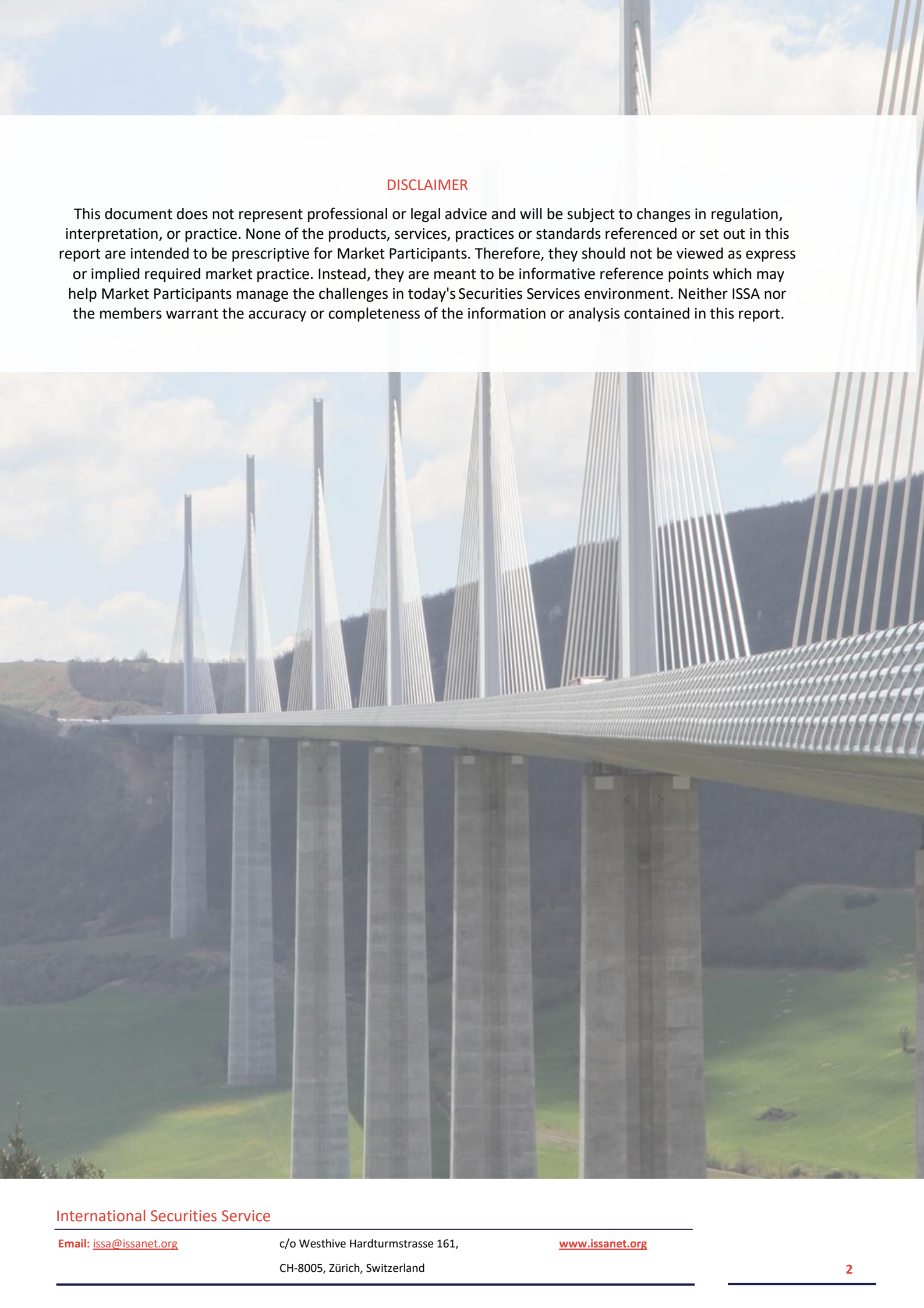

23rd ISSA Symposium

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An Account of Proceedings by Dominic Hobson

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Table of Contents

1. Keynote Presentation	4
1.1 Globalization continues but it is different	4
1.2 AI dominates the rivalry between the United States and China	5
1.3 AI will dominate domestic politics too	5
1.4 AI will impact the politics of taxation and expenditure.....	6
1.5 The value of resilience in a less stable world	6
2. Panels	7
2.1 Global Financial Crisis? Contemplating the Timing and Potential Catalysts of the Next GFC	7
2.2 Fireside Chat: Discussion with Australia’s Sovereign Wealth Fund.....	10
2.3 The Client Perspective	12
2.4 Agentic AI and Quantum Computing.....	16
2.5 Digital in Depth: Dispelling the Digital Myth	18
2.6 Rethinking Cyber Security from the Ethical Hacker.....	21
3. Breakout Sessions.....	24
3.1 Client Experience	24
3.2 Resilience, Recovery and Resolution	26
3.3 Navigating in an Uncertain World	27
3.4 AI and Agentic AI	30
3.5 Alternative Investments	31
3.6 The intersection of securities and cash	33
4. The Work of ISSA	35
4.1 The State of the Organization.....	35
4.2 Priorities for the future.....	35
4.3 Conclusion	37
5. APPENDICES – WORKING GROUPS.....	38
5.1 Accelerated Settlement.....	38
5.2 Alternative Investments	39
5.3 Asset servicing	39
5.4 Cyber.....	40
5.5 Digital Assets.....	40
5.6 Digital Identity and Onboarding	41
5.7 Domestic CSDs	42

5.8 Emerging Themes 42

5.9 Evolving Technologies and AI 43

5.10 Financial Crime Compliance 44

5.11 Investor Solutions 44



1. Keynote Presentation

This year's keynote speaker kick-started the conference with a presentation entitled: Geopolitical Uncertainty: An Economist's View of the Possible Looking Global Risks Impacting Securities Services. Contemporary geopolitics, unlike the recent past, are dynamic. The stable world order that prevailed for 70 years from 1945, led by the United States, founded on the supremacy of the United States dollar, and shaped by institutions conceived and steered by the United States, is fading away. It is unlikely to return.

Geopolitics is now competitive, multi-polar and power based. In this more fluid system, disruption is a feature, not a bug. It is such an unpredictable environment that maintaining a sound grasp of geopolitics is no longer a nice-to-have. For business, it is essential to successful navigation of the coming decades.

1.1 Globalization continues but it is different

Resilience must be the organizing principle. The Covid-19 Pandemic, and the subsequent wars in Ukraine and the Middle East, disrupted the supply chains built during the classic era of globalisation. Countries and companies are reshoring manufacturing, securing supplies of critical materials and diversifying energy sources.

This does not mean globalisation is ending. Instead, corporations must re-cast the idea of globalisation in terms of regional rather than worldwide trade flows governed by World Trade Organization (WTO) rules. Regional trade flows are less vulnerable to disruption but necessitate compliance with multiple regulatory regimes.

They require business to navigate new, and largely regional, trade corridors. China and the Association of Southeast Asian Nations (ASEAN), for example, are now major trading partners. In October 2025 they expanded the China–ASEAN Free Trade Area (CAFTA) for the second time since its inception in 2002.

By contrast, the Trump administration is raising tariffs across all countries and sectors. It is also using tariffs to achieve geopolitical effects, which adds uncertainty to cost. Tariffs are being imposed without much discrimination between friends and enemies either, which is fracturing longstanding alliances.

The most obvious fracture is the emerging political consensus within the European Union (EU) that the United States is no longer a reliable partner. Actions based on this consensus will emerge slowly. The EU response to the United States will be slow, incremental and technocratic but it will persist, and its aim is to replace reliance with resilience.

One element of American hegemony that will persist, irrespective of what the EU does,

is the role of the US dollar as the principal reserve currency. While the euro is issued by independent central bank, it lacks a single issuer of government debt, a single fiscal policy to meet interest payments on such debt, a single capital market to trade the debt and a single set of laws and regulations. So, the US dollar will retain its privileged global position, *faute de mieux*, and the euro will remain a regional counterpart only.

The currency is not the only area where the EU is not changing fast enough to be relevant. The goals of European policy – greater supply chain resilience, strategic autonomy by decoupling from the United States, and expanded trade with India and Latin America – are clear, but the EU lacks the stable, visionary political leadership and the institutional structures to fulfil them.

Instead, member-states continue to protect national champions, even in existential areas such as defence, where the absence of a coherent EU strategy is glaring. The Capital Markets Union (CMU) has made so little progress it has had to be re-branded. On artificial intelligence (AI), the EU has yet to find capital in the requisite quantities or make a choice between China and the United States.

1.2 AI dominates the rivalry between the United States and China

Yet it is a choice that must be made because, at the geopolitical level, the competition between the United States and China is the overriding fault line. This rivalry is currently at its most acute in the race to achieve supremacy in AI. The two countries are competing over the speed, size, capability and cost of AI models, to attract the talent to build them and to integrate the models with existing products and services.

Both China and the United States see leadership in any aspect of AI as a source of strategic advantage. They are right to believe that, if AI leads to a step-change in the pace of economic growth, it will confer material advantage. To secure that advantage, control of the inputs to AI – notably, semi-conductors but also access to reliable sources of energy – is essential.

In this contest, Tik Tok and Huawei and ASML and TSMC are not normal commercial enterprises but political objects. The United States is pressurising the Dutch and Taiwanese companies that control the lithography machines and microchip manufacture. China is seeking to control access to rare earth minerals. There is a shift towards data sovereignty or restricting data flows across national borders.

In China and the United States, AI is now inseparable from national security. It shapes industrial policy and market interventions, such as the use of export controls and licensing regimes to create supply chain choke points. The crucial question is whether the relationship between the two countries can be managed or must end in military confrontation.

In the past, the policy of the United States was to persuade China to run a different type of market economy. Now policy seeks no more than a constructive dialogue on non-contentious issues such as Chinese purchases of agricultural products and civilian aircraft, institutionalised via the proposed US-China Board of Trade and the US-China Board of Investment. AI will remain divisive.

1.3 AI will dominate domestic politics too

But AI is not just the principal geopolitical divide between the United States and China. It is fast becoming the central axis around which domestic politics revolves as well. AI disrupts employment by transforming coding and data entry into managerial and analytical roles to which the current skills of middle managers as well as blue-collar workers are ill-suited. Fearful, they are seeking new political homes.

In addition, the data centres needed to run AI models emit light and noise and consume large amounts of energy and water. This is creating not only Not-In-My-Backyard (NIMBY) political backlashes but consumer resistance to anticipated increases in energy and water bills. AI also raises concerns about the security of personal data and the resilience of crucial infrastructure.

Political systems are struggling to address these concerns. European countries are too cash-strapped to fund retraining programmes. In China, where a seventh of young people are out of work, policymakers are more concerned about political control than unemployment. The United States has yet to develop an overarching strategy on AI that balances innovation and political stability, adopting a *laissez-faire* approach by default.

This has exacted a price in terms of ceding leverage to China. In particular, the United States failed to recognise the Belt and Road Initiative as a Chinese strategy to monopolise critical minerals. Efforts by successive American administrations to incentivise a private sector alternative to Belt and Road faltered, because investable projects were difficult to identify.

That gap persists. Though the Development Finance Corporation (DFC) uses public money to mobilise private capital to advance American foreign policy goals, it is still hampered by a constraint - the need to find investable projects – that China does not face. The use of tariffs, and the taking of government equity stakes in Intel and defence contractors, indicate a less market-led approach is now being developed by the United States.

