Currency conversion and settlement in Mojaloop

Agenda

- How does Mojaloop do currency conversion?
- How does COMESA DRPP do currency conversion?
- What improvements are needed?

How does Mojaloop do currency conversion

Why is currency conversion a problem?

- Customers need a fair and binding exchange rate at the time they make a payment.
- DFSPs must provide liquidity cover before they make payments.
- Exchange rates can vary widely, even within a day.
- The exchange rate a DFSP gets for its liquidity cover may be different from the rate it has to offer its customer.
- This is *exchange rate risk*.
- Risk requires expertise and costs money.

The currency conversion conundrum

- We want currency conversion to be managed by the participant DFSPs…
  - The overall architecture of Mojaloop is:
    - DFSPs organise payments between themselves.
    - The hub provides services to support the DFSPs.
    - Only the DFSPs should incur liabilities.
- But we don't want DFSPs to *have to* know about currency conversion…
  - Currency conversion is a specialised skill
  - DFSPs shouldn't need to provide their own currency conversion
  - DFSPs should be able to get access to currency conversion via Mojaloop
  - Every DFSP should be able to participate in international payments, no matter how small.

Our solution

- Specialist DFSPs provide currency conversion services to other DFSPs.
- They assume exchange rate risk on behalf of their customer DFSPs…
- … and they recover the cost of that risk from their customer DFSPs (and, eventually, perhaps, the end users).

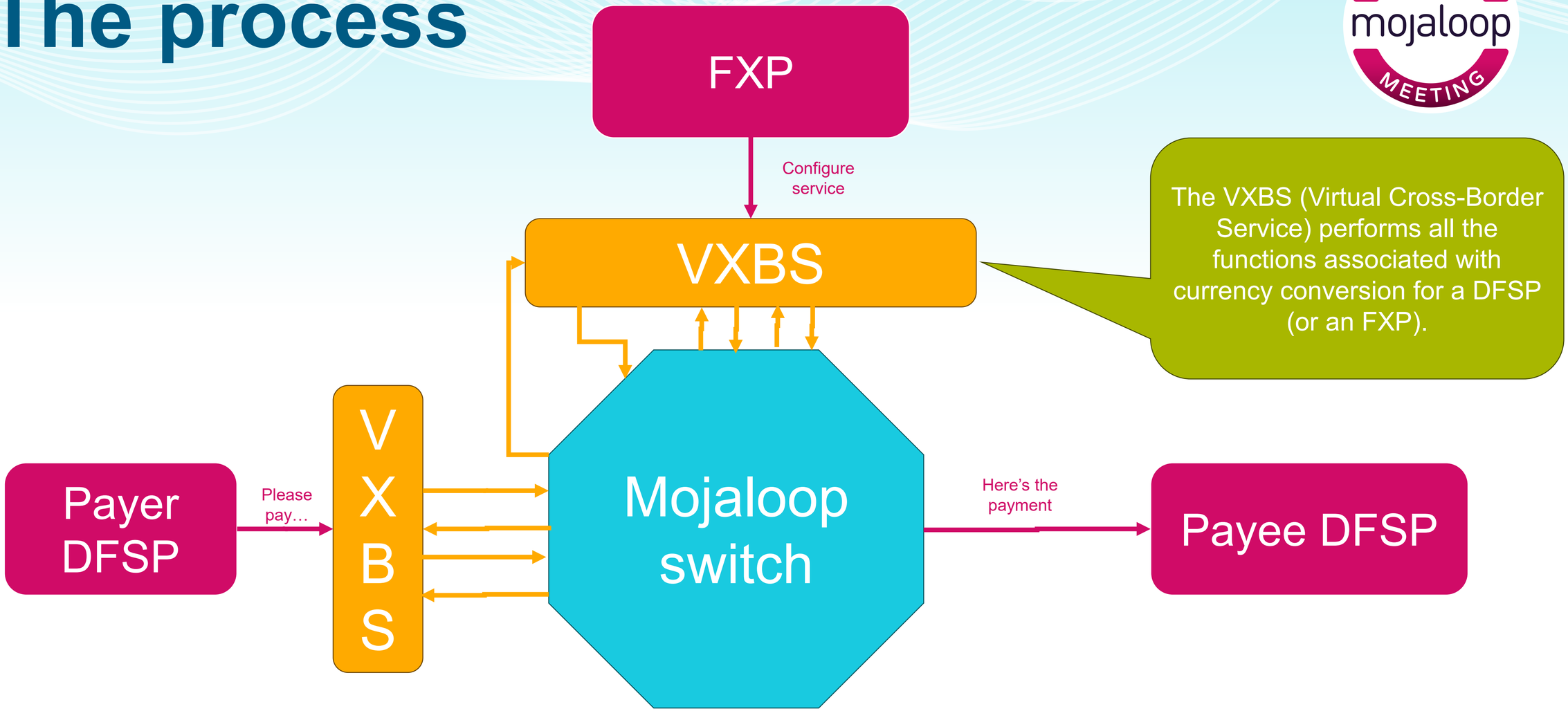
How do they do this?

