HONG KONG MONETARY AUTHORITY
香港金融管理局

CMU CENTRAL MONEYMARKETS UNIT
債務工具中央結算系統

CMU REFERENCE MANUAL SUPPLEMENT - THE CMU DIGITAL ASSET PLATFORM (CMU DAP)

NOV VERSION

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AMENDMENT SUMMARY

Effective Date	Clause	Amendments
25 Nov 2026		Initial Publication

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1 Background

The CMU Digital Asset Platform (CMU DAP) is an integral part of the Central Moneymarkets Unit (CMU). The CMU is the central securities depository (CSD) for debt securities in Hong Kong. Since January 2025, CMU OmniClear Limited (CMUOC) has been carrying out the operations and business development activities of the CMU on behalf of the Hong Kong Monetary Authority (HKMA).

In 2026, CMUOC aims to develop and launch its own digital asset platform, the CMU DAP, to provide enhanced custody and asset servicing for Tokenised Securities. The CMU DAP adopts the ICMA bond data taxonomy in its operations to ensure consistent data reporting. Transactions and settlements effected on the CMU DAP achieves settlement finality in accordance with applicable provisions of the PSSVF Ordinance.

This CMU Reference Manual Supplement is applicable to participating CMU Members during the lifecycle of the Tokenised Securities. It supplements the CMU Reference Manual, and sets out the on-chain and off-chain operational arrangements for the clearing and settlement of Tokenised Securities. Unless otherwise defined herein or the context otherwise requires, the terms defined in the CMU Reference Manual shall have the same meanings when used in this Supplement. For other operational procedures regarding the CMU that are not specified herein, please refer to the relevant clauses of the latest CMU Reference Manual.

2 The Service

The Distributed Ledger Technology (DLT)-based CMU DAP offers a comprehensive range of services, with key features outlined below:

- Supports the complete lifecycle of Tokenised Securities, including primary issuance, clearing and settlement, coupon payment and redemption. (Non-Digitally Native Securities and Digitally Native Securities are collectively referred to as Tokenised Securities).
- Adopts atomic Delivery versus Payment (DvP) settlement model, ensuring the simultaneous settlement of securities and cash token, with both cash leg and securities leg executed on-chain.
- Allows settlement in multi-currencies with direct interface with RTGS system and CBDC platform.
- Supports tokenisation of traditional debt securities in the CMU, also known as Non-Digitally Native Securities (Non-DN Securities).
- Enables Digitally Native Securities (DN Securities) issuance, facilitating paperless issuance without the need of physical global certificate.
- Provides unified custody of DN Securities and Non-DN Securities under the CMU.

3 Platform Overview and Operational Framework

The CMU DAP is a private and permissioned DLT Platform. It comprises a DvP settlement interface that connects with securities tokens and cash tokens on the CMU DAP. It supports both free of payment transfers (FOP) and Delivery versus Payment (DvP).

The CMU DAP is a DLT-based technology platform that is an extension of and integral part of the CMU system, used for including, but not limited to, the issuance, settlement, transfer, coupon and redemption of the Tokenised Securities.

Participants i.e. Direct Participants (DPs) and the Issuer Agent, will be able to use features on the CMU DAP depending on the roles they have subscribed to and functionalities have been granted access to use by HKMA-CMU as the System operator.

DvP transactions occurring on the CMU DAP are handled through updates in the record of entitlement to securities token as recorded in the Tokenised Securities Accounts of the CMU DAP, thereby achieving against a simultaneous exchange of cash tokens against securities token in DvP settlement. DPs can purchase or hold Tokenised Securities on behalf of their clients. Securities

tokens and cash tokens are automatically settled via the DvP process on the CMU DAP which is instant and atomic.

3.1 Connection between Payment Systems, CMUP and the CMU DAP

To facilitate smooth settlement on the CMU DAP, the CMU DAP is connected with RTGS and CBDC platform for CMU members to settle cash leg of the transactions on the CMU DAP.

The CMU DAP is also directly interfaced with the Central Moneymarkets Unit Processor (CMUP, the conventional CMU platform), for CMU members to efficiently manage the Tokenised Securities under the CMU DAP or CMUP. If a DP would like to settle the Tokenised Securities with a non-DP, it can send instruction(s) to the CMU DAP and CMUP to move the position between the CMU DAP and CMUP. The interface also enables the tokenisation of eligible debt securities currently held under CMUP, allowing them to be minted and settled on the CMU DAP.

For CMU Members who are DPs, settlement of Tokenised Securities may take place on the CMU DAP, on the CMUP, or both, depending on whether the holdings and counterparties are on-chain or off-chain or whether it is a cross-platform transfer. CMU Members, regardless of whether they have direct access to the CMU DAP, would be able to hold the Tokenised Securities for themselves or on behalf of their clients.

3.2 Role of the HKMA-CMU

As an extension of the CMU which is a designated system under the Payment Systems and Stored Value Facilities Ordinance (Cap. 584 of the Laws of Hong Kong) (the “PSSVFO”), HKMA-CMU is the sole system operator (SO) of the CMU DAP.

HKMA-CMU may carry out discretionary actions on the CMU DAP in relation to the delivery and secondary transfers of Tokenised Securities through its role as System Operator. To facilitate this oversight and operational control, HKMA-CMU maintains Control Accounts that act as an intermediary for transactions involving cross-platform transfer and income distribution. HKMA-CMU has access to Participating CMU Member (DPs') accounts and holdings as regards to the securities tokens.

The CMU will have access to DP functionality in connection with its System Operator role. The Control Accounts held by HKMA-CMU serve as the internal operational mechanism that fall within the scope of its Platform Operator role, to effect (i) the settlement and holding of DN Securities on behalf of non-DPs on

the CMU DAP, and (ii) certain payment obligations such as coupon payment and redemption related to the Tokenised Securities.

4 Roles and setup process on the CMU DAP

4.1 Roles on the CMU DAP

Each party participating on the CMU DAP will have pre-defined roles linked to specific functionalities which will determine the scope of their specific rights and obligations in connection with their participation on the CMU DAP. The pre-defined roles for each party will be designated by the HKMA-CMU (as System Operator) when the party signs up for the participation of the CMU DAP in accordance with the information provided in the "Subscription Form for the CMU DAP".

The high level pre-defined roles of the parties involved are as follows:

Parties	**Roles and responsibilities and access rights**
System Operator / HKMA - CMU	• Access to the System Operator functionality on the CMU DAP. • Access to the DP Platform functionality in connection with the System Operator function. • Acts as System Operator via CMU and settlement institution of cash tokens in the CMU DAP. • As System Operator approves account opening requests of Tokenised securities accounts and Tokenised cash accounts for DPs, mints / burns cash tokens and tokenised / detokenised Securities tokens. • Has full access to all data on the CMU DAP (including transfer and settlement activities, and DPs' holdings of securities tokens and cash tokens). • As record-keeper of the relevant records of entitlements on the CMU DAP.
Issuer Agent (also act as the paying agent)	• Access to the Issuer Agent Platform functionality. • A CMU member which is appointed, authorised and instructed by an issuer of DN Securities as an agent to the issuer to (i) input securities data for the creation of DN Securities and (ii) upload

	related DN Securities data documentation, as provided by the issuer, on the CMU DAP for and on behalf of the issuer. • For avoidance of doubt, this Issuer Agent role is specific to the CMU DAP. It refers to an agent of the issuer or the issuer itself whose role is to make a new securities issuance request to HKMA via CMUOC via the CMU DAP by keying in all the required securities-related information into the CMU DAP. • Process income payments such as coupon, redemption and relay corporate action on behalf of the issuer.
Direct Participant (DP)	• Access to the DP Platform functionality. • CMU members which are admitted for participation in the CMU DAP by the HKMA as DPs. • They may act on a proprietary basis (i.e. holding the securities for their own account) and may also be acting as custodians for their clients to hold for and on behalf of their clients' respective entitlement to securities tokens, and to administer or manage their clients' interests in the securities tokens for their clients.

