



Connecting Financial Institutions Worldwide

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# Welcome



Casting my eye over the last edition of the TNF Journal, published last November, it seemed we were well on the way to a more stable and slowly opening world only for the Omicron variant to hit in December. However, it was a relief to see that whilst more virulent, this new strain was significantly milder than feared and the impact on health markedly reduced. So onwards and upwards - surely?

Just as the world seemed to be heading in the right direction, “war” replaced “pandemic” in the world’s media with the sudden invasion of Ukraine in February this year. Together with the awful scenes playing across our screens, our industry has faced a massive wave of redemptions and sanctions – and a new world order suddenly has come into play.

It’s been a tough time for many these past few years, but our thoughts are foremost with Ukraine and the CEE community impacted by the ongoing crisis. It goes without saying that it’s not just business that we have in common with each other – but many individual stories have emerged and community members impacted by the fallout. We earnestly look forward to the day that the conflict finds resolution.

On a brighter note, we are positively thrilled to be gathering in London this June for the Annual Meeting – just 3 years after the last time we were all together in Athens! The agenda we have produced in consultation with industry members reflects many of the issues that are contained in this latest edition of our Journal.

Unsurprisingly ESG is high on the list of many, and we have special features with Rand Merchant Bank, Raiffeisen International and Caceis sharing their thoughts. The aforementioned political crisis is investigated from a network management angle by industry veteran John Gubert, and digital initiatives are explored by Citi, Deutsche Bank and Societe Generale.

These are just a taste of some of the topical issues of the day that you will find within these pages – as well as a non-industry related exposé of how to start a hotel business (courtesy of Paul Chapman).

So dear reader, we look forward to seeing many of you in London this Summer, and failing that, on the road at our regional Meetings in New York in September, Abu Dhabi in October, and Singapore in November.

Keep an eye on this site for updates: <https://www.thenetworkforum.net/home/events>

Let’s hope this time we really can say onwards and upwards!

**Andrew Barman**  
Managing Director  
The Network Forum



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# Politics And Networks

I had always appreciated that the network manager role had evolved since those halcyon days of my youth when it was a blend of tourism and travail. Markets are more complex today and our network fraternity now need a good understanding of technology, law and regulation. And, from experience of the Russia-Ukraine conflict we have to add political understanding to their menu of competences.

In my long sojourn in the world of finance, politics played a major role around the pricing of assets but a minor role around custody. The main political challenges I recall were around the perennial problems of Russian assets at times of tension, be it actions of registrars or the Crimean crisis. I also recall the freezing of Argentine assets and subsequently, in the domestic market, draconian directives on the allocation policies of funds in that country.

But the Ukraine conflict has raised new issues. There is the valuation and liquidity question for funds with assets in the area. There is a structural issue around the safest way to hold assets in custody. And now we have a further grim bar to overcome with the advent of true financial warfare. Both the use of SWIFT access and the immobilization of Central Bank Money as well as the freezing, and possible seizure, of private, or even State, assets will have ramifications on conduct. Conflict between two States may lead to a more International one around the structure and rules of financial markets. Laws at times of physical warfare can be laid aside by the conflicting parties and such Government action may be manageable from a risk perspective. But network managers need now to consider also how financial warfare involving third parties impacts their most critical role of ensuring the safety of assets.

I will leave it to the experts to negotiate the get out of jail clauses, other than to say they need to be robust or potential losses could dwarf the Lehman nightmare. Liquidity and valuation risk is more for the fund administrator with the role of the network manager being to advise of any sound basis for valuation, especially if assets are not listed in a fair manner in an open market or the underlying currency is no longer fully convertible. The jurisdictional issue is the first of the network manager's pitfalls and it is very dependent on the structures used for the impacted jurisdictions. But, the really scary issue is the impact of financial warfare.

The jurisdictional issue facing the network manager chrysalises if one form of asset holding gains preference over another. In Russia this has not happened but that does not mean it is a non-issue. There may be exceptions, but the bulk of assets could be held in a delinquent jurisdiction via an ICSD, via a direct holding in the local CSD or via a locally incorporated bank, be it true local or a subsidiary of a bank in another country. They could be held through a branch of an international bank or held in a designated or omnibus account with the agent of a global custodian or some other asset concentrator. Logically, the assets could be treated differently, with, as an example, assets being hit by different rules dependent on the local holder of the assets. A locally incorporated bank or the local CSD could be treated differently for impacted holdings than the subsidiary or branch of a bank from an offending jurisdiction. Or perhaps a supernational ICSD could be treated differently. The differentiation could be at entity level or refer to the jurisdiction of the underlying investor. Perhaps a fund based in one of the non-combative Caribbean islands would be subject to a different regime than one based elsewhere! The permutations are multiple and seriously they need to be considered, for I doubt the action taken in respect of Russia this year will be an isolated event.

I am unsure how financial warfare would be categorised among the force majeure and other escape clauses of legal documentation, but we need to recognise that we have entered a world where Governments are considering, without formal declaration of hostilities, the freezing or indeed seizure, and perhaps disposal, of assets belonging to persons or entities from a delinquent nation. And the delinquent nation would logically consider taking reciprocal action. Perhaps the sale of Chelsea Football Club will be offset for Mr Abramovich by the seizure of UK fund holdings of Gazprom? Flippant though that remark is, it reflects reality. Asset safety is no longer a structural issue, it is also one of politics. If the action is a direct result of Government against all investors in the delinquent jurisdiction, it might be easier to write it off as an investor risk than if it due to a binary issue between a plaintiff and a party in the asset ownership chain. Perhaps the action taken, and impacting investors of different nationalities, would be the result of a dispute between the country of jurisdiction of the Global Custodian and

the delinquent nation. Just as one example, how will an investor in a neutral jurisdiction using that Global Custodian, perhaps under the laws of a third country, respond if the action impacts their holdings. The challenges and computations are multiple and frightening.

For the reality is that we have crossed the Rubicon. Asset safety can no longer be assured by the legal structure of the asset ownership chain. Asset seizure in times of political, rather than physical, conflict has become an accepted risk in modern days. We need to consider what other causes could come to the fore: perhaps reparations for past slavery, perhaps territorial disputes, perhaps covert action by a country in another state. Or perhaps further conflict around the world, impacting a major centre of institutional investment? Even some of the smaller markets have assets under custody with a current value whose write off would seriously dent the capital bases of their custodians.

I am not sure of the best answer but the issue needs consideration from a legal, political and commercial point of view.

**John Gubert**  
Chairman,  
GTL Associates



# The Move To T+1 – Who Really Benefits?

The Securities and Exchange Commission (SEC) has recommended moving the US Settlement process from T+2 to T+1 to reduce risk and strengthen and modernize securities settlement in the US financial markets. The question is, is the industry really ready for such an impactful change and the potential upheaval that such a change will bring, and what about the international impact?\*

While Europe has so far remained silent, Asia has made some progress already. On September 7th, 2021, the Securities and Exchange Board of India (SEBI) granted its stock exchanges, NSE and BSE, the provisions to implement a T+1 settlement cycle in phases which started on February 25th, 2022. Hong Kong already operates its cash settlement on a T+1 basis.

Given major players in the US market have backed the move to T+1 for US and Canadian settlements, which will likely start in H1 2024, from a market and counterparty risk perspective, this is great news. While the move from T+3 to T+2 in 2017 was deemed a success, the move to T+1, removing half of the time allowed for settlement, will mean a more profound need to ensure everything is instructed correctly first time. The opportunities to make changes to resolve exceptions during the settlement

cycle will be limited and will have to occur on trade date. Hence, firms need to urgently assess if they are truly ready for this market change, as the impacts are likely to be much more significant than just a reduction in time.

As the Depository Trust and Clearing Corporation (DTCC) initiates the process of rolling out T+1, the market needs to appreciate that the last 2 years have put unforeseen challenges in front of all financial firms. The Covid-19 pandemic has rigorously tested firm's business continuity planning (BCP) efforts over the last 10 years and the trading in meme stocks, such as Gamestop & AMC, pushed up DTCC margin requirements significantly at brokers like Robinhood, which led DTCC to suspend trading in these volatile stocks. T+1 would lower the capital requirements at these brokers, but the increase in processing volume, would still need to be handled.

## So, is the back-office ready?

T+1 will remove some market risks, but risk doesn't go away, it simply moves to another area and, right now, it looks like that area will be back-office operations.

Compressing the settlement cycle to T+1 will demand that operational risk is mitigated. Any manual processes will immediately come under pressure, as automation should be a prerequisite for a T+1 environment to ensure exception management is limited and there is as little risk of trade failures as possible. Technologies such as the humble fax machine and emailed spreadsheets need to be retired for more automated tools, with operational

controls built-in, so staff can focus on exceptions and correcting transactions. Furthermore, firms should be looking at the root causes of exceptions to amend any obsolete or outdated processes to ensure those exceptions are avoided going forward.

