ISSA Newsletter

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International Securities Services Association

CONTENT OF THIS NEWSLETTER

Dear ISSA Members and interested parties,

With this Newsletter edition, ISSA informs briefly about progress in its four active Working Groups and publishes four articles written by representatives of ISSA Member firms.

At its April Workshop, the ISSA Operating Committee took note of the work status and provided guidance for further activities:

- The **Working Group on Corporate Actions and Proxy Voting** disseminated a questionnaire to the CSD community in March. The survey intends to obtain an inventory of the beneficial owner disclosure processes in various countries, which will form the basis for possible best practice recommendations. The analysis of the survey results is expected to be completed by mid-year.
- At its March Workshop, the Working Group on **Distributed Ledger Technology** decided to focus on enriching its October 2018 Report on «Infrastructure for Crypto-Assets: A Review by Infrastructure Providers» with input from Global Custodians. In order to drive this work forward efficiently, distinct work streams have been set up with a view to producing a first draft report by June.
- During the first quarter, the Working Group on **Financial Crime Compliance Principles** performed a second annual review of the ISSA Principles and revised various accompanying documents. They will soon be made available on ISSA's homepage. In addition, the Working Group has decided on its timetable for disseminating FCCP-related information to the industry.
- The Working Group on **Cyber Risks in Securities Services** has decided to focus its further efforts on an «Industry Level Incident Report». Work on a guide on «Individual Firm Incident Response» has been postponed for the time being, pending the outcome of the industry level report.

One of ISSA's next Newsletters will inform in detail about the Operating Committee Workshop and the status of the Working Group activities.

Governance Update

ISSA Operating Committee

In April, Jeffrey Williams, Global Head of Network Management, was appointed as the new representative of Citigroup in the ISSA Operating Committee. He succeeds Brian Crabtree in this role.

Controlling the «Supply Chain»

Nicola Kane
Global Head of Group Operations Credit Suisse
ISSA Board Member

Over the past decades, banks have become substantially more sophisticated in managing our supply chains. However, is it time to rethink what our supply chains actually are and where they end?

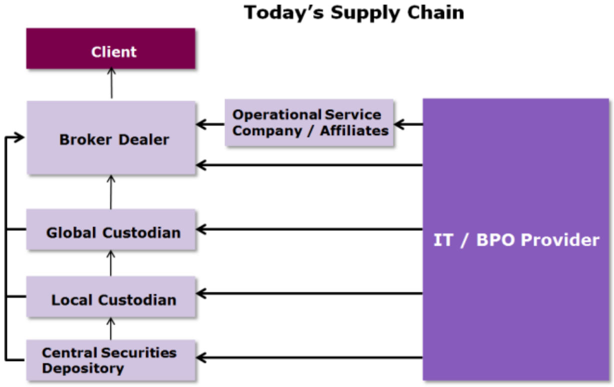
The history of supply chain management for Operations started with the basic Network Management of agent banks, which had been going on since before I started in the industry. This entailed a selection process which was a map and gap of requirements to a service catalogue with basic Service Level Agreements and an element of provider due diligence. I would posit that given that these agents were regulated financial institutions that there was mutual trust in the system. Over the decades, these agreements have improved to reflect industry and client expectations, with increased formalisation through risk management frameworks that include initial and ongoing due diligence requirements.

The next wave of intensity came with the Business Process Outsourcing (BPO) of the late 1990s and early 2000s. Institutions felt their way to create Service Level Agreements and Operating Level Agreements which reflected both the risk appetite and the expectations of the time. Given that the BPO providers were generally not regulated the contractual terms were much more professional and onerous. A number of contracts were extremely complex to manage with the available Management Information Systems (MIS) and simplification came with experience and comfort that the BPO providers were providing the services well.

A third wave of controls were added post the Global Financial Crisis when ring-fencing and subsidiarisation occurred. Suddenly there was a need to have intra-group and inter-entity contracts. The execution of the processes could also be «outsourced» to a ring-fenced service company within the financial institution. Untangling years of system and process consolidation and providing management information by legal entity was complex and created further MIS requirements to allow the Accountable Officers at the operating companies to discharge their supervisory duties.

