

Liability Management and Third-Party Fund Mobilisation in Indonesian Islamic Banks: A Systematic Literature Review of *Wadiah* and *mudharabah* Instruments

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Received: 22-09-2024

Revised: 08-10-2024

Accepted: 25-12-2024

Published: 30-12-2024

Abstract: Liability management is a critical determinant of Islamic banking performance, since the deposit base mobilised through Sharia-compliant contracts primarily *wadiah* and *mudharabah* provides the structural foundation for financing intermediation. Despite the rapid expansion of Indonesia's Islamic banking sector, the conceptual literature on liability management for third-party funds (*Dana Pihak Ketiga*, *DPK*) remains scattered across textbooks, regulatory reports, and journal articles, with limited synthesis into a coherent framework. This study addresses this gap by conducting a systematic literature review of liability management practices in Indonesian Islamic banks, with particular focus on the operational characteristics, risk profiles, and managerial trade-offs associated with *wadiah* and *mudharabah*-based fund mobilisation. A PRISMA-inspired protocol was applied to identify, screen, and synthesise twenty-eight English- and Indonesian-language sources comprising peer-reviewed journal articles, regulatory reports, and authoritative textbooks published between 2001 and 2024. Sources were thematically coded along four analytic dimensions: contractual structure, product taxonomy, liquidity-profitability trade-offs, and macro-institutional determinants. The synthesis yields three principal findings. First, *wadiah* and *mudharabah* operate on substantively different risk-return architectures, with *wadiah* anchoring short-term liquidity through on-demand non-remunerated deposits and *mudharabah* supporting medium-to-long-term productive financing through profit-sharing investment accounts. Second, effective liability management requires a structural pairing between fund characteristics and asset deployment, mediated through Asset and Liability Management (ALMA) protocols that guard against maturity mismatch. Third, the success of fund mobilisation is conditioned not only by internal managerial competence but also by external factors public trust, Islamic financial literacy, service quality, and competitive positioning vis-à-vis conventional banks. The study contributes a consolidated conceptual framework for liability management in Indonesian Islamic banks and advances four practical recommendations and three priority directions for future empirical research.

Keywords: Liability Management; Third-Party Funds; Islamic Banking; *Wadiah*; *mudharabah*; Systematic Literature Review.

Abstrak: Manajemen liabilitas merupakan faktor penentu kinerja perbankan syariah, karena basis simpanan yang dimobilisasi melalui akad-akad syariah terutama wadiah dan mudharabah menjadi fondasi struktural bagi intermediasi pembiayaan. Meskipun sektor perbankan syariah Indonesia berkembang pesat, literatur konseptual tentang manajemen liabilitas untuk Dana Pihak Ketiga (DPK) masih tersebar di berbagai sumber dengan sintesis yang terbatas. Penelitian ini mengisi celah tersebut melalui *systematic literature review* terhadap praktik manajemen liabilitas pada bank syariah Indonesia, dengan fokus pada karakteristik operasional, profil risiko, dan trade-off manajerial yang terkait dengan mobilisasi dana berbasis wadiah dan mudharabah. Protokol berinspirasi PRISMA diterapkan untuk mengidentifikasi, menyaring, dan mensintesis 28 sumber berbahasa Inggris dan Indonesia yang terbit antara 2001 dan 2024. Sumber dikodifikasi tematik melalui empat dimensi analitis: struktur kontraktual, taksonomi produk, trade-off likuiditas–profitabilitas, dan determinan makro-institusional. Sintesis menghasilkan tiga temuan utama: pertama, wadiah dan mudharabah beroperasi pada arsitektur risiko-imbalance hasil yang berbeda secara substantif; kedua, manajemen liabilitas yang efektif memerlukan pasangan struktural antara karakteristik dana dan deployment aset melalui protokol ALMA; ketiga, keberhasilan mobilisasi dana dikondisikan oleh faktor internal dan eksternal termasuk kepercayaan publik, literasi keuangan syariah, dan kualitas layanan. Penelitian ini menyumbangkan kerangka konseptual terkonsolidasi dan mengajukan empat rekomendasi praktis serta tiga arah prioritas untuk penelitian empiris mendatang.

Kata Kunci: Manajemen Liabilitas; Dana Pihak Ketiga; Bank Syariah; Wadiah; mudharabah; Tinjauan Literatur Sistematis.

Introduction

Indonesia's Islamic banking sector has experienced sustained growth over the past two decades, evolving from a niche financial offering into a structurally significant component of the national financial system. According to the Financial Services Authority (Otoritas Jasa Keuangan, OJK), total Islamic banking assets in Indonesia reached IDR 859 trillion by the end of 2023, representing a year-on-year growth of approximately 11.7% and a market share of around 7.4% of total banking assets (OJK, 2023). This expansion has been catalysed by regulatory reforms most notably Law No. 21 of 2008 on Islamic Banking and by the establishment of Bank Syariah Indonesia (BSI) in 2021 through the merger of three state-owned Islamic bank subsidiaries, creating the first Islamic bank with systemic scale (Hudaefi & Beik, 2021). Within this context, third-party fund (Dana Pihak Ketiga, DPK) mobilisation occupies a strategic position because it constitutes the principal source from which Islamic banks fund their financing operations. Effective liability management the systematic governance of these mobilised funds is therefore not merely an operational concern but a determinant of competitive viability vis-à-vis the much larger conventional banking sector (Antonio, 2001; Karim, 2013).

The historical trajectory of Islamic banking in Indonesia dates to 1992, when Bank Muamalat Indonesia (BMI) was established as the country's first Islamic commercial bank. The first decade of operation was characterized by slow growth, a limited branch network, and constrained product innovation (Antonio, 2001). The passage of Law No. 10 of 1998 on Banking, which formally recognised the dual-

banking system, and subsequently Law No. 21 of 2008 specifically governing Islamic banking, provided the regulatory infrastructure that enabled acceleration. By 2024, the Islamic banking landscape comprised 14 Islamic commercial banks (Bank Umum Syariah, BUS), 20 Islamic business units (Unit Usaha Syariah, UUS) within conventional banks, and 163 Islamic rural banks (Bank Pembiayaan Rakyat Syariah, BPRS) (OJK, 2023). The structural challenge facing this expanding sector is no longer regulatory legitimacy but operational efficiency particularly in the mobilisation and deployment of the deposit base that fuels intermediation.

Unlike conventional banks, which mobilise deposits through interest-bearing instruments, Islamic banks operate under Sharia constraints that prohibit *riba* (interest) and require all transactions to be grounded in valid *muamalah* contracts. Two contracts dominate the Indonesian Islamic banking deposit-mobilisation landscape: *wadiah*, a custodial contract whereby the bank acts as trustee of customer deposits with an obligation to return them on demand, and *mudharabah*, a profit-sharing contract whereby the customer (*shahibul maal*) entrusts funds to the bank (*mudharib*) for productive deployment under a pre-agreed profit ratio (Antonio, 2001; Az-Zuhaili, 2011; Sula, 2004). These two contracts produce structurally different deposit profiles: *wadiah*-based funds (savings and current accounts) are non-remunerated and on-demand, prioritising liquidity and security; *mudharabah*-based funds (savings and time deposits) are profit-sharing and more time-structured, supporting longer-tenor financing (Ascarya, 2007; Soemitra, 2017). In addition to these primary instruments, ancillary contracts such as *qardh* (interest-free lending) and *ijarah* (lease-based instruments used in *sukuk*) supplement the deposit-mobilisation toolkit, although their role in DPK composition remains secondary.

