multi (bridge) Retail CBDC

assume only two countries involved.

Payer's bank   Cross border transaction   Payee's bank

Acc 1   MAS $ $\$ \times 3.4 = RM$ RM   BNM   Acc 2

realtime ex-rate

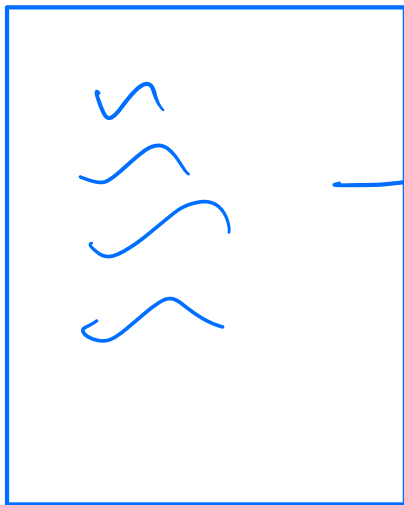M. Bridge

SGD CBDC   M Bridge contract   MYR CBDC
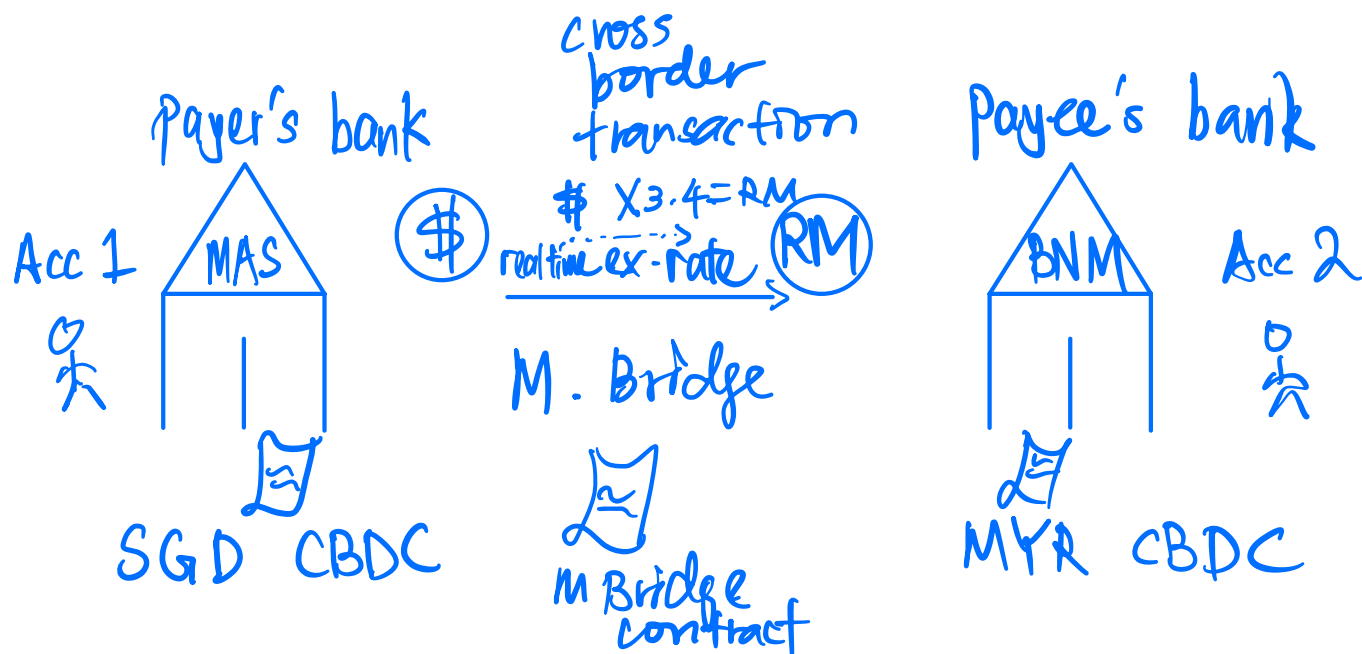
if token is not distributed by Central Bank, the token can only be called stablecoin although the value is pegged to fiat currency, else it would be so called CBDC