4.2 Participants Setup on the CMU DAP

All CMU members are eligible to participate in the CMU DAP upon service subscription and admission by the HKMA as (1) Issuer Agent to act on behalf of issuers for issuance process and income distributions, and/or (2) DPs to hold and settle the Tokenised Securities with accounts on-chain. To participate in the CMU DAP, the CMU Member is required to submit to CMU a completed "Subscription Form for the CMU DAP".

Alternatively, CMU members can use the existing securities account at CMUP to settle and hold the Tokenised Securities.

From an investor's perspective, there are multiple ways to invest in the Tokenised Securities:

(i) through DPs of the CMU DAP,
(ii) through general CMU members with existing securities account at CMUP,

(iii) through participants of the ICSD and regional CSD linkages

4.2.1 Direct Participants

For a CMU Member who would like to carry out transfers of relevant Tokenised Securities directly on the CMU DAP, it may join as a DP on the CMU DAP accessing the Direct Participant functionalities. To apply to become a DP, the CMU Member is required to submit to CMU a completed "Subscription Form for the CMU DAP" at Annex 1 (and/or other relevant Platform documentation, as the case may be). To allow sufficient time for CMU to process the application and for administrative setup, the completed subscription form must reach CMU at least 5 Hong Kong business days before the effective date of the DP's account on the CMU DAP.

Approval of applications to become a DP on the CMU DAP is at the sole and absolute discretion of the HKMA. Upon admission, the DP will be subject to this supplement (and/or other relevant Platform documentation, as the case may be) which form part of the wider CMU membership rule framework.

They may act on a proprietary basis (i.e. holding the securities for their own account) and may also be acting as custodians for their clients to hold for and on behalf of their clients' respective entitlement to securities tokens, and to administer or manage their clients' interests in the securities tokens for their clients.

4.2.2 Issuer Agent

For a CMU Member which would like to or is appointed to perform the Issuer Agent functionalities on the CMU DAP, is required to join as a DP first. In order to become an Issuer Agent, such Issuer Agent must have obtained an appropriate authorisation and instruction from the issuer authorising it to request/instruct the CMU to accept the DN Securities on its behalf by signing and returning to the CMU a completed "Issuer Letter of Authority" and "Undertaking by Issuer Agent".

To allow sufficient time for the CMU to process the application and for administrative setup, the completed forms must reach the CMU at least 5 Hong Kong business days before the effective date of the Issuer Agent's account on the CMU DAP. Upon admission, the Issuer Agent will be subject to this supplement (and/or other relevant Platform documentation, as the case may be) which form part of the wider CMU membership rule framework. Approval of Issuer Agent on the CMU DAP is at the sole and absolute discretion of the HKMA.

4.2.3 Non-Direct Participants

If a CMU Member does not want to become a DP on the CMU DAP but wishes to buy and hold Tokenised Securities for itself or hold on behalf of its clients, it could use its existing CMU Securities Account in CMUP, for clearing and settlement of the Tokenised Securities. No prior subscription for the service is required in the CMUP.

5 Types of Tokens

5.1 Cash Token

Cash tokens on the CMU DAP are minted and burned by the HKMA via CMUOC in its capacity as the system operator of the CMU DAP. The cash tokens represent a claim for relevant currencies against the HKMA-CMU to be settled via RTGS/CBDC platform (or any relevant payment system integrated with the Platform in the future) to be governed by the terms of RTGS/CBDC platform or such other payment system.

5.2 Securities Token

The debt securities are recorded on the electronic ledger of the CMU DAP which constitutes the definitive record of title. A securities token would be a digital record evidencing the holding of debt securities, they do not confer ownership but are evidence of title only. The tokens are not digital objects of property in themselves.

6 Forms of Tokenised Securities

Tokenised securities that are supported by the CMU DAP can be categorized into the following two types:

- Digitally Native Securities (DN Securities) – digital debt securities that are issued directly on the CMU DAP
- Non-Digitally Native Securities (Non-DN Securities) – traditional debt securities originally issued off-chain at CMU (i.e. CMUP), then immobilised and tokenised to enable a digital representation created and recorded on the CMU DAP at the post-issuance stage

6.1 DN Securities

Debt securities eligible for Digitally Native issuance on the CMU DAP that are approved by the HKMA to be cleared and settled in tokenised form, are eligible securities for the purposes of the CMU Service under the CMU

membership agreement between the HKMA and CMU members. DN Securities are issued in dematerialised book-entry or dematerialised registered form without a global certificate and shall be validly issued when the initial recording of the aggregate nominal amount of the DN Securities has been duly recorded in the Issuer Agent's (or its appointed DP's) Tokenised Securities Account(s). Being the settlement institution of cash tokens and System Operator of the CMU DAP, the HKMA-CMU acts as record keeper and does not act as an agent of the issuer or any party.

For issuance of DN Securities, there will not be a lodging agent nor will there be a lodging of a lodgement slip submitted to the HKMA via CMUOC as part of the valid constitution and creation of the DN Securities. Instead, securities information is created by the Issuer Agent on the CMU DAP first. To facilitate DN Securities settlement by non-DPs, securities information is also created by the HKMA via CMUOC in the CMUP with its unique CMU instrument number, common code and ISIN number. Such data information will then be available to non-DPs to facilitate the post-trade settlement process in CMUP.

6.2 Non-DN Securities

Traditional debt securities issued and held in CMUP, which are not inherently digital in nature, may be tokenised on the CMU DAP. Securities that have been approved by the HKMA for clearing and settlement in tokenised form are also eligible securities for the purposes of the CMU Service under the CMU membership agreement between the HKMA and CMU members.

7 Account Structure

7.1 Accounts that a DP will have on the CMU DAP

7.1.1 Tokenised securities account

A Tokenised securities account is a Securities Account holding Tokenised Securities maintained with the Monetary Authority on an online platform (as an extension and integral part of the Central Moneymarkets Unit) using distributed ledger technology.

Each DP will need to open at least one Tokenised securities account on the CMU DAP and may open multiple for itself on an own-account basis, to segregate its proprietary holdings from its clients' holdings. For its clients' holdings, it may maintain:

(i) an omnibus client account (in the name of the DP); or

(ii) segregated client accounts for each of its clients under the DP's account on the CMU DAP.

It is the DP that is responsible for managing the activities in such accounts, as they are accounts maintained by the DP for its clients, and it is the DP that has a legal relationship with such clients.

For Issuer Agents, a segregated Tokenised securities account will be opened.

7.1.2 Tokenised cash account

Each DP will need to open at least one Tokenised cash account on the CMU DAP and may open multiple for itself on an own-account basis. A DP may top-up its Tokenised cash account on the CMU DAP through:

(i) RTGS by transferring funds from its own RTGS account or its settlement banks' RTGS accounts to the HKMA's designated RTGS 810 account; or

(ii) CBDC platform by transferring e-HKD/e-CNY from its own wallet to CMU's wallet subsequent to the matched DvP.

Cash tokens in equivalent value will then be minted on the CMU DAP and credited to the DP's Tokenised cash account on-chain.

For Issuer Agents, a segregated Tokenised cash account will be opened.

7.1.3 Setup of Tokenised securities account / Tokenised cash account

The HKMA-CMU, as System operator, is the account administrator for Tokenised securities account and Tokenised cash account and will be responsible for approving the account opening requests on the CMU DAP for DPs, and monitoring the execution of post trade settlement activities on the CMU DAP.

Once the subscription form (per Annex1) of a DP is approved, HKMA-CMU will set up the institution profile, Tokenised securities account(s) and Tokenised cash account on the CMU DAP. A DP can opt to open additional segregated account or omnibus account if necessary.

Omnibus account (in the name of a DP) and clients' accounts under a DP's account on the CMU DAP is the responsibility of and maintained by the DP. It is the DP that is responsible for managing the activities in such accounts, as they are accounts maintained by the DP for its clients, and it is the DP that has a legal relationship with such clients.

7.1.4 Setup of Administrator Accounts for DP

At least two administrator accounts of the respective DP will be created when the institution profile is first setup on the CMU DAP. The administrator

information provided in the subscription form will be used for account creation. Subsequently, the DP may create additional admin and business operator accounts via the CMU DAP.