The restrictions place by the United States government on access to higher level AI models fit the same pattern. However, restrictions have not yet reached the stage at which AI models must be reviewed by the Federal government before release.

Nor is the Federal government likely to follow the EU and regulate AI directly. State legislatures will likely pioneer regulation of AI, as they did with data privacy. This will force companies to match the highest standard, to avoid having to comply separately with multiple AI regulations at the State level.

1.4 AI will impact the politics of taxation and expenditure

Within 18-24 months the effects of AI will dominate politics. Big technology companies will be under intense political scrutiny. In the United States, the 2028 presidential election will be won by the candidate who can articulate a vision of a society capable of accommodating both the productivity enhancements and higher growth of an AI economy with its socially destabilising potential to destroy jobs and - by extension - taxes.

If AI has the catastrophic effects on employment that some analysts predict, it will also undermine the tax base. In the United States, direct taxes on labour account for 85 per cent of total tax revenues. A debate about how to tax AI robots, either temporarily or permanently, without discouraging investment in AI, is as yet unresolved.

Erosion of the tax base will coincide with record fiscal deficits in the United States and Europe. The obvious solution is to grow the economy. However, that is challenging when interest costs alone exceed many departmental budgets, and governments must increase expenditure on defence and energy subsidies without cutting welfare spending. Ultimately, the bond markets will determine when the debt ceiling is hit.

1.5 The value of resilience in a less stable world

In generating these effects, the economic impact of AI is only accelerating fundamental political changes already in train because of technological change. Globally, resilience in the face of the disruptive power of AI is already the shaping principle of geopolitics. AI is, as the evidence suggests, at the heart of the geopolitical competition between China and the United States. As a result, geopolitical risk is no longer episodic. It is structural.

Which means geopolitical success can no longer be measured by reductions in jurisdictional fragmentation or the harmonisation of laws and regulations. Instead, success means managing fragmentation and disharmony. Business must think differently about risk, because there is no chance of return to the status quo ante. Competitive advantage is to be found in developing the resilience – in the sense of the ability to adapt to shocks and stress – necessary to survive in an unstable global environment.

2. Panels



There were multiple panels covering the key trends impacting the Securities Services industry. These included:

- Global Financial Crisis? Contemplating the Timing and Potential Catalysts of the Next GFC
- A discussion with Australia's Sovereign Wealth Fund
- The Client Perspective
- A discussion on digital assets and what is real
- Agentic AI and Quantum Computing
- Cyber hacking and cyber security

2.1 Global Financial Crisis? Contemplating the Timing and Potential Catalysts of the Next GFC

Financial crises often originate from the expansion of credit. Today, global public debt stands at a record high of more than USD 100 trillion. At 93 per cent of global Gross Domestic Product (GDP), it is climbing towards matching global income. Total non-financial private debt is currently worth more than USD 150 trillion, and assets under management by private credit funds add another USD 3 trillion.

Debt boosts equity returns. The S&P 500 index is currently trading at record highs of more than 7,500. The trailing price to earnings ratio of S&P 500 stocks is more than thirty, well above the historical average of twenty. The entire S&P 500 index is weighted towards a relatively small class of digital technology and communications companies which, to maintain their position in the race to artificial intelligence (AI), are investing much more than they are earning. The stock and debt markets are too intertwined to isolate a crisis

Sovereign debt issuance is testing the appetite of the bond markets at current yields and equity prices fail to reflect the geopolitical and other risks in the global economy. Either could collapse quickly with a single event leading to contagion. For example, the private credit market, already under strain, could prompt a correction in the public debt market. Likewise, if the Claude Mythos AI model developed by Anthropic was used by bad actors to mount cyber-attacks, it could sink the equity market.

However, the question of what will trigger a sell-off - or whether the debt market or the stock market will crack first - are not interesting. The debt and stock markets are inter-connected, so a problem in one is bound to spread to the other. The crucial consideration is whether a market correction turns into a full-blown financial crisis. Such a crisis feels overdue. 19 years have passed since the last one began in August 2007.

2.1.1 Private debt is more unstable than public debt

Yet the long passage of time since the Great Financial Crisis of 2007-09 suggests the re-regulation of banks in the wake of that catastrophe has proved effective. Banks are not the potential problem now. The worrying issue is sovereign debt. In 2007 the deficit of the United States federal government was USD 0.16 trillion and the debt outstanding USD 9 trillion. In 2025 the deficit was USD 1.78 trillion and the debt outstanding USD 37.6 trillion.¹

The total public debt of the Federal government is now equivalent to 123 per cent of GDP.² With private debt equivalent to 140 per cent of GDP, total public and private debt in the United States is heading towards three hundred per cent of GDP. This is tolerable when interest rates are at or close to zero, but both Treasury and mortgage rates are rising.

There is a lag before the effects are felt because of term funding, and because short rates remain relatively low. Indeed, governments are currently skewing their borrowing to the shorter end of the yield curve. This is making them less reliant on buy-and-hold institutional investors and more reliant on buyers such as hedge funds, which purchase government debt largely to acquire collateral for leveraged trades.

Long term refinancings by corporations and households, by contrast, are now happening at higher rates. So the current balance is fragile. Any loss of trust in sovereign credits is bound to have contagious effects, especially in countries whose sovereign borrowing relies on foreign investors, such as the United States and the United Kingdom.

Ultimately, it is not sustainable to grow debt faster than the economy. The sharp fall in bond prices, following the mini-Budget in the United Kingdom in September 2022, shows how quickly a decline in confidence can translate into a crisis. A failed government bond auction, or an unsuccessful recapitalisation by a major digital technology or communications company, could act as a similar transmission mechanism.

A collapse in private lending seems more probable because central banks have well-established tools to steady the government bond markets and maintain the public finances. History shows that new technologies, such as AI, inflate asset price bubbles and what deflates a bubble is a rise in interest rates. A supply shock, such as the rise in energy prices after the United States attacked Iran on 28 February, increases prices. Central banks are already raising interest rates to combat the consequent inflation.

2.1.2 Private credit is unlikely to trigger a crisis but might accelerate one

Rising interest rates are of course the chief transmission mechanism of monetary policy, intended to ripple through the entire financial system. Which raises the question of where the effects of rising interest rates will become visible first. The private credit markets, which have grown at a compound annual rate of 12 per cent to USD 3.5 trillion in loans outstanding over the last five years³, are one candidate.

Rising defaults, restructurings and redemption restrictions indicate the private credit markets are under stress. Fitch reports the private credit default rate rose from 8.1 per cent in 2024 to 9.2 per cent in 2026, which is twice the rate for syndicated bank loans, and three times the rate for high yield bonds.⁴ There is concern that limited disclosure conceals the true scale of leverage in private credit markets.

The likeliest vector of transmission from private to public markets is the insurance sector. Insurance companies have become major investors in private credit because it offers higher yields and matches life insurance liabilities. They are likely to have invested in some assets on the strength of credit ratings that prove misleading.

¹ <https://fiscaldata.treasury.gov/>

² <https://fred.stlouisfed.org/series/GFDEGDQ188S>

³ <https://www.aima.org/compass/insights/private-credit/financing-the-economy-2025.html>

⁴ <https://www.fitchratings.com/research/corporate-finance/6336fcc7-8612-4276-98e2-f7b826c87ab3-06-03-2026>

A meltdown in private credit markets could affect the Securities Services industry. Custodian banks support private credit mutual funds, which are usually structured as low liquidity “interval” funds. The Trump administration has also liberalised investment criteria to permit 401(k) defined contribution pension plans to invest in private credit. Custodian banks safekeep the assets of 401(k) funds.

In addition, the infrastructure that underpins private credit is less robust and more manual than its public market equivalent. This has created an opportunity to tokenized private credit instruments on blockchains, allowing manual post-trade processes to be replaced by smart contracts, and transactions and holdings to be recorded on immutable shared ledgers. This has facilitated distribution to retail investors.

However, even at USD 3.5 trillion in loans outstanding, the private credit markets are not large. They are half the size of the high yield bond markets, and perhaps one fortieth the size of the global bond markets. So private credit lacks the scale to be the source of a major financial crisis, as opposed to an accelerator of one. The role of private credit will be to deepen a crisis precipitated by other factors.

2.1.3 Collateralized financing is a possible trigger point

One such factor might be the collateralised financing markets. After all, the repo market provided the earliest warning sign of the crisis in 2007-08 because the investment banks and their hedge fund clients relied on it for daily funding.

That is why conditions in the repo market – measured by criteria such as acceptable collateral types and haircuts – were the first indicator analysed by one major financial institution on 2 April 2025, when President Trump announced sweeping tariffs on imports to the United States. That day, both the equity and the bond markets fell. Because government bonds on bank balance sheets are zero-rated for capital purposes, falling bond prices constitute a hidden risk. Highly leveraged basis trades amplified the risks. So, the tariff announcement could have triggered a financial crisis – a concern which led the administration to suspend the tariff increases on 9 April 2025 for 90 days.

Yet throughout that first week haircuts remained steady, the repo market continued to fund banks, trades settled and the market infrastructures worked as expected. Had the stress persisted though, it might have led to increased margin calls, creating a need to sell assets to obtain the cash liquidity to meet margin calls.

At that point, there would be a risk that a liquidity crisis would become a solvency crisis. Ironically, mandatory clearing of US Treasuries – which starts in December 2026 for cash transactions and June 2027 for repos – might increase the risk of a liquidity crisis developing into a solvency crisis by amplifying the margin call problem.

The best antidote to this risk is to expand the number and range of banks that have access to central bank financing as well as commercial bank funding. The number of banks that have access to central bank money in a crisis has not changed much since the Great Financial Crisis of 2007-09. However, the risk of a crisis developing has increased significantly because of the inflated volume of debt in the system.

2.1.4 Cyber-threats accelerated by AI could trigger a crisis

Lastly, there is a third, and somewhat novel, factor that could trigger a financial crisis. This is AI. Although AI can help financial markets strengthen their defences against cyber-attacks, it can also help bad actors attack financial institutions more effectively.

Three International Monetary Fund (IMF) analysts warned in a recent blog that AI could facilitate and accelerate cyber-attacks that trigger exactly the sort of funding difficulties that develop into a solvency crisis.⁵ The blog was prompted by the release by Anthropic of Claude Mythos, an AI model that can identify and exploit vulnerabilities in computer systems faster than they can be patched. Bank of England Governor Andrew Bailey, who also chairs the Financial Stability Board (FSB) of the Group of 20 (G20), has warned “Anthropic may have found a way to crack the whole cyber risk world open.”

One Anthropic executive said his review of Mythos created more security issues than he had previously encountered in his entire career. Mythos can write code and be used by non-experts. While large banks are likely to gain access to Mythos, smaller banks may not get access to information about the role of AI in accelerating and elaborating cyber-attacks. Information-sharing and stress testing are more important than ever.

Cyber-crime is a threat that financial institutions can mitigate but not control. What they must do is minimise their points of vulnerability. Useful steps include working with Cloud providers that maintain strong defences against cyber-attacks and reducing the number of applications deployed. AI can also strengthen as well as weaken cyber-defences. Mythos, for example, can be used to scan systems for vulnerabilities.

However, banks are also users of financial market infrastructures such as central counterparty clearing houses (CCPs), central securities depositories (CSDs), payments clearing houses and the Real-Time Gross Settlement systems (RTGSs) operated by central banks. If a cyber-attack disabled payments systems it would put the deposit funding of banks at risk by accelerating bank runs, turning a liquidity crisis into a solvency crisis.