But these are obstacles the back-office can mitigate and overcome by putting controls in place. However, other areas outside of pure technological changes need to be considered:

- Foreign exchange (FX) transactions traditionally settle on a T+2 basis. For international participants wanting to buy US securities, prefunding the transaction with USD or arranging for a short-dated T+1 FX settlement will be required. The effect of prefunding could potentially impact other investments, resulting in an investment manager being out of the market for 1 day. This is of particular concern to investors in Asia-Pacific markets, given the time zones.
- Corporate actions customarily have ex-date one day prior to the record date, enabling more trades to settle in advance of the record date cut off. The US market change will mean that the ex & record dates will need to be the same day which will undoubtedly lead to more reconciliation issues and subsequent market claims.
- Any cross-border transactions will be operating across two different settlement cycles resulting in further operational risk and staff pressure.
- A time constraint on securities lending where the lender will either need to get the original securities back from loan or substitute the lender with another party will bring challenges where the security has been sold late in the day on T+0 in order to effect settlement the following day.

These additional risks and issues will potentially offset some, or maybe even all, of the gains made from the decrease in market and counterparty risk. Whether it is more risk overall, is something operations managers need to monitor as they prepare for tomorrow.

## So, what's the answer?

US banks, brokers, and investors need to initiate an assessment of their current post-trade technologies and processes, from front-office to back to ensure that they are ready both from a technology and an operational standpoint for T+1. Foundational account and standing settlement instruction information needs to be 100% accurate and available to counterparties, as there is no margin for error in a T+1 settlement environment. If firms do not have the optimal post-

trade processes, they could be in for a difficult and expensive journey once T+1 goes live.

The decision for clients to replace legacy technologies and processes with a holistic open platform and integrated post-trade framework must now be considered to future-proof the organization. Real-time processing will need to be the standard and it will need to operate 24/7 to ensure the best outcomes.

Whatever the current state of your post-trade infrastructure, there is no time to delay, an urgent review is needed now to ensure you are ready for T+1 in 2 years' time.

## Bill Meenaghan

Product Management,  
Securities Processing

S&P Global  
Market Intelligence

S&P Global  
Market Intelligence



At S&P Global Market Intelligence, our post-trade Securities Process Solution provides the foundation for supporting T+1. Our team of industry experts collaborate with clients to deepen our understanding of their requirements so that when T+1 arrives, they are equipped with an integrated solution, offering automated features that maintain efficiency and transparency.

S&P Global Market Intelligence delivers multi-asset class solutions across the post-trade landscape, with integrated regulatory components enabling clients to better manage headwinds faced in an ever-evolving and uncertain environment.

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\* <https://www.sec.gov/rules/proposed/2022/34-94196.pdf>

# Driving Home Innovation: Custodians Look To The Future

At a time when margins are being heavily squeezed and competition for wallet share is growing, custodians are constantly looking for ways to differentiate themselves from their peers - including embracing data and digitalisation so as to support the bespoke needs of their increasingly diverse client base.

## Strategic partnerships with fin-techs yield inspiration

Custodians have historically not been renowned for being harbingers of innovation, but this mindset has evolved throughout the last few years. Many are now collaborating more widely with fin-techs to build cutting-edge solutions for their clients. Such partnerships can often yield exceptional results as they combine the flexibility and entrepreneurial spirit synonymous with start-ups - with the deep pool of resources and extensive product expertise available at custodians.

Some custodians have even gone further and are actively investing into promising start-ups, often through their in-house venture capital or strategic partnership teams. Elsewhere, hiring practices have also evolved and custodians are now bringing in a wider pool of talent, some of whom may previously have worked in the fin-tech space or launched their own start-ups. Over the last decade, a number of custodians have established in-house innovation labs where proofs of concepts (POCs) involving disruptive technologies are being trialled - often in close partnership with outside fin-techs. Not only do these innovation labs support R&D efforts, but they also serve as a centralised pool of expert resources specialising in cutting edge technologies such as distributed ledger technology (DLT), artificial intelligence and quantum

computing, a hyper-powerful form of computational power which can solve highly complex problems.

This collaboration with fin-techs can, however, sometimes pose a different set of challenges. Custodians abide by a comprehensive regulatory framework in a stringent risk-controlled environment, which can occasionally slow down some of these partnerships.

## Industry collaboration expedites innovation: Citi Securities Lending Access

Citi Securities Lending Access was developed by Citi's Agency Securities Lending team, its D10X innovation program and Sharegain, a fin-tech. This fully digital solution allows wealth management firms to deliver a securities lending program to their clients—giving customers the opportunity to earn additional revenue on their stocks, bonds, and ETFs (exchange traded funds).

## Data as an enabler

The key to success will ultimately be how data is leveraged. Through the establishment of a golden source of truth, data can be distributed across the entire network and investment chain, eliminating many of the friction pain-points and duplications in the trading lifecycle. By automating the flow of data in real time, it will become easier for the industry to obtain efficiencies in the transaction management process, leading to cost synergies for end investors.

However, this is easier said than done. Firstly, the industry operates with data silos, which makes it harder to work together on major initiatives. To facilitate a centralised data source which intermediaries can access seamlessly, there needs to be industry-wide collaboration. Custodians and central securities depositories (CSDs) are uniquely placed within the investment chain to help stimulate industry-wide cooperation which could bring about positive changes in this area.

Innovative technologies such as DLT and cloud empower this data, enabling custodians to develop exciting new products and solutions, helping them to expand into new asset classes including digital assets, while simultaneously reimagining transaction workflows.

It is very likely that both traditional and digital assets will co-exist for the foreseeable future; and with investors increasingly interested in trading digital assets, brokers dealers and their custodians need to provide clients with access and to act as a strategic bridge between the two worlds.

## Sub-custodians weave themselves into the digital asset universe: BondEvalue

Citi is playing an active role in encouraging innovation around digital assets. Recently appointed by BondEvalue, a Singapore-based fractionalised bond exchange, Citi will act as custodian for the underlying bonds traded on the digital exchange as fractionalised assets. The bank is also developing a digital custody solution for a wide

range of asset classes. In addition, Citi is working closely with clients to identify their immediate needs for digital assets and associated custody services.

## What does the future hold?

Looking further afield, some custodians are scoping out how technologies of tomorrow such as quantum computing and the Metaverse could impact their client operations. The securities services industry will need to find a way to come together and leverage these new technologies in order to generate benefits for the entire value chain.

It is increasingly clear that the future of custody will look very different. In years gone by, custody was a bundled service, but in the future it will likely be offered as a set of modular digital solutions allowing clients to select and tailor the services that are suitable for them. Providers who have demonstrated a commitment to innovation, and shown a willingness to embrace disruption, will be the ones leading the way.



# Magicians At Work

## AI is the magic ingredient

Digital transformation starts with digitisation, which is the conversion of information from a physical format into a digital one. Digitalisation is the use of digitisation to improve business processes, change business models and seek value-producing opportunities. Hence, digitisation is necessary, but not sufficient, for digitalisation.

Widespread impactful and multiple digitalisation results in digital transformation; the process of moving to a digital business. With digital transformation, data arrives in ever-increasing volumes from more sources with greater velocity and variety. Cloud computing is needed to deal with such 'big data' efficiently. It allows the delivery of services (e.g. data storage, servers, databases, networking, software) through the internet.

Artificial intelligence (AI) turns 'big data' into actionable information. AI involves computer systems performing tasks previously requiring human intelligence (e.g. visual perception, speech recognition, decision-making, translation between languages). Only with AI can such quantities of data be managed (e.g. applying risk management, regulatory or compliance requirements).

AI is the 'magic ingredient' allowing digitalisation, big data and cloud computing to transform securities processing. Without AI we would be non-swimmers drowning in a sea of data!

## Post-trade is being transformed

Post-trade processing converts mountains of financial data to meaningful and actionable knowledge. That is what we do in securities services. There cannot be many industries that were so perfectly suited for digital transformation.

With AI and APIs clients are moving to self-servicing with speedier access to real-time data across post-trade, from KYC and on-boarding to settlement and asset-servicing.

Big changes are happening across post-trade. Often they are intermingled or co-dependent. However, they can be put into four categories:

- Data improvement: digital transformation requires accessible high quality data with imbedded quality controls.
- Digitisation: there is much information to digitise (e.g. annual reports, contracts, emails, faxes, fee

schedules, fiscal forms, SLAs). The list is endless. Once digitised they can be analysed and actioned with AI.

- Process improvement: core to digitalisation is improving processes with streamlined, faster and better-connected workflow management.
- Insight: analysing and understanding data allows for better business management. This raises awareness of risks, encourages control and suggests appropriate products for clients.

Within BNP Paribas Securities Services this digital transformation is well underway and is evident in many of our processes (e.g. tax documentation, implementations, queries and instruction management). The goals of our investment and long-term plans are threefold: continue to improve our client experience, increase efficiency and reduce risk.

## Even magic needs direction

To achieve this digital transformation, post-trade providers are investing in new systems, partnering with fintechs and expanding in-house expertise. Some are outsourcing technology and operations. These are important strategic decisions. We used to say that post-trade was a people business. That was years ago. With digital transformation post-trade is a technology business.

