copper.co

Post trade services for digital assets.

2023 developments
& looking into 2024.

Ross Budgen

Business Development Director

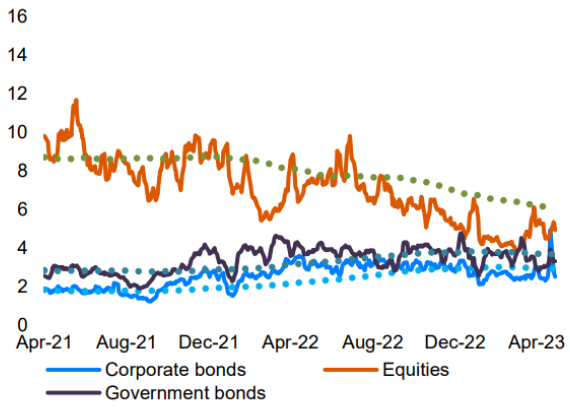
ross.budgen@copper.co →

Digital asset post-trade services:

Current status & promising future developments.

One of the main benefits distributed ledger technology (DLT) brings is its ability to provide market participants with more efficient post-trade service provision.

In traditional financial markets, major financial institutions, and financial market infrastructure (FMIs) providers employ tens of thousands of people to perform post-trade processing, with this high headcount requirement being intrinsically linked to the legacy technology upon which these financial markets are built. For context, the latest data from the European Securities and Authority (ESMA) Trends, Risks and Vulnerabilities report[1] shows that equity settlement fails in the EEA30 as of April 2023 stand at ~5%, with a one-year moving average of ~6.5%.



Note: Share of failed settlement instructions in the EEA30, in % of value, one-week moving averages. Missing data for some CSDs prior to mid-March 2020. Dotted lines represent one-year moving averages of the respective asset classes.

Regulators are actively trying to improve these statistics, with initiatives such as CSDR now rolled-out across Europe. The main objective of CSDR is to increase the safety and efficiency of securities settlement and settlement infrastructures (CSDs) in the EU by providing, among others, for the following:

- Shorter settlement periods
- Settlement discipline measures (mandatory cash penalties and 'buy-ins' for settlement fails, settlement fails reporting)
- An obligation regarding dematerialisation for most securities
- Strict prudential and conduct of business rules for CSDs
- Strict access rights to CSD services
- Increased prudential and supervisory requirements for CSDs and other institutions providing banking services ancillary to securities settlement

However, it is difficult to see how regulation alone will result in more efficient post-trade service provision. In January 2024, it is now well understood that the answer lies in overhauling the technology stack upon which financial markets operate, which is the primary driver behind why multiple Tier-1 Banks and FMIs have invested heavily into DLT-related companies and/or launched their own in-house DLT projects in recent years.

Despite this, there remains one major obstacle – how to adopt and integrate this new DLT-based financial infrastructure? The analogy, "flying the plane whilst building it" best describes this challenge given the overwhelming complexity, interconnectivity, and systemic importance of the existing financial infrastructure which currently processes trillions of dollars of transactions every single day.

Fortunately, the native digital asset ecosystem does not face this key obstacle. However, despite this, market participants trading digital assets are still largely reliant on relatively nascent post-trade service provision – both across Ce-Fi exchanges, alternative trading systems (ECNs, Dark Pools etc) and the bi-lateral OTC market.

This research piece reviews the current state of post-trade services in digital asset markets and explores how recent partnerships and product launches may improve these services for the growing number of institutional market participants now engaging in digital assets.

Off-exchange settlement for centralised exchanges.

The post-trade landscape for centralised exchanges has seen major improvements post-FTX with the emergence of multiple off-exchange settlement solutions.

For example, Copper's ClearLoop enables institutions to trade on centralised exchanges whilst retaining independent custody of their assets within a bankruptcy remote English law trust. In this solution, exchanges post collateral to Copper in respect of the net unrealised and realised profit/loss versus their respective clients, with Copper conducting a settlement of the realised profit/loss, in most cases, every 4-hours.

