



# NIFD and CLS Joint Forum

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# Topics

- FX principal risk
- Settlement risk drivers and mitigants
- Payment-versus-payment (PvP) – what is it and how it works
- Global connectivity – operational structure of connecting RTGS systems
- Role of a PvP global FMI – facilitate connectivity and create global standards
- Global oversight – role of central banks, oversight/governance, value to central banks

# FX Principal Risk

**To settle a FX transaction, counterparties need to exchange principal (value of the trade) in two currencies**

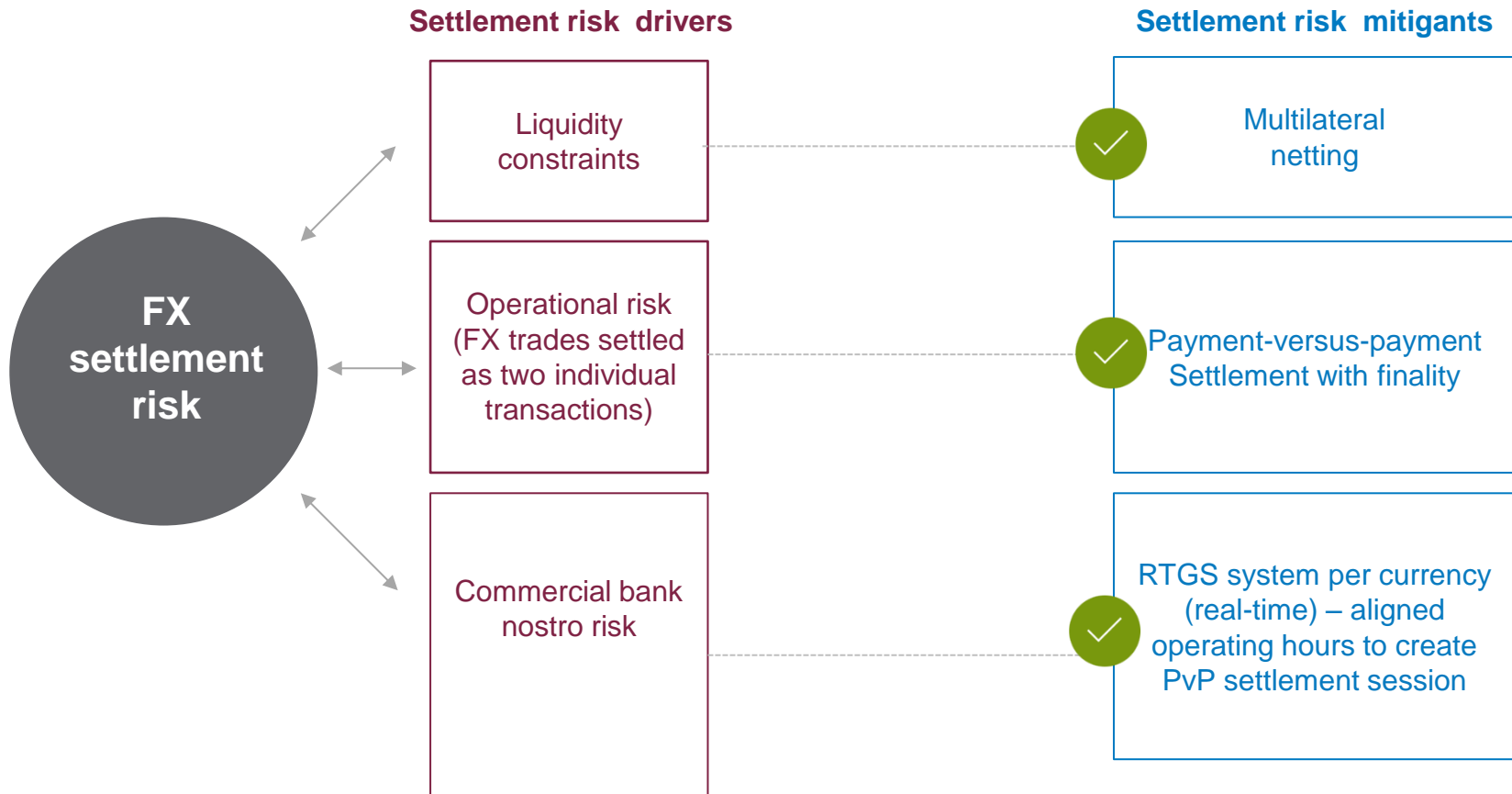
- Principal risk is the risk that one party to a FX transaction delivers the currency it sold but does not receive the currency it bought from its counterparty – ie loss of principal
- Also known as Herstatt risk – derived from the failure of Bankhaus Herstatt in 1974
  - Bankhaus Herstatt scheduled to receive Deutsche Marks (“DEM”) from, and pay U.S. dollars (“USD”) to, numerous counterparty banks
  - Due to time zone differences the bank ceased operations after receiving DEM payments but before it released USD payments - significant loss of principal of DEM470 million\*
- Settlement risk, is defined as the operational, liquidity and legal risk associated with the potential loss of principal