However, people are vital. Even magical AI needs direction. Digital transformation can only happen with business



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# RBI Navigating Through The Stormy Waters Of CEE

The markets of Central and Eastern Europe are strongly reacting to the geopolitical crisis. Raiffeisen Bank International as a regional leader is standing up to its role as infrastructure provider in tough times and war zones, delivering reliable and persistent services to all segments of its clients as well as product lines.

RBI Global Investor Services, serving as the backbone to RBI's markets and investment banking products, have built up a very resilient direct market access model with direct membership at the regional CSDs as one of the pillars of its product offering. Time is proving that this independent business model is highly sustainable for RBI's MIB business but even more importantly for its clients. Independently of the local market development, GIS can secure custody connection to the markets with deep market intelligence coming directly from our local colleagues. This allows quick reactions to local market developments. Operational efficiencies guaranteed by the short custody chain are at times of costs pressure the key to success.

The Environmental Social and Governance factors are gaining importance also in CEE. Raiffeisen Bank International as a regional pioneer in ESG has built up a knowledgeable sustainability competence center in Vienna, advising and servicing not only its corporate clients but increasingly also its institutional clients across all MIB products. The ESG investment funds issued by Raiffeisen Capital Management and green certificates issued by Raiffeisen Centro Bank have significant track record already. ESG offering is no longer a niche product but is rather part of each and every business line. Green bonds and ESG linked derivatives are structured and issued by RBI are our way to success.

After a hype in Environmental investment criteria, the Social and in particular the Governance aspects of investments have proven to be crucial in the current geopolitical development. With its regional presence in all three countries involved directly in the war, RBI'S role as ESG pioneer has gained a new dimension. In Ukraine RBI focuses on Social aspects as leader in direct humanitarian aid and resilient critical infrastructure provider in war zones to secure financial services to the local population at all times. In Russia the Governance aspect of ESG is key. By close monitoring of all market requirements in the fast changing sphere of sanctions and strict compliance rules, cooperation with our local teams and deep market knowledge is key. RBI headed on a very restrictive road of persistent client support in crisis times while steadily reducing any local market exposure.

As the winds get turbulent, Raiffeisen Bank International is your partner offering a resilient ship to navigate through stormy waters.

**Karolina Gregor**  
GIS Sales & Relationship  
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**Christian Geberth**  
Division Head Global  
Investor Services  
**Bettina Janoschek**  
Head of GIS Sales &  
Relationship Management



# ESG: Much More Than A Trend

In recent years, and now more than ever, Environmental, Social and Governance, known in short by ESG, became a familiar acronym around the world.

While we began to look at it as a trend, ESG has become much more than that, particularly, when companies need to take decisions that will influence their capacity to attract investment.

## Legislation... what else?

Significant legislative initiatives have been taken to date, intending to provide a framework with which companies and investors alike may work with, in order to embody in their decision making the three pillars that make up for ESG: "Environmental" looks at the impact that a given company has on the environment; "Social" is related with how firms impact the overall community, their stakeholders and employees; "Governance" relates to the corporate behavior and governance structure of the company.

## Amongst the various European diplomas, we can underline these:

- The Sustainable Finance Disclosure Regulation (SFDR), enacted in November 2019, aims at improving transparency in the market for sustainable investment products, making the sustainability profile of funds more comparable and understandable by end-investors, and preventing greenwashing.
- The Regulation on Taxonomy, from June 2020, through which an EU-wide classification system is established, with a view to providing businesses and investors with a common language, to identify to what degree economic activities can be considered environmentally sustainable.

## Is my product sufficiently "green"?

One of the objectives of the SFDR is for companies to disclose information on their business strategy and "political" decisions, including specific details related with the level of sustainability of their financial products. It distinguishes three types:

- Article 9: Funds that have been specifically created to address sustainability goals... known as DARKGREEN.
- Article 8: Funds that promote sustainable characteristics but not as an overarching objective... or LIGHTGREEN.
- Article 6: Non-sustainable funds... NO-GREEN.

## Socially Responsible Investing (SRI) and ESG... Where do these come from?

According to Matt Kelley and Chris Sardi (Portfolio Strategy Manager and Analyst, respectively), the first form of SRI dates back the 1800s, when the Methodist Church urged its members to restrict investments in controversial companies, namely alcohol, tobacco, weapons, and gambling ones!

As for "ESG", George Kell, author of various books and articles on sustainable investment, says that ESG investing began in 2004, when former UN Secretary General Kofi Annan invited 50 CEOs of major financial institutions to find ways to integrate ESG into capital markets. A year later, this initiative produced a report named "Who Cares Wins", where "ESG" was first coined. The report made the case that embedding environmental, social and governance factors in capital markets makes good business sense and leads to more sustainable markets and better outcomes for societies.

## Controversial... yes, but...

Certainly, controversial throughout time, but increasingly vital, many have addressed this topic in different occasions. In an article written in 2020 for "The Journal of Impact & ESG Investing" Blaine Townsend says that using any "social" criteria in investing went against conventional wisdom, and traditional socially responsible investing had many more critics than investment vehicles. The Economist Milton Friedman, for instance, came up with what Townsend refers to as the most famous soundbite of the era, saying that "the social responsibility of business is to increase profits". While criticism came from within and outside the financial world, it is reassuring to know that many navigated against the tide, setting the scene for what would become an unstoppable path.

A good example was provided by Morris Milgram, founder of a real estate investment trust in the 1960s, who left us with a remarkable quote: "Life is too short to do anything but build the kind of world one believes in."

In 2022, can we say that ESG came of age? We surely can!

## Hugo Rocha

Head of Client Development  
& Global Relationship  
Management  
**CACEIS Bank Spain**

**caceis**  
INVESTOR SERVICES



# Listen Up - The Retail Voice Is Getting Louder



Supported by regulatory change, the global markets have never been more accessible to retail investors. Online and app-based accounts are easy to open and manage; financial barriers to investing cross-border and in emerging digital assets are lower than ever; and data facilitating informed decision making is becoming more accessible for those who want it. As a result, a record number of people are joining the retail investor community for the first time, and in the process, flexing their newly formed Environmental, Social and Governance (ESG) muscles by leveraging their mandated rights.

## Regulation is driving change

The European regulatory agenda has been a catalyst to industry change. The Shareholder Rights Directive (SRD II) promoted the principles of investor engagement and mandated that intermediaries provide access to proxy voting services for both their institutional and retail investors; the Capital Markets Union (CMU) is very much focused on the further expansion of retail investor rights; and the Sustainable Finance Disclosure Regulation (SFDR) requires industry participants to disclose and evidence their compliance with their stated ESG standards.

It is clear that the European Commission remains focused on retail investors and driving greater transparency, especially around ESG-themed topics. This should be considered a good thing by the market, as the retail segment – whether deemed as important or not today – still forms part of the financial markets corporate governance framework and will no doubt play a vital role in its liquidity ecosystem in years to come.

## The influence of social media

The community on online forum Reddit has already demonstrated the appetite of retail investors to engage and influence markets through their trading activities. While the aspects of engagement around Gamestop and other meme stocks may not be typical of the whole retail investor community, these developments have nevertheless influenced the way in which the retail investor is regarded.

How far and how compelling the retail voice will be is still largely unknown, however there is a real possibility that in the future the retail voice will not be represented solely by the number of shares owned, but by the amount of

influence that a particular investor has on social media. These channels offer the potential to magnify a single shareholder's voice substantially.

## A golden opportunity

It is clear that demand for ESG is driving both regulation and new behaviour in the investment world. A recent report from Broadridge found that ESG assets are on track to grow to as much as \$30tn by 2030. The ability to influence corporations via voting on important issues such as board diversity and climate change is expected to become increasingly appealing to the retail investor community.

Investment platforms and investment managers should seize the opportunity to secure a competitive advantage in the race to improve their own ESG credentials, not only in terms of the new disclosure regimes, but also by giving the investors, both direct and in-direct, a voice on issuer policy.

The ability to capture investor preferences and incorporate them into policies and voting decisions will not only help secure approval from regulators and investors but will also tick the box over the likely convergence of the retail and institutional voice – which is where the battle lines of differentiation are being drawn out by those looking over the horizon.

## Demi Derem

GM, International  
Investor  
Communication  
Solutions,  
**Broadridge Financial  
Solutions**



# Cyber: Do We All Need To Be Experts?

50% of cyber-attacks originate through a third party, but Network Management teams are not doing enough to protect their banks from high-risk providers. Ultimately, this is IT Security's responsibility, but they cannot be expected to understand the complex ecosystem of custody and post trade counterparties. The answer? Network Management and IT Security need to work hand-in-hand.

There is nothing so terrifying as a risk you do not understand. For most of us, cyber security is one such risk. We all know the horror stories: massive data breaches, crippling financial losses, and shady new-age criminals, sometimes state-sponsored, never found. \$81 million was stolen from the Bank of Bangladesh in 2016 following a cyber-attack, and Banco de Chile took nearly two weeks to resume normal services in 2018 when 'MBR Killer' malware enabled attackers to transfer \$10 million through the bank's SWIFT system.