Off-exchange settlement (OES) solutions, when constructed similarly to this, enable clients to benefit from reduced counterparty risk versus centralised exchanges and realise a vast improvement in overall capital efficiency given their ability to deploy assets for trading in seconds from a single pool of collateral held at their respective custodian.

It is important to highlight that OES solutions are unable to 100% eliminate counterparty risk – a claim made by several OES providers. If the centralised exchange has any legal or technical control of the client's assets, even if this control is shared with the client, then there remains a degree of counterparty risk between the two parties. The leading OES solutions acknowledge that, in all financial markets, it is not possible to ever remove counterparty risk fully and therefore instead focus on how best to 'minimise' the counterparty risk through tri-party arrangements, legal and technical enforceability, and bankruptcy remote legal structures.

As the major providers of OES solutions continue to see growth in adoption, we are beginning to see them serve as a vital post-trade layer between custodians and exchanges, a fact highlighted by the recent announcement of both Komainu, Zodia and BitGo partnering with Copper to make ClearLoop 'multi custodial', thereby opening these benefits to a broader set of institutional clients.

One of the core promises of DLT is its ability to democratise financial markets and, to date, centralised exchanges have successfully assisted in delivering this reality principally through provisioning retail clients to directly access digital asset markets via their platforms. This innovation should not be overlooked and is the driving force behind why centralised exchanges will likely remain prominent sources of liquidity and dynamic venues for market makers and specialist high frequency/systematic hedge funds to trade on in the future.

Whilst regulatory pressures and increased scrutiny on security may result in more centralised exchanges ceasing operations, with over 600 registered centralised exchanges[2] currently operating there remains a future for off-exchange settlement providers to broaden their breadth of exchange integrations and in doing so their underlying institutional client-bases.

The emergence of Alternative Trading Systems.

The post-trade landscape for Alternative Trading Systems (ATS) is somewhat more bifurcated and under-served, despite the rise in popularity of alternative trading systems amongst leading institutional market participants.

Whilst ATS can deliver better liquidity, lower costs, and greater anonymity there remains barriers to their broader adoption within the digital asset ecosystem, principally due to the absence of standalone clearing houses willing to serve as the intermediaries between buyers and sellers utilising ATS to trade digital assets.

Despite this, specialist credit intermediaries such as Hidden Road are currently servicing a growing client-base wishing to utilise ATS to trade digital assets, evidenced through recent partnership announcements between Hidden Road and prominent ATS providers such as Crossover and Finery Markets.

However, there are new entrants planning to bring tried and tested post-trade structures into the digital asset ecosystem. The most promising of which is ClearToken, who have secured substantial backing from ATS providers, market makers and major buy-side institutions to build a revolutionary new clearing house dedicated to the digital asset market.

The growing popularity of bi-lateral OTC trading in digital assets.

There is a sub-set of institutional clients who frequently execute directly with OTC liquidity providers, with this service often being provided by major digital asset market makers/proprietary trading firms such as B2C2, Wintermute, Amber, Cumberland, and Flow Traders. The rationale for executing bi-laterally with these providers is often one or more of the following:

- Broader Asset Coverage
- Superior Pricing
- Regulatory Constraints (to utilise Ce-Fi Exchanges)
- Greater Optionality
- Confidentiality

The post-trade landscape for the bi-lateral OTC market has seen limited innovation in recent years, with most market participants relying on their own internal settlement systems, personal messaging applications, and self-custody technology to settle OTC trades. Perhaps more importantly, most settlements between counterparties occur on a free-of-payment basis (FoP) – i.e., one counterparty delivers their leg of the settlement first.

