



# CUSTODY REIMAGINED

## The Outlook for Global Securities Services in 2030

A world where fund managers and asset owners can access substantial amounts of structured, intelligent data, and gain actionable insights – at any time, at any place and in any way – may seem distant, but it's closer than you think.

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## The Outlook for Global Securities Services in 2030

It's 2030, and it's the middle of the night. Despite the time, a pension fund manager is awake, and wants to access settlement data for two digital currency transactions. They then want to see all the pension scheme's assets across all systems, geographies and platforms, in a single book of record, at T+0. They don't have to worry about reconciliation data, because reconciliation no longer exists. But they want to leverage their securities service providers' technology to run several investment scenarios to decide what hedging programmes to adopt across a range of assets. And they want to do all of this on their digital device.

A world where fund managers and asset owners can access substantial amounts of structured, intelligent data, and gain actionable insights – at any place, at any time, and in any way – may seem distant, but it's closer than you think. As Bill Gates famously said, “We always overestimate the change that will occur in the next two years, and underestimate the change that will occur in the next 10”.<sup>1</sup>

2030 will bring substantial changes to the asset servicing industry, but this change is not unexpected. Asset servicers have always evolved with the times. From their humble beginnings over two hundred years ago, to the patching platforms implemented in the 1980s to add custom-built end user computing,<sup>2</sup> to the last decade, where technological innovation became a key focus; transformation and adaptation has always been a vital part of the industry.

Over the last decade, global custodians moved beyond their traditional roles and began to provide a host of additional services around cyber security, artificial intelligence (AI), cloud computing, data analytics, and blockchain technology. By 2030, custodians will be providing a new, collaborative ecosystem where both digital and traditional electronic solutions exist side by side. The custodians of 2030 will be client-centric and focused on asset safety. But they will also be flexible, agile, creative, and digital in ways we haven't seen before.



*We always overestimate the change that will occur in the next two years, and underestimate the change that will occur in the next 10.<sup>1</sup>*

**BILL GATES**  
**FOUNDER, MICROSOFT CORPORATION**

## DIGITALISATION

The importance of digitalisation cannot be overstated. By 2030, financial services will have moved almost completely from an electronic to a digital world, and that will have a significant impact on asset servicers.

One driver will be clients themselves, and we see this happening already. Clients are citizens of a digital world. They expect better customer service from their asset servicers, and require more digital engagement than they've previously been offered. According to a 2020 Deloitte survey, 50% of asset manager respondents expect to introduce cryptocurrencies to their funds over the next three years.<sup>3</sup> However, the majority of those asset managers feel that their service providers are not meeting their expectations in terms of their digital expertise. As a result, more and more asset managers are using technology to insource certain activities.<sup>3</sup> To address their concerns, custodians will be required to offer new, innovative digital solutions.

These solutions will require, among other things, better structured data, and better access to data for clients. They will also require actionable insights that help clients make better investment decisions. By 2030, it won't be enough for asset servicers to safeguard assets and provide ancillary services with strong technology at the core. Instead, global custodians will be using AI and sophisticated algorithms to help their clients in a myriad of ways. They will be expected to provide individualised experiences at any time, anywhere, and in any way.

While the last decade brought the prevalence of Big Data, we believe the decade to come will see a change in Service on Data. By 2030, some data, for example, will be freely available and useable as a service. People will have moved beyond data lakes – the centralised repositories that store structured and unstructured data at any scale. Instead, data integration will enable live access to data at any time, and in a way that allows for integration with core internal processes. Those real-time data feeds will have significant implications for what experiences custodians can provide their clients, and at what costs.

Under current models, data is created multiple times at each asset servicing firm, for example, and systems and infrastructure have high costs. By 2030, custodians will be working more closely with one another. Data will be created once and synchronised across all firms, with shared systems and processes to reduce cost.

The custodians that support their clients best will be those that are able to generate the most actionable insight from their intelligent algorithms, not the most data. Today, institutions like Northern Trust are creating algorithms that sit on top of real-time data to create those actionable insights, using cloud technology and deploying complex AI. By 2030, this real-time intelligence and analysis will be something all clients expect as part of their asset servicer's value proposition.



**OF ASSET MANAGERS EXPECT TO INTRODUCE CRYPTO-CURRENCIES TO THEIR FUNDS OVER THE NEXT THREE YEARS**

## INVESTMENT ACCESS

Digitalisation will also impact in other ways.