Despite the operational centrality of these instruments, the conceptual literature on liability management for Indonesian Islamic banks remains fragmented across three domains: classical Islamic finance textbooks that emphasise contract law and jurisprudential foundations (Antonio, 2001; Karim, 2013; Az-Zuhaili, 2011); banking-management literature that addresses asset-liability management techniques without always integrating the Sharia dimension (Arifin, 2012; Muhamad, 2014; Rivai & Arifin, 2010); and applied empirical studies that examine specific products, risk dimensions, or customer-preference determinants in isolation (Hidayat, 2019; Fitri, 2016; Nurjanah & Setiawan, 2020). What has been missing is a systematic synthesis that integrates these strands into a coherent framework spanning contractual structure, product taxonomy, managerial trade-offs, and macro-institutional determinants.

Three gaps are particularly salient. First, prior reviews tend to address either *wadiah* or *mudharabah* in isolation rather than analysing them as a complementary pair within a unified liability-management architecture. This isolated treatment obscures the functional interdependence between the two deposit types, where *wadiah* serves as a liquidity buffer and *mudharabah* as a financing driver. Second, the

link between liquidity–profitability trade-offs at the product level and broader Asset and Liability Management (ALMA) practice has not been adequately theorised; practitioners face these trade-offs daily, yet the literature treats contract theory and ALMA as separate literatures. Third, the role of external determinants public trust, Islamic financial literacy, service quality, and digital-readiness as mediating factors in the success of liability management has been under-integrated into the conceptual mainstream, despite mounting empirical evidence of their importance (Hudaefi & Beik, 2021; Iskandar et al., 2020; Wahyuni-TD et al., 2021).

This study addresses these gaps by conducting a systematic literature review of liability management and third-party fund mobilisation in Indonesian Islamic banks. Three research questions guide the analysis: (1) What are the substantive contractual and operational characteristics of *wadiah* and *mudharabah* as instruments of deposit mobilisation in Indonesian Islamic banks? (2) What managerial trade-offs particularly between liquidity and profitability shape the practice of liability management at the product level, and how are these mediated through ALMA frameworks? (3) What internal and external determinants condition the success of liability management for Islamic banks competing in a dual banking system? Understanding these questions is particularly urgent given the Indonesian government's stated ambition to achieve a 15% Islamic banking market share by 2030 a target that will require substantial acceleration in DPK growth from the current base of approximately IDR 618 trillion. Without effective liability management, this growth target risks producing a fragile deposit base characterised by maturity mismatch, depositor concentration, and vulnerability to competitive displacement.

The study contributes by synthesising scattered evidence into a consolidated conceptual framework, by integrating contract theory with banking-management theory in a single analytic structure, and by advancing concrete recommendations for both managerial practice and future empirical research. The scope of the review encompasses both the micro-level operational mechanics of deposit management and the macro-level institutional and regulatory environment that shapes deposit-mobilisation outcomes. By addressing both levels simultaneously, the review avoids the reductionism that has characterised prior treatments which tend to focus on either contract law in isolation from banking practice, or on banking techniques in isolation from Sharia foundations. The remainder of the article proceeds as follows: Section 2 presents the systematic review method; Section 3 reports the findings organised around the three research questions; Section 4 discusses the synthesised framework and practical recommendations; and Section 5 concludes with limitations and an agenda for further work.

Method

Research Design

This study employs a qualitative systematic literature review (SLR) design, following the principles articulated by Tranfield et al. (2003) and adapted from the PRISMA

reporting guidelines for systematic reviews (Page et al., 2021). The SLR design is appropriate for the present study because the research aim is to synthesise existing conceptual and empirical knowledge rather than to generate new primary data. Compared with a conventional narrative literature review, the SLR approach increases methodological transparency by specifying the search strategy, inclusion and exclusion criteria, screening process, and coding framework in advance, thereby reducing selection bias and enhancing the replicability of conclusions (Snyder, 2019). The qualitative orientation of the synthesis thematic-comparative rather than meta-analytic reflects the heterogeneous nature of the source material, which spans conceptual textbooks, regulatory reports, and applied empirical studies with different methodological designs.

Search Strategy and Data Sources

Sources were identified through two complementary channels. First, a systematic database search was conducted across Google Scholar, DOAJ (Directory of Open Access Journals), Garuda (Garba Rujukan Digital), Emerald Insight, and the OJK official publications repository, using a combination of English and Bahasa Indonesia search terms: 'liability management' AND 'Islamic bank'; 'manajemen liabilitas' AND 'bank syariah'; 'third-party funds' AND 'Islamic banking'; 'dana pihak ketiga' AND 'wadiah' or 'mudharabah'; 'asset liability management' AND 'sharia banking'; 'penghimpunan dana' AND 'bank syariah'; and 'fund mobilisation' AND 'Islamic financial institution'. Second, ancestry searching (forward and backward citation tracking) was applied to seed studies defined as the most frequently cited works in the initial results to ensure coverage of foundational texts frequently cited but not surfaced through keyword search alone. This two-channel approach enhances recall and reduces the risk of omitting influential sources published in formats or outlets not fully indexed by the target databases (Tranfield et al., 2003).

Inclusion and Exclusion Criteria

Inclusion criteria were: (a) sources published between January 2001 and December 2024, with the start date corresponding to the publication of Antonio's (2001) foundational text on Indonesian Islamic banking; (b) sources directly addressing liability management, deposit mobilisation, *wadiah*, *mudharabah*, DPK management, or related ALMA themes within the Islamic banking context; (c) sources written in English or Bahasa Indonesia; and (d) source types limited to peer-reviewed journal articles, scholarly books, regulatory reports, and authoritative textbooks published by recognised academic or governmental publishers. Exclusion criteria were: (a) sources addressing only conventional banking liability management without Sharia application or reference; (b) news articles, opinion pieces, working papers without peer review, or non-scholarly blog posts; (c) sources duplicating coverage already represented by more authoritative or more recent works in the corpus; and (d) sources published in languages other than English or Bahasa Indonesia.

Screening and Selection

The screening process followed three sequential stages, summarised in Table 1. Stage 1 (identification) yielded 64 unique records after duplicate removal across the five databases. Stage 2 (title and abstract screening) excluded 24 records that did not meet the topical inclusion criteria primarily sources that discussed Islamic banking in general without specific treatment of liability management or DPK leaving 40 records for full-text assessment. Stage 3 (full-text eligibility assessment) excluded a further 12 records due to insufficient depth of analysis on liability management, near-complete overlap with other sources already in the corpus, or failure to meet the quality-assessment criteria, yielding a final corpus of 28 sources for synthesis. The corpus comprises 12 peer-reviewed journal articles, 9 authoritative textbooks, 4 regulatory reports from OJK and Bank Indonesia, and 3 edited-volume chapters.

