(0.47)	(-3.99)
LowZscore*Islamic	0.000586	-0.0186	0.0651	0.0472	0.00459
	(0.09)	(-1.54)	(1.62)	(1.10)	(0.38)
LowZscore*Post	-0.0148**	-0.00224	-0.0182	-0.0353	0.0309***
	(-2.56)	(-0.29)	(-0.91)	(-1.41)	(4.69)
LowZscore*Islamic*Post	0.0130**	0.0171**	-0.0128	0.0173	-0.0345***
	(2.56)	(2.10)	(-0.62)	(0.68)	(-3.46)
BRANCH	-0.00388	0.0233	0.0432	0.0626	-0.0484
	(-0.21)	(0.65)	(0.41)	(0.52)	(-1.36)
AGE	0.0213	-0.0536	-0.117	-0.150	0.0688
	(0.45)	(-0.56)	(-0.42)	(-0.47)	(0.73)
ROE	0.00656	0.00475	0.0791	0.0904	-0.0208*
	-0.0522	0.0423	0.167	0.157	0.124
_cons	(-0.86)	(0.34)	(0.45)	(0.37)	(0.99)
	-0.0522	0.0423	0.167	0.157	0.124
N	177	177	177	177	187
N_g	18	18	18	18	18
r2	0.407	0.281	0.156	0.233	0.880
TIME FE	YES	YES	YES	YES	YES
BANK FE	YES	YES	YES	YES	YES

This table displays the baseline regression results from a difference-in-differences analysis conducted on panel data involving 9 treated banks and 9 control group banks from July 2014 to June 2015. We employ regression with robust standards to estimate the following equation:

$$Y_{i,t} = \alpha + \beta_1 Islamic_i + \beta_2 Post_t + \beta_3 Islamic_i * Post_t * LowZscore + \beta_4 Control_{i,t} + \varepsilon_{i,t} \quad (7)$$

GDEP1B is The growth of deposit size less than 1 Billion IDR. GDEP1M5B is The growth of deposit size between 1 Billion to 5 Billion IDR. GDEP5B is The growth of total deposits**.** DEPRATE is Deposit rate (fee expense over total deposit). DEPRATE is Deposit rate (fee expense over total deposit). GACC1B is The growth of account size less than 1 Billion IDR. GACC1B5B is The growth of account size

between 1 Billion to 5 Billion IDR. GACC5B is The growth of account size more than 1 Billion IDR. GACCTOT is The growth of total accounts. Zscore is the risk variable calculated Z=((ROA+EQTA))/SDROA. Post is The treatment event, a dummy for one after announcement, 0 otherwise. Islamic is Treated group—a dummy variable for one for Islamic banks, 0 for matched conventional banks. lnTA is Natural logarithm of total asset. ROE is Return on equity. BRANCH. Logarithm of total bank branch. AGEis Age of banks. Standard errors are shown in parentheses. *, **, *** indicate significance at the 10%, 5%, and 1% level, respectively

Table 7.
Announcement of a Sharia-compliance Deposit Insurance, Level of Default Risk and Deposit Flow of Islamic Banks (Number of Accounts)