7.2 Accounts Opened by the HKMA for Operation of the CMU DAP

7.2.1 HKMA Control Tokenised Securities Account (AAAT002)

To facilitate non-DPs to buy and hold the DN Securities in CMUP, the HKMA has set up a Tokenised Securities Account called the HKMA Control Tokenised Securities Account which is an omnibus account on the CMU DAP to be held by the HKMA to hold DN Securities on behalf of:

- Non-DPs (for their own account and/or as custodians for their clients); and
- DPs who choose to hold the beneficial interest to the DN Securities on CMUP level (for their own account and/or as custodians for their clients).

It serves as an intermediary or “bridge” between the CMU DAP and CMUP. From system perspective, the HKMA Control Tokenised Securities Account functions like a DP’s Tokenised Securities Account. However, it does not function as a commercial DP’s Tokenised Securities Account from a business perspective. The HKMA Control Tokenised Securities Account cannot be used as a proprietary account by the HKMA.

7.2.2 HKMA Control Tokenised Cash Account

To facilitate coupon and redemption of non-DPs for the DN Securities, the HKMA has set up a Tokenised Cash Account called the HKMA Control Tokenised Cash Account which is an omnibus account on the CMU DAP to hold cash tokens on behalf of non-DPs. It serves as an intermediary or “bridge” between the CMU DAP and CMUP.

7.2.3 CMU Control Account (AAAT000 for Non-DN Securities and AAAT002 for DN Securities)

The CMU Control Account in CMUP records the holdings of Non-DN Securities of DPs on the CMU DAP (in AAAT000 account) and DN Securities of DPs on the CMU DAP (in AAAT002 account). However, it is a “mirror” account for internal reconciliation purpose only. Legal title of the Non-DN Securities and DN Securities of the DPs is determined by the computerised book entry records of the CMU DAP.

7.3 Issuance Token Record Account

7.3.1 Recorded Model Issuance

The Issuance Token Record Account is an operational "account" opened in the name of the relevant issuer, on a per issuer basis, to hold an issuance token which records all the DN securities. It is used to reconcile the total number/amount of DN securities in circulation, i.e. reflects the aggregate nominal amount of the relevant DN Securities during its entire life cycle on the CMU DAP as an operational reconciliation tool. One issuance token represents one issuance on the CMU DAP. The issuance token serves as an operational record of the entire issuance.

7.3.2 Registered Model Issuance

The Issuance Token Record Account is an "account" in the name of the HKMA which holds the issuance token. The issuance token will be recorded as owned by the HKMA which represents the HKMA as legal title owner of the relevant issuance. The issuance token will be the definitive data source of the off-Platform register maintained by the relevant registrar. As with the Recorded Model Issuance, the issuance token will serve as a reconciliation tool representing the digital bonds outstanding for the relevant issuance.

8 Settlement Finality

Since the CMU DAP is an integral part of CMU, transfer orders in relation to the settlement of transactions made through the CMU DAP are final and irrevocable. The Payment Systems and Stored Value Facilities Ordinance (PSSVFO) provides the legal basis for settlement finality regarding transactions settled in the CMU, as well as the CMU DAP.

8.1 Transfer of Tokenised Securities (including both DN Securities and Non-DN Securities) between Two DPs on the CMU DAP

DvP: The settlement in the CMU DAP takes place through the exchange of securities token and cash token between two DPs on the CMU DAP. All transfers effected through the CMU DAP between two DPs shall be completed, irrevocable and final, namely at the moment the Tokenised Securities is credited to the buyer’s Tokenised Securities Account.

FoP: For completeness, this applies in FoP transfers from the DP's Tokenised Securities Account to (i) another Tokenised Securities Account held by the same DP; (ii) a Tokenised Securities Account held by another DP, and vice versa, namely settlement is final at the moment the transfer of Tokenised Securities is recorded.

8.2 Transfer of Tokenised Securities (including both DN Securities and Non-DN Securities) across the CMU DAP and CMUP

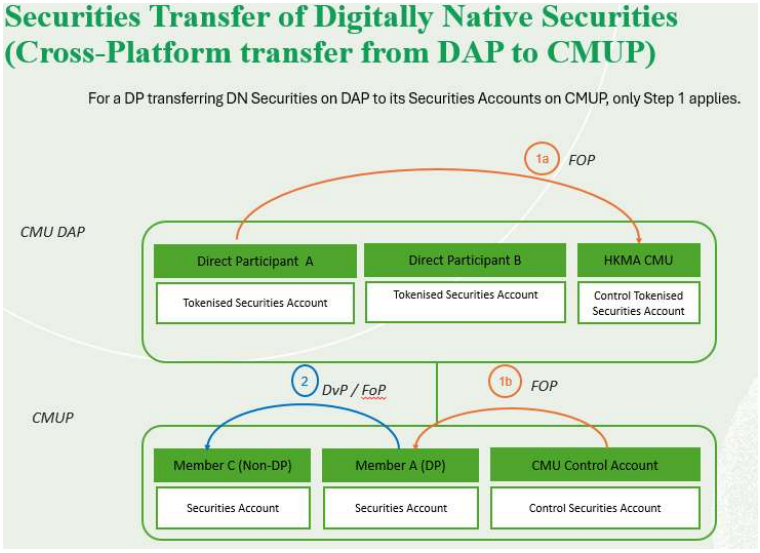
Both the buyer and seller must agree to effect the transfer through their accounts on the CMUP / CMU DAP via submitting matching instructions through the CMUP and CMU DAP, respectively.

All transfer to or from Tokenised Securities Accounts / Securities Accounts effected through the CMU DAP and CMUP between a DP and a non-DP / a DP holding via CMUP shall be deemed to have been delivered as of the moment the updated balances resulting from the transfer are recorded on the CMU DAP and CMUP accordingly. Such transfer shall be deemed to be made on the CMU and is thereby completed, irrevocable and final. Settlement finality is counted at the point when the Tokenised Securities are typically available to the receiving member.

8.2.1 Transfer of DN Securities from the CMU DAP to CMUP

For a DP transferring DN Securities from the CMU DAP to its Securities Accounts on CMUP, only Step 1 applies.

For a DP transferring DN Securities from the CMU DAP to a non-DP on CMUP, the transfer is processed as two transactions outlined in Step 1 and Step 2.



<u>Step1: Transfer from the DP's Tokenised Securities Account on the CMU DAP to the same DP's Securities Account on CMUP on FoP basis:</u>

(1a) First, the DN Securities held in the DP's Tokenised Securities Account will

be transferred to the HKMA Control Tokenised Securities Account on the CMU DAP, i.e. a debit from the DP's Tokenised Securities Account and credit to the HKMA Control Tokenised Securities Account on the CMU DAP.

(1b) This results in the CMU holding the DN Securities on behalf of the same DP at the CMUP layer, until the DN Securities are credited to the DP's Securities Account on CMUP.

Settlement finality for Step 1 is counted at the point when the DN Securities are credited to the same DP's Securities Account on CMUP.

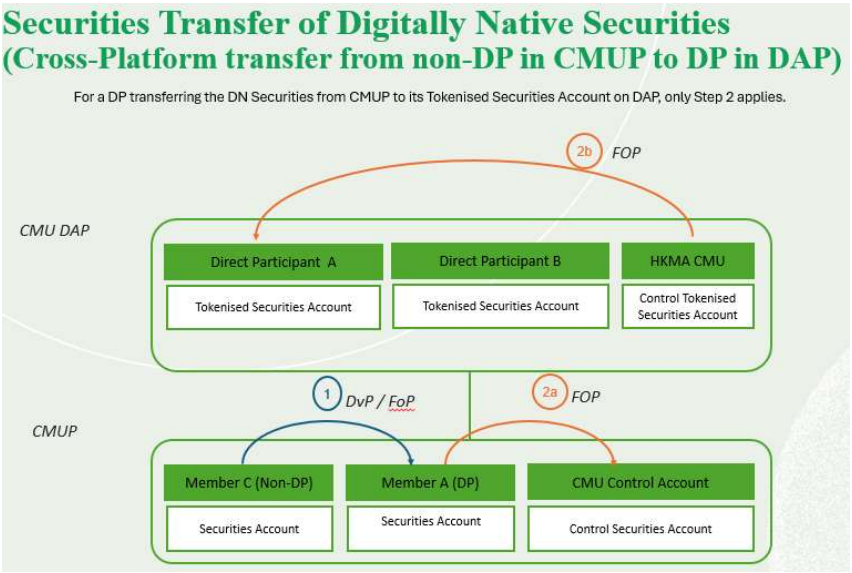
Step2: Transfer of DN Securities from the DP's Securities Account to the non-DP's Securities Account at CMUP on DvP / FoP basis:

This transfer is executed through a matching instruction between the seller (i.e. the DP) and buyer (i.e. the non-DP) at the CMUP layer. Settlement finality is achieved at the moment the DN Securities are credited to the buyer's Securities Account at CMUP.