Table 1. Source Selection Following PRISMA-Inspired Protocol

Stage	Records Remaining	Records Excluded
1. Identification (database + ancestry search)	64	
2. Title and abstract screening	40	24
3. Full-text eligibility assessment	28	12
Final corpus for synthesis	28	

Source: Authors' application of PRISMA-inspired protocol, 2024.

Coding and Synthesis Framework

Included sources were coded along four analytic dimensions corresponding to the research questions. Dimension 1 contractual structure captured the legal and operational features of *wadiah* and *mudharabah* as deposit-mobilisation instruments, including sub-categories such as contract pillars (*rukun*), conditions (*shurut*), risk allocation, and return structure. Dimension 2 product taxonomy mapped the deposit products derived from these contracts (*wadiah* savings, *wadiah* current accounts, *mudharabah* savings, *mudharabah* time deposits, *qardh*-based instruments, and *ijarah*-based *sukuk*) and their characteristic features (tenor, withdrawal flexibility, return mechanism, regulatory treatment). Dimension 3 managerial trade-offs captured the liquidity-profitability tensions, cost-of-fund implications, maturity-mismatch risks, and ALMA strategies discussed in the literature, including specific techniques such as gap analysis, duration matching, and behavioural-cash-flow modelling. Dimension 4 macro-institutional determinants captured the external factors (public trust, Islamic financial literacy, service quality, digital infrastructure, competitive dynamics within the dual-banking system) that condition fund-mobilisation success. Coding was conducted independently by the lead researcher and cross-validated by a co-author; disagreements were resolved through discussion and re-reading of the source material to enhance inter-coder reliability.

Quality Assessment and Trustworthiness

Source quality was assessed through three criteria adapted from the systematic-review methodology literature (Tranfield et al., 2003; Snyder, 2019): authority of the source (peer-review status, publisher reputation, author credentials, citation frequency); recency and relevance to the contemporary Indonesian Islamic banking context; and methodological transparency, particularly for empirical sources that reported original data. Sources meeting all three criteria were classified as high quality; those meeting two as moderate; and those meeting only one as marginal. Only high- and moderate-quality sources were retained in the final corpus. Trustworthiness of the synthesis was enhanced through three procedures: (a) transparent documentation of the search and screening process, enabling readers to evaluate the corpus independently; (b) cross-author validation of coding decisions at each analytic dimension; and (c) preservation of an audit trail linking each synthesis claim to specific source citations (Lincoln & Guba, 1985; Creswell & Poth, 2018).

Results and Discussion

Conceptual Foundation: Third-Party Funds in Indonesian Islamic Banking

Third-Party Funds (Dana Pihak Ketiga, DPK) are defined under Article 1(5) of Law No. 10 of 1998 on Banking as funds entrusted by the public to banks under a deposit agreement, taking the forms of current accounts, time deposits, savings, deposit certificates, or other equivalent instruments. The synthesis of Indonesian Islamic banking literature consistently identifies DPK as the largest single funding source for the sector, accounting for most total liabilities and providing the principal channel through which banks fulfil their intermediation role (Fitri, 2016; Soemitra, 2017; Ismail, 2011). In the Sharia banking context, DPK takes three principal product forms *wadiah* savings and current accounts, *mudharabah* savings, and *mudharabah* time deposits each governed by distinct contractual logic and producing distinct managerial implications (Antonio, 2001; Karim, 2013).

The strategic significance of DPK lies in the proportional relationship between deposit mobilisation and financing capacity. A larger DPK base enables Islamic banks to offer a wider range of financing products *murabahah*, *mudharabah*, *musyarakah*, *ijarah*, *istishna* and to support transaction volumes consistent with operational scale economies (Fitri, 2016). According to OJK data (2023), total DPK in Indonesian Islamic banking reached approximately IDR 618 trillion in December 2023, with time deposits (deposito *mudharabah*) constituting around 50%, savings (*tabungan wadiah* and *mudharabah*) around 35%, and current accounts (*giro wadiah*) around 15%. This composition carries significant managerial implications: the heavy reliance on fixed-term *mudharabah* deposits provides tenor stability but at a higher cost of fund, while the more modest *wadiah* base provides low-cost funding but with on-demand liquidity risk.

The literature further distinguishes between three categories of banking funds that together constitute the balance-sheet: first-party funds (*modal sendiri*),

comprising paid-up capital and retained earnings; second-party funds (dana pihak kedua), comprising interbank borrowings and subordinated debt; and third-party funds (DPK), comprising customer deposits. DPK dominates the liability structure of Indonesian Islamic banks, typically accounting for 80–85% of total funding (Kasmir, 2014; Muhamad, 2014). This dominance makes DPK management the single most consequential domain of liability management in the Islamic banking context a finding that is consistent across the entire reviewed corpus.

Comparative Architecture of Wadiah and mudharabah Instruments

The synthesis reveals that *wadiah* and *mudharabah* produce structurally divergent deposit profiles, with implications that propagate through every dimension of liability management. Table 2 summarises the key comparative features identified across the reviewed corpus.

Table 2. Comparative Architecture of *Wadiah* and *mudharabah* Deposit Instruments

Dimension	<i>Wadiah</i>	<i>mudharabah</i>
Contract nature	Custodial (<i>titipan</i>); bank as trustee	Investment partnership; bank as <i>mudharib</i>
Customer status	Depositor (<i>muwaddi'</i>); retains ownership	Capital provider (<i>shahibul maal</i>); shares risk
Withdrawal flexibility	On demand; full liquidity for the customer	Time-conditional (savings flexible; deposits fixed)
Return to customer	None contracted; voluntary bonus possible	Profit share at agreed <i>nisbah</i> ratio
Risk allocation	Bank guarantees principal (<i>yad dhamanah</i>)	Loss borne by <i>shahibul maal</i> unless <i>mudharib</i> negligent
Sub-types	<i>Yad amanah</i> (custody only); <i>yad dhamanah</i> (custody + utilisation)	<i>Mutlaqah</i> (unrestricted); <i>muqayyadah</i> (restricted)
Typical products	Savings <i>wadiah</i> ; current account <i>wadiah</i>	Savings <i>mudharabah</i> ; time deposit <i>mudharabah</i>
Bank cost of fund	Low (no contracted return)	Variable (linked to actual investment outcomes)
Bank deployment role	Short-term liquidity buffer	Medium-to-long-term financing source
Regulatory treatment (OJK)	Classified as demand deposits; subject to statutory reserve	Classified as investment deposits; subject to different capital treatment

Source: Authors' synthesis based on Antonio (2001); Karim (2013); Az-Zuhaili (2011); Ascarya (2007); Soemitra (2017); Hidayat (2019); OJK (2023).

Four substantive observations follow from this comparative architecture. First, the contracts implement structurally different risk-return logics: *wadiah* prioritises depositor security and liquidity at the cost of foregone return; *mudharabah* offers return-sharing at the cost of risk-sharing. The resulting deposit base is therefore not

homogeneous it is composed of two distinct sub-pools whose characteristics must be matched against differentiated asset deployment. Second, the regulatory and Sharia distinction between *wadiah yad amanah* (pure custody) and *wadiah yad dhamanah* (custody with bank utilisation right) is operationally important: in the latter configuration, the bank acquires the right to deploy the funds while still guaranteeing principal effectively transforming the deposit into a non-remunerated source of financing capital. This hybrid character distinguishes *wadiah yad dhamanah* from both conventional demand deposits (which pay interest) and from classical trust arrangements (which prohibit utilisation).

