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## **Project Helvetia III – The SNB’s pilot for wholesale CBDC**

### Remarks at the BIS Innovation Summit, 6–8 May 2024

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Ladies and Gentlemen

Let me thank the BIS for the opportunity to present and discuss Project Helvetia III. It is a great pleasure to give you some insights into this pilot project of the Swiss National Bank. The pilot represents the world's first issuance of a wholesale CBDC on a regulated third-party platform to settle commercial transactions with tokenised assets.

Helvetia III is a good example of how learnings from BIS Innovation Hub projects can be leveraged for real world use. We started this work together with the Hub's Swiss Centre and the private sector more than four years ago. In Helvetia I and II, we jointly expanded our understanding of wholesale CBDC and shared the findings with the central bank community. We took advantage of this groundwork to launch Helvetia III in December 2023, bringing Swiss franc wholesale CBDC from a test setting to real use.

In my remarks today, I will focus on three topics: First, I will share some preliminary insights from the ongoing pilot. Then, I will discuss two alternatives to wholesale CBDC we are currently exploring. I will conclude with reflections on the response of central banks to tokenisation.

### **Project Helvetia III**

The tokenisation of financial assets is gaining momentum.<sup>1</sup> Switzerland has emerged as one of the leading centres in the adoption of tokenisation within the regulated financial system. This raises the following question for the SNB: How can transactions with tokenised assets be settled in central bank money? Settlement in central bank money is crucial for two reasons: First, it eliminates credit risk and minimises liquidity risk in settlement, thereby contributing to financial stability. And second, it reinforces the role of central bank money as the anchor for the monetary system.<sup>2</sup>

Helvetia III pilots tokenised central bank money for wholesale use, often referred to as wholesale CBDC. Participating banks can use Swiss franc wholesale CBDC to settle transactions with tokenised bonds on SIX Digital Exchange (SDX). SDX is a regulated trading and settlement platform for tokenised assets. Since the start of the pilot, four tokenised bond issuances and one secondary market transaction have been successfully settled in wholesale CBDC.

Economically and legally, the wholesale CBDC used in Helvetia III is equivalent to sight deposits on the SNB balance sheet. Access to wholesale CBDC is restricted to banks and financial institutions which participate in the Swiss real-time gross settlement system, or RTGS system for short. Legally, wholesale CBDC is an alternative representation of sight deposits at the SNB. A key difference to sight deposits is that the pilot makes tokenised

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<sup>1</sup> Tokenisation means the digital representation of claims on financial assets on a programmable platform which typically relies on distributed ledger technology. It promises a more secure, more efficient and more transparent financial system.

<sup>2</sup> Cf. Thomas J. Jordan, Introductory remarks at the event 'Towards the future monetary system', Zurich, 8 April 2024.

central bank money available on the same third-party platform where the tokenised assets are held.

This approach eliminates barriers in today's siloed financial market infrastructures. At present, financial assets and central bank money are usually held on separate systems that are linked in order to synchronise payments and asset transfers. With wholesale CBDC as piloted in Helvetia III, assets and central bank money are instead closely integrated. This reduces the need for synchronisation and reconciliation and facilitates programmability. This approach aims to realise the benefits of tokenisation, but also poses challenges. I would like to discuss two challenges relevant for central banks – governance questions and fragmentation of central bank money – and share with you how we address these in Helvetia III.

Let me start with governance. Issuing wholesale CBDC on a third-party platform entails a public-private partnership. The central bank delegates certain tasks related to the issuance and use of central bank money to the platform provider. This means that roles and responsibilities must be clearly defined, as must rights and obligations. In Helvetia III, the SNB delegates certain contractually agreed tasks to SDX. At the same time, the SNB retains control and monitoring capabilities over the use of its wholesale CBDC. Such capabilities are made possible by operational and technical means on the SDX platform.

Let me now turn to the second challenge, the fragmentation of central bank money. Wholesale CBDC creates an additional pool of central bank money, which needs to be managed. If wholesale CBDC were to be issued on multiple third-party platforms, central bank money would be fragmented even further. Measures to mitigate such fragmentation are needed.