8.2.2 Transfer of DN Securities from CMUP to the CMU DAP

For a non-DP transferring the DN Securities from CMUP to a DP on the CMU DAP, the transfer is processed as two transactions outlined in Step 1 and Step 2.

For a DP transferring the DN Securities from CMUP to its Tokenised Securities Account on the CMU DAP, only Step 2 applies.



Step 1: Transfer from the non-DP to the DP's Securities Account at CMUP on DvP / FoP basis:

This transfer is executed through a matching instruction between the seller and buyer at the CMUP layer. Settlement finality of Step 1 is achieved at the moment the DN Securities are credited to the buyer's Securities Account at CMUP.

Step 2: Transfer from the DP's Securities Account at CMUP to its Tokenised Securities Account at the CMU DAP on FoP basis:

(2a) The DN Securities held in the DP's Securities Account will be transferred to the CMU Control Securities Account on CMUP, i.e. a debit from the DP's Securities Account and credit to the CMU Control Securities Account on CMUP. This results in the CMU holding the DN Securities on behalf of DP at the CMU DAP layer, until the DN Securities are credited to the buyer.

(2b) The CMU transfers the corresponding DN Securities from the HKMA Control Tokenised Securities Account to the buyer's Tokenised Securities Account on the CMU DAP. i.e. credit of DN Securities into the buyer's Tokenised Securities Account.

Settlement finality is achieved at the moment the DN Securities are credited to the buyer's Tokenised Securities Account at the CMU DAP.

8.3 Transfer of Tokenised Securities in CMUP

All transfers in Securities Accounts effected through CMUP shall be deemed to have been delivered as of the moment the updated balances resulting from the transfer are recorded. Such transfers shall be deemed to be made in the CMUP and is thereby completed, irrevocable and final. Settlement finality occurs once the buyer's Securities Account on the CMUP has been credited with the transfer amount of the Tokenised Securities.

9 Holding Structure

9.1 Holding Structure of Non-DN Securities

The CMU DAP itself acts as a digital definitive record of the legal titles of the Non-DN Securities. Electronic ledger records on the CMU DAP (i.e. the amalgamated balance in the Tokenised securities accounts) are recognised as the definitive record of legal title to the Non-DN Securities held by each DP in their Tokenised securities account(s). DPs hold legal title of the Non-DN Securities on the CMU DAP via its own Tokenised Securities Account maintained on the CMU DAP.

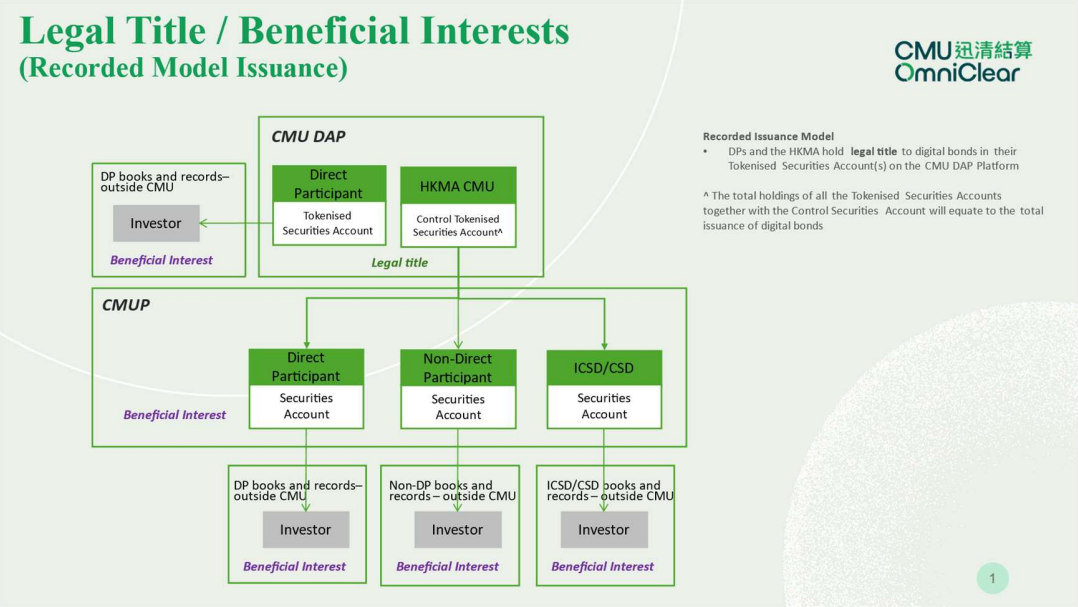
Upon tokenisation, the legal title to the relevant securities will be recorded in the Tokenised securities account on CMU DAP instead of the original Securities Account, and the relevant account records will be updated accordingly.

Upon detokenisation, the legal title to the relevant securities will be recorded in the relevant Securities Account(s) (which are not Tokenised securities account) of CMU members maintained with the HKMA-CMU, and the relevant account records will be updated accordingly.

9.2 Holding Structure of DN Securities

9.2.1 Recorded Model Issuance

This model may be used for issuers where the applicable legal formalities and requirements are rather light and permissive, without a requirement for maintaining a register.



The CMU DAP itself acts as a digital definitive record of the legal titles of the DN Securities issued in dematerialised book entry form, upon which each DP's legal title to its bond holding is recorded. Electronic ledger records on the CMU DAP (i.e. the amalgamated balance in the Tokenised Securities Accounts) are recognised as the definitive record of legal title to the DN Securities held by (i) each DP in their Tokenised Securities Account(s) and (ii) the HKMA in the Control Tokenised Securities Account.

Non-DPs/ DPs holding DN Securities via the CMUP with Securities Accounts in CMUP will hold the beneficial interest in the DN Securities, with

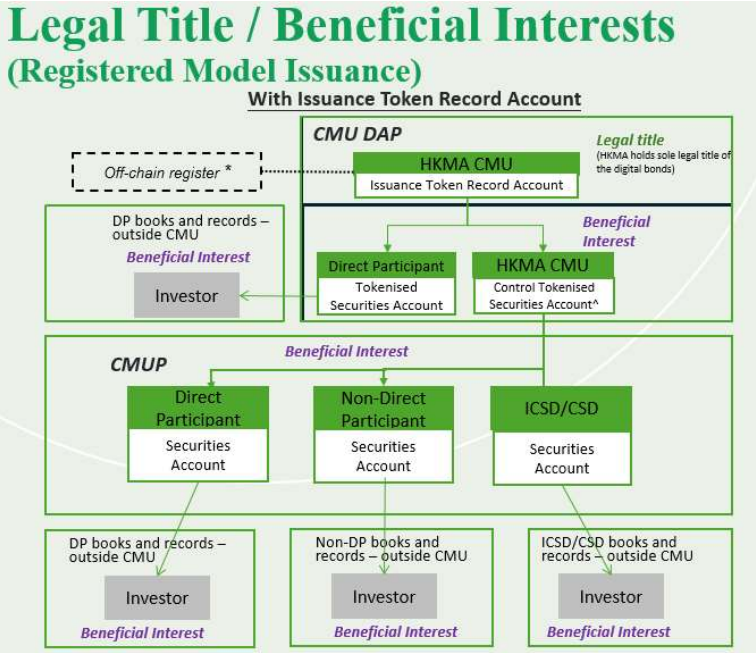
corresponding legal title held by the HKMA in the HKMA Control Tokenised Securities Account on the CMU DAP.