Third, the existence of *mudharabah muqayyadah* (restricted *mudharabah*) creates space for product innovation in which depositors can specify the sectoral or thematic deployment of their funds, anticipating the contemporary growth of green and ethical finance segments (Hudaefi & Beik, 2021; Wahab & Rahman, 2011). In practice, however, the deployment of *mudharabah muqayyadah* in the Indonesian market remains limited, with most Islamic banks offering only *mudharabah mutlaqah* products (Karim, 2013; Soemitra, 2017). Fourth, the cost-of-fund differential between *wadiah* and *mudharabah* carries direct profitability implications: *wadiah*-heavy banks enjoy lower funding costs but face greater liquidity volatility; *mudharabah*-heavy banks enjoy greater tenor stability but must share a larger proportion of investment returns with depositors (Muhamad, 2014; Rivai & Arifin, 2010).

Product Taxonomy: Sharia Deposit Products in Detail

Beyond the binary *wadiah* - *mudharabah* distinction, the reviewed corpus identifies a more granular product taxonomy that maps the full range of Sharia-compliant deposit instruments available in Indonesian Islamic banking. This taxonomy is organised across four product categories, each with distinct contractual and operational features.

Wadiah Savings (Tabungan Wadiah). This product operates under the *wadiah yad dhamanah* contract, permitting the bank to utilise deposited funds while guaranteeing full principal return on demand. No profit share is contractually promised; however, the bank may and in practice frequently does provide a periodic bonus (*athaya*) as a discretionary gift to attract and retain customers (Antonio, 2001; Soemitra, 2017). The bonus is recorded as an operating expense and is typically calibrated to approximately but does not match the returns offered on comparable conventional savings accounts. This competitive-calibration practice, while common, raises questions about whether the bonus genuinely remains voluntary or has become a de facto expected return (Karim, 2013).

Wadiah Current Accounts (Giro Wadiah). Current accounts in Islamic banks also operate under the *wadiah yad dhamanah* principle but are characterised by cheque-writing privileges and typically higher minimum balances. They serve corporate and institutional customers who require transactional liquidity. Because the fund is fully on-demand and transactional in character, banks deploy *giro wadiah*

primarily into the most liquid asset categories: cash reserves, Bank Indonesia deposits, and short-term Sharia money-market instruments such as Sertifikat Bank Indonesia Syariah (SBIS) (Arifin, 2012; Kasmir, 2014).

mudharabah Savings (Tabungan *mudharabah*). This product combines the flexibility of savings-account withdrawal with the return potential of profit-sharing. Deposits are pooled by the bank (as *mudharib*) and deployed into financing activities; profits are shared monthly according to a pre-agreed *nisbah* ratio commonly in the range of 30:70 to 45:55 (bank:depositor) depending on competitive conditions. Unlike *wadiah* savings, there is no principal guarantee; depositors technically bear capital risk proportional to their share, although in practice Islamic banks in Indonesia have never imposed capital losses on depositors (Hidayat, 2019; Yaya et al., 2014). The implicit principal protection creates a perception gap between doctrinal risk allocation and market practice that has implications for depositor expectations and regulatory prudence.

mudharabah Time Deposits (Deposito *mudharabah*). Time deposits represent the longest-tenor deposit instrument in the Islamic banking product suite, with maturities typically ranging from 1, 3, 6, to 12 months. The *nisbah* ratio for time deposits is generally more favourable to the depositor than for savings, reflecting the greater tenor commitment and reduced liquidity risk for the bank. Time deposits constitute the backbone of Islamic banks' medium-term financing capacity, funding *murabahah*, *musyarakah*, and *ijarah* contracts with matched or near-matched maturities (Antonio, 2001; Karim, 2013; Muhamad, 2014). Because early withdrawal typically results in *nisbah*-ratio reduction or penalty, the bank can deploy these funds with greater confidence in their tenor stability. OJK data confirm that *mudharabah* time deposits consistently represent the largest single DPK component, accounting for approximately 50% of total Islamic banking deposits (OJK, 2023).

Wadiah Fund Management: The Liquidity–Profitability Trade-off

The synthesis identifies eight substantive trade-offs and managerial considerations specific to *wadiah* fund management, as documented across the reviewed corpus. These can be grouped into three clusters with distinct managerial implications.

The first cluster concerns the liquidity–profitability dilemma. Because *wadiah* funds are on-demand and non-remunerated, banks face a structural tension between maintaining sufficient liquid reserves to honour withdrawal claims and deploying funds productively to generate revenue (Arifin, 2012; Rivai & Arifin, 2010; Kasmir, 2014). Excess liquidity translates into idle funds (*dana mengganggu*) that erode net revenue equivalents, while insufficient liquidity exposes the bank to withdrawal-shock risk particularly during periods of macroeconomic instability, festive seasons (Ramadan, Eid al-Fitr), or trust-shocks triggered by negative media coverage. Literature consistently recommends that *wadiah* -derived funds be deployed predominantly into highly liquid instruments such as cash, short-term Sharia money-

market instruments, central-bank certificates (SBIS), and overnight interbank placements (Arifin, 2012; Muhamad, 2014; Choerueny, 2013).

The second cluster concerns cost-of-fund efficiency and its implications for competitive positioning. *Wadiah* funds offer Islamic banks a structural cost advantage because no contracted return is owed to depositors; only voluntary bonuses (*athaya*) are permissible and they are not pre-committed in the contract (Karim, 2013; Soemitra, 2017). This advantage is particularly valuable in the Indonesian dual-banking system, where Islamic banks compete for customers against conventional banks that must pay interest on demand deposits. However, the cost advantage must be balanced against two countervailing pressures: the absence of any contractual term that would let the bank predict the funds' tenure, and the competitive pressure to provide bonuses that approximate conventional interest rates. If the voluntary bonus approaches the level of conventional interest, the cost advantage is eroded; if it falls too far below, customer retention is threatened (Ascarya, 2007; Hidayat, 2019).

The third cluster concerns risk management and prudential governance. The on-demand nature of *wadiah* deposits creates liquidity risk under conditions of macroeconomic instability or trust-shocks, requiring continuous cash-flow projection based on customer behavioural patterns, diversification across liquid asset classes, active prudential monitoring, and adherence to Bank Indonesia's statutory reserve requirement (Giro Wajib Minimum, GWM) (Choerueny, 2013; Yaya et al., 2014). The literature converges on the view that sophisticated behavioural-cash-flow modelling which uses historical withdrawal data to identify seasonal patterns, customer-segment-specific withdrawal behaviours, and stress-scenario projections is essential for converting the theoretical on-demand character of *wadiah* into a practically manageable funding source (Muhamad, 2014; Rivai & Arifin, 2010). Banks that fail to develop such modelling capacity are condemned to over-provision liquidity buffers, sacrificing profitability unnecessarily.

