Muzakarah
on Failure Resolution of Islamic Financial Institutions

Shariah Discourse 02
Shariah Analysis on Tokenised Deposits

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Introduction

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For this study, tokenised deposits are examined as a 1:1 digital representation of bank demand deposits—rather than as a new currency, crypto-asset, or standalone investment token.

01 Discussion scope

Shariah assessment of TD structure, ownership, transferability, smart-contract execution

02 TD context in this study

TD refers only to demand deposits represented on a permissioned ledger and backed by a direct commercial-bank liability.

03 Use-case basis

Assessment use cases are derived from the TD lifecycle and literature: minting, transfer/payment and redemption.

Basis of assessment: library research + semi-structured interviews with Shariah scholars + data analysis; use cases are treated as analytical scenarios, not live implementation results.

Research objectives

1

Examine TD from Shariah perspectives

2

Discuss Shariah issues related to TD

3

Propose Shariah-aligned guidance for TD

Research methodology

01

Library research

02

Semi-structured interview with 5 Shariah scholars

03

Data analysis

Literature review

What is TD?

Tokenisation process

Benefits of TD

What is TD?

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Digital Conversion	1-to-1 Representation	Commercial Bank Liability	Legal Continuity
TD is termed a 'token' because a traditional bank deposit is **converted into a digital unit** (a token) **on a blockchain or distributed ledger**.	TD serves as a 1-to-1 **digital representation** of traditional bank deposits recorded on distributed ledgers (BIS, 2023; 2026).	TD **remain direct liabilities of commercial banks** (Garratt and Shin, 2023) and can be seamlessly integrated with central bank settlement mechanisms (BIS, 2026).	TD preserves the traditional role of commercial banks in financial intermediation and **did not alter the fundamental legal nature of the deposit** (BIS, 2026).

Tokenisation process

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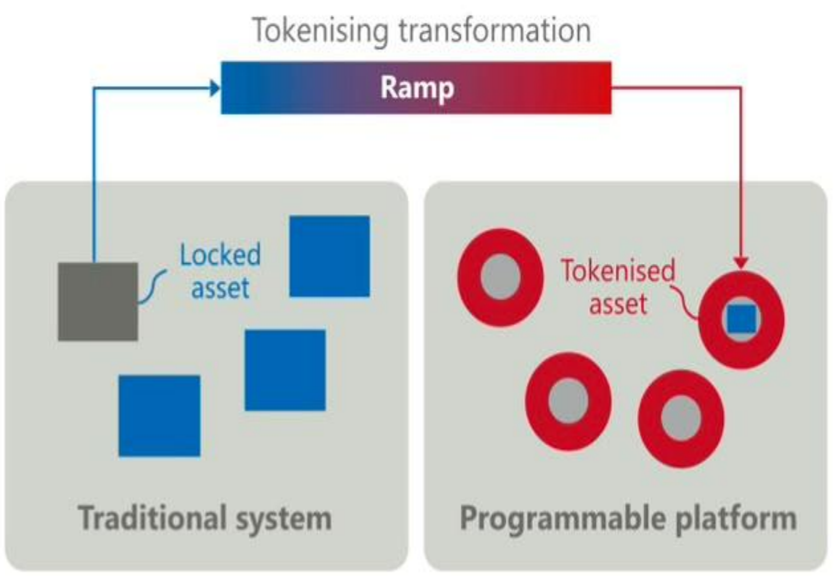
Ramps map assets to their tokenised counterparts on programmable platforms — Graph 2



Source: Aldasoro et al (2023).

Deposits are immobilized or locked before it is transformed to a token.

Locking of deposits ensure that the transfer of their tokenised counterparts guarantees the transfer of the deposits.

- Source: Aldasoro et al. (2023)

Benefits of TD

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BENEFITS OF TOKENISED DEPOSITS

1. OPERATIONAL EFFICIENCY & INSTANT SETTLEMENT

- **Atomic Settlement (T+0)**: Synchronized process eliminates risk.
- **24/7/365 Always-On Rails**: Eliminates cut-off times.
- **No Manual Reconciliation**: Shared ledger reduces back-office costs.

2. ADVANCED CUSTOMISATION VIA PROGRAMMABLE MONEY

- **Smart Contract Automation**: Treasurers embed complex rules.
- **Conditional Escrow**: Auto-releases funds on verification.
- **Supply Chain Triggers**: Instant payments execute on validated triggers.

3. TREASURY & CAPITAL OPTIMISATION

- **Elimination of Trapped Liquidity**: Instant cross-subsidiary transfers.
- **Minimized Float**: Frees up capital immediately, increasing efficiency.

4. SUPERIOR SAFETY OVER STABLECOINS

- **Deposit Protections**: Inherits statutory deposit insurance.
- **Interest-Bearing Potential**: True deposits can safely pay interest.
- **Regulatory Oversight**: Money stays within core system, subject to strict oversight.