Please refer to the diagram of the Account Structure for illustration purpose only.

9.2.2 Registered Model Issuance

Registered Model Issuance should be adopted by issuers where the applicable legal formalities and requirements necessitates a register.

9.2.2.1 Holding Structure with Issuance Token Record Account



The HKMA as the operator of the CMU will be the sole legal title holder of the relevant DN Securities and will not transfer such legal title for the term of the relevant issuance i.e. the legal title will remain static during the lifecycle of a Registered Model Issuance. The HKMA's legal title interest will be reflected in the Issuance Token Record Account, and such record will be the definitive data source underpinning the definitive off-Platform register maintained by the relevant registrar. The off-Platform register will constitute the definitive register for the term of the relevant issuance and including in the event of Platform failure / Platform cessation.

DPs may hold beneficial interest in the DN Securities as recorded in the relevant Tokenised Securities Account maintained on the CMU DAP (Platform Beneficial

Interest). In addition, DPs may hold beneficial interest of the DN Securities in securities accounts maintained on CMUP (CMUP Beneficial Interest).

Non-DPs can hold CMUP Beneficial Interest in the DN Securities via a securities account on CMUP (intermediated through the Control Tokenised Securities Account).

In the Control Tokenised Securities Account, the HKMA holds Platform Beneficial Interest to the relevant DN Securities under the CMU DAP for and on behalf of the non-DPs and those DPs who hold DN Securities via CMUP rather than CMU DAP. Accordingly, non-DPs / DPs holding DN Securities via CMUP with securities accounts in CMUP will hold the CMUP Beneficial Interest in the DN Securities, with corresponding Platform Beneficial Interest held by the HKMA-CMU under the Control Tokenised Securities Account on the CMU DAP.

10 Token Minting and Burning process

10.1 Cash token minting and burning

The CMU DAP is integrated with CBDC platform and RTGS to support the cash leg of settlement transactions. Cash tokens minted via CBDC platform/RTGS top-up are exclusively used for settlement on the CMU DAP and must not be employed for any other purpose, including collateralisation, or external transfers, and are not capable of permanently storing value or representing an amount of money.

10.1.1 Cash token minting and burning via RTGS

Supported currencies:

HKD, CNY, USD, EUR

10.1.1.1 Cash token minting (via RTGS)

To initiate a top-up of cash tokens via RTGS, a CMU member must execute a transfer of funds from its own designated RTGS account, or that of its settlement bank, to the corresponding RTGS account held by the CMU.

Procedures to send funds to the CMU's 810 account:

In RTGS, the CMU Member or its correspondent bank has to send IFT02 payment via SWIFT pacs.009 to the CMU's 810 account in RTGS in favour of the CMU Member's account number on the CMU DAP.

CMU's RTGS account details:

RTGS account: 810
SWIFT BIC: HKMAHKHCBDC

Swift Message Requirement in pacs.009 to 810:

All the pacs.009 message sent to CMU's 810 account must include the Tokenised Cash Account number in the <RmtInf> tag according to the format below. Incorrect formatting will result in processing delays or rejection.

Standard Format:

- DAP {Cash Account Details}

Tokens minted to the primary cash account:

- DAP {XXXX-Cash Account}

Tokens minted to the specific cash account xxx:

- DAP {XXXX-Cash Account-xxx}

where as XXXX is the member code and xxx is the sub-account number of the specific Tokenised Cash Account.

If such information cannot be provided in the pacs.009 message, CMU Member is required to send an email to cmuenquiry@hkma.gov.hk that provides such information.

If the transfer is valid, the CMU DAP will perform the following actions:

- Verifies and mints the equivalent amount of cash tokens in the designated currency and credit the newly minted cash tokens directly to the DP's designated Tokenised cash account in the CMU DAP.
- The minting is irreversible and occurs only after confirmation of the RTGS fund transfer.

10.1.1.2 Cash Token burning (via RTGS)

To initiate a withdrawal of cash tokens, a DP of the CMU DAP must instruct the HKMA-CMU to convert a specified amount of cash tokens in the CMU DAP.

- DP sends a cash token burning request to the CMU in the CMU DAP, which requires CMU's approval;
- Upon receipt of a valid burn instruction, the CMU DAP will verify that there is a sufficient amount of cash tokens to be withdrawn;
- After the verification check, the CMU DAP reserves the corresponding cash tokens in the DP's designated Tokenised cash account to prevent reuse;

- If the reservation is successful, the CMU DAP initiates a RTGS transfer of the equivalent amount of funds from the CMU's designated RTGS account (810) to the beneficiary's RTGS account based on the record maintained in CMU;
- CMU DAP burns the previously reserved cash tokens on the CMU DAP upon confirmation of the completed RTGS transfer.

The burning process is irreversible and occurs only after confirmation of RTGS transfer, ensuring one-to-one consistency between cash tokens in circulation on the CMU DAP and balances held in RTGS accounts.

Cash tokens redeemed via the burning process are permanently removed from circulation and cannot be reissued.

10.1.2 Cash token minting and burning via CBDC platform

Supported currencies:
e-HKD, e-CNY

10.1.2.1 Cash token minting (via CBDC platform)

Cash token minting for e-HKD/e-CNY must be associated with a matched DvP transaction. Standalone top-up request without DvP will be rejected.

Both the seller and buyer are required to send DvP instructions on or before the settlement date on the CMU DAP. Upon receipt of the instructions, matching will take place on the CMU DAP.

To initiate a top-up of cash tokens via CBDC platform, a CMU member must execute a transfer of funds from its own designated e-HKD/e-CNY wallet, to the corresponding CMU wallet. If the transfer is valid, CMU DAP will perform the following actions:

- Verifies and mints the equivalent amount of cash tokens in the designated currency and credit the newly minted cash tokens directly to the DP's designated Tokenised cash account in the CMU DAP.
- The minting is irreversible and occurs only after confirmation of the fund transfer of e-HKD/e-CNY.

10.1.2.2 Cash Token Burning (via CBDC platform)

To initiate a withdrawal of cash tokens, a DP of the CMU DAP must instruct the HKMA-CMU to convert a specified amount of cash tokens in the CMU DAP.

- DP sends a cash token burning request to the CMU in the CMU DAP, which requires CMU's approval;

- Upon receipt of a valid burn instruction, the CMU DAP will verify that there is a sufficient amount of cash tokens to be withdrawn;
- After the verification check, the CMU DAP reserves the corresponding cash tokens in the DP's designated Tokenised cash account to prevent reuse;
- If the reservation is successful, the CMU DAP initiates a transfer of the equivalent amount of funds from the CMU's e-HKD/e-CNY wallet to the beneficiary's e-HKD/e-CNY wallet;
- CMU DAP burns the previously reserved cash tokens on the CMU DAP upon confirmation of the completed transfer on the CBDC platform.

The burning process is irreversible and occurs only after confirmation of transfer on the CBDC platform, ensuring one-to-one consistency between cash tokens in circulation on the CMU DAP and balances held in the CMU wallet.

Cash tokens redeemed via the burning process are permanently removed from circulation and cannot be reissued.

10.2 Tokenisation and Detokenisation of Non-DN Securities

Non-DN Securities are traditional debt securities issued and held in CMUP that are eligible for tokenisation and detokenisation on the CMU DAP.

10.2.1 Tokenisation

For eligible CMU securities that can be tokenised on the CMU DAP, CMU members may submit instructions to CMU for the request of tokenisation.

Before a CMU securities can be settled through the CMU DAP, the securities information for the respective issue has to be created on the CMU DAP. CMU Members can make an enquiry of the existing securities information via their CMU DAP account. If such issue has not been created on the CMU DAP, CMU Members can request the CMU to register such issue by sending an email to CMU Enquiry mailbox by 2:00 p.m. at least one business day before the settlement date.