We are aware of the risks, and we know that they are growing. Cyber-crime is poised to wipe approximately \$10.5 trillion off the global economy annually by 2025, up from \$3 trillion in 2015. Most Financial Services companies have invested heavily in building security and resilience, but financial firms are also 300 times more likely than other institutions to experience attacks.

The key statistic, for attendees of The Network Forum, is that almost half of cyber-attacks originate through a third party. Consider what that means for a moment. Your bank may have a first-rate security team, a vast Enterprise Security budget and a tightly controlled attack surface, but that is only 50% of the picture.

Due to the interconnectivity of financial markets, a bank is only as secure as its supply chain, service providers and outsourcers – every third party, in short, that it relies on to deliver services to its clients, and especially those that hold client data and assets. The spillover risk of a cyber-attack on one financial institution is huge and could impact the operations of a market or even affect a bank's liquidity. What does this mean for Network Managers?

Network Management teams do not need to be cyber experts. However, they do need to work closely with their banks' IT Security and cyber teams. Some Network Management teams have already built sophisticated working relationships with the cyber experts in their banks: Network Management teams escalate IT due diligence responses for validation, whilst the Security teams provide continuous vulnerability monitoring of agent banks, CSDs, transfer agents and others.

After the infamous SolarWinds breach in late 2020 and the Log4J vulnerability discovered in late 2021, you can be sure that third-party cyber risk is firmly on IT Security teams' agenda. But while they are cyber experts, they cannot be expected to be risk experts. It is Network Management's job to educate them about the real-world implications of, for example, a CSD or Exchange halting operations due to Ransomware, a transfer agent suffering a data breach, or an agent bank being fined or shut down by the local regulator.

Do not assume that your bank's IT Security team understands post-trade risk. Network Managers need to ensure IT Security work with them to reduce the likelihood of downstream service providers, probably unknown or ill-understood by IT Security, introducing vulnerabilities into their banks. Banks can build secure and resilient networks, but only when Network Management and IT Security work hand-in-hand.

**Roland Thomas**  
Corporate Development  
Manager  
**Thomas Murray**



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**Creating Opportunities**

# Tokenization Done Right: A Compliant And Comprehensive Approach With Daml

As more securities move to distributed ledger technology (DLT) platforms, effective asset tokenization holds the key to transforming issuance, settlement, custody, and asset servicing processes in financial services. The benefits of such digitization are clear — corporate actions and complex lifecycle management of regulated assets have long been major pain points across the industry, imposing a heavy operational load and substantial risk on players across the capital markets ecosystem.

## What is tokenization?

Following past market shifts to immobilize and later dematerialize assets to enhance the efficiency of trading, most assets have effectively been digital for more than 20 years. Plainly speaking, tokenization needs to do much more than digitize and fractionalize assets to live up to its transformational promise. Thankfully, when tokenization is done right, it can.

Tokenization offers two fundamental advantages versus the landscape of already-digital dematerialized assets built with historic tech stacks. First, the capacity to bake full lifecycle automation onto the tokenized asset itself, including the rights and obligations of each of the ecosystem of participants across the market throughout the life of the asset; and second, the opportunity to wire traceability and provenance into the asset.

Let's begin by addressing the first major advantage - automated asset lifecycles. Tokenization via smart contracts represents a step towards greater efficiency in digitizing and mobilizing various asset types compared to the capabilities of siloed legacy systems, offering for the first time the opportunity to embed the lifecycle actions of an asset onto the asset itself, thereby minimizing the need for separate corporate-actions and financial-instrument platforms over and above registries to track ownership.

While the benefits to tokenization are tangible, market infrastructures and financial institutions are challenged by the how of the transition. There are significant barriers to overcome and moving parts to manage, including establishing distinct rights and obligations for all parties, eliminating repetitive actions across disparate platforms, modeling shared workflows, and establishing platform-agnostic compatibility — all while meeting security and privacy requirements.

Fundamentally, asset servicing, lifecycle events, and corporate actions require complex, multi-party workflows; many different entities need to communicate and synchronize to successfully deliver these services for investors and issuers. For this reason, distributed ledger technologies, smart contracts, and tokenization — with their unique capacity to share state across entitled parties and to automate an end-to-end process completely consistently across different companies — offer an ecosystem solution to the challenge simply not possible with yesterday's technologies.

With an influx of green bond programs aiming to support global climate initiatives, businesses require a more transparent and real-time capability for communicating the delivery of environmental, social, and corporate governance (ESG) covenants to regulatory bodies and investors. Thankfully, tokenization offers a radical breakthrough here, too.

By combining a tokenized financial asset with a data stream (like a feed from IoT metering devices attached to a solar farm) or workflow (for example, audit and confirmation that no deforestation has occurred in the production of a commodity, or certification that a energy efficiency upgrade has occurred to a certain standard), there is for the first time the capacity to have ESG linked assets with built-in, real-time reporting.

The bottom line for firms seeking to build DLT platforms and tokenize traditional assets is realization of a significantly faster time-to-market and the freedom to focus on developing rich, differentiated solutions and experiences for customers. Digital Asset can help. Daml, our core technology, is designed for compliant, comprehensive tokenization from the ground up. With a tokenized asset infrastructure underpinned by Daml, financial service providers don't need to choose between compliance, privacy, and control of permissioned ledger environments, and the distribution potential of public networks.

**Digital Asset**

**Digital Asset**

# Reimagine workflows and create a foundation for innovation with Daml

Daml, Digital Asset's core technology, sets the standard for building and running multi-party applications that connect historically fragmented software and systems. Daml helps enterprises create a foundation for future-proof business models while reducing cost and risk, eliminating manual reconciliation, providing reliable and consistent data, and accelerating innovation and time-to-market.

## What Daml offers

With Daml, enterprises can transform disjointed data and asset silos into synchronized networks. Daml eliminates duplicate processing and manual reconciliation, provides reliable data and audit trails, and creates a foundation for more seamless workflows and robust innovation.



### PRIVACY:

Unlike any other enterprise blockchain, Daml's privacy model extends to the sub-transaction level and distributes data only to entitled stakeholders, as required by data privacy regulations.



### INTEROPERABILITY:

Daml can be deployed across many blockchains and traditional databases, and allows users to change their integrated blockchain without changing their code—future-proofing technology decisions.



### SCALABILITY:

Daml is proven to scale to the complexity and performance demands of national financial infrastructures and mission-critical systems.

## Multiple ways to access

Daml is open source at its core. To make it easily accessible to different user groups, including enterprises, ledger operators, and application developers, Daml can be accessed via a Daml Enterprise license, which includes everything needed to build, test, and deploy Daml applications to your own infrastructure, on-prem, or in the cloud.

Daml's purpose-built, smart contract programming language helps development teams avoid common mistakes and spend more time focusing on business logic. The Daml platform includes a Software Developer Kit (SDK) with everything needed to build, test, and deploy a Daml application, automate multiparty workflows, and integrate the application into enterprise environments.



Learn more and view additional case studies at [digitalasset.com](https://digitalasset.com)

# Listed ESG Bonds Getting Greener, But Lag Rate Of Global Issuance In The New Adoption Wave



Last year, the South African debt capital market saw the listing of its first social and sustainability-linked bonds (SLBs). These follow the first green bond issued a few years prior, in a growing trend by businesses to align their financial and sustainability strategies. While it is clear there are differing levels of sophistication across the market, South African investors are increasingly proactively engaging with companies on improving their sustainability profile.

Of the R15.7bn SA-listed ESG bond issuance last year, SLBs represented R8.7bn, while green bonds and social bonds accounted for R3.5bn each. The growing popularity in South Africa was against an international backdrop of rapidly growing SLB issuance that doubled in 2021 when compared to 2020, reaching a total of just over \$1.1trn (~R15trn).

The issuances took place across all the key credit sectors – banks, corporates, state-owned entities (SOEs) and securitisation. Approximately half of last year's ESG issuances were placed in the market through auctions. Notably, only one SLB auction took place. All of the social bonds were issued through public auctions with green bonds a mix of both private placements and public auctions.

Rand Merchant Bank Markets Research conducted a survey to better understand South African investors' perceptions towards this fast-developing part of the market.

When it comes to investor popularity, green bonds are currently the most represented (61.9%) with respect to bids, followed by sustainability-linked bonds (42.9%).

But ESG bond adoption is still slow in South Africa. Issuance has been hampered by South African issuers understanding of their benefits and also concerns about costs. Offshore services providers are often used to provide pre issuance verification or second party opinions which is a cost borne by the issuer. Despite this, there is a very large appetite for green bonds from South African investors. On balance it makes issuing green bonds worthwhile.

The research showed that credit quality matters. When investors who bid for ESG paper were asked to substantiate their rationale for participation, fundamental credit quality of the name superseded other motivations. Notably, ESG mandates did not inform their decision.