TD from Shariah perspective

Comparison between Currency and TD

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Aspects	Currency	Tokenized deposit
Independent unit of measurement	Serve as its own independent unit	Adopts the exact unit of account of the underlying deposits it represent (1-to-1 basis)
Store of value	Yes	Digital representation of deposits held in a bank
Medium of exchange	Universal medium of exchange	Payment settlement within specific, permissioned network
Usage	Unrestricted usage	Restricted to compatible platforms and predefined smart contract conditions
Settlement finality	Immediate exchange	Immediate settlement

Summary: TD is not considered as a new form of currency. It is a digital representation of deposits which is already in the economy.

TD follows the rules of deposits

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Aspects	Traditional deposits	Tokenized deposit
Value	e.g. RM1,0000	Token 'mirror'/represents RM1,000 in bank deposits
Underlying contract	Subject to underlying contract of deposits (*qard, tawarruq* etc)	Token follows the same underlying contract of deposits
Shariah rulings	Depends on the underlying contract of deposits	Follows the ruling of the underlying deposits
Underlying claim	Depositor's right/claim against the bank	The same right/claim represented by the token
Liability	Bank is liable for the deposits	Bank is liable for the deposits represent by TD
Ownership	Account holders	Token holders
Withdrawal	Depositor can withdraw deposits according to the contract	Token can be redeemed for the deposits according to the underlying contract of deposits

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Summary: TD is *tabi'* of traditional deposits. Based on التابع تابع, its ruling follows the rules of underlying contract of traditional deposits.

Potential Shariah issues in TD

1. Ownership of TD

Ownership can be attached to:

1. Tangible property
2. Usufruct
3. Rights and debts

Ownership of TD is based on rights/debt derived from the contractual agreement between depositors and the bank during the opening of the account

Evidence of ownership in TD:

Evidence of ownership in TD

- KYC requirement during opening of account determine owner of the account.
- Possession of relevant **private data and hash record** kept off the shared ledger

Private data allows holder to:

'interpret their own states'

'prove or validate the chain of spent states'

have unrestricted right of disposal

Private data and hash record can be accepted as fulfillment of requirement for *takhliyah, tamkin,* and *tasarruf*

2. Shariah issues related to smart contract

01
Alteration & Immutability
Immutability may prevent correction of mistakes or rectification of unjust outcomes

02
Conflict with Shariah rules
Terms may contain *riba, maysir*, or other prohibited elements that are coded as an automated actions

03
Uncertainty
Unclear terms, outcomes, or data feeds may lead to *gharar* which invalidates contracts

04
Lack of Shariah intent
Smart contract execute code, not intent. The code cannot ensure the Shariah intention behind the contract

05
Autonomy & Accountability
No clear party is responsible for errors, bugs, or unauthorized execution

3. Transferability of TD

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Token holder within the same bank

Bank A's debt of (say RM1,000) reassigned from Ahmad to Fatimah

Token holder in different banks

Ahmad in Bank A transfer (say RM1,000) to Fatimah in Bank B

Transfer of TD is on the basis of restricted *hawalah* (if the drawer is a debtor to the drawee), or unrestricted *hawalah* (if the drawer is not a debtor to the drawee). Rules of *hawalah* applies.

Similarities of TD with cheque as payment function

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Facilitate transfer of deposit claim	Link to underlying deposit claim	Mechanisms for transferring claims	Operates as payment instruments
Depend on the banking system for ultimate settlement	Conditional acceptance payment	Evidence of payment transaction	Represents a relatively specific amount of value

Although fundamentally TD is different from a cheque, TD has similarities with cheque when comparing them from the perspective of payment function

4. Tradability of TD

Tradability of TD must fulfill the following requirements:

Taking possession of the countervalues (actual or constructive)	Countervalues of same currency must be of equal amount	Shall not contain any conditional option or deferment clause

5. Dealing with orphaned or disputed TD"

Pre-contract

1

Ensure documentation cover tokenization processes and procedures in dealing with orphaned or disputed situation.

Rectification

2

Ensure rectification processes are readily available

Post-event

3

Implement the concept of استصحاب الأصل to determine who is the rightful owner of the TD before the situation occurred.

Shariah-aligned guidance for TD

What are Shariah-aligned guidance for their treatment and limits?

Utilization of regulated platform (permissioned ledger)	TD must be created on 1-to-1 basis of the original Islamic deposits. Rules on trading of *ribawi* items apply.	KYC is compulsory for proper identification of TD holder.	Dispute resolution
Scrutinize T&C with customer to ensure Shariah requirements have been fulfilled.	TD to be used only as deposit transfer for payment settlement at face value, not to be treated as a commodity	Platforms, custody arrangements or settlement accounts (if any), should be Shariah compliant	Technology and operational safeguards to avoid technology risk, error correction

Thank You