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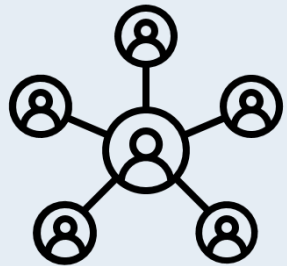
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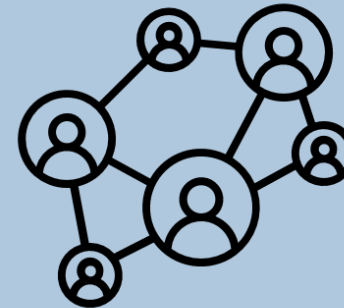
Project Helvetia and Project Jura – Overview

Benjamin Müller (SNB) | 18th Annual NBP-SNB Joint Seminar | 16 November 2022

DLT and tokenised assets are making inroads into traditional finance



Issuance, trading, clearing and settlement reflect manual paper-based processes and are centralised



DLT and tokenised assets could allow for a different, possibly more efficient financial market infrastructure

Central banks...

- (1) ...need to understand the potential changes brought about by DLT and tokenised assets
- (2) ...may want to continue offering settlement in central bank money also for tokenised assets

Projects Helvetia and Jura investigate settlement of tokenised assets in central bank money

Project Helvetia

Settling tokenised assets in central bank money



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Project Helvetia Phase II

Settling tokenised assets in wholesale CBDC

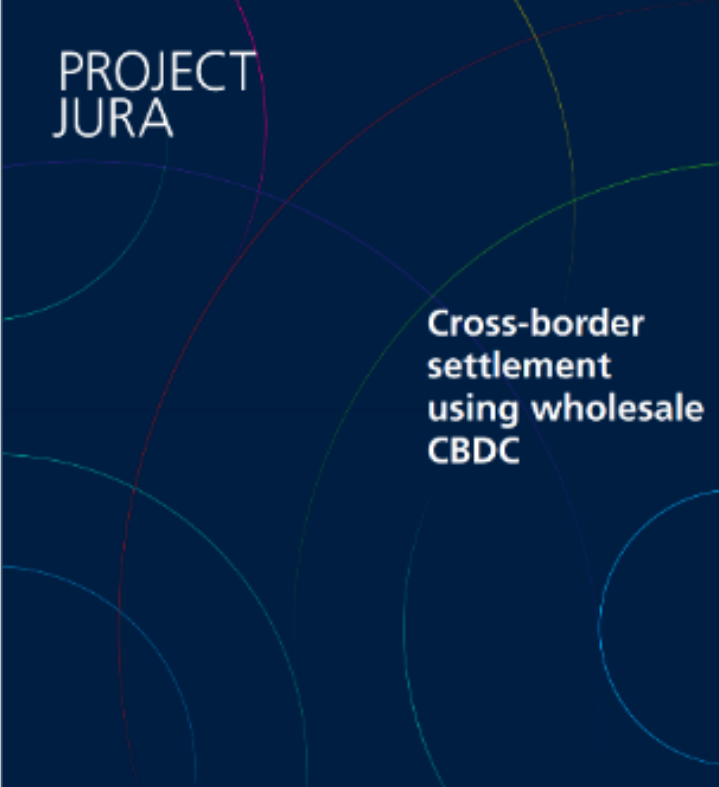


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PROJECT JURA

Cross-border settlement using wholesale CBDC

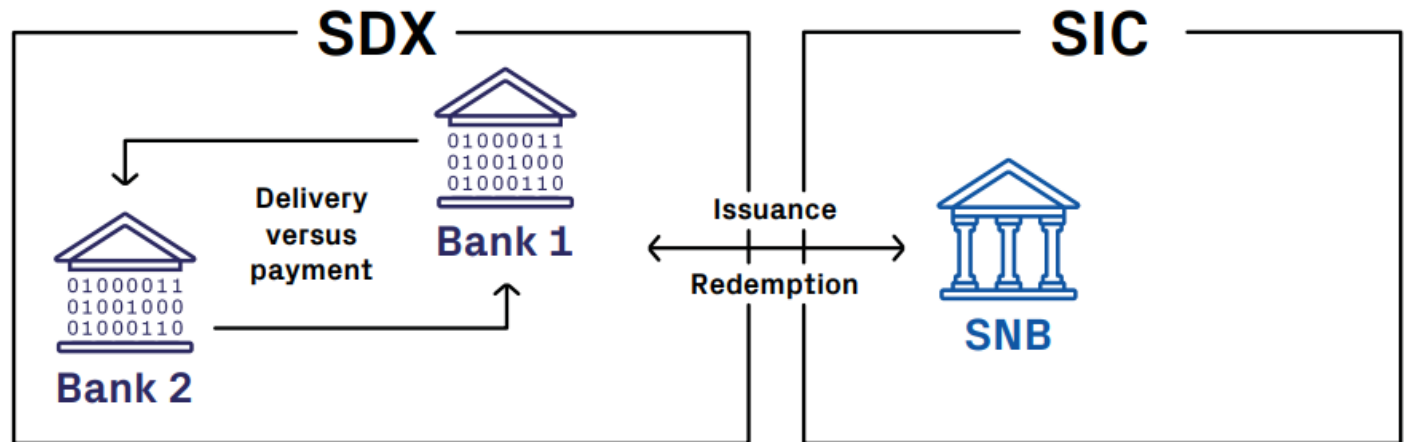


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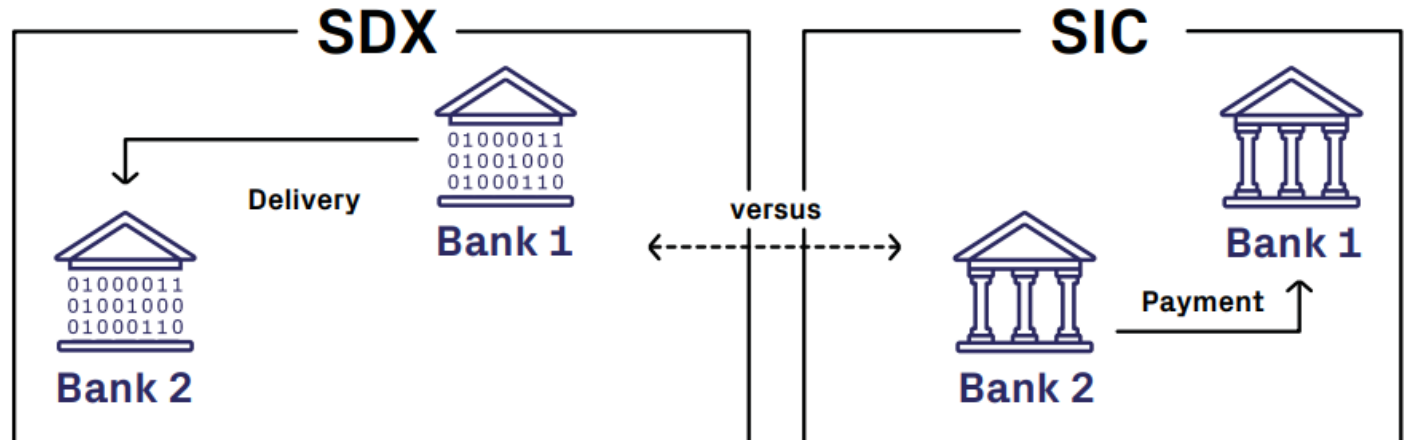
accenture | Credit Suisse | NATIXIS | SDA | UBS

Two approaches to settle tokenised assets in central bank money are explored in a domestic and cross-border context