Mudharabah Fund Management: Productive Deployment and Profit-Sharing Governance

Mudharabah funds, by contrast, are characterised by greater tenor stability, explicit profit-sharing returns, and a different set of managerial challenges. The literature identifies four principal managerial implications that distinguish *mudharabah* fund management from *wadiah* management.

First, *mudharabah* deposits provide the principal source of medium-to-long-term financing capacity, supporting equity-based financing products such as *musyarakah* and longer-tenor *murabahah* (Antonio, 2001; Hidayat, 2019; Fitri, 2016). The maturity-matching principle embedded in ALMA practice dictates that longer-duration deposits should fund longer-duration assets, and shorter-duration deposits should fund shorter-duration or liquid assets. *mudharabah* time deposits, with maturities of 1–12 months, provide the strongest maturity match for trade-finance *murabahah* (typically 3–12 months) and project-finance *musyarakah*

(typically 6–24 months). This structural pairing is a consistent recommendation across the banking-management literature (Arifin, 2012; Muhamad, 2014; Rivai & Arifin, 2010).

Second, the profit-sharing structure aligns the interests of depositors and the bank to a degree not observed in conventional banking, since both parties benefit from successful asset deployment. This alignment is a notable contrast with the conventional banking model in which depositors and shareholders bear opposite-sign exposures to interest-rate shifts (Iskandar et al., 2020; Wahab & Rahman, 2011). However, the alignment also creates a transmission mechanism through which poor investment performance reduces depositor returns, potentially triggering withdrawal-driven liquidity stress. Banks must therefore manage not only the absolute level of investment returns but also the variability and communication of those returns (Karim, 2013; Yaya et al., 2014).

Third, the nisbah ratio the pre-agreed proportion in which profits are shared between bank and depositor, functions as both a competitive lever and a prudential tool. Higher nisbah ratios offered to depositors attract funds but reduce the bank's retained earnings; lower ratios improve bank profitability but risk customer attrition to competitors offering more attractive terms. The optimal nisbah ratio is therefore not a fixed parameter but a dynamic variable that must be calibrated against competitive conditions, investment performance, and target profitability (Karim, 2013; Soemitra, 2017). The literature recommends that banks establish a nisbah committee or pricing function that reviews ratios periodically against these multi-dimensional inputs, rather than setting ratios on an ad hoc basis (Muhamad, 2014).

Fourth, the variable-return nature of *mudharabah* deposits introduces a competitive challenge specific to the dual-banking context. When depositor expectations of returns are calibrated against conventional bank interest rates as they frequently are, given that most Indonesian Muslim consumers maintain accounts in both Islamic and conventional banks periods of low investment performance can produce relative-return shortfalls that erode customer retention (Bin-Nashwan et al., 2020; Hidayat, 2019). The literature identifies this as the 'displaced commercial risk' (*risiko komersial yang tergeser*): the risk that Islamic banks lose deposits because their profit-sharing returns fall below comparable conventional interest rates, compelling the bank to sacrifice its own margin to maintain competitive returns. OJK regulatory guidance requires Islamic banks to establish an Investment Risk Reserve (IRR) and a Profit Equalisation Reserve (PER) to mitigate this risk essentially smoothing the distribution of returns across reporting periods to reduce volatility visible to depositors (OJK, 2023; Choerueny, 2013).

Asset and Liability Management (ALMA) in Islamic Banking: Bridging Wadiah and mudharabah

The synthesis identifies Asset and Liability Management (ALMA) as the integrative framework through which banks operationalise the structural pairing between *wadiah*

and *mudharabah* fund characteristics and the asset-deployment strategy. The ALMA literature reviewed in the corpus prescribes four principal techniques adapted for the Islamic banking context.

First, gap analysis examines the maturity mismatch between assets and liabilities across defined time buckets (overnight, 1 week, 1 month, 3 months, 6 months, 12 months, over 12 months). A positive gap where assets maturing exceed liabilities maturing indicates excess liquidity; a negative gap indicates funding pressure. In the Islamic banking context, *wadiah* funds contribute to the shortest time bucket (on-demand), while *mudharabah* time deposits populate the longer buckets (Arifin, 2012; Rivai & Arifin, 2010). The ALMA committee's task is to maintain negative gaps within prudential tolerances and to ensure that the aggregate maturity profile remains balanced.

Second, duration matching seeks to align the weighted-average duration of assets with that of liabilities, reducing the sensitivity of the bank's net worth to shifts in profit-sharing rates or macroeconomic conditions. Because Islamic banks do not use interest rates as a pricing mechanism, the conventional duration-matching framework must be adapted: instead of interest-rate duration, Islamic ALMA uses profit-rate sensitivity, measuring how changes in the investment-profit pool affect the bank's margin and depositor returns (Muhamad, 2014; Choerueny, 2013).

Third, liquidity-coverage management ensures that the bank maintains sufficient high-quality liquid assets (HQLA) to cover net cash outflows over a defined stress horizon typically 30 days, consistent with Bank Indonesia's Liquidity Coverage Ratio (LCR) adaptation for Islamic banks. *Wadiah*-derived funds, because of their on-demand character, generate the largest potential net cash outflows and therefore drive the HQLA requirement (OJK, 2023; Kasmir, 2014).

Fourth, funds-transfer-pricing (FTP) systems allocate the internal cost and revenue of funds between business units. In the Islamic context, FTP must reflect the different cost characteristics of *wadiah* and *mudharabah* funds: *wadiah*-sourced funds carry a low explicit cost (no contracted return) but a high liquidity-reserve cost; *mudharabah*-sourced funds carry a higher explicit cost (nisbah-shared returns) but a lower liquidity-reserve cost due to their greater tenor stability (Rivai & Arifin, 2010; Muhamad, 2014). A well-designed FTP system incentivises business units to originate assets whose maturity and risk profiles match the funding characteristics of their corresponding liability pools. In the Indonesian Islamic banking context, FTP systems remain relatively underdeveloped compared with those of major conventional banks, partly due to the smaller scale of Islamic banking operations and partly due to the human-capital constraints discussed below. Banks that invest in FTP infrastructure gain two advantages: first, more accurate product-profitability measurement, which informs pricing and product-development decisions; second, better internal discipline around maturity matching, since business units that deploy

short-term funds into long-term assets face higher internal charges that reduce their apparent profitability.

Beyond these four core ALMA techniques, the reviewed corpus identifies two supplementary practices that strengthen Islamic banking liability management. The first is stress testing and scenario analysis: banks should regularly simulate adverse scenarios such as a 20% sudden withdrawal of *wadiah* funds, a sustained decline in investment returns reducing *mudharabah* competitiveness, or a macroeconomic recession reducing new deposit inflows and evaluate the adequacy of their liquidity buffers, capital reserves, and ALMA positions under each scenario (Choerueny, 2013; OJK, 2023). OJK has increasingly mandated stress-testing exercises for Islamic banks as part of its supervisory review process, and the reviewed corpus recommends that banks go beyond regulatory minimums to develop proprietary scenario models calibrated to their specific depositor-base characteristics. The second supplementary practice is contingency funding planning (CFP): banks should maintain documented contingency plans that specify the actions to be taken in the event of a severe liquidity shortfall, including predetermined access to emergency funding from Bank Indonesia's Sharia liquidity facility (Fasilitas Pembiayaan Jangka Pendek Syariah, FPJPS), rapid asset-disposal protocols, and communication strategies to manage depositor confidence during periods of stress (Kasmir, 2014; Arifin, 2012).