\* Source: BIS, Bank Failures in Mature Economies, BCBS Working Papers No. 13, April 2004, [http://www.bis.org/publ/bcbs\\_wp13.htm](http://www.bis.org/publ/bcbs_wp13.htm)

# Options for FX settlement risk mitigation

- Use of collateral to reduce risk exposure
- Bilateral netting agreements
- Standardized and enforceable legal agreements
- Payment-versus-payment settlement
- Risk mitigation through RTGS connectivity

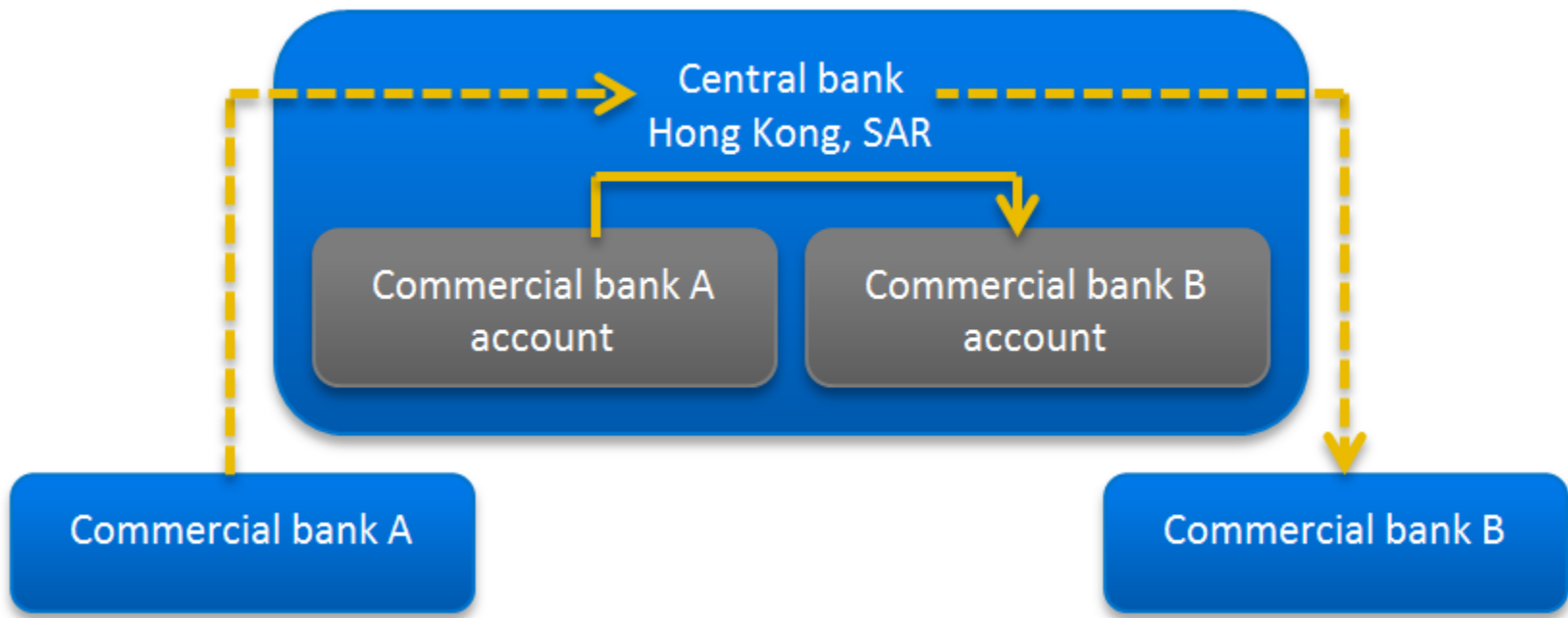
# Mitigating Settlement Risk



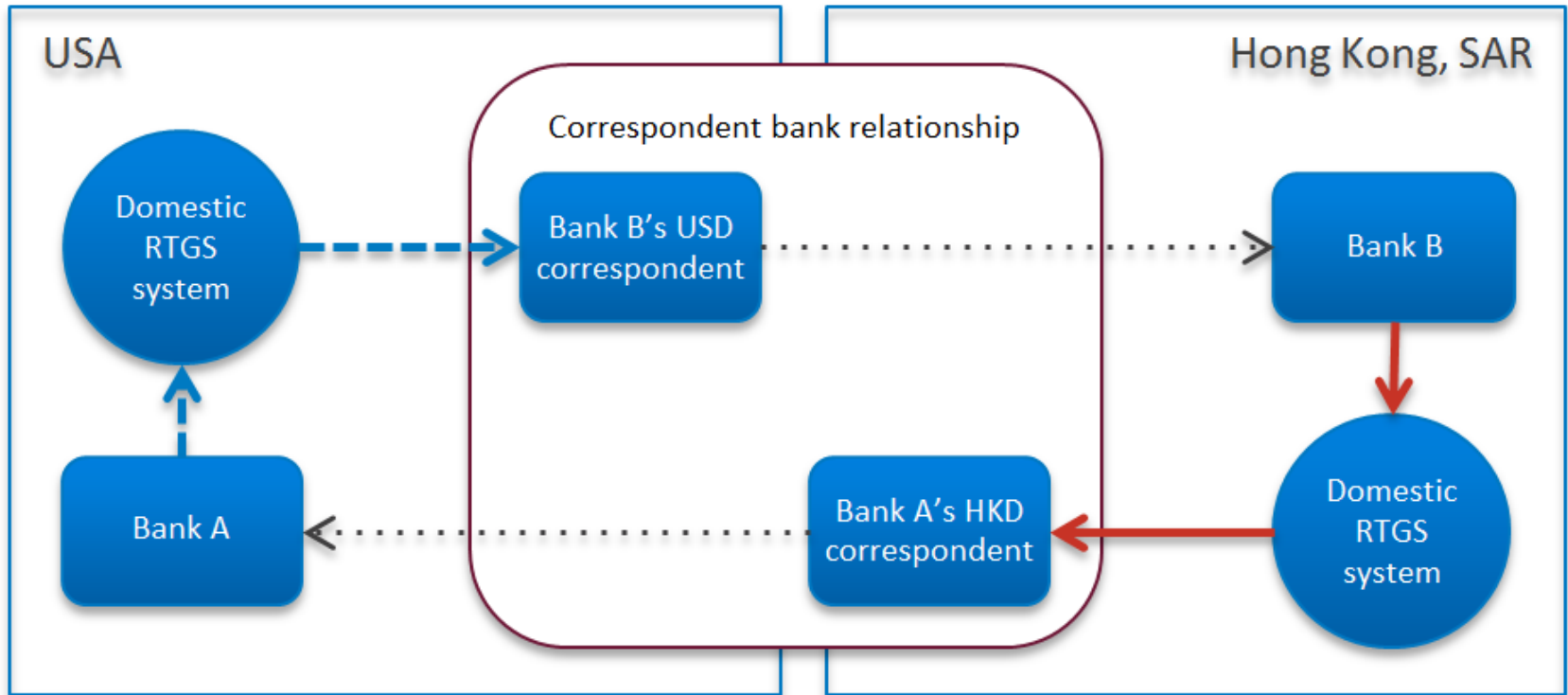
# Attributes of payment-versus-payment (“PvP”) settlement

- Cross-border FX transactions require payments in different currencies, different time zones and through different RTGS systems processes and standards
  - This leads to significant operational, legal and liquidity risk
- A PvP settlement service ensures that the principal amounts are protected by simultaneously settling matched FX payment instructions
- An ideal PvP system is characterized by:
  - linking RTGS systems in currencies settled
  - payments in central bank funds
  - operating with a global single set of standards and processes
  - providing legal certainty