	(1)	(2)	(3)	(4)
	GACC1M	**GACC1M1B**	**GACC5B**	**GACCTOT**
Post	-0.0423	-0.00911	0.0228	-0.0453
	(-1.34)	(-1.44)	(0.46)	(-1.44)
Islamic	-0.417	0.0317	-0.0415	-0.407
	(-0.93)	(0.72)	(-0.12)	(-0.91)
LowZscore	0.0134	0.00458	-0.0612	0.0140
	(0.68)	(0.90)	(-0.88)	(0.71)
LowZscore*Islamic	0.00777	-0.0166*	0.144	0.00912
	(0.29)	(-1.69)	(1.30)	(0.34)
LowZscore*Post	0.00306	-0.00397	-0.0257	0.00474
	(0.11)	(-0.63)	(-0.52)	(0.17)
LowZscore*Islamic*Post	-0.0194	0.0143**	-0.0155	-0.0196
	(-0.70)	(2.12)	(-0.21)	(-0.71)
BRANCH	-0.288	0.0124	-0.00748	-0.283
	(-0.99)	(0.44)	(-0.03)	(-0.98)
AGE	0.773	-0.0260	0.0138	0.759
	(1.00)	(-0.35)	(0.02)	(1.00)
ROE	0.0582	-0.000749	0.0884	0.0641
	(1.07)	(-0.07)	(0.70)	(1.18)
_cons	-1.040	0.0119	0.0182	-1.022
	(-1.03)	(0.12)	(0.02)	(-1.02)
N	177	177	177	177
N_g	18	18	18	18
r2	0.202	0.270	0.183	0.200
TIME FE	YES	YES	YES	YES
BANK FE	YES	YES	YES	YES

This table displays the baseline regression results from a difference-in-differences analysis conducted on panel data involving 9 treated banks and 9 control group banks from July 2014 to June 2015. We employ regression with robust standards to estimate the following equation:

$$Y_{i,t} = \alpha + \beta_1 Islamic_i + \beta_2 Post_t + \beta_3 Islamic_i * Post_t * LowZscore + \beta_4 Control_{i,t} + \varepsilon_{i,t} \quad (8)$$

GDEP1B is The growth of deposit size less than 1 Billion IDR. GDEP1M5B is The growth of deposit size between 1 Billion to 5 Billion IDR. GDEP5B is The growth of total deposits**.** DEPRATE is Deposit rate (fee expense over total deposit). DEPRATE is Deposit rate (fee expense over total deposit). GACC1B is The growth of account size less than 1 Billion IDR. GACC1B5B is The growth of account size between 1 Billion to 5 Billion IDR. GACC5B is The growth of account size more than 1 Billion IDR. GACCTOT is The growth of total accounts. Zscore is the risk variable calculated Z=((ROA+EQTA))/SDROA. Post is The treatment event, a dummy for one after announcement, 0 otherwise. Islamic is Treated group. A dummy variable for one for Islamic banks, 0 for matched conventional banks. lnTA is Natural logarithm of total asset. ROE is Return on equity. BRANCH. Logarithm of total bank branch. AGEis Age of banks. Standard errors are shown in parentheses. *, **, *** indicate significance at the 10%, 5%, and 1% level, respectively.

VI. ROBUSTNESS CHECKS

To make sure that our results are robust, we consider an alternative dependent variable. We use the natural logarthim of deposit to measure the size of deposit. We also try an alternative proxy of risk, the standard deviation of ROA (SDROA). Our robustness checks show that we find similar conclusions.

Table 8.
Robustness Checks: Alternative Dependent Variables

	(1)	(2)	(3)	(4)
	LnDEP1B	**LnDEP1M5B**	**LnDEP5B**	**LnTOTDEP**
Post	0.0289	-0.0840	-0.0840	0.00672
	(0.76)	(-1.56)	(-1.56)	(0.17)
Islamic	-2.056***	-2.576***	-2.576***	-0.0513
	(-3.88)	(-5.97)	(-5.97)	(-0.13)
Post*Islamic	0.0854***	-0.0283	-0.0283	0.0853***
	(3.08)	(-0.75)	(-0.75)	(3.29)
Zscore	-0.00560	-0.0179	-0.0179	0.00982
	(-0.04)	(-0.17)	(-0.17)	(0.09)
BRANCH	0.814***	-0.460*	-0.460*	0.461**
	(3.54)	(-1.89)	(-1.89)	(2.56)
AGE	-0.649	1.317**	1.317**	-0.155
	(-1.42)	(2.28)	(2.28)	(-0.44)
ROE	0.0665*	0.0869	0.0869	0.0143
	(1.70)	(1.29)	(1.29)	(0.39)
_cons	0.779	-5.225	-5.225	-4.517
	(0.24)	(-1.61)	(-1.61)	(-1.53)
N	195	195	195	195