<u>To effect the tokenisation:</u>

- A CMU member sends a deliver FOP/ MT542 instruction to the CMU Control Account (AAAT000) to transfer the subject CMU securities from its own securities account to the CMU Control Account in CMUP;
- Upon the CMU Control Account receiving the subject securities, the CMU DAP will be notified and will trigger a verification check of eligibility;

- If the verification is successful, the CMU DAP will mint and credit securities token representing the equivalent amount of the subject securities to the DP's Tokenised Securities Account on the CMU DAP;
- The corresponding nominal amount of the subject securities that have been tokenised will be recorded in the "CMU Control Account" in CMUP for internal reconciliation purposes;
- The DP's total holdings of the subject securities will be determined by

(i) the record in its CMUP account with respect to the subject securities that have not been tokenised; and

(ii) the record of securities tokens representing the subject securities in its Tokenised Securities Account on the CMU DAP.

10.2.2 Detokenisation

CMU members who wish to detokenise securities tokens after settlement may send an instruction to CMU to request detokenisation of part or all of its holdings of the subject securities.

To effect the detokenisation:

- A CMU member sends a FOP receive / MT540 instruction to the CMU Control Account (AAAT) to transfer the subject CMU securities from CMU Control Account in CMUP to its own securities account;
- Upon receipt of a valid burn instruction, the CMU DAP will verify that there is a sufficient amount of securities tokens to be burned;
- After the verification check, the CMU DAP reserves the corresponding securities tokens in the DP's designated Tokenised Securities account to prevent reuse;
- If the reservation is successful, the CMU DAP will trigger an instruction to the CMU Control Account to transfer the subject securities from the CMU Control Account to the CMU member's securities account in CMUP;
- The CMU DAP burns the previously reserved securities tokens on the CMU DAP upon confirmation of the completed securities transfer in CMUP.

11 Primary Issuance of DN Securities

11.1 Issuer Agent's Authority from the Issuer

Where an issuer is not currently a CMU Member or Direct Participant on the CMU DAP, where the debt securities are serviced by a CMU Member as the appointed and authorised agent of an issuer (e.g. Issuer Agent), such Issuer Agent must have obtained an appropriate authorisation and instruction from the issuer authorising it to request/instruct the CMU to accept the DN Securities on its behalf by signing and returning an "Issuer Letter of Authority" and "Undertaking by Issuer Agent" to the CMU. In order to carry out the duty

and responsibility of an Issuer Agent, it must be a Direct Participant on the CMU DAP.

The Issuer Agent, acting on behalf of the issuer, must issue DN Securities in accordance with statutory (pursuant to the relevant governing law, as the case may be) and other requirements under applicable law in force at the time covering the issuance of the debt securities.

11.2 Issuing Procedure

The Issuer Agent has to provide CMU the issue details by completing the Securities Information Sheet. The new issue of DN Securities is to be allotted, cleared and settled through the CMU DAP. This is used to verify against the bond shell information inputted manually by the Issuer Agent on the Platform. CMU will allocate a CMU issue no., common code and ISIN to DN Securities.

The HKMA reserves the right at the HKMA's sole discretion not to accept any DN Securities to be allotted, cleared or settled through the CMU DAP.

The issuer and other relevant parties will need to comply with the following:

(a) DN Securities must comply with the terms and conditions set out in information memorandum, trust deed and or other relevant legal documents relating to the issue(s);

(b) The documentation mentioned in (a) above must be executed by all relevant parties before the issuance of the DN Securities;

(c) Each issue of the DN Securities will be represented by the information recorded in the issuance token record account, including the CMU issue number, common code and ISIN; and

(d) Submission of the issuance details to CMU (via CMU DAP) by the issuer or the issuer agent must be at least one business day before the issue date.

An Issuance Token Record Account is created for the relevant Issuer on the CMU DAP on a per Issuer basis, for the purpose of holding Issuance Token to enable the CMU to reconcile the total number/amount of DN Securities in circulation on the CMU DAP i.e. reflects the aggregate nominal amount of the relevant DN Securities during its entire life cycle on the CMU DAP.

A "new issue account" will be opened by the CMU DAP for each Issuer agent. The account no. is in the format of XXXX333 where XXXX is the CMU member code of the Issuer agent.

11.3 Creation of bond shell information by the Issuer Agent

(a) The Issuer Agent creates / compiles bond shell information of the DN Securities in accordance with the pricing supplement or any equivalent document at least one day before the issue day;

(b) Informs the CMU by email at cmuenquiry@hkma.gov.hk upon completion of (a) above

11.4 Allotment

On the issue date, the CMU DAP will automatically credit the whole issue size of the new DN Securities to the new issue account (XXXX333) of the issuer agent (which must be a DP or through an appointed DP).

Thereafter, the issuer agent can carry out the subsequent delivery of the new issue DN Securities to the allottees. For DvP allotment in a primary issuance, both transfers of Securities token and Cash Tokens are effected on the CMU DAP on the settlement date. The process flow for distribution is as follows:

(a) The Issuer agent (each of which must be a DP or through an appointed DP) is required to send DvP instructions to deliver (via SWIFT MT543 or CMU DAP User Interface; for DvP instruction settles with cash token in CBDC, only CMU DAP User Interface is available) and the relevant DPs are also required to send DvP instructions to receive (via SWIFT MT541 or CMU DAP User Interface; for DvP instruction settles with cash token in CBDC, only CMU DAP User Interface is available) the DN Securities on or before the settlement date. Upon receipt of both instructions, automated matching takes place immediately on the CMU DAP.

(b) On settlement day, if the issuer agent and relevant DPs have sufficient cash token and securities token, atomic settlement takes place on the CMU DAP. DvP and FoP flows occur as described in Section 12.1 below.

(c) Issuer agent can arrange with allottees to deliver new issues to their accounts by either DvP or FoP mode.

12 Secondary Market Transactions

12.1 Transactions between two DPs on the CMU DAP

12.1.1 Settlement Window

CMU DAP supports 24-hour real-time settlement across the book of the HKMA on the CMU DAP except Saturdays, Sundays and public holidays in Hong Kong.

12.1.2 Settlement Means

Settlement of secondary market transactions on the CMU DAP is effected in real time and on a gross basis. Trading of Tokenised Securities is conducted off-chain. Transfer instructions can be created via SWIFT MT54X or create via the front-end terminal of the CMU DAP. For DvP instruction settles with cash token in CBDC, only CMU DAP User Interface is available. Illustrated examples of MT54X are attached at Annex 2 for your reference.

12.1.3 Settlement Process Flow

12.1.3.1 DvP between DPs

The DvP settlement process flow on the CMU DAP is as follows:

- Both the seller and buyer are required to send DvP instructions on or before the settlement date on the CMU DAP. Upon receipt of the instructions, matching will take place on the CMU DAP.
- On the settlement day, if the buyer has sufficient cash token in the Tokenised Cash Account, and the seller has sufficient securities token in the Tokenised Securities Account, atomic settlement will take place on the CMU DAP with the exchange of tokens occurs as described below:
  (i) If there is insufficient securities token / cash token in the seller's Tokenised Securities Account / buyer's Tokenised Cash Account, real-time DvP transactions will be placed in a queue and the CMU DAP will check if there are sufficient securities token / cash token until the cut-off time of the CMU DAP. The transaction will be in pending settlement status until otherwise cancelled by the buyer and seller.
  (ii) If sufficient securities token and cash token are in place before the cut-off time of the CMU DAP, atomic settlement of DvP will be processed.
- Delivery versus Payment occurs when cash tokens are credited to the seller's Tokenised cash account and securities token credited to the buyer's Tokenised securities account simultaneously, reflecting the (i) transfer of legal title of the Tokenised Securities in the case of Recorded Model Issuance, or (ii) Platform Beneficial Interest of the DP of the Tokenised Securities in the case of Registered Model Issuance.

- The outstanding cash token and securities token on the CMU DAP (as applicable) are available for use by the relevant DPs for carrying out subsequent transactions through the CMU DAP.
- A transaction that is pending settlement will not be cancelled by the system until it has sufficient securities token or cash token for settlement. However, if the buyer and seller agree not to proceed with the trade, they can cancel their respective instructions manually on the CMU DAP.