Custodians are fully aware that the future will belong to digital assets – assets that are issued, exchanged and settled digitally – across all sectors, whether it is bonds, private equity, exchange-traded funds (ETFs), special purpose vehicles, precious metals, real estate, or more. By 2030, we believe, these assets will be classified and regulated, and will become part of a digital asset taxonomy. Legislators and regulators, both regionally and globally, will need to work together, and ensure that the market is meeting its compliance and operational requirements now, to bring this to bear over the next 10 years.

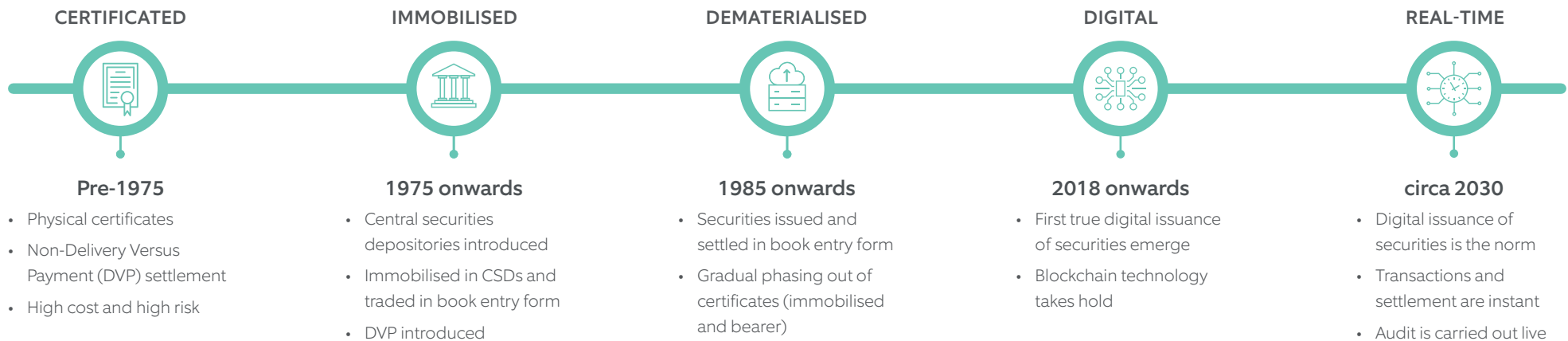
The use of digital currencies will be commonplace. We’re seeing this already as central banks and financial institutions around the world are launching initiatives designed to move us beyond simply replacing physical cash with electronic money and to instantaneous transactions. In 2030, cash management will be real-time, and a fully integrated part of all investments – this will impact credit risk management, and the overarching discipline of investment.

By 2030, asset servicers will be supporting a number of digital and cryptocurrencies, and will be continuously adding more to their service provision.

*In 2030, cash management will be real-time, and a fully integrated part of all investments.*

### WHERE ARE THEY NOW?

*The move to digital marketplaces*



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Digitalisation will have an impact across the wider value chain of the securities services industry as well. That value chain has never been static. If you had bought a stock prior to 1975, you would have held a physical share certificate for that stock, for example. However, after 1975, that actual certificate would have been immobilised in a Central Securities Depository (CSD). From 1985, securities were issued and settled in book entry form, and certificates were phased out entirely. Over the last decade, digital issuance has begun, and blockchain technology has come to the foreground.

The next evolution will see a rise of new settlement platforms, and the issuance of digital securities. Participants in the chain will evolve further. By 2030, because of technological advancements, it will be the job of global custodians to act like digital conduits for clients who require local access to markets. One thing we are clear about is that nobody is going to wake up on a Monday morning with a new-found 'digital religion'. The move from traditional electronic to digital will take time, just as it took many years, and a process, for physical share certificates to be phased out in the 1970s and 1980s.

For a certain period of time after 2030, custodians will be responsible for managing the co-existence of heritage and digital ecosystems simultaneously. Blockchain will co-exist alongside traditional CSD custody. It means custodians will have to be more adaptive, and flexible, than ever before.

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## THE DIGITALISATION OF OUR ENVIRONMENT

*The digitalisation of the financial services industry*



### INSIGHT

- Digital integration will enable live access to data and real time analysis for enhanced insight and better decision making



### CRYPTOCURRENCIES

- Interest from institutional investors significantly increases in 2018
- Increasing focus from regulators
- Significant work on AML/KYC



### DIGITALISATION OF TRADITIONAL ASSETS

- Government and corporate bonds
- Traditional listed securities/ private equity
- Funds/ETFs
- SPVs/synthetic securities
- Precious metals
- Custom structures (wealth, real estate, fine wines etc)



### DIGITAL MARKET INFRASTRUCTURES

- Blockchain custody will coexist with traditional CSD custody
- Europe sees its first new blockchain enabled digital CSD receive regulatory authorisation
- Switzerland announced the digitalisation of its market place in August 2018
- Australia's digital transformation is well under way



### DIGITAL CENTRAL BANK CURRENCIES

- Numerous central banks are currently contemplating issuing digital fiat currencies
- Move towards cashless societies

## NEW MARKET SPACES

We also believe that by 2030, the asset servicing landscape will have profoundly changed, with new market spaces and crossing platforms being developed. We are seeing the drivers for this already.