Macro-Institutional Determinants of Liability-Management Success

Beyond product-level architecture and bank-level managerial practice, the synthesis identifies four external determinants that condition the success of liability management for Indonesian Islamic banks.

First, public trust in the Islamic banking system functions as the principal demand-side driver of deposit growth (Soemitra, 2017; Ismail, 2011; Antonio, 2001). This trust is built through consistent Sharia compliance validated by the bank's internal Sharia Supervisory Board (Dewan Pengawas Syariah, DPS) and externally by the National Sharia Board of the Indonesian Council of Ulama (DSN-MUI) transparent governance, and the visible execution of bank obligations. Trust-shocks triggered by media reports of Sharia non-compliance, poor governance, or financial distress can produce rapid deposit outflows that overwhelm liquidity buffers and destabilise the bank's ALMA position. The literature therefore positions trust-maintenance as a first-order liability-management imperative, not merely a reputational concern (Wahyuni-TD et al., 2021; Karim, 2013).

Second, the level of Islamic financial literacy in the broader population sets the ceiling on potential deposit growth: prospective customers who do not understand the conceptual difference between *wadiah* and *mudharabah*, or who confuse profit-sharing with concealed interest, are unlikely to choose Islamic banks over conventional alternatives or to select the deposit product most appropriate to their financial profile (Hudaefi & Beik, 2021; Soemitra, 2017). The reviewed corpus consistently identifies low financial literacy as one of the most persistent barriers to

Islamic banking penetration in Indonesia, particularly outside Java and in rural areas. Multiple sources recommend that Islamic banks invest in customer-education programmes both branch-based and digital that explain the Sharia foundations, risk-return characteristics, and practical implications of deposit products in accessible language (Iskandar et al., 2020; Nurjanah & Setiawan, 2020).

Third, service quality including digital channel availability, branch accessibility, customer-service responsiveness, and the user experience of mobile and internet banking platforms mediates customer choice between Islamic and conventional banks within the dual banking system, particularly for digitally fluent younger demographics who prioritise convenience alongside values-based alignment (Iskandar et al., 2020; Wahyuni-TD et al., 2021). The rapid digitalisation of Indonesian banking accelerated by the COVID-19 pandemic has made mobile-banking functionality a threshold requirement for deposit acquisition, and the reviewed corpus suggests that Islamic banks that lag in digital channel development risk losing market share to conventional fintechs and neo-banks.

Fourth, the competitive positioning of Islamic banks within the dual-banking system itself shapes liability-management outcomes. In Indonesia's dual system, Islamic banks compete not in a separate market but in the same customer pool as conventional banks. This competitive exposure means that pricing, convenience, and perceived return are jointly determined by the conventional benchmark a structural constraint that complicates the pure application of Sharia profit-sharing logic. The literature identifies this as the 'dual-system paradox': Islamic banks must be Sharia-distinct in their contractual form while remaining market-competitive in their commercial outcomes (Karim, 2013; Ismail, 2011). Effective liability management in this context requires constant monitoring of both Sharia compliance (internal) and competitive adequacy (external), ensuring that neither dimension is sacrificed for the other.

Challenges Facing Liability Management in Indonesian Islamic Banks

The synthesis further identifies five principal challenges that complicate liability management for Indonesian Islamic banks, each of which emerges as a consistent theme across multiple sources in the reviewed corpus.

The first challenge is the maturity-mismatch problem. While *wadiah* funds are on-demand, a substantial portion of Islamic bank assets particularly *musyarakah* and *diminishing-musyarakah* financing for property and infrastructure have tenors exceeding 12 months. This structural mismatch is a persistent source of liquidity risk that cannot be eliminated entirely but must be managed through ALMA techniques and adequate liquidity buffers (Arifin, 2012; Choerueny, 2013). The absence of a deep and liquid secondary market for Islamic banking assets comparable to the conventional interbank market exacerbates this problem, since Islamic banks have limited options for converting illiquid assets into cash at short notice.

The second challenge is displaced commercial risk (DCR). As noted earlier, the risk that Islamic bank profit-sharing returns underperform conventional interest rates creates competitive pressure to subsidise returns from the bank's own margin. While OJK-mandated reserves (IRR and PER) provide a buffer, the fundamental tension between market competitiveness and Sharia-authentic risk-sharing remains unresolved at the conceptual level (Choerueny, 2013; Karim, 2013).

The third challenge is customer concentration risk. In many Indonesian Islamic banks, a small number of large institutional depositors account for a disproportionate share of total DPK. The withdrawal of a single large depositor can create acute liquidity stress, particularly if the depositor holds *wadiah* current-account funds. The literature recommends active diversification of the depositor base across customer segments, geographic regions, and depositing products as a fundamental liability-management strategy (Rivai & Arifin, 2010; Kasmir, 2014).

The fourth challenge is the regulatory-compliance burden. Indonesian Islamic banks operate under a complex regulatory framework that includes OJK prudential standards, Bank Indonesia monetary-policy instruments (SBIS, Fasilitas Simpanan Bank Indonesia Syariah), DSN-MUI fatwa on product permissibility, and international standards issued by the Islamic Financial Services Board (IFSB) and the Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI). Navigating this multi-layered regulatory environment consumes managerial bandwidth and can delay product innovation (Soemitra, 2017; Yaya et al., 2014).

The fifth challenge is human-capital constraints. Effective ALMA, behavioural-cash-flow modelling, and nisbah-ratio optimisation require specialised skills at the intersection of Islamic jurisprudence, quantitative finance, and banking operations. The reviewed corpus consistently notes that the supply of professionals with this combined skill set remains limited in Indonesia, creating a human-capital bottleneck that constrains the operational sophistication of liability management (Antonio, 2001; Muhamad, 2014; Rivai & Arifin, 2010). Unlike conventional banking where treasury and ALMA skills are well established in the professional ecosystem Islamic banking requires an additional layer of Sharia-governance competence that must be integrated into every product, pricing, and risk-management decision. This dual-competence requirement raises the effective entry bar for Islamic ALMA professionals and limits the talent pool from which banks can recruit.

Comparative Perspective: Indonesian Liability Management in the Global Islamic Banking Context

While this review focuses on the Indonesian context, a brief comparative note enriches the analysis. Malaysia, as the most developed Islamic banking market in Southeast Asia, has pursued a more regulation-driven approach to liability management: Bank Negara Malaysia mandates specific liquidity-coverage ratios for Islamic banks, has developed a deep sukuk and Islamic money-market infrastructure, and has promoted *mudharabah* muqayyadah instruments through explicit regulatory

incentives (Karim, 2013; Wahab & Rahman, 2011). In contrast, the Gulf Cooperation Council (GCC) states particularly Saudi Arabia and the UAE benefit from a depositor base with higher average balances and greater tolerance for profit-sharing risk, reflecting both higher per-capita incomes and deeper cultural familiarity with Islamic finance concepts. Indonesia's position is distinctive: it has the largest Muslim population in the world but the lowest Islamic banking market share among major Muslim-majority countries, a gap that is directly attributable to the liability-side challenges low financial literacy, limited Sharia money-market infrastructure, and intense conventional-banking competition identified in this review.

