

The potential for Distributed Ledger Technology to reduce FX Settlement Risk

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In 2019, the Bank for International Settlements (BIS) Triennial Survey estimated almost \$9 trillion-worth of FX payments remain at risk of settlement failure on an average trading day and reported PvP protected settlements had dropped to approx. 40% of the market¹. In an effort to eliminate principal risk, in December 2020, the BIS issued supervisory guidance recommending using PvP settlement where practicable² - a message echoed in the recently updated FX Global Code, with its increased emphasis on the need for market participants to reduce settlement risk and use PvP mechanisms where available³.

Whilst various governance bodies are calling on the industry to step-up and take action, the challenge remains

that many FX market participants lack access to the infrastructure necessary to facilitate safe settlement.

FX is a market without a widely used central exchange or clearing facility. CLS offers Payment-vs-Payment (PvP) settlement to its members across a select number of central bank currencies - reducing the risk of a counterparty failing to fulfil their settlement obligations. However, as trading in emerging market currencies continues to rise, for example from 2016 to 2019, daily average volume for CNY grew by 41% to \$285bn and RUB by 24% to \$72bn⁴, the proportion of trades eligible for PvP protection is in decline.

In 2020, the Financial Stability Board (FSB) launched an initiative focused on enhancing and de-risking cross-border payments⁵. Looking to the revolutionary change in network technology, the FSB committees advocated that new technologies can and will enable faster, cheaper, transparent, and scalable payments for a broad range of users in the banking system⁶.

However, following years of under investment in post-trade infrastructure, many banks are heavily reliant on legacy technology built around central-server based architecture with

disparate interconnected systems, running batch-processes and different data schemas.

If access to PvP is to evolve in a realistic timeframe it is therefore likely to be via the co-existence of innovative technologies that effectively interoperate, non-intrusively, with the legacy systems and processes prevalent across financial institutions. Ripping out and replacing existing infrastructure (at this stage) is not an option for most large banks.

WHERE DO WE GO FROM HERE?

Firstly, it's evident that increasing market access to secure PvP settlement protection is fundamental. A more inclusive approach is needed - one that allows a broader range of market participants and currency pairs to be eligible for PvP settlement. If this could be achieved without the dependency on using central bank money, adding new currency pairs would not prove so challenging - making PvP a more viable option for settling emerging market currencies. This would bring an end to the idea of 'riskless settlement' as a privilege available to the happy few.

Secondly, the processes of managing intraday exposures and obligations during 24hour settlement cycles needs to be streamlined, to provide



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counterparties real-time visibility and greater certainty as to when exactly their trades will settle.

If PvP settlement timeframes could be reduced, liquidity could be liberated. This would allow Treasury teams to increase the usage and flow of capital across the organisation, with access to money that would have otherwise been inaccessible for an elongated period whilst the settlement process completed.

Moreover, reducing settlement timeframes would also present the possibility of multiple settlement cycles taking place intraday, providing participants with the ability to re-use their cash, effectively further reducing liquidity requirements.

Thirdly, creating an innovative settlement ecosystem that allows for the co-existence of configurable network capabilities, using new technologies such as distributed-ledger technology (DLT), interoperating (non-intrusively) with legacy systems such as ledgers, payment gateways and messaging systems and protocols, would prove transformative. It would ultimately allow for constructive disruption through the use of blockchain inspired technology in an environment ripe for automation and change.

Such a structure would offer capital market firms the option to continue leveraging their existing communication protocols and core systems, whilst eliminating the impact of inflexible batch-based, fragmented infrastructures. The introduction of DLT would afford settlement participants complete and real-time visibility of all settlement actions, offering a single source of truth and the ability for all interactions to instantly become immutable facts. This would deliver a level of transparency and certainty unachievable with traditional bilateral settlement - significantly reducing settlement risk.

With the ability to consume data from a distributed ledger, market participants would be able to trigger payments at will throughout the trading day. DLT would allow settlement participants to efficiently transfer asset ownership using collaborative and synchronised

workflows, operating across real accounts that hold real assets (negating the need for tokenisation). This simultaneous change of ownership is at the core of PvP practices, allowing settlement participants to benefit from the latest advancements in decentralised technology with settlement finality enforced by jurisdiction-specific rule sets.

The ability for this data to be then consumed by software that could determine the payment frequency and initiate settlements following the trigger of pre-set thresholds and the rails over which the funds will transmit, would provide even greater control.

There is a clear need for flexible, safe and robust settlement mechanisms for all currencies and all market participants. The status quo needs to evolve if we are to effectively curtail settlement risk exposure.

The distributed ledger technology required to enable firms to better control their FX settlements and manage intra-day funding requirements with confidence, is available to market participants today, contact info@batonsystems.com for more information. If you'd like to learn more about FX settlement risk, lessons from the cleared derivative markets (learned the hard way in response to the Global Financial Crisis) and the challenges of the market's existing infrastructure download our white paper: Stress Fatigue: Addressing the urgent threat of settlement risk in the global financial system. <https://pay21.batonsystems.com/stress-fatigue/>

1. https://www.bis.org/publ/qtrpdf/r_qt1912x.htm
 2. https://www.bis.org/press/201217_letter.pdf
 3. https://www.globalfx.org/docs/fx_global.pdf
 4. <https://stats.bis.org/statx/srs/table/d11.3>
 5. See FSB Enhancing Cross-Border Payments Stage 1

Report to the G20 at <https://www.fsb.org/2020/04/enhancing-cross-border-payments-stage-1-report-to-the-g20/>; Stage 1 Report to the G20: Technical background report at <https://www.fsb.org/wp-content/uploads/P090420-2.pdf>; CPMI Enhancing cross-border payments:

building blocks of a global roadmap Stage 2 Report to the G20 at <https://www.bis.org/cpmi/publ/d193.pdf>; and FSB Enhancing cross-border payments Stage 3 Roadmap at <https://www.fsb.org/wp-content/uploads/P131020-1.pdf>
 6. FSB Stage 1 Report to the G20, op.cit.