### CURRENT GLOBAL PROJECTS

#### NORTH AMERICA

- **The Depository Trust & Clearing Corporation (DTCC)** is analysing the potential of distributed ledger technology (DLT), asset digitalisation and other emerging technologies in public and private markets through two projects:
  - Project Ion seeks to optimise the settlement process in public markets.
  - Project Whitney considers opportunities to provide increased levels of digitalisation throughout the private market asset lifecycle.<sup>4</sup>
- In Canada, **Project Jasper** – a collaboration between R3, Payments Canada, the Bank of Canada, TMX group and a number of financial institutions – is looking at the feasibility of clearing and settlement of securities using DLT.

#### EMEA

- **Deutsche Börse** is working with Swisscom and Sygnum to build financial market infrastructure for digital assets.<sup>5</sup>
- **SIX Swiss Exchange** made an investment into Omniex which will provide the front end platform for its upcoming digital asset exchange SDX<sup>6</sup> which aims to provide institutional clients with trading, settlement, and custody of cryptocurrencies.
- In the UK, **Archax** became the first ever Financial Conduct Authority (FCA) regulated digital securities exchange and custodian, paving the way for digital issuances from across the world to trade on an FCA regulated secondary market.

#### APAC

- In 2018, the **Australian Stock Exchange (ASX)** announced that it would be the world's first blockchain DLT-enabled stock exchange.<sup>7</sup>
- In June, **The National Stock Exchange of Australia** revealed a joint venture project to introduce a blockchain-based clearing and settlement system.<sup>8</sup>

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Northern Trust has been spending a great deal of time focused on understanding the technology being used by all of these platforms, and on understanding the best way to connect to the platforms, and leverage the data back, as well as on giving our clients the right access to key insights. As the platforms and market spaces evolve, so will our approach.

We are also mindful that new market spaces will allow for the development of new asset classes. The digitalisation of medical intellectual property is one example. AI and robotics in healthcare are moving at pace, and key digital data is being gathered across all sectors. With the speed that data is moving, 2030 should see asset classes emerge that don't yet fully exist in the marketplace today.

Other initiatives that are only just being developed now should become commonplace by 2030, and will democratise investment access. Fractionalisation through digitalisation is one example. Last year, Northern Trust and Singapore-based BondEvalue partnered to deliver integrated asset servicing for the fractional ownership of fixed income bonds. BondEvalue's regulated platform facilitates the trading of fractionalised investable assets based on wholesale assets, with Northern Trust as its exclusive asset servicing provider.

The platform allows investors access to investments that were historically only available to larger institutions. It means that any private individual, with even just a small amount to invest, can allocate to individual wholesale assets that they currently would not have access to. By 2030, this type of service may be offered as standard by any asset servicer, and will democratise the investor landscape.

## COLLABORATE OR FALL BEHIND

Against this backdrop, custodians and service providers will need to collaborate as members of a shared digital ecosystem. We believe custodians and other industry actors will start working together on platforms, or on shared infrastructure, to leverage market positions, and to mutualise costs and create new revenue streams by partnership. We see this in the consortiums and collaborations that are already taking place. Collaboration will also mean working with a broader, more diverse, and cognitively disparate workforce.

Meanwhile, standardised processes such as corporate action events and proxy voting will become more commoditised, and less competitive over time. Instead, custodians will compete on how successfully they are able to help their clients, in terms of ease of use, timeliness, and service provision.

But no matter how advanced technology becomes, custodians and repositories will always have to demonstrate that they are a trusted and stable provider. They are, first and foremost, there to protect their clients' assets, and any evolution will need to be client-centric, with industry players putting clients at the heart of everything they do. In 2030, more time will be spent giving clients information on what they need to know, and enabling them to make decisions.

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## EMBRACING CHANGE

By 2030, custodians will also have embraced cultural change. At the moment, custody is a niche sector, operated by a group of specialists, but the skillset of today will have evolved significantly by 2030. The notion of operational expertise, skill, and fluency will be different, as will cultural imperatives. The four- or six-eye principle check of a fax instruction simply won't be relevant, for example. Instead, specialists will be fluent in all the features of technologies such as blockchain.