Yet the easiest point of entry for cyber-attackers is not due to unpatched software vulnerabilities. Both the National Cyber Security Centre (NCSC) in the United Kingdom and the Cyber and Infrastructure Security Agency (CISA) in the United States have warned that 90-95 per cent of data breaches and successful cyberattacks involve some form of human interaction. Educating and training employees remains vital to effective cyber-defence.

2.1.5 Collaboration in non-competitive areas can improve crisis management

It is a cliché to say that any system is only as strong as its weakest link. But this is undeniably true of a financial system as closely inter-connected as modern financial markets. A crisis could be triggered by a loss in any of several markets – debt, equity, funds, banking, insurance, technology or Cloud services – that inhabit legal and operational silos but are, nevertheless, densely intertwined.

So it is sensible for banks, asset managers, insurers, brokers, technology vendors and financial market infrastructures to collaborate in areas where they do not compete. Non-competitive fields obviously include cyber-security. But they also encompass consideration and analysis of how risks are inter-connected and how they might combine in unexpected ways to precipitate a global financial crisis.

2.2 Fireside Chat: Discussion with Australia’s Sovereign Wealth Fund

The Future Fund is the Sovereign Wealth Fund (SWF) of the Commonwealth of Australia. The fund was established in 2006, with initial contributions from Budget surpluses and two slices of the proceeds of the privatisation of the Telstra telecommunications company.

⁵ <https://www.imf.org/en/blogs/articles/2026/05/07/financial-stability-risks-mount-as-artificial-intelligence-fuels-cyberattacks>

2.2.1 The origins and purpose of the Future Fund

The Future Fund was the brainchild of Peter Costello, Federal Treasurer between 1996 and 2007, who managed to achieve budget surpluses in ten of the twelve budgets he delivered. Its first CEO was his namesake, Paul Costello, who had launched the New Zealand Superannuation Fund in 2003.

Appointed in 2006, Paul Costello imbued the Future Fund with the strong sense of purpose that it retains today. Although it was envisaged at the outset that the fund would cover anticipated shortfalls in civil service pensions, it was always intended to be an inter-generational Sovereign Wealth Fund and never a superannuation fund.

The purpose of the fund is to encourage the Australian government to save today to meet the costs of future generations. It means the management of the fund is governed by the goal of delivering financial stability for future generations. As a result, its focus is always on investing, not on purchasing asset management or asset servicing products.

2.2.2 The obligation to outsource

The Future Fund Act of 2006, that established the fund, prescribes that both the asset management and the asset servicing functions must be outsourced. Paul Costello thought this meant the fund could be run with a staff of no more than thirty people. It implied a clear division of labour between what was done in-house and what was outsourced.

A further implication was that the Future Fund needed to recruit managers with sufficient technical expertise and experience to supervise the work that is outsourced, so it is done effectively. It forced the initial leadership to think about how the insourced and outsourced functions could best be joined up to create a single operating system.

2.2.3 The ingredients of long-term outsourcing relationships

At their first offsite, the senior management agreed to abandon the longstanding distinction between the Front Office, the Middle Office and the Back Office in favour of managing the investment lifecycle as a single process. This decision had profound implications for the choice of outsourcing partners.

First, it required service providers to abandon their own siloes. Secondly, it dictated that the Future Fund must work with no more than a handful of long-term strategic partners that could work with the Fund effectively to realise its strategic vision. After all, outsourced relationships can easily stray, leading over time to strategic misalignment.

Thirdly, it required the Future Fund to share the risk of failure with its service providers. It is tempting for funds to outsource all the risks as well as certain functionalities, but long-term relationships cannot be built if they make so many demands of a service provider that the relationship becomes unprofitable and they cease to invest in it.

2.2.4 The crucial importance of data integration

Once long-term partners were chosen, operationalising the integration of Front-, Middle- and Back-office functions was primarily a data management challenge. The Future Fund had to combine public and private data streams into information useable by its decision-makers. An initial search for a data service provider was fruitless, but the task is now fulfilled by a second custodian bank.

Structuring and integrating external and internal data has enabled the Future Fund to adopt artificial intelligence (AI) applications quickly. In line with managing the investment lifecycle as a single system, AI is used primarily to investigate and test the impact of investment propositions from the beginning to the end of the investment lifecycle.

However, in adopting AI the Future Fund is mindful also of its founding purpose. The organization insists that AI is adopted in ways that instil trust, especially among employees. This means AI applications must operate not just within guardrails, but traverse siloes, abhor hierarchy and become parts of an end-to-end system.

2.2.5 Growth in AuM demands data integration

The growth of the fund has made data integration, analysis and presentation even more important. An organization, whose first CEO expected to run it with no more than thirty people, now employs 350. Information exchanges between the investment team and the operations team have become more complicated and extended.

The assets under management have also grown. Initially, it was expected that the assets of the fund would become available for distribution from 2020. In practice, the life of the fund has been extended twice, first to 2027 and then to 2033. These extensions have prompted a change in the character of the fund from being relatively short term to relatively longer term.

This has required adjustments to the investment portfolio. Further adjustments were occasioned by the decision of the Australian government to make the Future Fund responsible for managing six additional funds: the Medical Research Future Fund, the Future Drought Fund, the Disaster Ready Fund, the Disability Care Australia Fund, the Housing Australia Future Fund and the Aboriginal and Torres Strait Islander Land and Sea Future Fund.

Each of these six funds is governed by a different investment mandate and investing profile. Taking them on forced the Future Fund management to develop fund pooling and unitisation capabilities and to use Total Return Swaps to enable the new portfolios to leverage the scale of the original fund. The changes have increased operational complexity.

2.2.6 Culture trumps commerce

The management of the Future Fund believe they have overcome the challenges of growth and complexity because they do not judge outsourcing solely by the quality of the services provided. They also believe that outsourcing relationships must be “governed” by the purpose of the Future Fund: investing for future generations.

In practical terms, this means looking beyond purely commercial considerations. It entails engaging with every interest in the asset management and Securities Services industries – consultants and regulators as well as asset managers and custodians -and sharing experience, learnings and ideas with them.

Internally, especially as the life of the Future Fund is being extended, governance has meant embedding the corporate culture. An academy is now in place for Future Fund staff, not to impart technical knowledge but to share the culture of the organization. The academy ensures that, as longstanding employees retire or leave the Future Fund, their successors inherit an unchanged culture.

2.3 The Client Perspective

This panel drew on the results of a survey questionnaire distributed to ISSA members in which they were asked to identify where their clients were under most pressure in post-trade services, what service improvements clients were demanding, where client expectations were being disappointed and what clients value most about their services.

2.3.1 Cryptocurrencies and digital assets are increasing complexity and fragmentation

Though the asset management industry is under margin pressure, chiefly because of the shift towards passive investing, Securities Services firms believe a larger source of concern on the buy-side is the growing operational complexity and fragmentation in post-trade areas such as clearing, settlement and custody (see Chart 1).

This reflects two main factors. The first is rising interest in investing in cryptocurrencies and mounting concern that traditional securities will be supplemented if not supplanted by long-term digital or tokenized assets. This presents asset managers with the prospect of having to accommodate two separate trade and post-trade infrastructures.

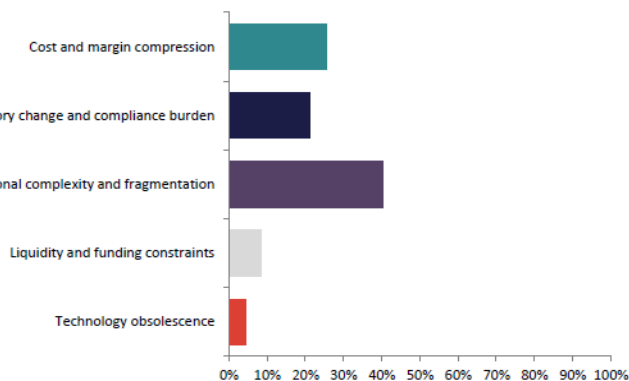
Institutional asset managers observe that retail investors active in the cryptocurrency and Stablecoin markets are already grappling with dozens of payments service providers (PSPs), cryptocurrency exchanges, digital wallets, blockchain protocols and client authentication applications. “From a client perspective,” said a panellist, “it’s a disaster.”

That said, large and liquid security tokenized markets remain a distant prospect. Numerous and successful proofs of concept and pilot tests in equity and debt have yet to produce a scalable use-case, or even a use-case with demonstrable advantages over traditional securities. Until the digital assets industry can achieve scale, action can be postponed.

The Client Perspective – Survey Results

Question 1:

What is the most significant pressure your clients are facing in today's post-trade environment?



2.3.2 Privately managed assets are highlighting service gaps and extra costs

The second factor increasing operational complexity and fragmentation may prove more influential. This is the changing behaviour of underlying investors. Investors are now more intentional, emphasising returns over time to meet liabilities instead of measuring performance against a benchmark. This has complicated investment mandates, through increased use of alternative investments, and especially privately managed assets.

As a result, there is concern about a growing mismatch between the operational needs of the buy-side and the operational capabilities of the Securities Services industry. Custodian banks and central securities depositories (CSDs) tend to be organized by asset class rather than client needs. This is illustrated vividly by the decision at many custodians to treat cryptocurrencies and digital assets as yet another asset class.

The mismatch is becoming acute as institutional investors have expanded their holdings of privately managed assets. Service providers are struggling to produce solutions that can accommodate on behalf of a single client real estate holdings that pay rent monthly, private credit advances that pay interest annually and private equity investments that are subject to periodic capital calls.

At present, the buy-side is solving the problem by appointing different providers for each privately managed asset class. This is expensive. One investment fund holds 30-40 per cent of its assets under management in private assets but pays eight times more to safekeep and service them than it does for public assets.

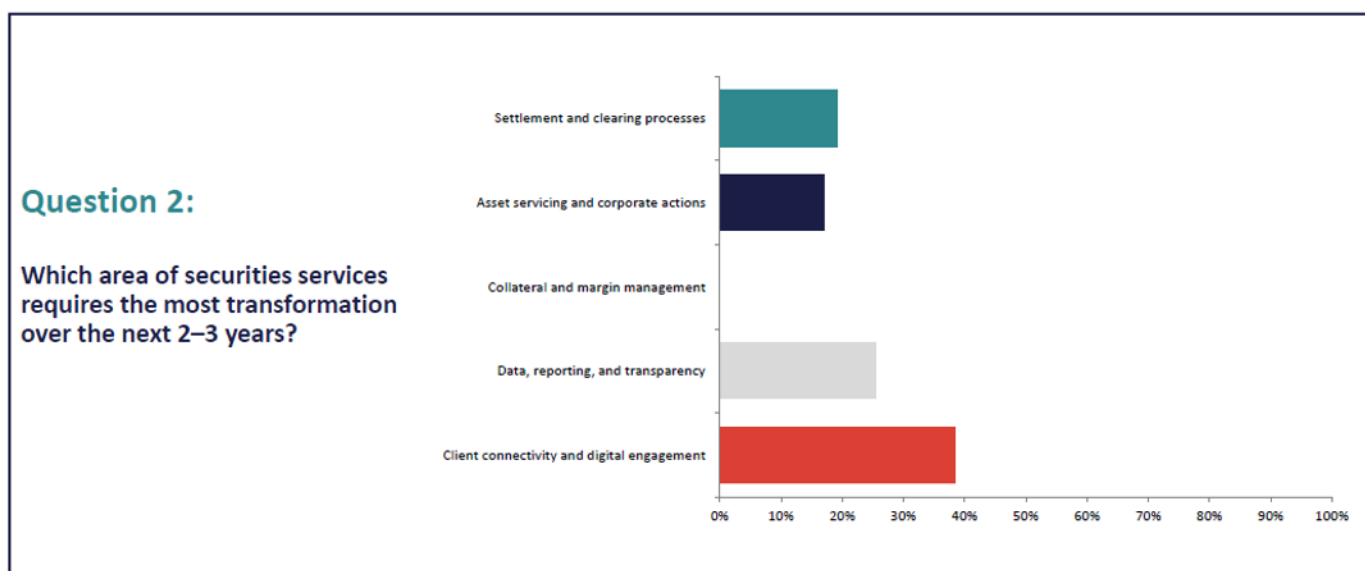
This reflects the lack of standards and common market infrastructure in privately managed asset markets, creating a reliance on physical documents and unstructured data. Securities Services firms could reduce this cost by improving their data capture, processing and consolidation capabilities. "But there needs to be business value on both sides," said a panellist. "I do not want to pay a custodian ten basis points to store a physical certificate."