Measuring returns and impact of sustainable funding is an important challenge. Reporting has been labelled as 'extremely important' by about 60% of respondents. Investors believe that issuers should report the direct and indirect impact funding results.

Investors shared the view that 100% of issuers are issuing ESG bonds in order to capitalise on market trends and only half of the issuers are putting consideration into making a difference. Issuers and arrangers need to be cognisant of these factors, but a way of rectifying this is by providing clear guidance of targets versus historical performance. Global trends and comparable numbers also form a good benchmark.

Looking ahead, transition bonds, a new asset class targeted at industries with high greenhouse gas emissions, are expected to take off in popularity in South Africa this year.

They are designed to help "brown" companies, meaning those with a high carbon footprint, to transition to greener business activities. Many of these companies are increasingly excluded from existing markets for sustainable finance. The adoption of transition bonds will be transformative for corporate South Africa.

**Nigel Beck**

Head of Sustainable Finance and ESG Advisory  
RMB



Had it not been for South Africa's world beating genomic sequencing capabilities and the subsequent discovery of the Omicron variant in early December 2021, TNF Africa might actually have gone ahead in Johannesburg this month after an (incredibly long) two year interlude.

Nonetheless, the situation does appear to be improving. Barring a handful of markets in Asia whose steadfast commitment to zero-COVID remains totally unassailable, most countries are largely casting off the shackles of restrictions and opening up their economies.

Accordingly, there is a sense of bullishness in the securities services industry that the TNF Meeting just held last March will be the last one to be entirely virtual - with physical events poised to make a much vaunted come-back later in 2022.

Although the world is putting COVID-19 behind it, geopolitical tensions – namely the brutal conflict between Ukraine and Russia have come to the fore - and this is already having a huge impact on the custody industry.

While Africa is far away from Ukraine geographically, the knock-on effects of rising oil and food prices will feed acutely into inflation across the region, potentially fuelling instability further down the line.

## Creating a more competitive market

Investor interest in African markets is clearly on the ascent, which is prompting some local policymakers to implement wide-ranging structural reforms.

In addition to unveiling new investment products (e.g. derivatives plus CCPs, securities lending/borrowing tools), a number of African economies are also embracing ESG (environmental, social, governance) by developing sustainable bond markets.

This is likely to result in further inflows from global institutions, many of whom are coming under renewed pressure from investors and regulators to disclose how they integrate ESG into their decision-making activities.

Digital assets are also gathering momentum in Africa – especially CBDCs (central bank digital currencies) – which are being trialled in a handful of markets including South Africa. If applied correctly, CBDCs could remove a lot of the pain-points synonymous with cross-border payments and settlements by supporting real-time settlement in digital fiat money.



At a market infrastructure level, the Africa Exchanges Linkage Project (AELP) will remove some of the barriers preventing cross-border listing, trading and investing across seven of the continent's largest economies including South Africa, Nigeria and Kenya. Attendees at TNF seem to agree that the scheme is a good thing with over 90% saying improved regional connectivity will be beneficial for cross-border investment activity.

Although African economies have made excellent progress reforming their capital markets, there is scope for improvement. For example, network managers complain the existence of multiple CSDs in individual markets creates unnecessary costs and friction during the investment process.

Another network manager also stressed that CCPs should be adopted in countries where it is viable – in accordance with best market practice. While it makes absolutely zero sense for the smaller African economies to establish CCPs, some counter a regional CCP providing coverage across multiple markets could help attract liquidity.

#### Network management 2022

After being grounded for nearly two years, most network managers are raring for on-site due diligences to resume, not least because a number of agent banks were onboarded during the pandemic while a handful of African FMIs went live - meaning network teams have yet to meet any of them in person.

A TNF survey found 45% of network managers intend to return to on-site due diligences imminently, while a further 47% said they would do so in the next six to nine months. However, many TNF attendees accept logistical barriers are likely to mean the due diligence process is less straightforward than what it was before.

Assuming network managers can even fly into a market without impediment (e.g. mandatory quarantine or arbitrary testing, etc), some have expressed concerns that local providers might have their own COVID-19 restrictions still in place - such as ongoing limits on face to face meetings or bans on outside guests visiting the office.

While remote due diligences do have benefits – namely negating the administrative headache of organising physical visits, network managers argue their effectiveness pales in comparison to on-sites, especially when dealing with new suppliers.

**Charles Gubert**  
Founder,  
GTL Associates



## Angola – Africa's Giant Is Open For Business



#### Angola makes strides to position itself as a force in Africa

Africa's third largest economy, boasting USD121 billion GDP in 2021, 1650km coastline, 3 million hectares of farmland, significant mineral deposits, and a dynamic young population. These are some of the unique advantages that make Angola a giant whose investment potential will magnify with time for investors. The country has ear-marked capital markets as one of the pillars that is integral to private sector led development economic model.

"In the last 8 years, we've seen the Angolan capital markets grow in leaps and bounds," comments Patrick Ocailap Enotu, responsible for Investor Services at Standard Bank Angola. As with many markets, trade in government securities kicked off this development with notable values in 2016 as depicted in the graph.

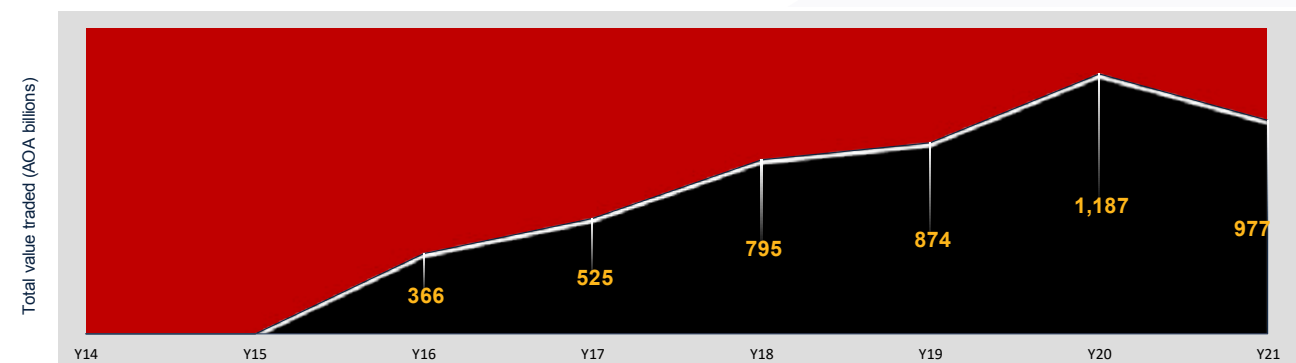
The infrastructure is in place and is up and running under the stock exchange, Bodiva (Bolsa de Dívida e Valores de Angola). Bodiva is already responsible for the issuance and trading of government debt on the primary and secondary markets.

The Capital Markets Commission (CMC) is an active regulator with its pulse focused on the main things needed to support the capital market.

With the Privatisation Program (Propriv) established under Presidential decree 250/19, activity on Bodiva is anticipated to scale up with the prospective completion of IPOs of state-owned entities, and the intended listing of private sector companies. "While Propriv was set back by Covid, we believe that we will see an IPO in 2022 for one or more of the identified entities namely BAI, SONANGALP, BCGA and TV Cabo.," adds Enotu.

Standard Bank understands that the extent of due diligence and research involved in any initial investment, especially into new markets, is enormous. This also holds true for the need for trusted partners who possess sound operational capabilities and solutions in the market. "Our Group track record and domestic expertise gives us the confidence to partner our clients as they consider entry into Angola, the rising African giant," concludes Enotu.

**Patrick Enotu**  
Head: Investor Services,  
Angola  
Standard Bank



**Key developments over time**

Bodiva founded

Organised Over the Counter Market (MRTT) implemented

Stock Exchange (MBTT), Trading Registration Market (MROV), Securities Exchange Center (CEVAMA) implemented

Bodiva accepted into Association of National Numbering Agencies (ANNA)

Securities coding system, Order book access on website Partial opening of capital account

Highest traded values achieved Licencing guidelines applicable to non-residents.

New trading and posttrade platform (Capizar) is launched.

Source: Bodiva

# Moving Into Digital Assets: Key Strategic Considerations For Global Custodians



Digital asset adoption is going mainstream. Financial institutions of all sizes are now at advanced stages of creating digital asset service capabilities.

Perhaps most significant though is the move by global custodian banks in developing offerings, with institutional crypto currency custody and trading services the first port of call. Within the next 18 months, or earlier, most of these offerings will be live.

The question of go-to-market is complex, with considerations at play whether to build capabilities fully integrated within the Securities Services arm, or launch a specialized subsidiary—Zodia, the digital asset custody arm pioneered by Standard Chartered being a successful case in point for the latter.