As time goes by, education in this area will increase, and the number of people with the right expertise will broaden. More people will become more fluent in navigating the New Normal of the custody world. Skills will increase – partly because of training, and partly because of an element of cultural sea change that will take over the industry.

As a result of this sea change, diversity will be the norm and, in 2030, custodians who only pay lip service to inclusion in the workplace will not thrive. Firms will succeed through proactive leadership, and will have built an inclusive and cognitively diverse culture, one which values people of all different backgrounds, experiences, and perspectives.



## OPERATIONAL EFFICIENCY

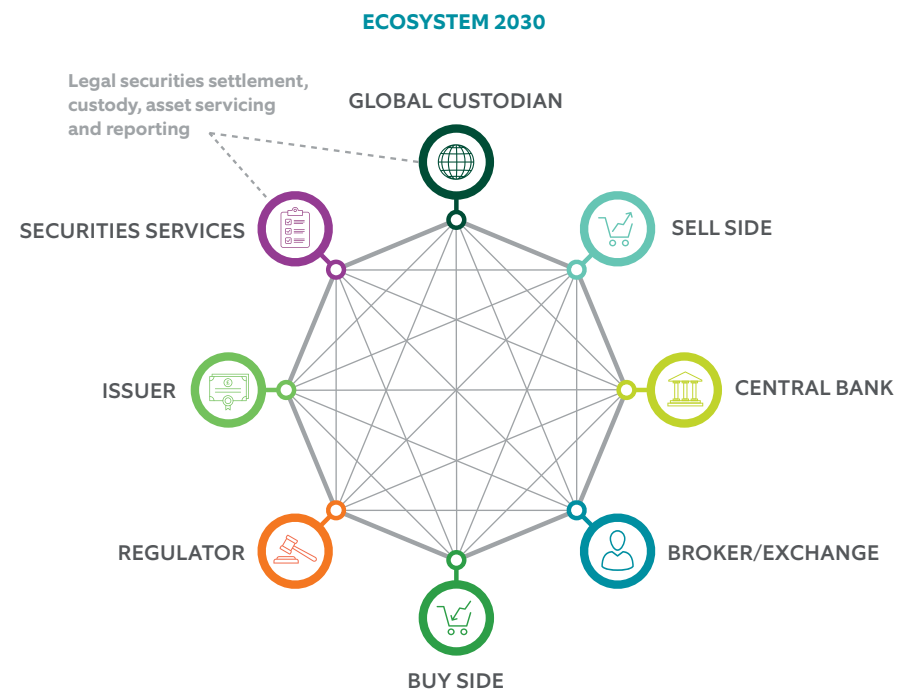
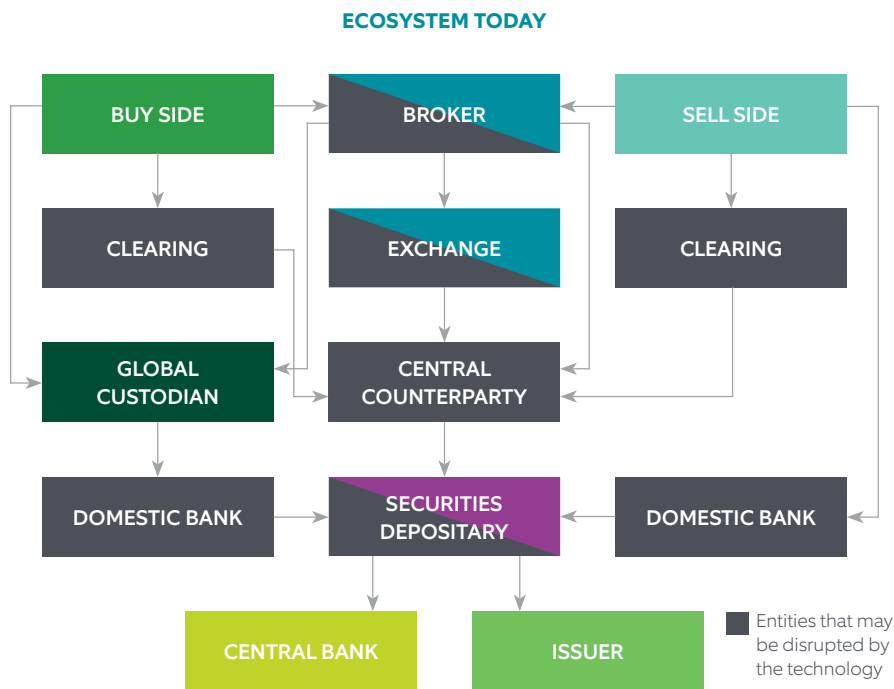
Just as many things will change, other things will remain the same. As much as asset servicers are required to be innovative and creative in their approach, they will also be required to continue to demonstrate their operational efficiency.