Artificial intelligence (AI) is an obvious solution to the dilemma of combining better data management with lower costs. Early experiments in the field are encouraging but incomplete, with 90 per cent accuracy being achieved. “We cannot have custodians saying they are certain only about where 90 per cent of our assets are,” said a panellist. “But technology will get us there.”

Ironically, another technology that might help is tokenization. This could improve the efficiency with which privately managed assets are issued and serviced and provide exits and price discovery through the development of secondary markets. But unless tokenized assets are integrated with traditional securities, the risk of parallel market infrastructures will persist.

2.3.3 Why Collateral and Margin Management is not a Source of Anxiety

On this point, the fact that tokenization is progressing fastest where traditional securities are weakest might be seen as discouraging. If assets are being tokenized because they can then be traded 24/7, it increases rather than decreases the risk of fragmentation. On the other hand, the fact that tokenization can overcome problems that are insoluble by traditional means can be seen as encouraging.



It helps to explain, for example, why no survey respondent named collateral and margin management as a service in need of radical overhaul (see Chart 2): blockchain is solving the problem already. For example, Distributed Ledger Repo (DLR), the blockchain-enabled repo processing platform operated by Broadridge, settled a total volume of USD 8 billion in transactions in April 2026.

In the United States, using blockchain to secure overnight collateralised financing is an everyday topic of conversation between banks, investment banks, asset managers and financial market infrastructures. The lack of interest in the subject among survey participants is nevertheless a surprising finding.

For asset managers, excess holdings of cash that could be deployed in the repo market or having to sell an asset at an inopportune time to raise cash to meet a margin call both erode returns. They value full, real-time visibility into cash and collateral holdings and margin calls, and do not believe the Securities Services industry is delivering it yet.

In addition, the switch to a T+1 securities settlement cycle – in place in North America since 28 May 2024 and scheduled to start in Europe on 11 October 2027 – increases the value of efficient cash and collateral management, especially for participants based in Asia, and for others outside normal trading hours, when pre-funding is hard to access.

One possibility is that the ability to post eligible collateral, liquidate assets to raise cash, or upgrade assets to obtain eligible collateral, is subsumed in other survey options: data reporting and transparency, settlement and clearing and the most popular choice, client connectivity and digital engagement.

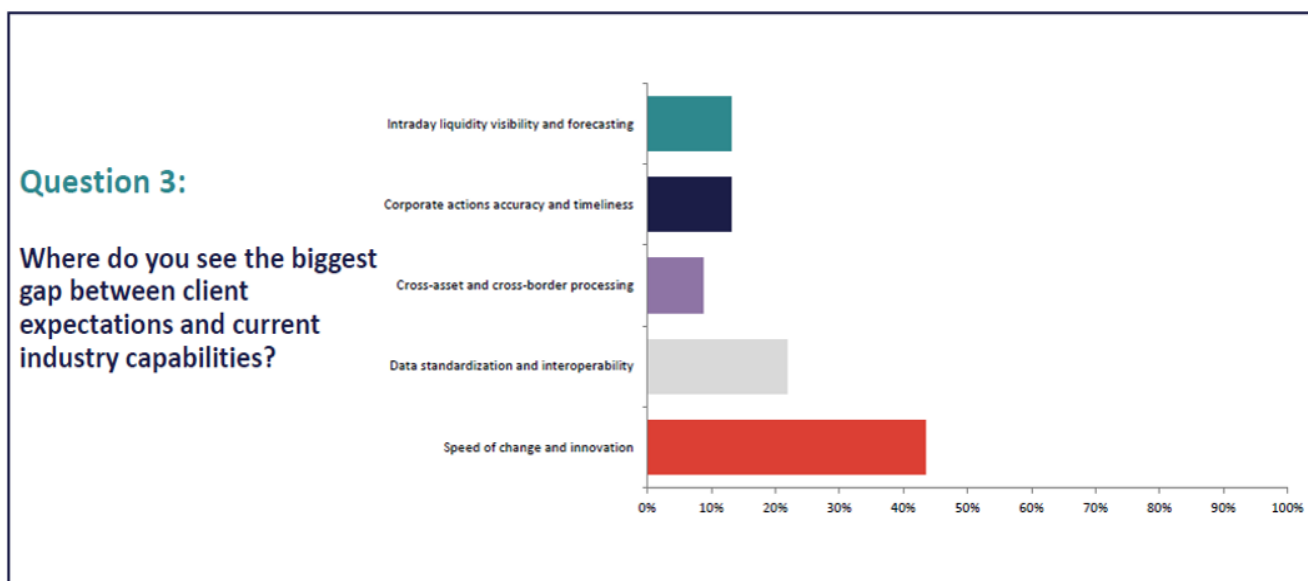
2.3.4 What effective industry collaboration could achieve

That said, there is a conviction on the buy-side, as well as among survey participants (see Chart 2), that the Securities Services industry could do better in communicating and engaging with clients. “Why don’t custodians talk to me?”, asked a panellist. “Client connectivity is poor. If you are just building a sales line for an RFP, forget about it.”

The buy- and sell-sides of the Securities Services industry also agree that better communication, closer collaboration and increased cooperation could address another problem: the glacial pace at which the industry changes and innovates (see Chart 3). “The industry moves slowly,” said a panellist. “It takes four to five years to do anything.”

Some issues never improve, despite the lack of competitive advantage in leaving them unresolved. The lack of a “golden source” of reference data for financial instruments and market participants was cited as one example. Corporate actions announcements were named as another.

In Securities Services, meaningful change and innovation seem reliant on regulatory impetus only. Yet issues such as data management for settlement and corporate actions, and integrating digital and traditional assets, would benefit from voluntary industry collaboration and compromise rather than purely commercial solutions.



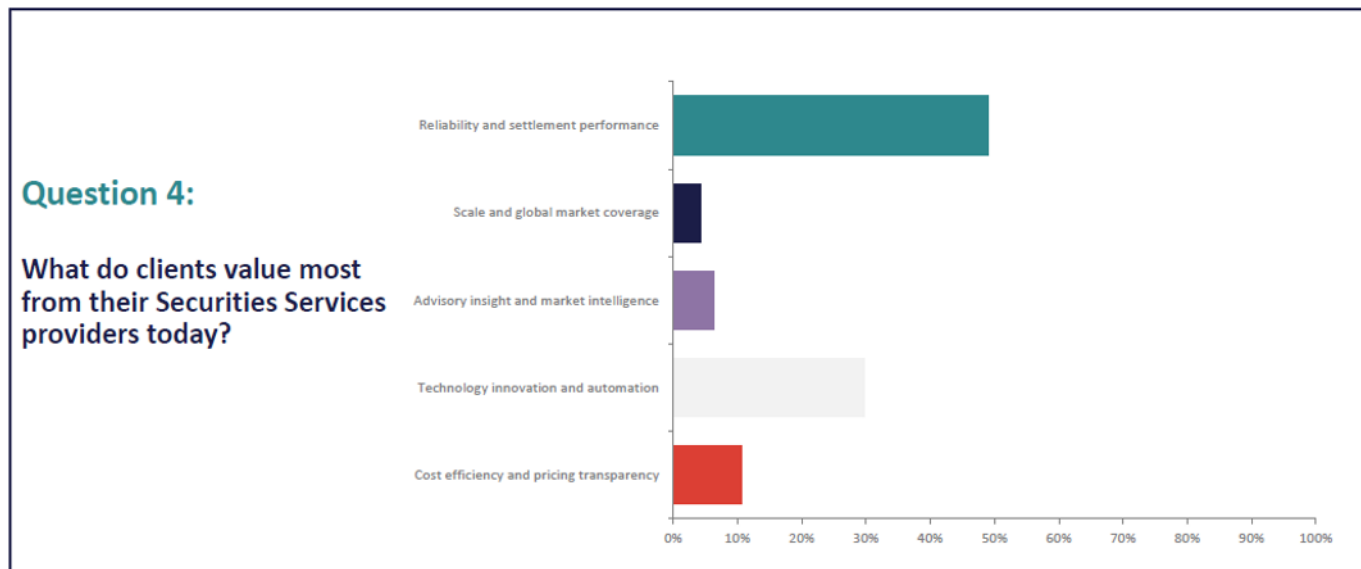
Securing a budget for investment in long-term, industry-wide solutions is difficult for commercial entities. But up-front costs such as adapting to a T+1 settlement timetable, or building digital assets capabilities, can be re-framed as opportunities that deliver returns in lower pre-funding costs or higher transaction volumes.

2.3.5 Core services are essential but cost-free growth is a differentiator

Contrary to popular perceptions, asset managers are open to such collaboration. They see custodian banks as partners rather than product providers. This is especially evident at the local market level, where custodians have a lot of local influence and knowledge they can deploy with regulators and government agencies charged with attracting foreign capital. But what asset managers really want from custodians is their assets to be kept safe, their trades settled and their entitlements collected (see Chart 4).

“A custodian’s main purpose is to keep our assets safe - especially against cyber threats, and maybe quantum computing threats - and service them,” said a panellist. “On top of that, you can sell securities lending and cash management. But you must get the core services right first.”

Reliable settlement and asset safety are the necessary requirements to offer Securities Services at all. But they are not differentiators. What differentiates one provider from another is how the provider helps buy-side clients achieve scale, especially across national borders, by using technology to ensure costs do not increase in tandem with size.



2.4 Agentic AI and Quantum Computing

ChatGPT 3.5, launched in November 2022, introduced the public to the concept of artificial intelligence (AI) machines – in the shape of large language models (LLMs) – that were able to talk and appeared to be able to think. LLMs have since developed the capacity to use data and tools to act autonomously, initiating a boom in the use of so-called “agentic AI” across multiple industries, including finance.

Agentic AI systems set tasks and pursue goals independently, make their own decisions in real-time as information changes, learn and improve from every interaction and work harmoniously with humans. Indeed, younger people working in finance are building relationships with AI agents and starting to trust them with their daily work. These developments are likely to accelerate and embed themselves as agentic AI improves.

2.4.1 Is agentic AI destroying jobs in Securities Services?

Agentic AI has resurrected long-held fears that technology will destroy jobs. Such fears appear rational. One Securities Services unit found the use of Gemini AI to find and analyse information generated a 22 per cent productivity improvement. Work that took an experienced research analyst five hours was completed by Gemini AI in eight minutes. As a result, retiring analysts are not being replaced and graduates are not being hired.