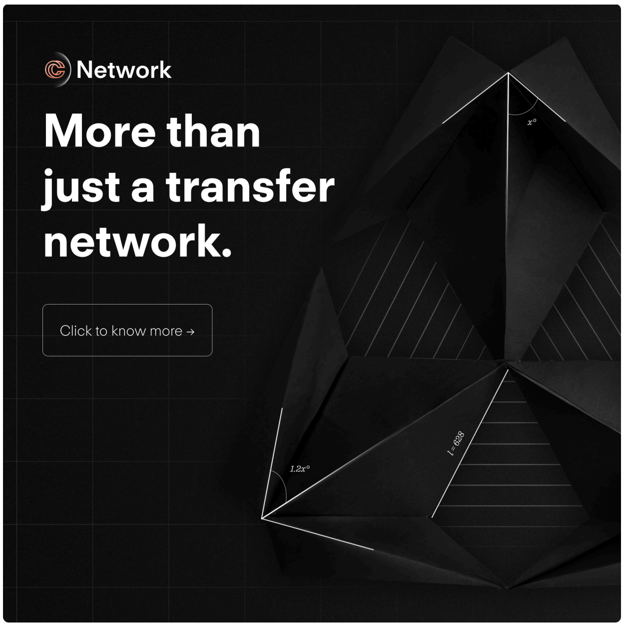
FoP settlement has long since been phased out of traditional financial markets, with the industry adopting delivery-vs-payment (DvP) settlement since the early 1990's. The move away from FoP settlement was principally driven by the Committee on Payment and Settlement Systems (CPSS), a committee consisting of representatives from major central banks, in response to multiple negative market events related to settlement risk, of which the bankruptcy of Herstatt Bank is likely the most well-known.

In digital assets, multiple custodians and self-custody providers have built dedicated 'transfer/settlement' networks to facilitate the movement of funds between counterparties, however all of these to date have been closed networks only permitting the movement of funds to occur if both counterparties are fully onboarded with the custodian or self-custody provider operating the network.

A distinction must also be made between a 'transfer' and a 'settlement' network. In practice, blockchain technology enables counterparties to transfer assets directly without the involvement of a third-party simply by both counterparties providing each other with the relevant wallet addresses. A 'settlement' network implies that there is a third-party involved in the settlement process providing dedicated infrastructure to tie the counterparties obligations into a settlement instruction and provide the rails through which both parties can securely transfer value to each other, all whilst retaining visibility of the status of their obligations throughout the lifecycle of the settlement. Several institutional custodians provide settlement networks to their clients, but again their utilisation is limited due to the universe of counterparties available for settlement being limited to those of the same custodian.

Commonly, it is the OTC desk who, post execution, submits the settlement information to their counterparties, therefore any attempt to build an ecosystem-wide settlement network will require the custodian or self-custody provider to have them as fully onboarded clients. Copper, through provisioning secure access to centralised exchanges via ClearLoop, is fortunate enough to have most of the largest liquidity providers as fully onboarded clients.

As a result, Copper has spent the last 6-months developing the ecosystem's first custodian agnostic settlement network to provide market participants with the much needed secure, scalable, and efficient settlement rails required to continue growing their business in 2024 and beyond.



As both products continue to mature, there presents an opportunity for OTC liquidity providers to leverage ClearLoop and Copper Network in conjunction to vastly optimise their existing processes, thereby delivering a more seamless offering for their end-clients and also maximising revenue generation for themselves.

What to expect in 2024?

Whilst the post-trade market structure for digital assets 3-5 years from now remains an unknown, continued innovation from custodians, prime brokers, and other post-trade service providers is expected to continue throughout 2024 which will further build upon the foundations laid in 2023 by some of the key firms highlighted in this report.

Sources:

1) ESMA – Trends, Risks and Vulnerabilities Report (TRV)
No. 2, June 2023 (ESMA50-1389274163-2681 TRV 2, 2023 Risk Monitor (europa.eu)

2) Chainalysis – The Chainalysis Guide to On-chain User Segmentation for Crypto Exchanges, June 2023
Guide: On-Chain User Segmentation for Crypto Exchanges (chainalysis.com)