The comparative perspective suggests that Indonesia's path to closing this market-share gap lies not in replicating the GCC's wealth-driven depositor advantage but in emulating Malaysia's infrastructure-driven approach: deepening the Sharia money market, standardising liability-management practices through regulatory guidance, and investing systematically in Islamic financial literacy at scale. The four-component framework proposed in this study provides the conceptual architecture for such a strategy, while the eight strategic recommendations offer the operational and ecosystem-level interventions needed to implement it.

An additional dimension that merits attention in future comparative work is the role of Islamic banking within the broader Islamic economic ecosystem. In Indonesia, the growth of Islamic banking is increasingly intertwined with the development of zakat institutions, waqf management, halal industry financing, and Islamic social finance instruments (Hudaefi & Beik, 2021; Wahyuni-TD et al., 2021). Liability management in this broader context is not merely a banking function but a component of an integrated Islamic economic architecture in which DPK mobilisation feeds into both commercial financing and social-impact deployment. The framework proposed here can be extended to incorporate this ecosystem dimension by adding a fifth component ecosystem integration that links liability management to the broader goals of maqasid al-shariah (the objectives of Islamic law), including wealth circulation, poverty reduction, and economic justice.

Synthesis: An Integrated Conceptual Framework for Liability Management

The synthesis culminates in a four-component conceptual framework for liability management in Indonesian Islamic banks, depicted in Table 3.

Table 3. Integrated Conceptual Framework for Liability Management in Indonesian Islamic Banks

Component	Definition	Key Strategies
1. Contractual Segmentation	Recognise that the deposit base is structurally heterogeneous and must be analysed as two distinct sub-pools	Separate <i>wadiah</i> and <i>mudharabah</i> fund accounting; differentiated ALMA treatment per pool
2. Structural Pairing	Match fund characteristics to asset deployment along maturity, liquidity, and risk dimensions	<i>Wadiah</i> → liquid assets; <i>mudharabah</i> → productive financing; gap analysis and duration matching

3. Balanced Trade-off Management	Simultaneously pursuing liquidity adequacy, cost-of-fund efficiency, and profitability	Behavioural cash-flow modelling; diversification; FTP; nisbah-ratio optimisation; reserve management
4. External-Determinant Cultivation	Cultivate the demand-side conditions that sustain deposit inflows	Trust-building through governance; financial literacy campaigns; digital service quality; competitive monitoring

Source: Authors' synthesis of the reviewed corpus, 2024.

The first component, contractual segmentation, recognises that a one-size-fits-all approach to DPK management is incompatible with the structural heterogeneity of Islamic banking liabilities. Banks must maintain separate analytic and operational frameworks for *wadiah* and *mudharabah* funds, reflecting their different risk-return architectures, regulatory treatments, and customer expectations. The second component, structural pairing, operationalises the maturity-matching principle through ALMA techniques, ensuring that short-term *wadiah* funds do not leak into long-term illiquid assets and that *mudharabah* tenor stability is leveraged to support productive financing. The third component, balanced trade-off management, addresses the multi-dimensional optimisation challenge that emerges from the interaction of liquidity, cost, profitability, and risk objectives. The fourth component, external-determinant cultivation, extends the framework beyond internal bank operations to encompass the demand-side ecosystem that ultimately determines the volume, stability, and composition of deposit inflows.

Taken together, these four components offer a unified architecture that integrates contract theory (dimensions 1 and 2 draw on fiqh muamalah), banking-management theory (dimensions 2 and 3 draw on ALMA and financial-management literature), and institutional theory (dimension 4 draws on the trust, literacy, and competitive-dynamics literature) within a single analytic structure. This integration addresses the fragmentation identified at the outset of this study and provides a coherent reference framework for both academic research and practitioner application.

Strategic Recommendations for Optimising Liability Management

Drawing on the four-component framework and the five challenges identified above, the synthesis generates eight concrete strategic recommendations for Indonesian Islamic bank managers, regulators, and policymakers. These recommendations are organised into two tiers: operational recommendations (directed at bank-level management) and ecosystem recommendations (directed at regulators and industry associations).

Implement Contractual Segmentation in the General Ledger and Management Information System.

Banks should maintain separate sub-ledgers and reporting dashboards for *wadiah* and *mudharabah* fund pools, enabling differentiated monitoring of liquidity ratios, cost-of-fund metrics, and maturity profiles for each pool. This segmentation should

extend to the funds-transfer pricing (FTP) system, so that business units drawing on *wadiah* funds are charged a liquidity-premium rate while units drawing on *mudharabah* funds are charged a nisbah-sharing rate. Without such segmentation, cross-subsidisation between pools can mask underlying liquidity risks and distort product-profitability analysis (Muhamad, 2014; Rivai & Arifin, 2010).

Develop Behavioural-Cash-Flow Models by Customer Segment.

Rather than treating all *wadiah* deposits as fully on-demand, banks should analyse historical withdrawal patterns to identify 'core' *wadiah* deposits funds that, despite their contractual on-demand character, remain stable over extended periods. These core deposits can safely be deployed into slightly longer-duration assets, improving profitability without materially increasing liquidity risk. The modelling should be segmented by customer type (retail individual, corporate, institutional), account size, and seasonal patterns such as the pre-Ramadan withdrawal spike and the post-Eid normalisation cycle. Banks that lack in-house quantitative capabilities should consider partnerships with academic institutions or fintech analytics providers to develop these models (Choerueny, 2013; Arifin, 2012).

Establish a Dynamic Nisbah-Pricing Committee

The nisbah ratio for *mudharabah* deposits should not be set on an ad hoc or annual basis but should be reviewed monthly or quarterly by a dedicated committee that considers four inputs simultaneously: the bank's realised investment-profit pool for the period; the prevailing conventional deposit rates (as the competitive benchmark); the target net-income-margin for the bank; and the depositor-retention metrics by product tier. This dynamic-pricing approach enables the bank to compete effectively while maintaining Sharia-authentic profit-sharing logic and adequate retained earnings (Karim, 2013; Soemitra, 2017).

Diversify the Depositor Base to Reduce Concentration Risk

Banks should actively monitor depositor-concentration metrics and set internal limits on the proportion of total DPK attributable to any single depositor or depositor group. Strategies for diversification include targeted marketing to the retail mass market (particularly in underbanked regions of eastern Indonesia and outside Java), development of digital-first savings products that lower the entry barrier for small depositors, and partnership programmes with Islamic educational institutions and charitable organisations whose membership bases provide a natural depositor pipeline. Diversification reduces the bank's vulnerability to single-depositor withdrawal events and contributes to the long-term stability of the DPK base (Kasmir, 2014; Rivai & Arifin, 2010).