Anthropic, developer of the Claude AI model, has showcased AI agents in the form of functional “personalities” employed in the financial markets, such as an asset manager or a customer on-boarding adviser, to prove that agentic AI can fill existing roles. However, Anthropic also concede that the agents fail to complete tasks accurately a third of the time.

Experience suggests that success rates for completing tasks will improve., which means jobs in finance are likely to be displaced. Potentially affected roles include established white-collar professions such as software engineers and legal and financial professionals. However, labour market data suggests that entry-level roles are most at risk.

This threat first materialised in 2021 during the global Pandemic and before ChatGPT 3.5 was launched. The Pandemic taught finance firms how to run skeleton teams using technology, so AI is a vehicle of change rather than a cause of it. The transformation in the employment prospects of graduates planning to make a career in finance is structural, which poses the question of how they should respond to the changed environment.

One step is to recognise that agentic AI is likely to reward top performers. Studies show that, if AI tools are given to top performers, their performance soars. If the same tools are given to average performers, there is no change. The explanation is that top performers can discriminate. In other words, the individuals best equipped to thrive in a workplace transformed by AI will be able to choose, exercise judgment and think critically. Counter-intuitively, the human ability to analyse, discriminate and communicate is more important than a grasp of technology. Young people should nurse these capabilities rather than technology skills.

2.4.2 Does AI favour monopsonies in financial markets?

In addition to the fear of job losses, there is growing concern among policymakers that agentic AI will favour large financial institutions over smaller ones. A monopsonistic market might develop, in which only the biggest banks can afford to invest in the AI capabilities needed to compete and in the defences needed to combat AI-assisted cyber-attacks.

To avoid this outcome, policymakers are looking to place responsibility for cyber-security on to vendors with AI functionality so they - rather than their customers - bear the costs of patching vulnerabilities. Smaller financial institutions should also form consortiums, not just to buy AI capabilities and security collectively but to share data and information.

A concentration of suppliers is certainly a risk in AI. Cyber-attacks could cascade through the securities industry because of its reliance on a handful of models or even a single model and a small number of Cloud suppliers. The need for new versions of AI models to be backwards-compatible increases this risk. The Cloudflare outages in November 2025 and February 2026 led to extended down-times.

2.4.3 Is Europe being left behind in the race to develop and deploy AI?

A similar concern is that vendors in a particular jurisdiction will capture a disproportionately large share of the market, leaving nothing for others. The likeliest candidates for the emergence of this kind of producer or product are China and the United States, where the current scale of investment is premised on the idea that AI is a winner-takes-all market.

European policymakers are certainly concerned about this threat. They are dismayed that no European country has yet obtained access to Claude Mythos, despite its ability to facilitate cyber-attacks. The United States Department of Defense has made it clear that it regards Mythos as a weapon. This has fuelled concern in Europe that the most critical, productivity-enhancing technology of the next century is not controlled from Europe.

As a result, European policymakers have encouraged the idea of developing a “sovereign AI” independent of their American and Chinese counterparts. Yet the continent lacks large technology companies altogether. It has no sizeable corporate competitor in AI markets and is devoid even of a European-owned owned and controlled hyperscaler capable of building the data centres that provide the computational power to process the data that fuels LLMs.

These gaps are not intrinsic to European business. Start-ups, such as Spotify, prove that European entrepreneurs can start and scale technology businesses. (even if they are eventually obliged to move to the United States to recruit the capital they need to continue to grow).

The principal barrier is jurisdictional fragmentation. Europe is not a single country, or even a single market, but is instead a collection of separate legislative and regulatory environments with limited interoperability between them. Decision-making at the continental scale, even within the European Union (EU), is both slow and consensual, leading to compromises that retard progress in a field as fast-moving as AI.

The EU appeared to have chosen to become the masters of AI regulation, with the passage of the Artificial Intelligence Act in 2024. However, the heaviest restrictions on high-risk uses of AI are now being postponed, chiefly to avoid European technology companies becoming uncompetitive in the field.

Unfortunately, the development of European competitors to Anthropic, OpenAI and NVIDIA is improbable. The capital expenditure necessary to compete is immense. Alphabet, for example, is expecting to spend up to USD 200 billion in capital expenditures in 2026, most of it on AI. A fully European LLM would cost at least USD 44 billion, even if it went well.

Unlike the Gulf states, Europe also lacks cheap energy. Hyperscale's find it quicker and cheaper to build and operate data centres outside Europe, because many European governments are hostile to low-cost nuclear energy as well as fossil fuels. That said, hostility to dirtier sources of energy has given Europe a competitive edge in nuclear fusion technology, if it ever works commercially.

Another area where Europe might have a competitive edge is quantum computing. In theory, quantum computing can drastically reduce energy costs by training AI models faster, enabling them to consume less computational power and therefore less energy. However, AI firms have not yet worked out how to integrate quantum data centres into their computational infrastructures.

2.4.4 Is AI an investment Bubble?

Quantum computing will of course require further capital investment. Public and private investment is already measured in tens of billions of dollars, and it has yet to produce a commercially viable quantum computer. So the capital cost of quantum computing could turn out to be another barrier to entry to AI for European firms.

On the other hand, the high capital expenditure on AI in the United States might be a symptom of a market bubble. Concern is reinforced by the circular nature of the investment flows. Hardware manufacturers, for example, are investing in the hyperscalers, Cloud providers and AI start-ups that purchase hardware from them. Yet sales of AI services indicate the industry has still not developed a commercially viable model.

The counterargument is that journalism has a natural bias to negativity and that AI is proving itself in multiple fields, including Securities Services. Asset managers are using AI to adjust investment portfolios dynamically. Custodians are using AI to accelerate identity checks when customers are on-boarded. AI is being used successfully to detect one of its own creations: synthetic imitations of important individuals ("deep fakes") who may or may not work in Securities Services.

2.5 Digital in Depth: Dispelling the Digital Myth

Digital assets are struggling to scale. In early May 2026, according to an industry analytics platform, the market value of distributed digital assets (essentially, native digital assets) was USD 30 billion and the market value of referenced digital assets (essentially, non-native digital assets) USD 410 billion⁶. These sums are trivial relative to global bond markets worth USD 145 trillion and global equity markets valued at USD 126 trillion⁷.

The gap is the measure of the size of the opportunity that the conventional securities markets present. But it is also a measure of how much digital assets must grow to unsettle the status quo. Expectations of a rapid transformation of such densely interconnected, systemically important and highly regulated markets by any new technology were always unrealistic, but blockchain must also overcome a series of obstacles intrinsic to the technology.

⁶ <https://app.rwa.xyz/>

⁷ SIFMA, 2025 Capital Markets Fact Book

2.5.1 Post-trade obstacles to the scaling of digital assets

The first is that innovations that work well in the Decentralised Finance (DeFi) markets have proved difficult to adapt to traditional markets. For example, while DeFi market participants are comfortable with probabilistic settlement (in which transactions become progressively harder to reverse as blocks of transactions are added) regulated financial institutions must rely on final settlement (which is defined in law) only.

In addition, traditional institutions have, since 1992, comprehended only three Delivery Versus Payment (DvP) settlement models: DvP 1 (gross settlement of securities and cash), DvP 2 (gross settlement of securities with net settlement of cash) and DvP 3 (net settlement of securities and cash). Market participants are not yet confident that “atomic settlement” on blockchains aligns with any of these.

Traditional financial institutions are also yet to be convinced of asset safety arrangements dependent on possession of private keys, with entitlements distributed by smart contracts rather than banks. This is a transaction validation process that relies on cryptographic consensus and an integrity of issuance that relies on the immutability of the blockchain ledger. This is why digital assets do not always fulfil the blockchain promise of disintermediation and instead maintain roles for custodians and registrars.

2.5.2 Potential duplication of costs inhibits investment in blockchain

Another blockchain promise – namely, wider distribution of financial assets through issuance and trading on trust-less public networks open to all-comers – is also proving hard to fulfil. Public blockchain networks are incompatible with the risk appetite of most institutional investors. They prefer to put their trust in private permissioned or public permissioned networks consisting of tried and trusted counterparts.

A surfeit of experiments on multiple blockchains – some public, but most private – have failed to build that trust. They have sapped enthusiasm for change. Dozens of Proofs of Concept (PoCs) and Pilot Tests have proved repeatedly that blockchain works in a wide variety of asset classes but also failed to demonstrate meaningful gains. Many market participants have concluded that the existing securities markets are sufficiently cheap and efficient.

This undermines the case for investing in a new operating model, since building a new system for marginal gains would lumber incumbents with the costs of running parallel market infrastructures without compensating economies. The costs of running separate infrastructures are further inflated by the lack of interoperability between blockchain networks and traditional markets as well as between blockchain protocols.

Standards to overcome these obstacles to interoperability both exist and are multiplying. The best-known are those defined for the Ethereum protocol - and especially tokens issued on to the Ethereum blockchain, such as ERC-20 - but they are not yet universally adopted. It will take time for the digital asset industry to converge on a common set of standards to facilitate interoperability.

2.5.3 Legal and regulatory obstacles are only partially cleared

Though legal and regulatory frameworks for digital assets are now settled - or being settled - in several jurisdictions, they have yet to converge sufficiently to deliver even the limited interoperability across national borders that traditional assets have achieved. The portability of digital assets between jurisdictions, as well as between blockchains, remains problematic.

Law and regulation continue to trail technical innovation. Several jurisdictions have hosted “sandboxes”, in which existing regulations are suspended for innovators. These tended to be backward-looking. They have also failed to produce substantial blockchain businesses, though they persist in the United Kingdom and the European Union (EU). They may even have diverted time and money into durable but ultimately non-viable start-ups instead of encouraging established institutions to bring innovations into live production.

Certainly, established institutions are now progressing digital asset services without much regard to sandbox experiments. More importantly, they are expressing concern that the introduction of laws and regulations designed specifically to encourage digital assets has created room for regulatory arbitrage. As a result, new entrants are competing with incumbents to issue and distribute securities or make payments without bearing the same regulatory and capital burdens.

This is unjust because the firms that emerged from the cryptocurrency markets - in pursuit of institutional money - have long recognised the need to be regulated in the same way as established financial institutions. Suggestions nevertheless persist that digital assets are being issued and traded without facing the same regulatory obligations - such as best execution, fair access and pre- and post-trade transparency – as traditional firms. An associated concern is that digital assets are being sold by competitors without the full disclosure to investors that established firms must make when launching new investment products.

“Wrapped” equities, for example, deny investors the benefits of ownership of a stock and the associated voting rights and entitlements. As investors in tradeable contracts that track the performance of a stock, the buyers are exposed to the issuer of the wrapped equity rather than the issuer of the equity itself. These limitations are not well-understood by the (primarily retail) investors.

2.5.4 Tokenization of securities in the United States promises scale

This implies that wrapped equities cannot unlock scale in digital assets because they are derivatives of the status quo rather than replacements for it. A more promising prospect is the no-action letter the Securities and Exchange Commission (SEC) issued to the Depository Trust Company (DTC) in December 2025, enabling the American central securities depository (CSD) to tokenize securities it holds in custody. The service is expected to start in the second half of 2026.

In the DTC model, investors will hold not “wrapped” equities. Instead, they will hold digital versions of Russell 1000 equities, Exchange Traded Funds (ETFs) tracking major indices and U.S. Treasury bills, bonds and notes that enjoy the same entitlements, investor protections and ownership rights as the assets in their traditional forms.