When it comes to financial technology infrastructure — and assessing decisions such as Build vs. Partner — it is important to remember not only that it is very expensive to build technology in-house, but also that technology developed today may not necessarily be fit for purpose in the future. The digital asset sector possesses particular challenges in the remarkable pace of innovation. It is easy to forget that decentralized finance (DeFi) has only been in existence for a little under two years and NFTs only came to market in the past twelve months. The market is in flux, so sharing R&D costs with industry peers via a third-party which delivers this foundational infrastructure might be a better avenue to pursue.

Talent will also be key to success. Innovation in the digital asset industry is incredibly fast-paced and building a team of experts across cryptography, engineering, and security who can build infrastructure that evolves at this speed is a challenge.

## The custodian's dilemma: striking a balance between divergent priorities

Custody is the cornerstone upon which all future digital asset use-cases rest, and institutions will face binary choices from the outset in how they build this foundation. Custodians want to support their customers who need instant access to their digital assets, but must do so in

a highly secure way. In crypto, losing the key means losing the asset. Custodians must move and grow fast, to achieve scale, but must do so in a highly compliant way.

There are trade-offs to be made, and each one of these binary decisions risks closing down options for the future, therefore creating legacy infrastructure.

The solution, and the source for lasting competitive advantage, lies in removing these trade-offs. By operating a true multi-vault custody setup underpinned by orchestration systems and unified governance. An orchestration system buys a financial institution massive optionality at a low premium cost. It ensures that technology developed today does not limit a firm to a particular path in the future.

## The time is now for action

It is clear that the time is now for building digital asset capabilities. Demand, regulatory progress, and innovation have coalesced to create an environment ripe for adoption.

However, the decision to act is not enough. Competition in the market is bubbling quietly under the surface and institutions will need to make the right strategic decisions to ensure that their infrastructure is fit for purpose in the future. Orchestration is a foundational component which can ensure success.

### Adrien Treccani

CEO and Founder  
**METACO**

**METACO**



Can digital assets and DLT do for capital market inclusion what mobile money did for payments and banking inclusion in Africa?

- As per the Chainalysis report, the value of Africa's crypto currency market has grown by 1200% in last year. In addition, the region also has some of the highest grassroots adoption in the world. Kenya, Nigeria, South Africa and Tanzania feature in the top 20 of Global Crypto Adoption Index.

- In last 4 years, 8 African countries have launched initiatives to establish CBDC (Central Bank Digital Currency) in their markets. South Africa has set up the Intergovernmental Fintech Working Group (IFWG) comprising regulators and market players to promote DLT-driven innovation in financial markets. The IFWG has already completed two projects.

- As per Briter Bridges report, investments in tech start-ups across Africa doubled in 2021 reaching USD 5 billion. Investment in African fintech increased 9 times in last 5 years. Fintech also emerged as a preferred sector for global investors in recent "World to Africa Survey" conducted by Standard Bank.

Digital assets are generating interest in Africa. Tokenised securities, which are traded and settled on a distributed ledger technology (DLT) could bring enormous benefits to Africa – not least by democratising the investment process. By fractionalising conventional assets (e.g., equities, bonds, private market instruments such as private debt) into bite-sized, digital units, the cost of investing will decrease. This will allow retail clients to construct their own tailored investment portfolios, but at much lower cost. By enabling greater retail participation in capital markets, liquidity across Africa will increase.

A couple of decades ago, several African economies jump-started the mobile banking revolution offering millions of Africans access to easier and cheaper money transfers. Today, central bank digital currencies (CBDCs) – a digital equivalent of a country's fiat currency – could promote greater financial inclusion in underbanked societies across developing markets. Which is why a number of African economies are trialling CBDCs. The use of CBDCs, together with stable coins (i.e., a privately issued crypto-currency underpinned by a reserve asset such as fiat money, a tangible asset, or a commodity) could reduce friction in cross-border payment and securities settlement processes. This will generate cost efficiencies and mitigate risks.

Africa's reputation as a disruptor was cemented during the mobile banking revolution. The question now is whether the continent will be equally as disruptive with digital assets.

### Hari Chaitanya

Head: Custody & Investor Services Africa Regions, Corporate & Investment Banking  
**Standard Bank**



# First Across The Line – India Celebrates Its lead On T+1



Showing a lead over the US and Canada – where a T+1 equity trade settlement cycle will not be rolled out before 2024 – India is currently racing ahead with its phased-in implementation of T+1

Twenty years after the Securities and Exchange Board of India (SEBI) first proposed shortening the country's trade settlement cycle, India's two stock exchanges – the Bombay Stock Exchange (BSE) and the National Stock Exchange of India (NSE) – announced in February 2022 that they were ready to replace T+2 with T+1 in stages, starting with the bottom 100 stocks by market capitalisation. After this, the next lowest 500 stocks by market capitalisation would then be added on a monthly basis – so that all the country's publicly listed equities should be settled on T+1 by the end of January 2023 at the very latest.

Experts expect the reforms to increase domestic retail investor participation in the Indian market, leading to a dramatic pick-up in trading volumes and liquidity. In the case of foreign portfolio investors (FPIs), proponents of settlement compression say it should help institutions minimise their operational risks and costs. Under T+1, counterparty exposures will be truncated; the outcome of this is that trading firms will not need to post as much collateral as previously. This frees up trapped liquidity.

To date, India's transition to T+1 has gone fairly smoothly, although the process is still in its early days. As more widely traded stocks migrate to T+1, foreign portfolio investors (FPIs) – especially those located in different time-zones – could face logistical issues around trade confirmations and FX management. In the case of FX, transactions might need to be booked on a same day basis or pre-funded as intermediaries might have to confirm trades on either T day or early on T+1 as the rules get formalised in the next few weeks. The FX market may not be open during the specified time for booking. Despite these risks, industry experts believe FPIs have sufficient time to recalibrate their operations to deal with T+1's impact.

## First T+1, then what?

Assuming that India's transition to T+1 goes ahead without too many glitches, the market may even feel sufficiently confident to adopt T+0, or even atomic settlement – also known as instant settlement. While

the technology exists to facilitate T+0, counterparties cannot obtain netting benefits across segments e.g., cash equities and equity derivatives, which is why clients may not push for it. However, disruptive technologies – such as distributed ledger technology (DLT) and central bank digital currencies (CBDCs) – could eventually make possible a potential solution to enable market participants someday.

Several leading markets are examining whether DLT and CBDCs can be deployed to achieve instant settlements. India is no exception here and is currently exploring the merits of both technologies. For instance, the country's Finance Ministry recently announced that the Reserve Bank of India (RBI) would unveil a digital Rupee by March 2023 while the Ministry of Electronics and Information Technology's dedicated Centre of Excellence in Blockchain Technology, based at Bengaluru, in the southwest state of Karnataka evidences the government's support for blockchain.

As India leapfrogs other major markets in its implementation of T+1, a further contraction in the country's settlement cycle over the next five to 10 years is highly likely.

For the full article, please see <https://flow.db.com/securities-services/india-trumpets-t1-settlement>

## Sriram Krishnan

Managing Director, Co-Head,  
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*\*Global Finance Magazine, 2021*

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## API Technology – How Are APIs Improving Our Processing Today?

**'Digitisation and Digitalisation' has emerged as a hot topic. Why is this relevant to APIs?**

With so much legacy technology in the Banking Industry generally, APIs open up opportunities to leverage it more effectively. They offer the ability to connect legacy data into new, more powerful software and systems. Such interoperability means that sponsors can maintain that legacy data's usefulness and leverage fresh, new processing capabilities.

APIs can 'consume' i.e. pull in live - or legacy - data which can then be processed by the functionality of a new application. This is hugely attractive to Banks where significant sunk cost might otherwise be just that - sunk. An API can extend the life of legacy data until such point that either the legacy data is no longer useful, or a new application can be used to replace the legacy context altogether.

APIs do not transform data; they are a standardised interface that is implemented and through which an application provides access to its resources. Examples of how we have been using APIs for many years now, include integration with core account systems at several Clients and integration with an external account opening system, to create (post), get (get) and subsequently update (put) accounts in MYRIAD, as part of that Client's account opening process. The same API is also integrated with automated testing tools, as part of the Bank's deployment pipeline.

APIs represent a significant part of the industry's new landscape. They are one way to mitigate the risk - and cost - associated with updating old technology, while preserving the usefulness of the data warehoused in old technology. Adoption of an API strategy could radically de-risk migration from old technology, as well as underpinning the value of the 'new'. De-risking includes faster time-to-market, adoption of best-of-breed technology, a move away from in-house development and all-round lower cost.

Two things remain paramount: a shift in mind-set to move on from a reliance on the I.T. department to a much more Dev Ops approach. There is a cost, resource, standardisation, simplification and integration angle to the adoption of APIs, all of which need to be considered.

Integration is key and should be the priority: Dev Ops are far better placed to leverage third-party software and platforms, optimising modern technology and the interoperability between old and new data; Dev Ops' focus should be specification, refinement, integration and ultimately execution on projects. APIs are one way of doing this and this is a much more cost-effective use of resource.