# One-way domestic payment via RTGS system

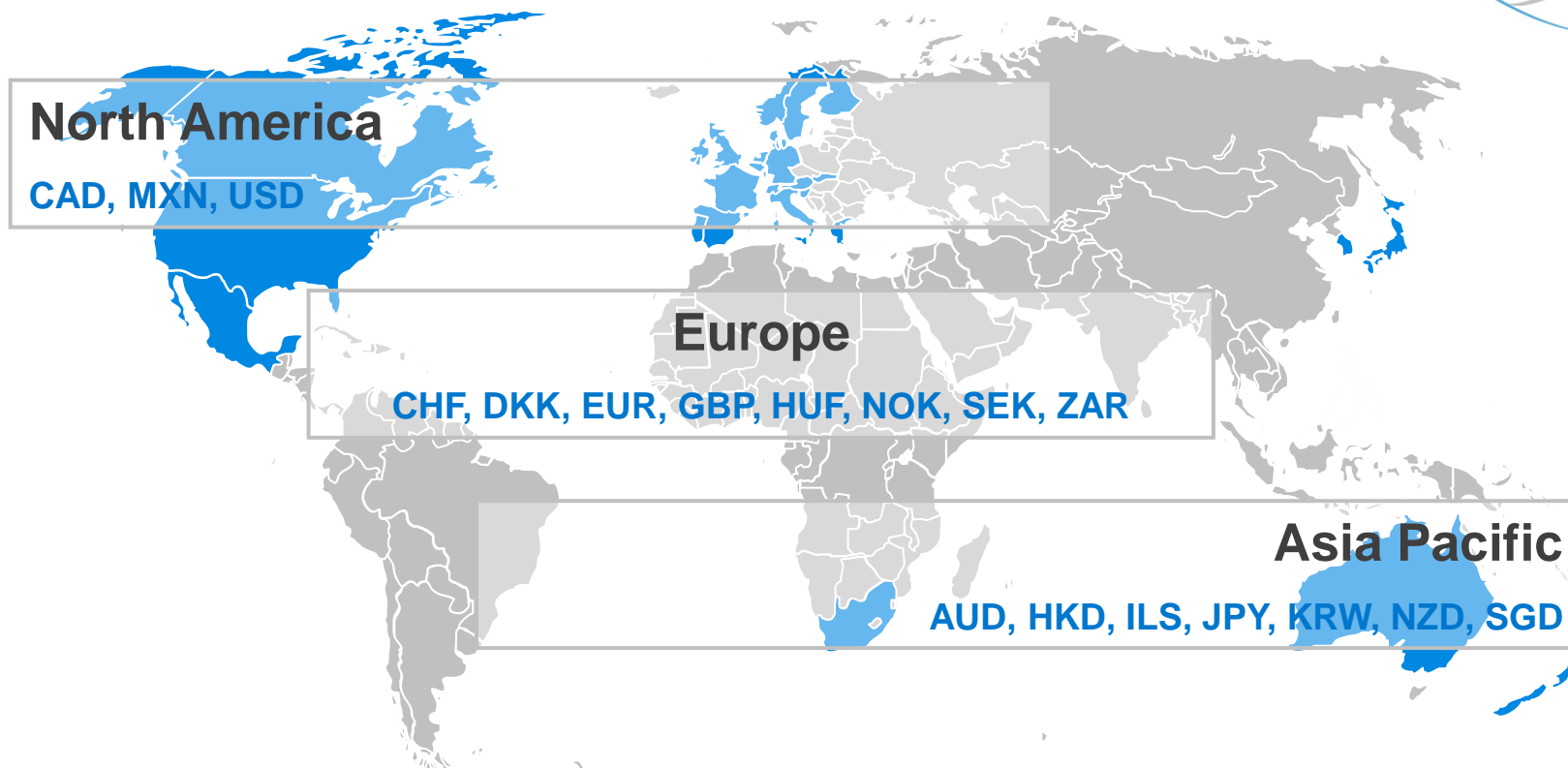


# Two-way cross-border FX settlement





# PVP requires overlapping RTGS systems



## How CLS connects different RTGS systems and settles:

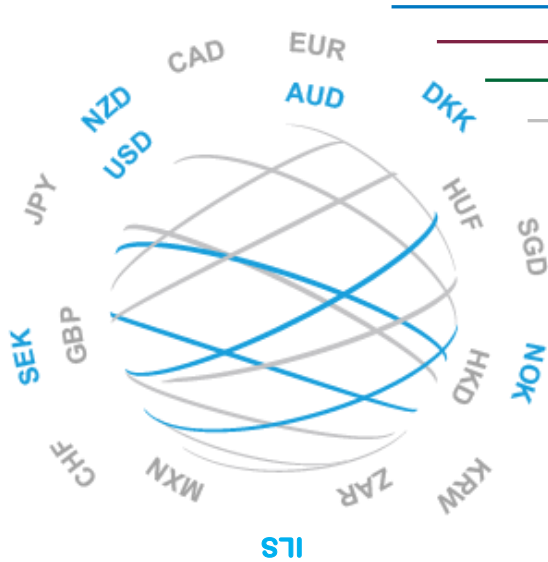
- All currencies settlements are from 13:00 to 15:00 Beijing time
- Asian currencies Pay-ins and Pay-outs are from 13:00 CET to 16:00 Beijing time
- All other currencies Pay-ins and Pay-outs are from 13:00 CET to 18:00 Beijing time

# How CLS delivers settlement risk mitigation



# CLS Multilateral Netting Effect

18 currencies, 66 settlement members, 23,000 third parties



multiple transactions

Peak day average value:  
Approx. **USD11 trillion\***

Average daily value  
**USD5 trillion**

100%

Multilateral netting  
**4%**

Optional additional risk tool for CLS members

**1%**

Significant liquidity savings

Payment via RTGS in central bank funds

- \* Peak value day
- 21 June 2017 – CLS settled a record of USD11.1 trillion in gross value
- Net funding was USD73 billion; a payment netting efficiency of 99.3%

# Global central bank oversight