The tokenized assets will be tradeable between digital wallets 24/7 because both Nasdaq and the New York Stock Exchange (NYSE) have chosen to use the proposed DTC service to allow the tokenized assets to trade on their exchanges. These decisions, in tandem with the move by the DTC, suggest that both the leading American stock exchanges and the American CSD believe that tokenization of securities could grow sufficiently to undermine their conventional business revenues.

Whatever their motivation, the DTC, NYSE and Nasdaq announcements are drawing the major investment and custodian banks into supporting digital asset issuance and custody. Their motivation is client need, rather than fear of loss. Neither type of bank is likely to be disintermediated because “referenced” token markets of the kind envisaged by the DTC, NYSE and Nasdaq require the provision by them of digital asset issuance, trading, settlement and safekeeping services to issuers and investors.

Crucially, the involvement of established institutions is adding the requisite degree of trust. Issuers are readier to do tokenized their securities, and investors to buy them, when they are listed on a traditional exchange and settled in a traditional CSD.

It is also important that the change is happening in the United States, whose capital markets account for half the market capitalisation of the global equity market and two fifths of the value of the global fixed income markets. In other words, the tokenization of assets in the largest capital markets in the world is the obvious route to scale in digital assets.

The decision of the DTC to embrace digital assets is likely to prove infectious. The likeliest candidates for disintermediation, as digital asset markets scale, are domestic CSDs rather than banks, not least because the gatekeepers to their services are banks. In most domestic markets, two or three banks already control 60-80 per cent of flows. If the banks redirected those flows on to blockchains, CSDs would lose most of their settlement revenues.

2.5.5 Cash on-chain will catalyse growth in digital assets

DvP and RvP settlement means the simultaneous delivery or receipt of securities against payment. With the cash leg of settlements also moving on-chain another obstacle to scaling is removed. This is evident in the rapid growth of Stablecoins in the last five years. Major payments providers such as Visa have embraced Stablecoins because they see them as an opportunity to transform global payment rails and offer money transfers in real-time.

However, tokenized deposits seem a better long-term candidate to assume the role of commercial bank money than Stablecoins. Tokenized deposits mimic the established two-tier monetary system of claims on central banks (central bank money) and claims on commercial banks (commercial bank money) that delivers the current combination of an ultimate settlement asset, deposit insurance and backing by cash deposits rather than money market instruments.

2.5.6 The global debt markets are driving demand for tokenized collateral

Where money market instruments are catalyzing digital asset markets is in the issuance of tokenized money market funds. These are acceptable as collateral in cryptocurrency markets, are being used as collateral in the conventional repo markets and to meet cash margin calls in the conventional derivative markets. Collateral demand is emerging as a major catalyst of growth in digital assets markets.

The driver of demand is the sheer scale of public and private debt, with repo transactions serving as the principal source of liquidity. Tokenization can make any asset class, with relatively stable value, available as collateral including illiquid investments such as gold and real estate. As a result, demand for collateral will increasingly extend to these assets in tokenized form, as they can be used in debt markets.

2.6 Rethinking Cyber Security from the Ethical Hacker

Most discussions of cybersecurity fail to distinguish between hacking computers and hacking organizations. Regarding them as synonymous is understandable, since hacking the computers at a firm is liable to damage the revenues and reputation of the organization, and increase its costs.

2.6.1 Hacking an organization is different from hacking a computer

However, conflating attacks on computers with attacks on firms also obscures the fact that successful cyber-attacks are not primarily a technological shortcoming. They are an organizational problem. In other words, securing an organization against cyber-attacks is not synonymous with securing its computers against cyber-attacks.

Successful cyber-defences begin not by securing an organization against external threats but in addressing the internal vulnerabilities that increase the chances of a successful attack. A fix exists for every technological weakness. If a firm is attacked successfully, the important question is why the fix was not in place.

It is commonplace for firms to regard employees as their chief vulnerability since inbound communications are the commonest point of entry to corporate computers. Yet, if a hacker can access the entire production environment of firm via a phishing email, the firm has failed to assess and protect its points of vulnerability.

2.6.2 Unused patches are a symptom of deeper organizational problems

Financial services firms seem to accept vulnerabilities as an unavoidable risk that can be mitigated but never solved. Risk managers talk glibly of a cyber-attack being a matter of “when, not if” and invest at least as much time and money in planning their recovery from inevitable attacks as they do in seeking to prevent them.

This approach is akin to an airline noticing that bolts on the fuselage of its aircraft work loose from time to time and electing to tighten them periodically rather than ground the aircraft and identify and address the underlying cause. Patches to fix identified vulnerabilities in software play a similar role in computing.

What matters about patches is whether they are installed. Unfortunately, the number of unused patches in systems used by banks is worryingly high. This is partially because organizations fear the patches will cause software problems elsewhere in their systems, but mainly because internal processes are poor.

The problem of unused patches is so extensive that consideration is now being given to making software patches a legal and regulatory obligation. Others argue that artificial intelligence (AI) can be used to automate patching and the testing of patches. However, it would be better to solve the problem of unused patches by improving internal processes.

If a firm is hacked when a patch is available - but not installed - the problem is not technological or regulatory but organizational. Indeed, irregular installation of patches is a symptom of other organizational problems and there are steps which firms can take to address them.

2.6.3 Cyber-security must be managed holistically across the organization

The first is to treat cyber-security as an issue for the entire firm, not just the technologists. Organizations tend to silo cyber-security by appointing a Chief Information Security Officer (CISO) or assigning the issue to a new group charged with fixing problems unaddressed by the IT department. Yet cyber vulnerabilities are a structural issue that cuts across silos. They must be solved holistically.

2.6.4 Cyber-security is not just a technical problem, but a financial one

The fastest way to adopt a holistic approach is to treat cyber-security not as a technological problem owned by the CISO but as a financial one owned by the Chief Financial Officer (CFO). The argument for this shift of responsibility is not just that cyber-attacks have financial consequences. It is that poor security is costly because it is inefficient.

Software issues cost sales. They inflate the fees charged by third party vendors and Cloud providers because software that is not optimised uses more computing power, energy and water. Staff turnover in the IT department increases.

The reverse is also true. Efficient cybersecurity increases revenue, cuts costs, lifts profits and retains staff.

There is another reason corporate expenditure on cyber-security is rising between 5 and 10 percent a year. Internal and external interest groups are using “when, not if” warnings to secure budget increases. If internal IT departments and external technology vendors are being paid to treat a problem, they have no incentive to solve it.

2.6.5 Poorly engineered and ageing software are growing problems

It may be too cynical to argue that developers are incentivised to write software in ways that embed vulnerabilities. However, poorly engineered software is certainly a problem and it is getting worse. This is evident in deteriorating user experiences following updates. It is increasing the number and range of vulnerabilities in software.

Ageing software is also a problem. Financial institutions are deploying systems designed to last for ten years when managers know that product support and component replacement will be withdrawn after three years. Even where applications are upgraded, testing ceases on earlier versions after a few years.

In finance, using 20-25- year-old software applications is commonplace. Firms know they were not designed or built to address contemporary problems but they see replacement as risky in terms of cost and especially time. Unless replacement timetables can be reduced from years to months, reluctance to change will persist.

2.6.6 AI and software standards can help

Poorly engineered and ageing software are among the problems which AI can potentially alleviate. “Vibe coding” could increase quality and security as well as accelerate development. Claude Mythos could be used to fix vulnerabilities as well as exploit them. However, increased dependence on AI is potentially dangerous.

Standards, to ensure software is written and maintained in consistent, secure and scalable ways that reduce errors and make change easier, are a more convincing solution to cyber-security vulnerabilities than AI. Regulators in Europe and North America are enforcing standards by making software firms liable for the quality of their work.

2.6.7 The most effective solution is to change financial incentives

However, the best way to reduce software vulnerabilities is neither AI nor standards. It is to change the incentives facing developers. If developers were offered, say, 10 percent of the savings that they created by writing more efficient software, the overall quality of software would rise.

However, the best way to reduce software vulnerabilities is neither AI nor standards. It is to change the incentives facing developers. If developers were offered, say, 10 percent of the savings that they created by writing more efficient software, the overall quality of software would rise.

Changes in remuneration of this kind require a new brand of leadership in cyber-security. The field currently belongs to technicians that are not rewarded for their contribution to business outcomes. It needs to belong to managers with the authority to turn cyber-security from a technical discipline into a financial one.

Until that change occurs, hackers will continue to operate in a familiar landscape rich in vulnerabilities created by the ways in which software is written, systems are built, configured and maintained, internal processes are organized, third party relationships are managed and financial incentives are structured.



3. Breakout Sessions

The Breakout Sessions are the forum in which the ISSA commitment to inter-firm and cross-industry collaboration is truly brought to life at the Symposium. They are smaller groups in which individual members can talk and debate, as opposed to listen. In smaller groups, delegates converse, share experiences and knowledge and debate alternatives, as opposed to listening to presentations or panels.

The purpose of the discussions in the Breakout Sessions is to identify new or expanded areas for existing or new ISSA Working Groups (WGs) to analyse. In this sense, they are the key to the future of ISSA and the ability of ISSA to continue to provide value to the Securities Services industry.

In 2026 the six Breakout Sessions covered all external forces affecting the industry. They included:

- the potential gap between industry capabilities and client expectations (Client Experience)
- cyber-threats (Resilience, Recovery and Resolution)
- geopolitical uncertainty (Navigating an Uncertain World)
- technological developments in artificial intelligence (AI) (AI and Agentic AI), digital assets
- Alternative Assets looking at
- the impact of shrinking settlement timetables (The Intersection of Cash and Securities)

The work of these Sessions was important because Securities Services providers cannot control external events. However, they can collaborate to increase their collective strength and resilience in the face of adverse external developments. That said, the industry cannot abandon investment in its core services to focus on external threats.

3.1 Client Experience

There are multiple reasons why Securities Services firms should take client experience seriously. Satisfied clients are loyal, which makes revenues more dependable and feedback more honest. Happy clients are also the best advertisement and advocates for a brand. These are the ingredients of durable success.

However, the recent ISSA client survey identified two significant gaps between client expectations and industry capabilities (data standardisation and operability and speed of change and innovation) and rising client demand for services that support their evolving operating models (namely, modular, configurable services, Application Programming Interfaces (APIs) and digital connectivity).

The Breakout Session was charged with exploring how these gaps might be bridged. Two opportunities in obvious need of improvement were identified. The first opportunity was customer onboarding, which remains unstandardised, manual, inconsistent, duplicative and a major source of client frustration.

In solving the problem, several priorities were pinpointed. They were more efficient collection, integration and distribution of data about clients; a better process for firms to keep abreast of changing regulatory requirements in client identification and verification; and the need for higher levels of automation and standardisation in on-boarding processes.

The second opportunity was to use technological advances to improve client experience. The two immediately relevant technologies are AI and blockchain. These can be used directly to improve processes such as client onboarding but also have the potential to transform client experience more broadly.

On client onboarding, the Breakout Session noted that the onboarding of retail clients is already relatively fast and efficient in many jurisdictions. In India, for example, Know Your Client (KYC) information for retail investors is stored and maintained centrally, and banks can access what they need easily. Institutional onboarding, by contrast, remains challenging.