More recently the «make» or «buy» matrix has moved to another level and we are seeing signs that more BPO providers and FinTechs are entering the service chain and offering a more «utilitised» service or leveraging new technology capabilities to enhance and, sometimes, disrupt traditional processes. This means supply chains will become even more complex and the demands on how we manage them will increase as we continue to face a tight regulatory framework, more sophisticated cyber security threats and a challenging macro environment.

Today's Supply Chain



Fundamentally though, the ownership of the risk, service levels and ultimate accountability for the process will remain firmly with the underlying financial institution. Therefore, the need to invest in building robust control frameworks supported by increased data transparency to better measure the end-to-end service and risk from execution through to clearing, settlement and custody is critical to the ongoing stability of the industry and needs to be a key focus for all of us.

Connecting China, Connecting the World

James Fok
Head of Group Strategy
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ISSA Board Member

The internationalisation of China's capital markets could well be the biggest single influence on global financial markets in a generation. Since the launch of the groundbreaking Connect platforms in 2014, linking the Mainland financial markets with Hong Kong's markets, there has been a significant acceleration in the opening up of China's capital markets. Set against today's more complex geopolitical backdrop, the next phase of integration between the Mainland and international markets will undoubtedly require further evolution in both market infrastructure and the global financial regulatory framework.

Connecting the World to China

To date, Stock Connect has seen more than US$1.7 trillion of total turnover. As at the end of 2018, this channel represented 58% of the US$172 billion foreign portfolio holdings in Chinese onshore equities. Bond Connect, launched in 2017, has seen total turnover to date of US$210 billion, and accounts for 10% of foreign holdings in China's onshore bond market.

The relative ease of access offered by the Connect platforms, coupled with the confidence provided by Hong Kong-based custody, has allowed Mainland Chinese securities to be included in a number of international benchmark indices for the first time.

Following initial inclusion of China A-shares in the MSCI Emerging Markets Index last year, MSCI announced in March that the weighting of China A-shares in the index would increase by more than four times by November this year. Similarly, FTSE Russell will begin transitioning Chinese A-shares to secondary emerging market status within its FTSE Global Equity Index Series starting from June this year. Separately, Bloomberg began including Chinese bonds in the Bloomberg Barclays Global Aggregate Index from last month. These inclusions are major milestones and are expected to drive inflows of over US$200 billion into the Mainland capital markets in the next year. Over time, as China's foreign ownership increases to international levels, foreign portfolio investment in Mainland securities is estimated to rise to US$3 trillion.

Given the significant differences between Chinese and international market structures, continual enhancements are being made to the Connect platforms to improve user experience. For example, to ease the operational strain arising from China's T+0 settlement cycle, particularly for fund managers on the US West Coast, Hong Kong Exchanges and Clearing (HKEX) is working on a blockchain-based solution for trade allocations that makes use of smart contracts for settlement instructions. Other anticipated enhancements to Connect include adding more eligible securities in both markets and enabling cross-border trading even where one market is closed for holidays.

As international holdings in Mainland Chinese securities grow, there has been increasing demand for better risk management tools, including the ability to short-sell and access onshore and offshore derivatives in equities, interest rates and FX. To raise the capital efficiency of their Chinese securities holdings, international investors are now increasingly demanding the ability to pledge, collateralise and repo these assets to generate liquidity.

Two months ago, HKEX and MSCI announced the launch, subject to regulatory approval, of a futures contract on the MSCI China A

Index. This is a very positive start, but much more is needed. The solutions will depend not only on infrastructure providers, but also on Chinese and international regulators and policymakers.

To give Chinese regulators sufficient comfort to endorse a broader portfolio of risk and liquidity management tools, transparency levels for foreign investors must be brought in line with the Chinese domestic system. This would allow the regulator to track each investor's securities transactions and holdings in real-time. This reflects global regulatory trends, ranging from know-your-customer rules to European legal entity identifiers, and the post-financial crisis drive towards central clearing of OTC derivatives. The implementation challenge of this will fall to market infrastructure providers like HKEX, and to market participants. New technology will play a critical role and brings hope of significant collateral benefits in the form of greater efficiencies.