12.1.3.2 FoP between DPs

- For FOP settlement, both the seller and buyer are required to send FOP instructions on or before the settlement date on the CMU DAP for matching.
- If there are sufficient securities tokens in the seller's Tokenised securities account, securities token will move from the seller's Tokenised securities account to the buyer's Tokenised securities account.

12.2 Cross-Platform transfer between the CMU DAP and CMUP

12.2.1 Settlement Means

DPs can send transfer instructions via SWIFT MT54X or create via the front-end terminal of the CMU DAP. Non-DPs can send instructions via CMT or SWIFT. Illustrated examples of MT54X are attached at Annex 2 for your reference.

12.2.2 Settlement Process Flow

12.2.2.1 DP sells DN securities to a non-DP

Before settlement with a non-DP, a DP seller is required to transfer DN Securities of its holdings from CMU DAP to CMUP via the HKMA Control Tokenised Securities Account (AAAT002) by way of FoP. Subsequently, the DP can transfer the DN Securities to a non-DP in CMUP. DvP will not be supported for the transfers of DN Securities from the CMU DAP to the CMUP.

<u>On the CMU DAP</u>

If the DP is a seller, the real-time FoP process flow is as follows:

(a) On or before settlement day, for a DP who is a seller, it is required to send a deliver FoP instruction against AAAT002 for the transfer of DN Securities from its Tokenised Securities Account in the CMU DAP to its securities account in CMUP (via SWIFT MT542 or input via the front-end terminal of the CMU DAP). Once the instruction is sent out, the DP is required to inform

HKMA-CMU via email or phone call if immediate attention by HKMA-CMU is required.

(b) Such deliver FoP instruction (with AAAT002 as the counterparty) will be pending for matching by the HKMA-CMU. HKMA-CMU will then input a receive FoP instruction to match with that on the CMU DAP.

(c) On settlement date, if the DP has sufficient securities tokens in its Tokenised securities account, atomic settlement takes place on the CMU DAP. Securities tokens will be debited from the seller's Tokenised securities account and transferred to the HKMA Control Tokenised Securities Account (AAAT002) held by HKMA-CMU on behalf of the seller DP.

On CMUP

(d) The receiving party of the DN Securities, i.e. same CMU member, is also required to send a receive FoP instruction (via SWIFT MT540 or input via CMT) to the CMUP against AAAT002 before the specified input cut-off time as stipulated in clause 15 (operational timetable) below.

(e) On settlement day, CMU will transfer the DN Securities from the CMU Control Account (AAAT002) to the receiving party's (seller DP itself) Securities Account at CMUP upon completion of steps (a) to (d).

(f) Further transfer of DN Securities from the DP's Securities Account to the non-DP's Securities Account at CMUP can be settled on DvP / FoP basis. This transfer is executed through a matching instruction between the seller (i.e. the DP) and buyer (i.e. the non-DP) at the CMUP layer.

12.2.2.2 Non-DP sells DN securities to a DP

If a non-DP wishes to sell the DN Securities to a DP, it is required to settle the DvP or FoP transaction with the DP in CMUP first. Upon completion, the buyer DP can FoP transfer the DN Securities back to its own Tokenised Securities Account on the CMU DAP or retain it in its Securities Account in CMUP at its own discretion.

On CMUP

(a) Upon completion of the transaction in CMUP, if the DP wishes to deliver the DN securities back to its Tokenised Securities Account on the CMU DAP, the DP is required to send a deliver FoP instruction against AAAT002 (via SWIFT MT542 or input via CMT) in CMUP before the specified input cut-off time as stipulated in clause 15 (operational timetable) below. DvP will not be supported for the transfers of DN Securities from the CMUP to the CMU DAP.

(b) On settlement day, if the DP has sufficient securities balance in its Securities Account, CMU will transfer the DN Securities from DP's Securities Account to the CMU Control Account at CMUP.

On the CMU DAP

(c) DP who wishes to transfer the DN securities from CMUP to its own Tokenised Securities Account on the CMU DAP, on or before settlement day, the DP is required to send a receive FoP instruction (via SWIFT MT540 or input via the front-end terminal of the Platform). Once the instruction is sent out, the DP is required to inform the CMU via email or phone call if immediate attention by the CMU is required.

(d) Such receive FoP instruction will be pending for matching by the HKMA-CMU. HKMA-CMU will then input a deliver FoP instruction to match with that on the CMU DAP.

(e) Once the instruction is matched, FoP settlement takes place on the CMU DAP. Securities tokens will be debited from the HKMA Control Tokenised Securities Account and transferred to the DP's Tokenised Securities Account.

12.3 Transactions of DN Securities between two non-DPs in CMUP

For the avoidance of doubt, a DP who is holding the DN Securities through CMUP is also a non-DP.

12.3.1 Settlement Window

Settled across the book of the HKMA in CMUP's real-time window from 8:30 a.m. to 6:30 p.m. Hong Kong time except Saturdays, Sundays and public holidays in Hong Kong.

12.3.2 Settlement Means

Settlement of secondary market transactions on the CMU DAP is effected in real time and on a gross basis. Trading of Tokenised Securities is conducted off-chain.

Transactions in CMUP settles in real-time DvP or real-time FoP basis. For DvP transactions with money settlement through the RTGS systems in Hong Kong, CMU Members who are not direct participants of the respective RTGS systems, they can appoint a settlement bank to handle the money settlement arising from CMU transactions. Transfer instructions can be created via SWIFT MT54X or create CMT. Illustrated examples of MT54X are attached at Annex 2 for your reference.

12.3.3 Settlement Process Flow

The clearing and settlement of DN Securities between two non-DPs (i.e. between two CMU Members) in the CMUP system are described in clause 4 in Part II of the CMU Reference Manual. Please refer to the clause for the detailed processing flow. Non-DPs can send instructions via CMT or SWIFT of which illustrated examples of MT54X are attached at Annex 2 for your reference.

Specifically, where connectivity to Euroclear or Clearstream systems is provided by the CMU in respect of applicable DN Securities, for a DP who wishes to deliver the DN Securities to its account in Euroclear or Clearstream, it has to transfer the DN Securities to its Securities Account in CMUP first in accordance with the procedure as described above. Upon receipt of the DN Securities in its CMUP account, onward delivery can be made to HKNE000 for Euroclear and CIHK008 for Clearstream in the CMUP system. For receipt of the DN Securities in Euroclear or Clearstream, CMU Members have to refer to the respective ICSD system's business scope and operating procedure manuals.

12.4 Transfer of Non-DN Securities between DP's Tokenised Securities Account on the CMU DAP and its Securities Account on CMUP

12.4.1 Transfer of Non-DN Securities from CMUP to CMU DAP for the same DP

DP could transfer Non-DN Securities from CMUP to the CMU DAP by way of tokenisation of Non-DN Securities. The process flow of tokenisation of DN Securities should be referred to clause 10.2.1 above.

12.4.2 Transfer of Non-DN Securities from CMU DAP to CMUP for the same DP

DP could transfer Non-DN Securities from the CMU DAP to CMUP by way of detokenisation of Non-DN Securities. The process flow of detokenisation of DN Securities should be referred to clause 10.2.2 above

13 Coupon payment and redemption

13.1 Coupon payment and redemption of Non-DN Securities

13.1.1 For the holdings of Non-DN Securities that has been tokenised on the CMU DAP

(a) On payment day, Income distribution of coupon payment and redemption of the Non-DN Securities to DP will be effected on the CMU DAP by way of

distribution of cash tokens to the relevant DPs' Tokenised Cash Accounts. For non-DP, it shall follow the procedures of traditional securities held in CMUP.

(b) Upon receipt of the income proceeds from the issuer agent, the CMU DAP shall distribute the income proceeds, after deduction of applicable withholding tax (if any), by crediting the cash tokens to the Tokenised Securities Accounts in accordance with the holding records in their Tokenised Securities Accounts at the closing of record date.

(c) For redemption, the securities tokens will be burned in the respective DP's Tokenised Securities Accounts upon completion of the income distribution. The Issuance Token representing the issuance held in the Issuer's Issuance Token Record Account will be burnt.

13.1.2 For the holdings of Non-DN Securities in CMUP that has not been tokenised

Income distribution of coupon payment and redemption of CMU securities that has not been tokenised shall follow the procedures of traditional securities held in CMUP.