The second aspect brings this commentary full circle - the success of APIs and their adoption is contingent upon the digitisation of data, the digitalisation of the processes surrounding the digitised data, and the safe storage of that data in a highly secure context that is interfaced by, potentially, multiple APIs. This is the route to substantial cost saving, greater efficiency and significant value-added future returns on investment.

**Simon Shepherd**

CEO,  
MYRIAD Group  
Technologies Limited



# Risks And Opportunities Of The Crypto Currencies

Cryptocurrencies have attracted the interest of asset managers as the promise of returns is so high. Recent developments show that there is no profit without risk, that is to be constantly assessed.

Cryptocurrencies are naturally becoming a new asset class with a market capitalisation that has grown from \$80 billion to more than \$1,3 trillion.

## Adoption is now

2021 and 2022 have seen the massive arrival of institutional investors and corporate clients into the world of digital assets. In the US, companies like Microstrategy and Tesla have converted part of their cash into Bitcoin. Hedge funds and even traditional funds are looking for exposure to this new asset class. A country like El Salvador, and more recently Central African Republic recognises Bitcoin as legal tender. All of these factors have helped increase adoption and thus strengthen the ecosystem. However, we note differences between continents, with the United States remaining dominant on the crypto-currency scene and Europe positioning itself more on the appeal of security tokens.

As a reminder, security tokens are financial assets created on a blockchain. Societe Generale is a driving force in this field, notably through its subsidiary SG Forge, which has already tokenised bonds and structured products. Moreover, from April 2022, SGSS has been able to support fund accounting for buy side clients investing in digital tokens.

This gap was already confirmed in the surveys that SGSS conducted in February 2021, as well as in market data. The Chainalysis index confirms to us the skyrocketing adoption of cryptos, and the number of Bitcoin holders has increased tenfold in the last six years. The adoption of crypto assets is following roughly the same pace as the Internet before them. This suggests that the number of crypto holders could reach half a billion by 2025. The asset management world has cards to play to enable its clients to benefit from these opportunities in a secure manner.

Recent developments in central bank digital currencies, which have already become a reality in China with the Digital Yuan, will undoubtedly help transform our market towards a token market.

Tokenisation of financial and non-financial assets can bring to the table an important number of benefits such as efficiency through automation, reduced time to delivery, but also transparency. These elements will undoubtedly change the role of players in the value chain. Asset management will be able to take advantage of these improvements.

## Some considerations to take in account

Crypto currencies since their inception are inherently volatile. The developments of stable coin appeared as a necessity to ensure some balance and promote the exchange of crypto currencies. The recent collapse of the Terra Luna stable coin pointed out that not all crypto currencies are equally mature. The high return promises of this algorithmic stable coin could give clues. The risk management policy is more than topical in order to protect investors. This incident that has hit the headlines also poses the problem of systemic risk of several players like the crypto exchanges. What will happen if one of the top crypto exchange fail?

Bitcoin was created in 2018 during the subprime crisis to address a trust issue. 13 years later, this collapse can potentially put a trust issue back on the table for some cryptos and the ecosystem in general. It is in this context that the regulatory harmonization is a necessity at the European level but also at a more global level in order to secure the ecosystem, and the investors who are not always aware of the risks involved.

## Laurent Marochini

Head of Innovation  
Societe Generale  
Securities Services

 **SOCIETE GENERALE**  
Securities Services



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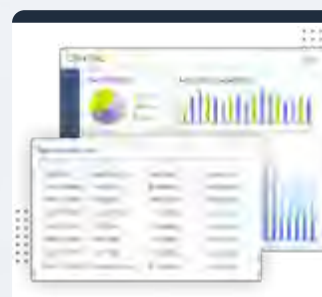
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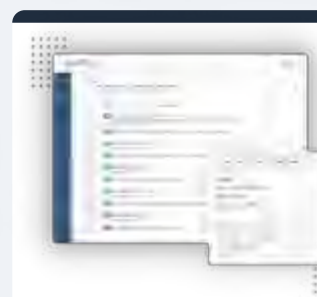
## BNM360 Modules



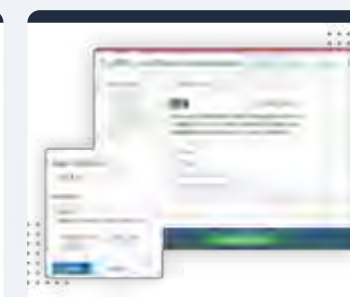
**DDQ Monitoring & Issue Management**



**Master Agent Bank & Account Database**



**Account Opening & Closure Request Workflows**



**Account Re-certification Process**

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# Development Or Disruption

The past 12 months have been some of the most momentous for the Nordic sub-custody market in history. When February was about to transfer into March, the fan was severely hit by the announcement from Nordea to exit the Nordic sub-custody business and doing so with a record narrow window for clients to find a new home for their business. Later in the summer, Danske Bank also arrived at the same conclusion. SEB became the sole remaining locally represented established player and has had to adapt accordingly' says Jesper Lindén, Co-Head of Cash & Sub-Custody. 'In general, custody is a technology-dependent, low-margin business that requires large scale to be profitable. Add in regulatory stresses, client-side pricing pressures and, most importantly, the absolute need for local know-how, and the sub-custody market is a game which many of our peers decided they no longer wanted to play' adds Ulf Norén, Relationship & Sales Manager. SEB, however, has chosen a different path, with a clear commitment to sub-custody at all levels within the bank 'SEB has a very long tradition in this business line that stretches back more than 100 years. The past year is confirmation that our long-term approach is paying off, and we now have a position of strength that no other Nordic bank has ever been in' says Stefan Råni, managing the Business Development department.

The implications for SEB as a business have been huge. The vast majority of customers needing a new provider chose us because of our stature in the market and superior offer. As a result, we have scaled up our capacity – financially, operationally and technically – to meet the increased demand. All customers affected have now been migrated onto our platform but there

is still more work to do. Migration on such a huge scale and with so many complexities means that a "one size fits all" approach is not suitable, and so a large number of specific adjustments to suit individual clients are now being developed, prioritised and implemented.

'While consolidation has dominated the market, there have been plenty of other challenges to get to grips with. Harmonisation work in the Nordics is intensifying, All this will require resource devotion and investment in the coming years' says Stefan Råni.

'A further challenge is our relationship with Central Securities Depositories (CSDs). It is vital that they work closely with us, and that their costs are reduced. The danger is that if CSDs' costs explode, the industry will become more polarised and systemic risk will increase. The reborn perception that CSDs should be able to extend credit is worrying. CSDs providing banking-type ancillary services is questionable. We believe that the CSDs' critical role as central market infrastructures for core functions should remain adequately protected from any additional risks, such as banking risks, credit risks or market risks, that are normally associated with the provision of banking services. We need a market where everyone works in harmony and towards the same goals, especially in cross-border situations' Jesper Linden continues.

'And then there are the perennial challenges of regulation and technology. The market has largely adapted well to the introduction of the Central Securities Depositories Regulation (CSDR), but a question mark remains over whether mandatory buy-in rules will come into force. A clear technology roadmap is also crucial to success, and the traditionally SWIFT FIN-based sub-custody world is being increasingly influenced by new technologies. From digitisation to AI and machine learning, technology is constantly evolving, creating both challenges and opportunities for the future, something we follow closely and actively engages in' Stefan Råni states.

'A year on, and while the Covid-19 pandemic picture looks very different, many of the repercussions for the industry remain – and could be here to stay. The majority of clients were forced to work remotely from home during the height of the pandemic, and legacy processes were disrupted as a result. Face-to-face meetings with clients and due diligence visits have largely returned, but we are still seeing virtual AGMs and many documents are now signed digitally as a matter of course. Like the rest of the business world, sub-custody is still trying to find the right balance between physical and virtual engagement, both for people and processes' Ulf Noren says.

'The past 12 months have seen a sea-change in the Nordic sub-custody market and established SEB as the premier provider, but we never rest on our laurels. Consolidation and the subsequent increase in business volumes strengthen our ability to invest even more in the business, which directly benefits our customers'.

'During my almost 40 years in this industry I have seen examples of providers that took their position for granted but rest assured that SEB will not do that!' Göran Fors says.

'We are very aware of our privileged position and it is extremely important that we continue to develop and deliver high quality. We look forward to working closely with old and new customers alike to deliver the best possible service to them for many years to come'. Jesper Lindén adds.

**SEB**

# It Is Time For CSDs To Take Charge Of Our Future

Predictions of the fate of the CSDs in a tokenised future are moving from apocalypse to progeniture. The financial market infrastructures once thought to be certain victims of tokenisation can now be seen not merely as beneficiaries of tokenisation but as the institutions best-placed to bring a tokenised future into existence. So it is curious most are doing nothing about it.

Central securities depositories (CSDs) were an early target of the Blockchain disintermediators. After all, on a blockchain network it is tokenised assets rather than data which move between digital wallets, and it is smart contracts embedded in the assets that automate the servicing of the tokens.

In tokenised securities markets of this kind, the traditional roles of the CSD in the issuance of securities, the confirmation and settlement of securities transactions, and the registration, custody and servicing of holdings of securities are all redundant.