Today, as custodians move to a digital world, they have a multitude of underlying technical or IT fabrics to navigate. They are moving beyond just communicating via SWIFT or file transfer methods, and embracing new standards and languages. By 2030, technology will have bridged standards of the future, and integrated systems and networks.

Operational functions will become self-learning and self-functioning, with the integration of data becoming much easier. Standardisation will become routine, which is why Northern Trust is today working with regulators, governments, and market associations to build a set of standardisation and globally understood taxonomy.

### BLOCKCHAIN

*What could the new ecosystem look like?*



## REGULATION

By 2030, regulation will change as well. Today, regulators do not want to see technical standardisation only. They expect governance frameworks to be put in place as well. Like the industry itself, regulators are thinking about the implications of digitalisation for the near and long-term. Ultimately, regulators are concerned about standardisation of the operational market. They are also concerned about financial risk, cyber risk, and compliance.

In the aftermath of the global financial crisis, new regulations were introduced, some of which related to digital assets. But while custodians today have regulatory overheads and drags, many Fintechs do not. By 2030, the regulatory environment will catch up, and level the playing field. Regulators will be integrated into the new digital ecosystem as part of their own digital journey. They will be running their own AI algorithms to supervise market movements, while market participants themselves will be self-reporting through their technologies. Today, asset servicers report transactions to the regulator. By 2030, with the use of smart technology, transactions will report themselves.

There will always be reporting and auditing requirements in our industry. By 2030 custodians will have strengthened their real-time auditing via blockchain technology to make this process more efficient. Northern Trust did this for its private equity life cycle events in 2018, when it began working with PwC and other audit firms in Guernsey, and proved that auditors can now access fund data held on the private equity blockchain directly, in order to audit specific events.

This live audit capability – which flags up any breaches to parameters in real-time – makes a retrospective audit process, which can take place many months later, look archaic. We believe industry practitioners and regulators themselves will begin to adopt live auditing in the coming period. We also believe that in the future, markets will regulate themselves, based on algorithmic updates. The use of robo-auditors will make the market safer, even for complex assets, which in turn will further drive the widening of access to the market. Individuals will be allowed to access asset classes and adopt strategies that are currently only available to the most sophisticated institutional investors.

As we all progress into new, uncharted territory, there will be new regulations for asset types and products that don't exist in current frameworks. They will need to sit and operate alongside the regulation that exists for the traditional electronic world. Once again, interoperability will be key, as two ecosystems co-exist in more than one regulatory environment. Eventually, the heritage environment will recede, and the industry will be left with the digital environment only.

Recent regulations with a focus on accountability and governance have already encouraged the creation of new technologies for dramatically enhancing transparency, and by 2030, questions of tax rates and repetition of associated data may well be eliminated through the intermediary chain. Similarly, in corporate actions, regulation will have eliminated competitive differentiation from corporate event announcements and disclosures – the bar will be significantly higher and custodians will have to differentiate themselves based on their service.

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## THE BRAVE NEW DIGITAL WORLD

Faced with this brave new digital world, custodians will evolve, or they will fall by the wayside. By 2030, successful asset servicers will be the ones who have bridged the gap between traditional and digital assets, and helped their clients navigate the transition between the two. They will be offering their clients truly customisable information and insights across all of their assets, in a simple and accessible way, available any time they choose to access it. They will have learnt how to collaborate, and how to navigate a new ecosystem.

But in this period of rapid change leading up to 2030, it will be easy to get lost in the noise. Asset servicers will have to remember that, first and foremost, they will always have a duty of care to their clients, whether they are managing digital or traditional assets, or a combination of both. In an increasingly diverging marketplace, the cornerstone responsibility of the custodian is asset safety.

10 years is an incredibly long time in the custody industry – the investment landscape is in constant flux as new products, asset classes and technologies come to the fore. We've explored a base case for the new opportunities that will have developed across financial services by 2030 but, as the speed of change continues to increase, far more could happen in the next 10 years. However, we can be certain that custodians will continue to be the enablers of their clients' investment strategies, ensuring efficiency and effectiveness come what may.

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## END NOTES AND SOURCES

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