In Helvetia III, participating banks tokenise sight deposits and de-tokenise wholesale CBDC through the Swiss RTGS system in a standardised, automated process. For this to work seamlessly, the operating hours of the Swiss RTGS system and SDX are aligned. If multiple third-party platforms with wholesale CBDC were to exist, this approach could be replicated. De-tokenising wholesale CBDC on one platform and tokenising sight deposits on another would use the same process and would be facilitated by the Swiss RTGS system. The role of the SNB in this process would be to control the issuance and redemption of wholesale CBDC on the respective platforms.

My focus so far has been on Project Helvetia III, which explores wholesale CBDC on a third-party platform. But there are other approaches to settling tokenised asset transactions. To understand the respective risks and benefits, we are examining two alternative approaches to wholesale CBDC. In the second part of my remarks, I would like to describe them and offer a preliminary assessment.

### **Alternative settlement approaches and preliminary assessment**

The first alternative approach is linking the tokenised asset platform with the Swiss RTGS system. I will refer to it as the RTGS link. The second approach uses private token money

which is issued on the tokenised asset platform and which is bankruptcy-protected and fully backed by sight deposits at the SNB. I will call this approach backed private token money.

The RTGS link employs a synchronised approach to settlement: Sight deposits and tokenised assets remain on different infrastructures. To settle a tokenised asset transaction in this setting, the transfer of assets and central bank money is synchronised by messages sent back and forth between the different infrastructures. This corresponds to the current process, where central banks support links between their RTGS systems and other financial market infrastructures in order to facilitate safe settlement.

An RTGS link could leverage existing functionality in the Swiss RTGS system. Central bank money would not leave the current sight deposit accounts, thus preventing fragmentation of central bank money. It would also avoid the governance questions arising from issuing central bank money on a third-party platform. However, an RTGS link would replicate the current process, which builds on synchronisation. This might limit the ability to improve the status quo.

Backed private token money in turn enables an integrated approach to settlement whereby money and assets would be held on the same platform. It would be accessible to banks that already have access to central bank money and would have risk characteristics similar to those of central bank money. If the token issuer defaults, holders of such private token money have recourse to the central bank money backing it. Backed private token money would reduce the need for synchronisation, since assets and money would be available on the same platform. Depending on the design, it could entail fewer governance challenges than with wholesale CBDC in Helvetia III, but fragmentation challenges would be the same. Compared to wholesale CBDC and sight deposits, however, backed private token money is not a direct claim on the central bank, and thus requires a thorough analysis with regard to its regulatory treatment.

Our work so far on the three settlement approaches suggests that they are all technically and legally feasible. They do, however, have different operational, governance and risk implications and they might differ in their ability to deliver efficiency gains. It will therefore be important to carefully assess the respective benefits and risks of the approaches in order to decide on the best way forward.

## **Conclusion**

Ladies and Gentlemen, let me conclude. Technological innovations such as tokenisation may help to make today's financial system more efficient. This raises the general question of how central banks should respond to tokenisation. As with any technological innovation, a central bank's actions must reflect its mandate. And these actions may depend on the relevance of tokenisation for its domestic financial market.

If the tokenisation of assets becomes mainstream, settlement in central bank money will be crucial. This will allow central bank money to maintain its essential role as the anchor of the

monetary system and to continue to serve as a safe means of payment. The SNB is currently investigating three approaches to settling transactions with tokenised assets in order to understand and compare their respective risks and benefits. This will then put us in a position – should the need arise – to take an informed decision on the choice of one or perhaps multiple settlement approaches.

Given that the tokenisation of assets is still a niche phenomenon, central banks must address the question of whether and how they should engage at this stage. They can take a wait-and-see stance and only act if tokenisation is adopted at scale. Alternatively, they can push ahead independently of market adoption and offer new approaches for the settlement of tokenised asset transactions at an early stage. Or they can proceed stepwise to identify the optimal solutions for settling tokenised asset transactions together with market participants through experiments or pilots.

The SNB is pursuing the third option. Through our Helvetia III pilot, we are contributing to the private sector's exploration of how tokenisation can improve the current financial system. The world's first issuance of wholesale CBDC on a regulated third-party platform underscores our commitment to facilitating technical progress while acting prudently and responsibly.

Thank you for your attention.