Table 8.
Robustness Checks: Alternative Dependent Variables (Continued)

	(1)	(2)	(3)	(4)
	LnDEP1B	**LnDEP1M5B**	**LnDEP5B**	**LnTOTDEP**
N_g	18	18	18	18
r2	0.999	0.997	0.997	0.999
TIME FE	YES	YES	YES	YES
BANK FE	YES	YES	YES	YES

This table displays the baseline regression results from a difference-in-differences analysis conducted on panel data involving 9 treated banks and 9 control group banks from July 2014 to June 2015. We employ regression with robust standards to estimate the following equation:

$$Y_{i,t} = \alpha + \beta_1 Islamic_i + \beta_2 Post_t + \beta_3 Islamic_i * Post_t + \beta_4 Control_{i,t} + \varepsilon_{i,t} \quad (9)$$

GDEP1B is The growth of deposit size less than 1 Billion IDR. GDEP1M5B is The growth of deposit size between 1 Billion to 5 Billion IDR. GDEP5B is The growth of total deposits**.** DEPRATE is Deposit rate (fee expense over total deposit). DEPRATE is Deposit rate (fee expense over total deposit). GACC1B is The growth of account size less than 1 Billion IDR. GACC1B5B is The growth of account size between 1 Billion to 5 Billion IDR. GACC5B is The growth of account size more than 1 Billion IDR. GACCTOT is The growth of total accounts. Zscore is the risk variable calculated Z=((ROA+EQTA))/SDROA. Post is The treatment event, a dummy for one after announcement, 0 otherwise. Islamic is Treated group. A dummy variable for one for Islamic banks, 0 for matched conventional banks. lnTA is Natural logarithm of total asset. ROE is Return on equity. BRANCH. Logarithm of total bank branch. AGE is Age of banks. Standard errors are shown in parentheses. *, **, *** indicate significance at the 10%, 5%, and 1% level, respectively.

Table 9.
Robustness Test Alternative Risk Variable (SDROA)

	(1)	(2)	(3)	(4)	(5)
	GDEP1M	**GDEP1M5B**	**GDEP5B**	**GTOTDEP**	**DEPRATE**
Post	-0.0146***	-0.0110	-0.0145	-0.0402	0.0204**
	(-3.40)	(-1.32)	(-0.64)	(-1.55)	(2.12)
Islamic	-0.0229	-0.0131	-0.0290	-0.0651	-0.205***
	(-0.72)	(-0.21)	(-0.18)	(-0.38)	(-2.96)
SDROA	-0.198	-0.197	0.686	0.290	-0.162
	(-1.13)	(-0.46)	(0.53)	(0.20)	(-0.42)
SDROAxIslamic	0.0636	0.445	-1.110	-0.602	0.319
	(0.38)	(1.19)	(-1.14)	(-0.51)	(0.81)
SDROAxPost	0.531**	0.839***	0.390	1.760*	-0.766**
	(2.04)	(2.67)	(0.45)	(1.69)	(-2.30)

Table 9.
Robustness Test Alternative Risk Variable (SDROA) (Continued)

	(1)	(2)	(3)	(4)	(5)
	GDEP1M	**GDEP1M5B**	**GDEP5B**	**GTOTDEP**	**DEPRATE**
SDROAxPostxIslamic	-0.272	-0.828***	2.029*	0.929	0.598*
	(-1.13)	(-2.77)	(1.93)	(0.78)	(1.94)
BRANCH	-0.0264	-0.00752	0.000627	-0.0333	-0.0634
	(-1.31)	(-0.18)	(0.01)	(-0.29)	(-1.41)
AGE	0.0605	0.0317	-0.282	-0.190	0.220
	(1.13)	(0.29)	(-1.00)	(-0.60)	(1.65)
ROE	0.00865	-0.0135	0.0172	0.0124	0.0314***
	(0.86)	(-0.68)	(0.20)	(0.15)	(2.77)
_cons	-0.248	0.0108	-1.868*	-2.105*	0.726***
	(-1.18)	(0.04)	(-1.87)	(-1.93)	(2.74)
N	177	177	177	177	
N_g	18	18	18	18	
r2	0.399	0.304	0.319	0.383	
TIME FE	YES	YES	YES	YES	
BANK FE	YES	YES	YES	YES	