wCBDC on third-party platform
Helvetia Phase I, II & Jura



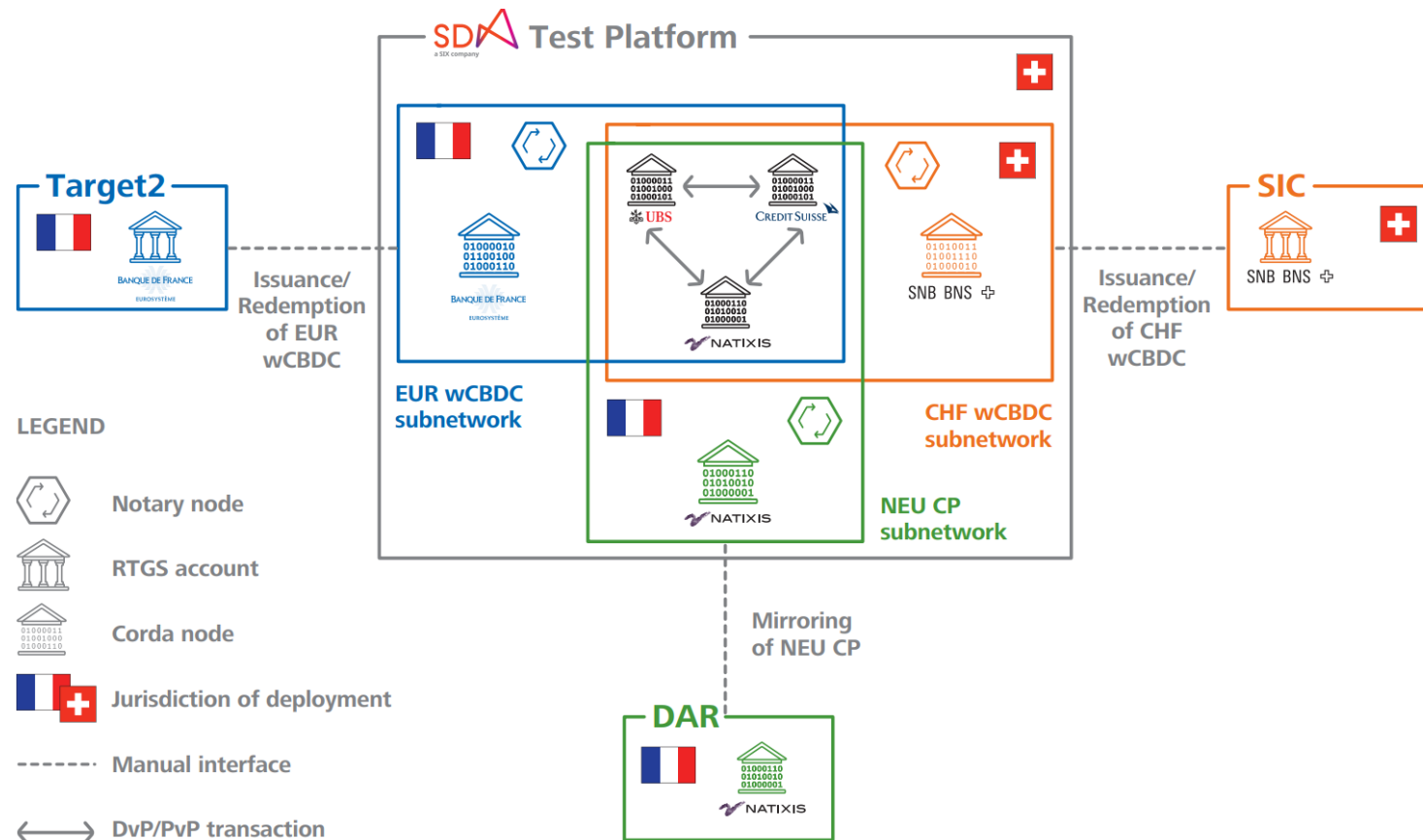
RTGS link
Helvetia Phase I



wCBDC raises more policy questions, but might also enable more potential efficiency gains of DLT and tokenisation