Further details are set out in Part II "Clearing, Settlement and Custodial Services" of the CMU Reference Manual.

13.2 Coupon payment and redemption of DN Securities

13.2.1 On announcement notification date (before the payment day)

(a) The issuer agent is responsible for updating the CMU DAP (based on the coupon/redemption payment information specified in the issuance documents) the upcoming coupon/redemption information before the coupon payment dates. Notification report will then be generated by the CMU DAP.

(b) The HKMA-CMU will also notify non-DPs who hold the DN Securities in CMUP via CMT reports of the upcoming payment.

13.2.2 On payment day

(a) To make available the required amount for income distribution on the CMU DAP, the issuer agent is required to top-up their Tokenised Cash Accounts as soon as possible on the payment day.

(b) Upon receipt of the income proceeds from the issuer agent, the CMU DAP shall distribute the income proceeds, after deduction of applicable withholding tax (if any), by crediting the cash tokens to the Tokenised Cash Accounts in accordance with the holding records in the respective holders' Tokenised Securities Accounts at the closing of record date.

(c) For DPs, income distribution will be effected on the CMU DAP by way of distribution of cash tokens to the relevant DPs' Tokenised Cash Accounts.

(d) As for non-DPs, income distribution will be effected on the CMU DAP by way of distribution of the relevant cash tokens to the HKMA Control Tokenised Cash Account. Cash token in HKMA Control Tokenised Cash Account will be burnt and distributed to non-DP in CMUP. CMU will distribute the income proceeds to non-DPs' Settlement Accounts at RTGS or at their settlement bank in accordance with their settlement instructions record maintained at CMUP when they first joined CMU as members.

(e) For redemption, the Securities Token will be burnt in the respective DP's Tokenised Securities Account. The Issuance Token Record representing the issuance held in the Issuer's Issuance Token Record Account will also be burnt.

(f) In the event that a Securities Account in CMUP or a Tokenised Securities Account or a Tokenised Cash Account on the CMU DAP is suspended due to whatever reason (e.g. sanction, bankruptcy event etc.) rendering the HKMA-CMU's inability to distribute income payments to it, HKMA-CMU will return the said entitled proceeds to the issuer agent at the closing of payment day.

14 Corporate Actions (CA) Announcement

(a) Issuer (or its agent)

Currently, the CMU DAP does not support distribution of CA[1] information or announcement on the CMU DAP. When the issuer or its agent wishes to make CA announcement, the CMU will send to DPs/non-DPs via email.

The HKMA is not responsible for verifying the accuracy or completeness of information and reports the CMU receives for dissemination to CMU Members and users / participants of the CMU DAP. As such, the HKMA accepts no liability for any inaccuracy or incompleteness of such information. Neither does the HKMA accept liability for the timely delivery of the reported information to CMU Members and users / participants of the CMU DAP.

[1] Please refer to Part II clause 5.5.1 of the CMU Reference Manual for the meaning of CA (i.e. Corporate Action).

(b) Entitled DN Securities holders on the CMU DAP

Once a CA event notification is announced, DPs will be notified of the upcoming CA applying to the DN Securities which they hold on the CMU DAP via email or any communication means as advised by the HKMA from time to time. The entitled holding is fixed on record date or on actual date, according to the terms and conditions of the relevant CA.

(c) Holders of the bonds in CMUP

Non-DPs which are CMU Members will also be notified of the upcoming CA events via email or any communication means as advised by the HKMA from time to time.

15 Operational Timetable

The following timetable summarizes the cut-off times for various services on the CMU DAP on a normal settlement day. CMU DAP supports 24-hour real-time settlement across the book of the HKMA on the CMU DAP except Saturdays, Sundays and public holidays in Hong Kong.

Time	Event
00:00	Start time for DvP/FoP settlement between two DPs for the current value date
08:30	Start time for DvP/FoP settlement between DPs and non-DPs for the current value date
Before 12:00	Primary issuance for DN securities
17:00	Cut-off time for FoP instructions sent to the HKMA Control Tokenised Securities Account (via CMU DAP) / CMU Control Account (via CMUP) to facilitate: - Tokenisation and detokenisation of non-DN securities; and - Cross-platform transfer of DN securities
18:30	Cut-off time for processing: - Cross-platform transfer of DN securities, - Tokenisation and detokenisation of non-DN securities - DvP/FoP settlement between two non-DPs for the current value date
23:59	Cut-off time for cash tokens and securities tokens transfers, DvP/FoP settlement between two DPs for the current value date

Payment system cut-off time (including RTGS and CBDC platform) are determined by the underlying system schedules. The cut-off time for burning instruction of cash token in RTGS currencies is 30 minutes before the standard RTGS cut-off for that currency.

16 Reporting

DPs can log in to the CMU DAP to check and download reports of their holdings and daily transactions of cash tokens and securities tokens for reconciliation purposes, after value date cut-off of the CMU DAP.

17 Contingency Arrangement

The CMU DAP has system failover arrangement and backup & recovery process in place to cater for system disruption. In the event of the occurrence of a serious incident that prevents the CMU DAP from normal operation, the BCP focuses on ensuring the availability of records to support HKMA-CMU to transfer the outstanding tokenised securities to the traditional platform (CMUP). Before triggering the bond migration, the HKMA-CMU will issue email notification to Issuer Agent.

The CMU shall upon the Issuer Agent's instructions, notify the Direct Participant (DP) the triggering of BCP for bond migration from CMU DAP to CMUP. In accordance with the CMU DAP related documentation, without consultation with any party and without any DPs' approval, commence the bond migration by transferring (i) the definitive record of legal title in the case of Recorded Model Issuance, and (ii) the definitive record of Platform Beneficial Interests in the case of Registered Model Issuance determined by the HKMA from the CMU DAP, to the CMUP.

For clarity, following the bond migration under Recorded Model Issuance, the DPs will no longer hold legal title and instead will hold beneficial interests in the respective CMU Securities Accounts of the relevant CMU Members. The HKMA Control Tokenised Securities Account will also no longer hold legal title to the tokenised securities, although beneficial interests held by CMU Members through the HKMA Control Tokenised Securities Account as intermediary will remain in the respective CMU Securities Accounts of the relevant CMU Members.

Upon a BCP notification in relation to a serious incident that prevents the CMU DAP from normal operation being given to DPs, all DPs (whether for their own account or acting as intermediary or custodian for investors) will be deemed to consent to such bond migration.

By the confirmation of balance information from DPs to the HKMA-CMU, all DPs agree that the HKMA-CMU is deemed to have been authorised by the DPs to

move their entire tokenised securities holdings for immobilisation into their own Securities Accounts in CMUP. Upon receipt of confirmation, CMU will migrate the tokenised securities holdings to the CMUP accordingly. Upon the migration, CMUP will serve as the legally definitive database of the legal title entitlements of the tokenised securities under Recorded Model Issuance.

As for the migration of DN Securities under Registered Model Issuance to the CMUP, Platform Beneficial Interests of DPs will be merged to DPs' Securities Accounts held via the CMUP. There will be a single tier of beneficial interest in the tokenised securities on CMUP in the relevant CMUP Securities Accounts of the relevant DPs and non-DPs.

All unsettled trades on the CMU DAP will be disregarded and DPs will be required to re-submit instructions on CMUP.

18 Termination of DP on the CMU DAP

If a DP no longer wishes to be a DP, it is required to give at least 5 business days' notice in writing to the HKMA. By the close of business on the date of termination, all the Tokenised cash account and Tokenised securities account(s) in the name of the CMU Member will be closed. The DP is required to transfer out all the cash tokens in the Tokenised cash account and securities tokens in the Tokenised securities account before 6:00 p.m. on that day.

19 Suspension/Termination of CMU Membership

In general, suspension or termination of CMU membership on the CMU DAP due to member default follows the terms of the CMU Membership Agreement. Please refer to Part I clause 3 of the CMU Reference Manual for further details.

20 Operational Contact

All requests for business information relating to the CMU DAP must be directed to:

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1 Austin Road West,
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