Launch a National Islamic Financial Literacy Programme

OJK, in coordination with the Ministry of Religious Affairs and the Indonesian Council of Ulama, should develop and deploy a national programme that teaches

basic Islamic finance concepts particularly the difference between riba-based interest and Sharia-compliant profit-sharing, the distinction between *wadiah* and *mudharabah*, and the implications of each for depositor rights and risks. The programme should utilise multiple channels including mosque-based seminars, social-media campaigns, and integration into the national school curriculum at the secondary level. The reviewed corpus consistently identifies low Islamic financial literacy as the single most binding constraint on Islamic banking market-share growth (Hudaefi & Beik, 2021; Soemitra, 2017; Nurjanah & Setiawan, 2020).

Developing a Sharia Money-Market Infrastructure

The limited depth and liquidity of the Sharia interbank money market constrain the ability of Islamic banks to manage short-term liquidity efficiently. Bank Indonesia and OJK should expand the range of Sharia-compliant money-market instruments including short-term sukuk, commodity murabahah instruments, and interbank *mudharabah* placements and should promote active secondary trading through market-making incentives. A deeper Sharia money market would enable Islamic banks to deploy *wadiah* funds more productively and to manage maturity mismatches more flexibly, directly addressing two of the five challenges identified in this review (Arifin, 2012; OJK, 2023).

Strengthen Cross-Institutional Human-Capital Development

The human-capital bottleneck identified in the review should be addressed through a coordinated industry response. Islamic banking associations (such as Asbisindo), universities with Islamic finance programmes, and professional certification bodies should collaborate to develop specialised post-graduate curricula and professional-development modules that integrate Islamic jurisprudence with quantitative ALMA techniques, behavioural analytics, and digital-banking operations. International knowledge-exchange programmes with Malaysian and Gulf-based Islamic banking professionals could accelerate this capacity-building process (Antonio, 2001; Umam, 2013).

Encourage Product Innovation Through Regulatory Sandbox for mudharabah Muqayyadah

The largely untapped potential of *mudharabah muqayyadah* restricted profit-sharing deposits in which the customer specifies the sectoral deployment of funds should be encouraged through a dedicated OJK regulatory sandbox. Pilot products could include green-energy *muqayyadah* deposits (linked to renewable-energy financing), MSME-focused *muqayyadah* deposits (linked to micro and small enterprise financing), and agriculture *muqayyadah* deposits (linked to food-security financing). Such products would differentiate Islamic banking from conventional banking on a values-proposition basis rather than on a price basis, attracting impact-oriented

depositors and expanding the overall DPK pool (Wahab & Rahman, 2011; Iskandar et al., 2020).

Conclusion

This systematic literature review synthesised twenty-eight English- and Indonesian-language sources to develop a coherent four-component framework for liability management and third-party fund mobilisation in Indonesian Islamic banks, with particular focus on *wadiah* and *mudharabah*-based deposit instruments. Four principal conclusions emerge from the analysis.

First, third-party funds remain the dominant funding source for Indonesian Islamic banks and the principal proxy for public confidence in the Sharia banking system; their effective management therefore conditions both intermediation capacity and competitive viability within the dual-banking system. The composition of DPK approximately 50% *mudharabah* time deposits, 35% savings, and 15% current accounts creates a liability structure with inherent maturity-mismatch risk that demands active and sophisticated management.

Second, *wadiah* and *mudharabah* operate on substantively different risk-return architectures that produce distinct managerial trade-offs. *Wadiah* anchors short-term liquidity through on-demand non-remunerated custodial deposits, requiring banks to balance liquidity adequacy against idle-fund costs. *mudharabah* supports medium-to-long-term productive financing through profit-sharing investment accounts, requiring banks to manage nisbah competitiveness, investment-performance variability, and displaced commercial risk. The two contracts are not substitutes but complements within heterogeneous deposit-based architecture, and their joint management through ALMA protocols including gap analysis, duration matching, liquidity-coverage management, and funds-transfer pricing is essential for operational stability.

Third, the success of liability management depends not only on internal managerial competence ALMA practices, risk management, nisbah optimisation, and product innovation but equally on the cultivation of external determinants: public trust in the Sharia banking system, Islamic financial literacy among the target population, digital service quality, and competitive positioning within the dual-banking environment. Banks that treat liability management as a purely internal technical exercise, without investing in the demand-side ecosystem, will find their deposit-mobilisation capacity constrained regardless of their operational sophistication.

Fourth, five structural challenges maturity mismatch, displaced commercial risk, customer concentration, regulatory complexity, and human-capital constraints continue to complicate liability management for Indonesian Islamic banks and will require sustained attention from both bank managers and regulators.

Study contributes to literature in three ways. Theoretically, it advances a four-component integrated framework (contractual segmentation, structural pairing,

balanced trade-off management, and external-determinant cultivation) that synthesises previously fragmented literatures on contract theory, ALMA practice, and institutional determinants into a single coherent analytic structure. Methodologically, it demonstrates the applicability of a PRISMA-inspired systematic review protocol to Islamic banking literature that combines English- and Indonesian-language sources, providing a reproducible template for future reviews in the field. Practically, it advances four recommendations for Indonesian Islamic bank managers: (1) explicitly segment liquidity-oriented (*wadiah*) and profitability-oriented (*mudharabah*) deposits and pair each with its appropriate asset class through formal ALMA protocols; (2) develop behavioural-cash-flow models using historical withdrawal data to anticipate withdrawal patterns by customer segment and seasonal cycle; (3) invest in customer-facing literacy programmes that clearly distinguish profit-sharing returns from interest-rate equivalents and that explain the Sharia foundations of each deposit product; and (4) prioritise digital service quality as a competitive lever for deposit acquisition among younger demographics within the dual banking system.

This study has three principal limitations. First, as a literature review, the analysis cannot generate new primary empirical evidence on the effectiveness of the proposed framework; it remains a conceptual synthesis subject to empirical validation through field research. Second, the corpus is biased toward Indonesian-language sources reflecting the Indonesian Islamic banking context; cross-jurisdictional comparison with Malaysia, the Gulf Cooperation Council states, Pakistan, or Turkey was beyond the present scope and would likely reveal alternative institutional configurations. Third, the predominantly textbook-and-applied-paper composition of the corpus reflects the relatively limited stock of high-impact empirical work specifically focused on Islamic liability management a gap that itself validates the research-agenda priority identified here.

Three priority directions for future empirical research are proposed. First, panel-data econometric analysis of the relationship between *wadiah* / *mudharabah* composition ratios and Islamic bank profitability indicators (ROA, ROE, and NIM-equivalent margins) across Indonesian Islamic commercial banks over a multi-year period, controlling for bank size, age, and macroeconomic conditions. Such analysis would test whether the structural-pairing principle identified in this review produces measurable performance outcomes. Second, survey-based studies of Indonesian Islamic financial literacy levels across demographic and geographic segments, and their correlation with deposit-product choice, deposit tenure, and switching behaviour between Islamic and conventional banks. These studies would quantify the external-determinant dimension of the framework and provide evidence for the design of targeted literacy interventions. Third, cross-country comparative studies of liability-management practices across major Islamic banking jurisdictions particularly Malaysia, Indonesia, Saudi Arabia, and the UAE with attention to the institutional,

regulatory, and cultural factors that produce divergent DPK compositions and management outcomes. Such comparative work would test whether the four-component framework proposed here generalises beyond the Indonesian context or requires jurisdiction-specific adaptation.

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