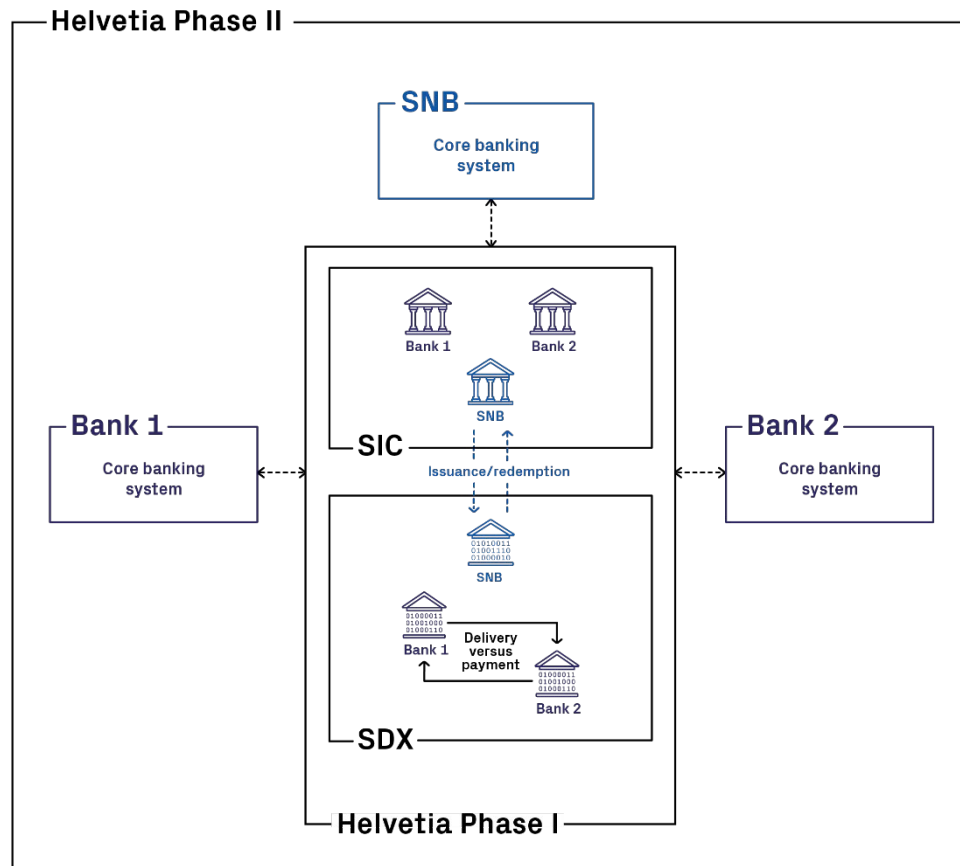
	wCBDC	RTGS link
Benefits	<p>wCBDC on third-party platform enables the full functionalities of SDX's DLT platform</p> <ul style="list-style-type: none"> • Execution of programmable business logic ("smart contracts") • Atomic (multilateral) settlement in central bank money 	<ul style="list-style-type: none"> • Does not raise major new legal or policy questions, as central bank money always remains in the RTGS system • Would require only minor adjustments to the central bank's business processes
Challenges	<ul style="list-style-type: none"> • Raises numerous legal and <i>policy questions</i> • Requires substantive adjustments to the <i>(central) bank's business processes</i> and systems 	<p>No wCBDC on third-party platform limits functionalities of the SDX platform:</p> <ul style="list-style-type: none"> • Limited execution of smart contracts involving reserve balances • Atomic multilateral settlement not feasible with RTGS link due to the current setup of SIC

Policy questions: Helvetia and Jura solution designs take serious central bank control and monitoring functionalities with wCBDC



- Issuance and redemption through the RTGS system and a central bank **issuer node**
- Central bank control over the **notary node** in Project Jura
- **Observer node** to monitor wCBDC transactions and balances
- wCBDC booked and reconciled in **core banking systems** in Project Helvetia II
- Deployment of critical network elements in **local clouds** (Jura)

Business processes and systems: Helvetia presents a wCBDC-solution design that can be integrated with traditional systems



Helvetia Phase II:

- wCBDC integrated in core banking systems through message-based communication
- Booking and reconciliation processes adapted for wCBDC
- Interoperability between SDX and the SIC-system for issuance and redemption through ISO-gateway

Helvetia Phase I, RTGS link:

- Interoperability through link functionality in the SIC-system

Conclusion

Key findings

- Domestic and cross-border DvP, PvP and payment settlement in wCBDC functionally feasible
- Technology affords central banks control and monitoring capabilities to issue wCBDC on a platform owned and operated by a third-party
- Integrating wCBDC in core banking systems and back office processes is functionally feasible

Implications

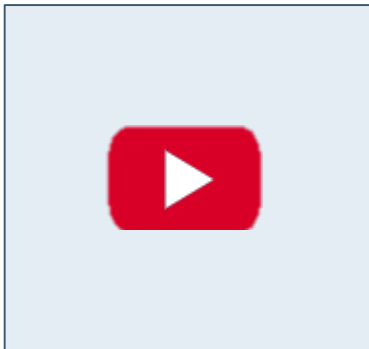
- Financial stability: DvP & PvP settlement in central bank money reduces settlement and credit risks
- Monetary policy: Implications for monetary policy implementation depending on wCBDC design. Market segmentation and new settlement standards.
- Payments policy: Fragmentation of central bank money and governance questions

References

Helvetia Phase II



[Project Helvetia Phase II \(snb.ch\)](https://www.snb.ch)



- [Project Helvetia Phase II: Overview – YouTube](#)
- [Helvetia Phase II - short version - YouTube](#)

Jura

[Project Jura \(snb.ch\)](https://www.snb.ch)

- [Project Jura - Cross-border settlement using wholesale CBDC – YouTube](#)
- [Project Jura - Cross-border settlement using wholesale CBDC - short version - YouTube](#)

Thank you for your attention!

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