To bring greater capital efficiency to Chinese securities holdings, however, policymakers will also need to address the international financial and regulatory framework. It is necessary to create a more level playing field for Chinese securities, particularly in areas such as risk weightings of sovereign securities under the Bank for International Settlements' Basel rules for the banking sector.

Connecting China to the World

While international market participants understandably focus on the Connect platforms as a way to access and invest in Chinese securities, at HKEX we are much more excited about the Chinese outbound investment story. With US$24 trillion of China's savings sitting in bank deposits, this represents the largest untapped pool of capital in the world, the deployment of which has the potential to transform global capital markets.

Given its growing middle class and aging demographics, the need for China's population to generate better returns to support post-retirement lifestyles is undeniable. At the same time, as the private sector overtakes state owned enterprises as the primary driver of economic growth, it will no longer be tenable for the Chinese state to underwrite credit risk in the economy through implicit guarantees to depositors. This has forced policymakers to support a shift towards capital markets for funding.

As China's savings are redeployed into capital markets, the demand for investment diversification will inevitably lead to some portion of these assets being allocated internationally. However, for China this poses some significant challenges.

First, there is no doubt that China's closed capital account gives the Chinese Government significant diplomatic policy levers, through the ability to control access to its market and the ability to control the flow of its citizens' capital. Such powerful policy tools will be hard to give up. Second, today, when Chinese investors invest in international securities markets beyond Hong Kong, ultimate custody generally falls either to a US global custodian or an international CSD. Given more widespread use of financial sanctions in international policy in recent years, and having observed the vulnerability of these institutions to Western pressure, there is understandably some reluctance among Chinese policymakers to expose China to such financial security risks. Third, unlike the US, China does not have the clout to impose laws like the Foreign Account Tax Compliance Act (FATCA) on the rest of the world, meaning that allowing free flows of capital would be accompanied by signifycantly greater risks of tax avoidance.

Therefore, the Connect concept, which offers a high degree of transparency within a «closed loop» system for securities trading and settlement, is ideally suited to meet China's near- and medium-term needs as it pursues greater outbound capital markets internationalisation. The benefits for capital users around the world will be significant. That said, as we have seen from the impact that Chinese outbound investment flows have had on property markets from Vancouver to Sydney, this is a process that must be managed carefully.

As Asia's leading financial centre, Hong Kong is the trusted venue of choice for both China and international investors. Hong Kong has a common law legal system based on the rule of law, as well as international practices and regulatory standards trusted and respected around the world. In the coming years, Hong Kong will continue to innovate and upgrade its infrastructure to support both the inbound and outbound internationalisation of China's capital markets. I would urge international market participants, policymakers and regulators to ensure that they are adequately prepared to meet the opportunities and challenges that this presents.

Tokenised Assets: Successful Interledger DVP Settlement

Tinku Gupta
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The Distributed Ledger (DLT) is an emerging technology with great potential to fundamentally transform capital markets, making financial transactions and processes more transparent, resilient and at a lower cost. Singapore Exchange (SGX) has been collaborating with the Monetary Authority of Singapore (MAS) on Project Ubin, a series of industry-level projects to explore the use of DLT for the clearing and settlement of payments and securities.

Project Ubin

Last year, SGX led the development of Project Ubin DvP, a phase that successfully achieved interledger connectivity and settlement finality, proving Delivery-versus-Payment (DvP) of a tokenised asset and a digital currency on two separate ledgers. In this project, prototypes of different DLTs with varied capabilities and features were developed, allowing the transfer of tokenised assets such as Singapore Government Securities and Chinese Depositary Receipts on a trade-by-trade basis.

Specifically, we engaged three technology partners, Nasdaq, Deloitte and Anquan, a local FinTech startup, to build six blockchains in three DvP pairs to evaluate the new models. The blockchains used were the open-sourced HyperLedger, Ethereum, Quorum, as well as Chain and Anquan, which features a proprietary stack.