Several obstacles to improvement were identified. Chief among them is the knowledge that KYC tasks (such as data collection) can be delegated but the legal liability for misidentification cannot. Other problems include jurisdictional fragmentation, competing investment priorities, privacy obligations and lack of industry alignment on the importance of the issue.

The Breakout Session advised against a full-scale, Big Bang-style transformation. Instead, it favoured a piecemeal, incremental approach in which specific measures that delivered the earliest improvements and the fastest short-term cost savings were implemented first. The Session agreed a list of ten such measures (see Box 1).

Ten Steps to Improve Institutional Client Onboarding

1. Standardization of static data and taxonomy
2. Elimination of paper and manual signatures
3. Pre-population from trusted external sources
4. Creation of a single client repository
5. Automation of document collection and validation
6. Streamlining of workflows and reduction in human touch
7. Definition of accountability and escalation paths
8. Tracking of onboarding status via real-time dashboards
9. Introduction of a client-facing portal
10. Measurement of cycle time and driving of continuous improvement

The most contentious recommendation - given the discouraging history of data utilities - was creation of a single client data repository. It seems an obvious solution. Ninety-seven percent of the data that Securities Services firms need on a client is the same. Accessing that data from a common repository would save time and money spent on duplication.

To sidestep data privacy obligations, clients could agree to share the common set of data with all providers. The clients would benefit, because they would be on-boarded more quickly, and business could start earlier. However, it might take a regulatory intervention to overcome the reluctance of firms to create a shared industry utility.

To identify further areas in which new technologies might improve client experience, the Breakout Session recommended conducting a survey of different client types to establish where applications of Artificial Intelligence (AI) and blockchain would have the most impact. In addition to client onboarding, asset servicing tasks such as tax reclaims, income processing and other corporate actions were identified as the likeliest candidates.

The survey would militate against the industry temptation to adopt short term tactical fixes by identifying a series of operational pain points for clients. Most of these pain point are caused by internal silos at service providers, manual processing and duplication of data requests. Data exchange standards and new infrastructure that address the problems at source can then be introduced, based on a clear understanding of the data requirements

Established technologies such as APIs and Cloud can help but the Breakout Session felt that AI could play an especially important role in delivering the solutions. It is seen as useful in processing unstructured data into machine-readable formats and, perhaps, even obviating the need to agree data standards. However, the Session argued that AI used in this way must be subject to independent audit, an obligation to explain its decisions and strict data privacy controls.

The Breakout Session recognised that, although the changes will deliver benefits for both clients (in terms of reduced time and effort, transparency, compliance and resilience) and service providers (in terms of reduced manual processing, optimised workflows and more efficient procedures), implementation would also make demands of service providers.

Delivering a better experience to clients entails service providers obtaining the budget to fund the investments, moving beyond long-established internal silos, supporting at least 24/5 and even 24/7 operation and (notably in the case of client onboarding) achieving industry consensus on what needs to be done. The Breakout Session concluded that establishing a client experience sub-group of the Investor Solutions WG would facilitate the process of change.

3.2 Resilience, Recovery and Resolution

Threats to the resilience of the Securities Services industry are proliferating. The most obvious are cyber-attacks on legacy and newly installed systems. The industry is, by definition, reliant on both. As outsourcing has increased, third-party suppliers have emerged as another vulnerability, alongside clients and counterparties.

The danger posed by these threats is intensified by regulation. Regulation fails consistently to keep pace with technological changes such as blockchain and AI. Yet, regulators never fail to lay additional compliance burdens on Securities Services firms as technologies evolve and they are never slow to increase scrutiny when incidents occur.

To these familiar problems, recent events have added a new threat: geopolitical risk. Wars, tariffs and sanctions affect the Securities Services industry directly when assets are trapped or clients are sanctioned or offshore operations are attacked. However, geopolitical risk also affects the industry indirectly through its effects on economic stability and the value of stocks, bonds, funds, commodities and currencies.

Faced with these threats, it is not hard to make the case for investing in resilience. However, resilience means more than one thing. It encompasses the ability to prevent disruption (resilience), recover rapidly when disruption occurs (recovery) and adapt when recovery is more complicated or takes longer than expected (resolution).

The task of the Breakout Session was to explore two urgent aspects of the problem. The first was interconnectivity. This refers to inadvertent dependencies between firms. Concentration risk, for example, can turn a cyber-attack on a Cloud provider into a systemic crisis because the Cloud provider is used by many firms in the industry.

The second aspect was geopolitical risk. With the post-Second World War order led by the United States breaking down, geopolitics has re-emerged as a risk few people in the Securities Services industry have experienced directly. Since it is likely to be feature of the external environment for the foreseeable future, the Breakout Session argued that the industry must accept the management of geopolitical risk as a permanent new cost of doing business.

On interconnectivity, the Breakout Session agreed concentration risk was increasing, in line with the growing use of Cloud, Internet infrastructure, cyber-security services and growing exposure to a small class of AI vendors and associated data centres. These are new concentration risks to add to those created by traditional financial market infrastructures such as SWIFT. Concentration risk has also developed at the local market level in areas such as paying agency and registration.

Resilience frameworks, designed to manage the failure of a single service provider or market infrastructure or counterparty, are poorly adapted to crises amplified by concentration risk. They are also poorly adapted to the failure of a general-purpose infrastructure, such as the Iberian Peninsula blackout of April 2025.

The Breakout Session contended that, in responding to such crises, Securities Services firms do not understand where the dependencies lie. They also do not yet understand how risks propagate contagion, though AI and round-the-clock trading have greatly accelerated the pace at which they do. Lastly, the Session pointed out that, at many Securities Services firms, ownership of the recovery and resolution process remains unclear even after a crisis has begun.

On geopolitical risk, the Breakout Session advocated what it called “resilience by design.” By this, it meant Securities Services firms must therefore:

- diversify suppliers and geographies
- build resilience into all new systems and processes from the outset, rather than as a post-incident add-on
- draw up plans to ensure employees are safe (including from each other, if people of different nationalities are on opposite sides of a conflict when a crisis erupts) to preserve human capital as well as human life
- map international regulations and sanctions, including any contradictions
- develop a methodology to balance what is possible and what is legally or politically legitimate

The Breakout Session argued that it is essential firms think and plan at the industry level. They proposed the establishment of trusted communications channels and shared escalation mechanisms to deal with the immediate effects of a crisis. These could limit contagion in the crisis by sharing information and accelerating responses.

The effectiveness of information-sharing could be institutionalised by the development of industry frameworks for assessing dependencies and concentration risk; agreement on the minimum set of data metrics needed to enable rapid identification of exposures in a crisis; training and education of employees; and publication of a shared industry crisis or global resilience playbook.

The playbook could provide the foundation for regular industry-wide wargames and simulations to stress test its resilience, recovery and resolution templates. This is another area where AI could be used, in this case to create digital twins to simulate scenarios and assess the impact of crises before they occur.

ISSA is well-placed to co-ordinate measures at the industry level. It can act as the neutral host of a coalition of members willing to share information when a crisis happens. ISSA can also lead the development of industry-standard frameworks and data sets, host stress tests and wargames and generally encourage - through WGs and publications - the sharing by members of information, intelligence and expertise in the field of resilience, recovery and resolution.

3.3 Navigating in an Uncertain World

The Future of Securities Services 2024-2030⁸, published by ISSA in September 2024, identified three “composite” forces affecting the industry over the next five years. They were geopolitics and the associated macroeconomic uncertainty; the changing behaviour of investors, especially the transition from active and intermediated to passive and self-directed investing; and new service demands driven by blockchain and AI.

⁸ https://issanet.org/content/uploads/2024/09/ISSA-FOSS-Paper-2024_FINAL.pdf

Sifting these “composite” forces - for the underlying drivers of change and disruptors of the status quo - was the task entrusted to the Navigating in an Uncertain World Breakout Session. Its members identified five drivers of change in Securities Services: Regulatory Evolution, Macroeconomic Uncertainty, Geopolitical Factors, Changing Investor Behaviour and Technological Advances (see Table 1).

Drivers of Change in Securities Services

	Regulatory Evolution	Macroeconomic Uncertainty	Geopolitical Factors	Changing Investor Behaviour	Technological Advances
Factors	Accelerated settlement cycle Interoperability Heightened regulatory and supervisory scrutiny Fragmented regulation	Increased market volatility and competition Increased cost pressure and lower margins	Rise of nationalism and diminished trust between governments Data sovereignty demands Sanctions and trade restrictions Cyber threats as sovereign leverage	Shift to Self-Directed (DIY) investing taking higher risk without understanding, driven by influencers Fee sensitivity and cost transparency Trust deficit Divergence of investor behaviour Retail versus Institutional Shift to passive investment	Tokenization/Digital Assets and Blockchain Digital onboarding and improved customer interface Deployment of AI Increased investment in cybersecurity enhancement Technology changes happening too fast
Impact	Increased costs Pressure on intermediaries to modernise data management, reporting and controls	Impact on asset valuation and funding costs Higher margin calls, collateral reallocation and need for real-time monitoring	Reduction in capital inflows Higher counterparty risk management required Re-routing of flows Management of systemic risk	Push for T+1 settlement Investors expect quick access to funds/securities Need for new asset classes Stronger investor protection/education	Traditional trading/transaction models challenged by atomic settlement and DLT-based infrastructure Early detection and prevention of cyber attacks

These drivers are having a series of effects on the industry. Rising regulatory costs, macroeconomic uncertainty, the transition to passive investing and competition from new entrants - not just in High Net Worth Individual (HNWI) markets but mass market retail investing - are compressing management and transaction fees.

At the same time, Securities Services firms are under pressure to:

- invest in faster settlement timetables,
- service alternative asset classes and digital assets, including in tokenized form
- Leverage AI responsibly,
- enhance risk data analytics and collateral management services

This combination of shrinking revenue, inflating investment demands and rising costs is squeezing margins.

Worse, the margin squeeze is occurring as geopolitical developments are threatening to put globalisation into reverse, undermining the stability of the geographically distributed operations that Securities Services firms have built since the 1990s. The obvious risk this poses for the industry is reduced cross-border capital flows, with capital controls and regional trade blocs forming. However, de-globalisation also brings into question the viability of follow-the-sun client servicing models.

Geopolitical fragmentation is one of six factors listed by the Breakout Session, whose effects are likely to persist for the foreseeable future. The others are Fee Compression and Margin Pressure, Passive Investing, Digital Assets and Blockchain, Accelerated Settlement Timetables and Generative AI. Their impact on the industry will vary between regions.

Regions with ageing populations, such as Europe, Japan and East Asia, require income-generating, low-volatility securities servicing to suit the investment profiles. Correspondingly, regions where populations are not ageing, such as Sub-Saharan Africa, the Middle East and Central and South Asia, require high growth equity, cryptocurrency and digital asset servicing. Servicing requirements will also vary between developing and developed financial markets.

On top of regional variation, the industry faces an increasingly complex client profile. Market activity is now driven mainly by retail investors and market makers, rather than their institutional equivalents, which challenges client service models and systems geared to large pools of institutional money. AI is accelerating this trend by facilitating the hyper-personalisation of investing. In competing for this business, new entrants are not constrained by the legacy technology that holds back current incumbents.

Likewise, tokenization of assets on blockchain networks offers new models of issuance, trading, custody and asset servicing that are being exploited by new entrants. Tokenized collateral financing is already suppressing the net interest income of custodian banks. Established custodian banks, and some central securities depositories (CSDs), are responding to tokenization as an opportunity but the threats of disintermediation and loss of business to new entrants remain real.