This table displays the baseline regression results from a difference-in-differences analysis conducted on panel data involving 9 treated banks and 9 control group banks from July 2014 to June 2015. We employ regression with robust standards to estimate the following equation:

$$Y_{i,t} = \alpha + \beta_1 Islamic_i + \beta_2 Post_t + \beta_3 Islamic_i * Post_t * SDROA + \beta_4 Control_{i,t} + \varepsilon_{i,t} \quad (10)$$

GDEP1B represents the growth of deposit sizes below 1 billion IDR. GDEP1M5B indicates the growth of deposit sizes between 1 billion and 5 billion IDR. GDEP5B measures the overall growth of total deposits. DEPRATE refers to the deposit rate, calculated as fee expenses over total deposits. GACC1B denotes the growth of account sizes under 1 billion IDR, while GACC1B5B reflects the growth of account sizes between 1 billion and 5 billion IDR. GACC5B indicates the growth of account sizes over 1 billion IDR, and GACCTOT measures the growth of total accounts. SDROA is the standard deviation of ROA, serving as a risk variable. "Post" is a dummy variable indicating the treatment event, coded as one after the announcement and zero otherwise. "Islamic" is the treated group, a dummy variable coded as one for Islamic banks and zero for matched conventional banks. lnTA stands for the natural logarithm of total assets, ROE is the return on equity, and BRANCH is the logarithm of the total number of bank branches. AGE indicates the age of the banks. Standard errors are provided in parentheses, and significance levels are marked with *, **, and *** for 10%, 5%, and 1%, respectively.

VII. CONCLUSION AND RECOMMENDATION

The continued development of Sharia-compliant deposit insurance is essential due to the rapid expansion of Islamic banks across various jurisdictions. Islamic deposit insurance serves as a financial safety net, enhancing the stability and soundness of these banks. This paper examines the effects of introducing Sharia-compliant deposit insurance on deposit flows, utilizing an exogenous shock within the Indonesian dual banking system. We employ a difference-in-differences strategy to compare the changes in deposit flows of Islamic banks against a matched control group of conventional banks. Our results show that the deposit flow of Islamic banks increases after the announcement. More precisely, our empirical results show that the announcement only affects the small depositors and does not affect the medium and big depositors. The reasons behind these findings are that the reform could convince the religious-inspired depositors to join the banking system since this reform eliminates the sharia-risk. For the medium and big depositors, we see two tentative explanations that might be at play. On the one hand, the loyalty to their banks (and plausibly relative higher transaction costs vis-à-vis small depositors) might explain why the announcement does not directly affect this type of depositors to switch bank accounts. On the other hand, we believe that lack of full coverage may arguably explain the absence of reaction of these big depositors. The results also show that after the introduction, Islamic banks depositors are still sensitive to risk but not sensitive to the price that banks offer compared to conventional banks. The reason behind this is that Islamic bank depositors are more convinced by the new system and they are no longer confused about the source of the fund since it is compliant with sharia.

This paper contributes to the ongoing development of a Sharia compliance deposit insurance on bank stability and depositor's confidence. Our results suggest that the implementation of an Islamic deposit insurance system will give an additional trust for depositors and enhance financial stability. Our results also provide a noteworthy policy implication. The jurisdictions that have a dual banking market should consider implementing a Sharia compliance deposit insurance system to boost the Islamic banking market and increase financial stability. Building on this policy relevance, future research could also focus on the interaction between Islamic deposit insurance design and broader financial stability outcomes.

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