Payment → Token contract < SGD CBDC / MYR CBDC

underlay on

Contracts
SGD CBDC

swap token (cross border
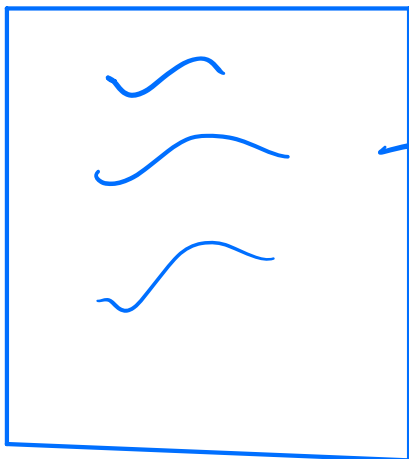remit   Transaction)

owner: MAS
↳ mint
↳ burn
↳ transfer → local acc.
↳ balanceof
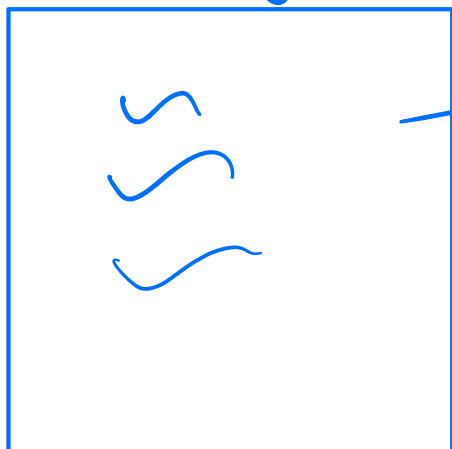↳ forward call to MBridge
↳ listen call to M Bridge

MYR CBDC

owner : BNM
↳ mint
↳ burn
↳ transfer → local acc.
↳ balanceof

M Bridge (proxy?) ERC 1155?

owner : MAS, BNM
rate = 0.29 ⇔ 3.44

↳ forward burn SGD CBDC
↳ forward mint
      MYR CBDC × rate
   or vice versa

burn ✓ → mint

transact SGD to MYR( ) ~ called by SGD CBDC

// SGD CBDC . burn ( )

// MYR CBDC . mint ( ) → after apply rate

// MYR CBDC . transfer ( )

transact MYR to SGD( ) ~ called by MYR CBDC

// MYR CBDC . burn ( )

// SGD CBDC . mint ( ) → after apply rate

// SGD CBDC . transfere ( )

wallet (check acc. in two CBDC contact)

Wallet Activity Voucher E-commerce   disconnect wallet

Acc. Details   current Balance

Username:
Ah Meng
Native Token
5 MATIC

200 | DSGD ▼ | Available
      | DMYR |

Pay   Request

Activity

Wallet **Activity** Voucher E-commerce   disconnect wallet

Current Balance

200 DSGD/DMYR Available

Recent Activity

Payment Subject	Type	Address	Msg	Amt
Alice	Rec.	0x...	Fund	+60DSGD
Bob	Send	0x...	Bill	-100DSGD

Reward/Voucher use case (ERC1155)

Wallet Activity **Voucher** E-commerce   disconnect wallet

Claimed Voucher

Details	Value	Expired in
PBM Dairy	10	5 days
PBM Elec.	200	1 day

Voucher used

. . . . .   [Use]

. . . . .   [Use]

Cancel

E-commerce use case (ERC20)

Wallet Activity Voucher **E-commerce**   disconnect wallet

Merchant XXX from Malaysia

Product
A
.... $5
Buy

Order

Product A $5

[Pay with SGD CBDC]

. . . . . [Wallet Voucher]