The solution design of prototypes also enables a Recognised Market Operator to maintain a central role to monitor and facilitate market functionalities. Given that investor security is of paramount importance, the solution possesses the following key design features:

- Account controls with multiple signature conditions
- Contract locks utilising secure secrets
- Time boundaries established for asset recovery
- Dispute resolution through arbitration

Potential to Enhance Efficiency and Investor Confidence

We observed that this setup provides the flexibility to compress settlement cycles and simplify post-trade settlement processes. In Singapore's context, SGX together with the industry has recently moved from T+3 to T+2, shortening the settlement cycle and thereby reducing underlying risk exposures. DLT could be an enabler to eventually compress the settlement cycle even further for specific asset classes, while also retaining the flexibility to provide for variable settlement cycles in accordance to market demand and regulatory requirements.

In addition, the use of smart contracts for DvP can enable the consistent and coherent implementation of rights and obligations that will increase investor confidence and reduce compliance costs. DLT can maintain consistent transaction data across all its nodes, potentially eliminating the massive reconciliation overheads that currently plague markets, paving the way for seamless regulatory reporting.

With the unique Ubin DvP prototype, we successfully demonstrated that DvP is possible when tokenised assets and cash are on separate ledgers. We have also filed for SGX's first technology patent on the Interledger DvP technical model.

Opportunities and Challenges

In summary, DLT not only enables a much more efficient settlement model, but also creates a new digital asset class that can change the way funds are raised and distributed, unlocking liquidity and facilitating borderless transactions. While progress has been made on many fronts, a number of challenges remain before DLT can achieve mainstream adoption, including the lack of standards and interoperability, fragmented technology stack and transaction privacy. These are opportunities for more collaboration in the future.

SGX is committed to explore and experiment with DLT use cases, and we will continue to harness emerging technologies, working together with market participants to bring value to the ecosystem.

Asset Tokenisation: Cornerstone for Securities Services

Zhu Kuang LEE
Director, Product Innovation
Securities Services,
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While real-world assets were traditionally difficult to divide or transfer, the industry has made significant headway in developing systems to mitigate this challenge over the last decades. Today, we can trade such assets using paper-based agreements and more recently, electronic agreements.

However, this process – from trade matching, clearing to settlement – remains slow and costly due to the complex market structure involving multiple intermediaries. The lack of transparency due to inefficiency in data reconciliation and exception handling also increases the possibility of failed or fraudulent trades. This is especially the case for illiquid assets like real estate, which are generally not very tradable.

How Tokenisation Can Transform Real-world Assets

Simply put, tokenisation is the creation of a digital representation of assets on an immutable ledger. These digital tokens represent the right of ownership to the underlying assets and are typically built on top of blockchains for secured bookkeeping of settled transactions.

Tokenisation creates liquidity by enabling fractional ownership and smaller unit investments. This means that assets can now be democratised to expand the potential investor base, where new investment or capital raising models can be created.

Tokens can also be traded round the clock, 24/7, without any geographical restriction. Atomic swap of tokens can be achieved by using a dedicated middle layer to translate messages between different blockchain technologies. An asset can then be traded against any other asset or currency, enhancing liquidity through greater accessibility especially for illiquid assets.

How We Will Put Tokenisation to Work

We believe that tokenisation can be the answer to a much-needed radical change to trading and settlement today. Our Securities Services team has most recently completed a Proof of Concept (POC) to tokenise assets and structured finance products, and we are now in the implementation phase with several internal use cases to work towards commercialising new products and services for our clients. Another POC that we are working on aims to enable interoperability between different blockchain technologies.

These two POCs serve as the initial steps to realise our vision for any asset to be traded and settled easily in a transparent and efficient manner through our platform. With this, we believe not only will clients benefit from better portfolio diversification with smaller investments and precise exposure, they will also gain access to instruments that they may not have been able to historically. Most importantly, they will get to experience real-time settlements with transparency and reduced costs through fewer intermediaries.