- A DFSP asks the FXP to agree to a currency conversion.
- The FXP sets the exchange rate and any charges.
- The FXP agrees not to apply the conversion unless the payment succeeds.
- When the payment is complete:
  - The payer DFSP “pays” the FXP in source currency.
  - The FXP “pays” the payee DFSP in target currency.

Isn’t that a bit, er, complicated?

- We need this to be a process that small informal DFSPs can participate in.
- So we provide them (and any other DFSPs) with tools to manage the complexities of the process.

The process


FXP
Configure service
VXBS
The VXBS (Virtual Cross-Border Service) performs all the functions associated with currency conversion for a DFSP (or an FXP).
Payer DFSP
Please pay…
V
X
B
S
Mojaloop switch
Here's the payment
Payee DFSP

How does COMESA DRPP do currency conversion?

How does COMESA DRPP do currency conversion?

- The COMESA Digital Retail Payments Platform (DRPP) supports multi-currency and forex operations
- This enables competitive foreign exchange transactions with centralized liquidity management and settlement through central bank RTGS systems
- Mojaloop *Cross-Currency* algorithm provides a robust mechanism for Payer FIs to purchase liquidity cover from FXP connected to the COMESA DRPP Regional Hub

How does COMESA DRPP do currency conversion?

- This approach is designed to provide scaled access to the corridors by requiring a single relationship with the regional hub while supporting as many source and destination currencies, based on the FXP’s regulatory authorization or commercial capacity.

How does COMESA DRPP do currency conversion?

- Finance Portal Enhancements & Currency Conversion Tracking
  - Enhancements to the Finance Portal, improving tracking and reporting of currency conversion transactions.
  - Enhanced transaction filtering options based on currency, fields, and transfer types.
  - Improve source currency visibility, ensuring greater traceability of multi-currency transactions.
  - Recorded demonstration of the updated Finance Portal, providing a reference for operators and stakeholders.

What improvements are required?

Support for correspondent banking

- An example from the real world: FDH Bank
  - FDH Malawi is a licensed FXP (Foreign Exchange Provider) in Malawi
  - FDH is not licensed in Zambia, but:
  - FDH has a correspondent banking relationship with UBA Zambia, which is licensed in Zambia.
  - Now, because FDH lacks a license in Zambia, it cannot directly provide Zambian Kwacha liquidity or quote ZMW exchange rates as a principal.
  - But through correspondent banking, it can still participate in cross-border payments, using UBA as a proxy.

Correspondent banking: an instant guide…

- Two DFSPs make an agreement with each other.
- Each DFSP opens an account at the other DFSP.
- If the DFSPs are in different jurisdictions, those accounts will be denominated in different currencies.
- Bank B is an *agent* for Bank A in the target jurisdiction, and Bank A is an *agent* for Bank B in the source jurisdiction
- Now Bank A can make payments to a DFSP in the target jurisdiction from its account at Bank B...
- … and this appears in the target jurisdiction as a payment from Bank B

How do we propose to support this?

- The correspondent agreement is a point-to-point agreement which is outside the scope of Mojaloop.
- Each agent must be a participant in its jurisdictional scheme.
- The FXP may nominate an agent for the source currency, or the target currency, or both.
- Agent information will form part of the agreed documentation for an individual currency conversion and its associated payment.
- This information is already part of the ISO 20022 standard.
- We will extend the FSPIOP API definition to support this additional information.

What does the switch do?

- When a currency conversion defines an agent:
- The switch will substitute the agent for the FXP when it calculates obligations.
- If the agent is part of the switch's scheme, then it will be registered as the payee (in the source scheme) or the payer (in the target scheme) for the obligation.
  - The consequence is: the agent will be the party which settles that payment.
- If not, the obligation will be registered against the original payer or payee's proxy.

Open questions…

- Should the FXP notify its agent of the payment?
  - This could be done using existing Mojaloop functionality…
  - … and enforced using scheme rules or the correspondent agreement.
- Should an agent provide separate liquidity cover for payments executed under a correspondent agreement?

Thank You !!