Confronted by this spectre, CSDs labelled threat as opportunity. New roles were devised, in which CSDs would govern or operate blockchain networks, expand into new asset classes as they assumed tokenised form, run customer due diligence checks and enable different networks to inter-operate.

## To survive CSDs cannot rely on a static environment

However, each of these propositions hinged upon the behaviour of others. Issuers and investors had to prefer private blockchains to public ones. New asset classes had to be tokenised on to familiar exchanges. Specialist digital asset CSDs must not exist. Digital identities had to remain a pipedream.

Reality has failed to conform. A recent survey by OMFIF found two in five sovereign debt issuers were happy to use a public blockchain. More than 20 regulated token exchanges have emerged. Specialist CSDs (Montis, D7 and SDX) are proliferating. Tokenisation implies adoption of digital identities.

What prevents these emerging realities from disrupting the CSDs is the minuscule size of the security token markets. No reliable source on their size exists, but their value is unlikely to exceed US\$50 billion – one six thousandth of the size of the global bond, equity and funds markets today.

## Tokens are minuscule today but could scale quickly

Yet history shows financial innovations can scale quickly. Neither the mortgage-backed securities market in the United States (US\$12 trillion in outstandings), money market funds in the United States (US\$5 trillion) or passive investing worldwide (US\$22 trillion) existed as recently as the 1970s.

To be as big as the passive investing market today, tokenised assets would have to own a mere 7 per cent of the value of the global equity, bond and funds markets. If a fifth of new issues were tokenised every year, it would take less than four years for tokenised markets to get there.

This is what investors in token exchanges and digital custody services (there are more than 80 in existence today and the acquisition market is lively) are betting on. According to Blockdata, digital asset custodians raised US\$4.5 billion in 2021. Coinbase has US\$256 billion in custody already.

Most importantly, more than half those 80 digital custodians are regulated. So they have not only money and deep knowledge and experience of digital assets, but are seeking and securing the licences they need to compete with CSDs (and their custodian bank gatekeepers) for institutional business.

## CSDs risk being bypassed by digital asset specialists

It is also becoming clearer which asset classes will tokenise at scale first. It will be neither equities nor real estate, but bonds (US\$123.5 trillion in outstandings), funds (US\$71.05 trillion) and privately managed assets (US\$9.8 trillion). Bonds and funds alone make up half the business of the CSDs.

There is a risk that, as these token markets grow, the issuance, settlement, safekeeping and servicing of bonds and funds will migrate away from the CSDs to some combination of digital exchanges, successful digital custody start-ups, specialist CSDs and a handful of innovative custodian banks.

Given the gravity of the threat, the response of CSDs is feeble. True, some are active in bonds (DCV) and bonds and funds (Clearstream) and privately managed assets (DTCC). Some exchanges (notably SIX) are building integrated token platforms that embrace post-trade, but most CSDs remain cautious.

## It is more prudent to do something than to do nothing

It is understandable. For the next five years, growth in token markets is likely to be minimal. But it is a bold CSD that is willing to bet that the market will not grow substantially over the next ten to 20 years. The savings in the cost of capital and investing are too great for issuers and investors to ignore.

Central banks and securities market regulators, while concerned to protect investors and maintain financial stability, are signalling that innovation is welcome. Securities settlement, especially across national borders, is now the major use-case for central bank digital currencies (CBDCs).

The introduction of a CBDC in a major market is the likeliest trigger for an explosion of activity in security token markets, because it will make central bank money available to settle the cash leg of securities transactions on blockchain-based tokenisation networks.

So a prudent CSD must now do something rather than nothing. An obvious first step is to experiment with token issuance, settlement and custody capabilities, with a view to developing an integrated token servicing platform capable of inter-operating with other token platforms at home and abroad.

Investing incrementally will contain the costs and the risk that the market does not develop quickly, or at all. Ensuring that any development minimises the impact on

existing users will further reduce the risk of losing control of costs or outright failure.

## The grandest opportunity is the infrastructural

But technology will not be enough. Markets need issuers and investors as well, and CSDs will need to work with banks and brokers to bring them to market, and to encourage banks and brokers to take responsibility for sustaining liquidity in tokenised securities as market-makers and lead brokers.

Like any market, issuance flows and transactional liquidity in security token markets will depend on inter-connected, inter-operating and mutually reinforcing networks that span market infrastructures, institutional and private investors, service providers, banks, brokers and technology and data vendors.

Indeed, perhaps the greatest opportunity that tokenisation affords CSDs is to become the progenitors of these networks of networks. CSDs are infrastructures. A true infrastructure, like the electricity grid or the road network, is a common means to many ends.

A national blockchain infrastructure, built and operated by a CSD, could become the securities equivalent of Open Banking: a trusted but open facility where traditional financial institutions and FinTechs compete and collaborate to provide innovative services to issuers and investors.

## Dominic Hobson

Co-founder of  
Future of Finance



A white paper that expands on the issues raised in this article can be found at [www.futureoffinance.biz](http://www.futureoffinance.biz).

# Watch Out, New Hotel About!



There are various rules in life one should try to follow at all times, including never eating yellow snow and never buying a second-hand Italian sports car in the dark (one for another time perhaps). Following events of the last eighteen months I'd also add another – never buy an old hotel / bar / restaurant in the middle of a pandemic thinking that it'll be plain sailing and it'll make you loads of money straight away..... I'm getting ahead of myself though, let me take you back to when it all began and you can judge for yourself!



My family and I are very lucky to be able to live in a wonderful part of the world, a small village called Gullane, south-east of Edinburgh, in Scotland. It's blessed with fabulous beaches, good road, rail and air links, proximity to Edinburgh, and twenty-one superb golf courses within twenty minutes' drive including Muirfield, one of the best in the world. In late 2018, despite being a tourist destination, the village didn't have temporary accommodation in abundance – Greywalls, attached to Muirfield, Tom Kitchen's Bonnie Badger and a hotel which had been in the same family for 57 years, The Mallard. A much-loved local institution, The Mallard had remained

unchanged and the owners, wishing to retire, sold the business to developers subject to planning permission being granted. Perhaps due to the onset of covid, or a concern as to potential traffic disruption, or a loss of tourist accommodation in the village, or likely a combination of all three, planning permission was refused and the property came back onto the market. Not wishing to lose a beautiful building for the community, and emboldened with visionary ideas of creating some fabulous local employment opportunities for local teenagers, after a couple of wine-fuelled 'strategy sessions' with some like-minded villagers a group of three couples, including ourselves (my wife Karen and I) submitted a bid. It must be stated at this point that whilst we'd all had significant experience of being on one side of a bar / restaurant, and had stayed in many hotels around the world, none of us had done anything whatsoever in the hospitality sector.



Naively deeming all 'helpful' suggestions and warnings from hoteliers, local bar- and restaurant- owners to be, in reality, potential competitor disinformation, we blithely embarked upon a massive refurbishment program to bring the property (which we had

christened The Watchman, both because it watches over the village's three golf courses but also as an amalgamation of the owners' names) up to a standard which we'd be proud of. As this was – early 2021 – and 'peak' covid, all of the banks we approached conspired to put a spanner in the works by refusing to lend us a single penny – cue a significant amount of finance-juggling and reallocation of funds from other projects. However, the government actually helped us for once by ruling that builders could no longer work on residential properties, thus allowing the 'slack' to be taken up on commercial properties like hotels.



The next eight months were an expensive, tiring and frustrating period during which raw material costs spiralled, refurb and builders' costs overran, the potential pool of staff disappeared overseas to spend furlough money in their local countries and we learned more about air- and ground-source heat pumps than we ever realised we'd need to know. The delays meant that we missed the main body of the lucrative summer period, but a concerted effort meant that we opened in early September 2021 – 18 well-appointed bedrooms with fabulous beds and powerful showers, 180 covers including a gorgeous, enclosed back garden and a terrace seating 40+ overlooking the golf courses, as well as a dedicated drying room for those days when the Scottish weather lives down to expectations - 'summer in Scotland, my favourite day of the year'. We were fortunate to secure the services of an amazing young South African chef, Nick Lang, and over the course of the following months built a strong team of professionals, including fifteen 15-18 year old 'associates' – young local people who can both earn money but also learn priceless interpersonal skills in a friendly environment. Whilst some just wish to earn enhanced pocket money, others are keen to build a career in hospitality and we are assisting them by

putting them through City and Guilds and Sommelier qualifications, all of which they've passed with flying colours so far.



Would we do it again? Never say never, but at present we're focusing on building up our reputation and enhancing the customer experience in advance of what we expect to be a hugely busy period, with the Edinburgh Fringe, Scottish Open Golf and British Ladies Open tournaments on our doorstep. Want to come and see for yourselves? Please do – any TNFers are most welcome and will be particularly well looked after!

**Paul A. Chapman**

Gullane



[www.watchmanhotel.co.uk](http://www.watchmanhotel.co.uk)