The Breakout Session projected three possible business models that might emerge from the current flux.

The first is that traditional and tokenized models will coexist, requiring interoperability rather than the replacement of one by the other. The second is partnerships between incumbents and new entrants, creating new but additional platforms. The third is full integration of traditional and tokenized models in which issuance, trading, custody and asset servicing are provided on unified platforms.

The Session reasoned that one opportunity for ISSA is to develop a framework for analysing these three possibilities, with the aim of clarifying which intermediaries will do what in each of them. In the case of the first model, for example, ISSA could define interoperability principles and standards to prevent the fragmentation of liquidity between traditional and tokenized platforms.

However, the Session argued there are other opportunities for ISSA to help its members compete successfully. ISSA could establish best practices in data; curate and share successful applications of AI in the industry to encourage adoption; and develop and maintain a shared taxonomy of information about tokenization, digital assets and hybrid operating models to build a common understanding across the industry.

The Breakout Session recommended four immediate actions for ISSA to take. The first is to build a regulatory hub to track global regulatory developments, with the aim of generating early insights for members. The second is to open an ISSA academy to educate industry insiders to a single standard. The third is to deepen the work of ISSA on accelerated settlement. The fourth is to analyse the servicing needs of specific alternative asset classes.

3.4 AI and Agentic AI

ISSA research predicts that the immediate future (2026-2028) will see the use of AI in Securities Services cease to be a mere efficiency tool in some areas and become a core part of the operational infrastructure of the industry. The transition is driven by the change in AI technology itself, from machines that react to human inputs or queries to machines that can act autonomously, or Agentic AI.

Several functions in Securities Services could benefit from Agentic AI. They include customer onboarding, corporate actions processing, trade reconciliation and settlement exception handling. Agentic AI is also likely to contribute to improved client service, by accelerating response times and personalising reporting.

The research found 75 percent of firms also expect the ability of Agentic AI to process unstructured data to enhance information exchange (emails, regulatory filings and news); valuations (especially Net Asset Value (NAV) calculations); anomaly detection (such as trades likely to fail); and financial crime screening (such as money laundering, sanctions breaches and market abuse).

Estimates point to AI delivering between 20 and 40 percent productivity gains in middle- and back-office functions, especially in areas that process high volumes of transactions. However, Agentic AI working autonomously creates challenges as well as benefits.

The most important challenge is deciding who is accountable for decisions, especially if a decision made by AI leads to negative financial consequences. After all, 82 percent of firms using Agentic AI report data-related risks and 51 percent cite inaccuracies or “hallucinations.” In Securities Services, this could lead to costly errors such as incorrect NAVs, regulatory misreporting or clients making the wrong corporate actions choice or missing a corporate actions deadline.

Accordingly, firms must introduce controls that allow Agentic AI to be introduced safely and responsibly, which means decision-making paths that are delineated by clear lines of accountability, ownership and escalation. The research predicts that firms that integrate AI with strong governance and proprietary data controls are expected to outperform those that treat AI as a peripheral tool.

AI also inflates the risk of errors, cyberattacks and fraud. If the data used to train an AI model is not available when the AI model moves into production, it will be inaccurate when used. Bad actors can embed malicious functionality in an AI model (“model manipulation”) or prompt AI to disclose valuable or sensitive information (“prompt injections”). AI can also be used to create convincing deepfake instructions, which can be used to make fraudulent payments.

There is also mounting concern in the Securities Services industry about dependency on third parties and concentration risk in AI. The industry is already dependent on a small number of Cloud providers and outsourcing agents and just two companies control two thirds of the enterprise AI market. Technology companies characterised by lavish capital expenditure also account for nearly two fifths of the value of the S&P 500.

Finally, Securities Services firms are concerned about the impact of AI on their workforces. So far, AI has been used primarily to reduce headcount as business scales – AI enables processing volumes to be increased without hiring more people - rather than build new products and services. This focus on economy creates anxiety among employees.

While service providers that embrace AI can expect to attract talent as a result, they also face the daunting task of retraining their existing workforce to use AI and work with Agentic AI. This threatens to bifurcate the workforce. There is also evidence that AI is deterring young people from seeking a career in Securities Services, because they fear they will soon become redundant or their residual work will be boring.

These opportunities and concerns shaped the two tasks set for the Breakout Session. The first task was to identify the areas in which Securities Services firms can integrate AI without demoralising the workforce, making costly mistakes or risking excessive exposure to third parties.

The second task was to explore what governance and accountability frameworks are needed to allow firms to introduce Agentic AI without inadvertent compliance breaches or data corruption or undermining resilience, recovery and resolution plans.

On the first task, the Breakout Session confirmed that predicting and reconciling post-trade breaks or exceptions, corporate actions decision-making and processing and accelerating client service response times, were the obvious opportunities to apply Agentic AI. However, its members also noted useful contributions from AI in analysing Due Diligence Questionnaires (DDQs) and Requests for Proposals (RFPs), testing software and making meetings and presentations more efficient.

One untapped use-case identified by the Breakout Session is improvements to data quality which would increase opportunities to sell data. Another potential use-case is using AI to enhance cash and liquidity management. This could reduce the costs of credit - and of idle cash and collateral - thus increasing yields.

On the second task, the Breakout Session agreed that AI needs oversight and control and clear accountability for decisions. It noted that, although AI is effective in processing high volumes of transactions, removing humans with long experience and deep expertise from the loop risked loss of the knowledge of how processes work. Human operators, it warned, will always be needed to “course-correct” AI.

The Breakout Session advocated better measurement of the usage - and especially the output - of live AI deployments by member-firms, coupled with a sharing of the findings. The Session also favoured two other initiatives. First, closer analysis of how AI requires adjustment to business continuity and resilience, recovery and resolution planning. Secondly, an assessment of how AI amplifies the risks of cyber-attack, fraud and data theft and corruption.

The members of the Breakout Session felt that each financial institution must answer the crucial question (“When do we completely trust AI?”) for itself, informed by their individual risk appetite. However, they warned that, if coherent frameworks of standards and principles for the safe operation of AI are not developed by the industry collectively, there is a risk that regulators will impose common standards on all institutions. This would slow down the adoption of AI.

Accordingly, the Session concluded that ISSA can best contribute to the adoption of AI and Agentic AI in the Securities Services industry by developing principles and standards for its responsible use. Such standards should be applied to the use of AI to issue and complete DDQs and RFPs. ISSA could also contribute to the development of frameworks for the use of AI in client-facing areas, such as customer on-boarding and the use of public data to facilitate tax reclaims.

3.5 Alternative Investments

Alternative investments are the label applied to any asset class that lies outside publicly listed equities and bonds. It covers a commensurately broad range of asset types ranging from the privately managed (such as private equity and credit), through the real (real estate, infrastructure, natural resources), to commodities and collectibles. Traditionally, hedge funds are also seen as alternatives.

Despite their variety, alternative investments do have some characteristics in common. They are less liquid (harder to buy and sell quickly), somewhat opaque (less information about them is published), hard to value (secondary market prices and benchmarks are absent), often complicated (most require specialist knowledge), available in large lots only (minimum subscriptions are high) and expensive to own (management fees are high).

Despite these drawbacks, alternative investments are increasing in popularity with both institutional and retail investors. This is chiefly because they promise higher returns than listed securities. However, they also offer risk diversification, low correlation with public stock and bond market performance and protection against inflation.

For all these reasons, alternative investments present challenges for Securities Services providers in terms of safekeeping, record-keeping, valuation, reporting and compliance. Servicing them on behalf of end-investors, in terms of subscriptions, transfers, redemptions and lifecycle events (such as capital calls) is largely manual. There are also very few markets that provide settlement via a central securities depository (CSD).

An industry geared to standardised workflows is less comfortable servicing bespoke investments of this kind. The Breakout Session was therefore charged with identifying what characteristics alternative asset classes have in common (so workflows can be standardised and automated) and what challenges they set for service providers (so steps can be taken to mitigate them).

On the first task, the Breakout Session was doubtful about the prospects of making progress in the automation of workflows. It identified multiple common characteristics across a sub-set of alternative investments – namely, private equity, private credit, real estate and infrastructure - but found no scope for automation across on-boarding, trading, settlement, custody, valuation or asset servicing (see Table 2).

Characteristics of Alternative Investments

Lifecycle Circle	Alternatives	Traditional
Pre-Trade	Complex, bespoke legal documentation e.g. subscription documents Complex onboarding to determine eligibility Higher barriers to entry	Standard onboarding and data points
Trade	No active market Illiquid Not publicly offered	Admitted to trading on a regulated market
Outcome	Not eligible for settlement in traditional place of settlement e.g. CSD, ICSD	Settlement, including finality in a CSD
Legal/Risk	Different treatment to full custody, potentially safekeeping only Complex ownership Complex regulation or limited regulation different to regulation of publicly offered securities	Full custody and servicing, including liability
Service	NAV – run on models as hard to value Manual data flows Hard to perform due diligence Complex fee structures	Transparent pricing for NAV Readily available data

The Breakout Session then looked at the second task - mitigating the challenges of servicing alternative investments. On this, the Session was more encouraging. It advocated bridging the servicing silos - that separate alternative assets from publicly listed securities - by treating alternatives as part of a single client portfolio.

Considered as part of a portfolio, alternative investments are governed by the same principles as conventional assets. Servicing of the assets can also be defragmented, through the formation of partnerships between custodians and specialists in areas such as onboarding, valuations and secondary market liquidity. These partnerships, which might operate to alternatives industry standards such as the International Private Equity and Venture Capital Valuation (IPEV) Guidelines, could evolve into formal servicing platforms.

ISSA, which looked at alternative investments as Out-of-Network Assets in 2014⁹, now has an Alternative Investments WG. It can contribute by encouraging service providers to approach alternative investments from a client perspective, servicing them as parts of a comprehensive portfolio rather than as Out-of-Network Assets.

⁹ https://issanet.org/content/uploads/2013/04/2014-04_ONA_Report_Final.pdf

ISSA can encourage service providers to broaden their capabilities, through recruitment or partnerships. It can also work to align conventional standards with alternative investment standards and encourage the convergence of national regulation of alternative investments, which remains fragmented.

3.6 The intersection of securities and cash

Clients of the Securities Services industry are exerting pressure on their providers. They expect not only faster settlement but real-time visibility into the status of cash payments and securities transfers. Clients want to economise on the use and cost of credit and collateral, and maximise the yield on their holdings of cash, and not maintain expensive buffers of cash and securities in multiple jurisdictions. They also want to avoid the cost of late settlement fines and compulsory buy-ins.

Delivering securities against cash - Delivery versus Payment, or DvP - is a core function of the Securities Services industry. Any misalignment, in the exchange of assets and cash, is fraught with risk and cost. If one leg of a transaction fails, one party cedes control of an asset without receiving value in return. That creates principal risk.

This is why the Securities Services industry emphasises the standardisation of data exchanges, the integration of securities and payments market infrastructures and ever-tighter settlement timetables to achieve simultaneous DvP. However, DvP, especially across borders and time-zones, is not achieved easily. It entails bringing multiple institutions and infrastructures into alignment.

Generally, cash and securities are held by different market infrastructures. Securities are held and settled in central securities depositories (CSDs) while cash is held in domestic banks or correspondent banks for settlement in the domestic Real Time Gross Settlement systems (RTGSs) operated by central banks, sometimes after netting via a commercial Automated Clearing House (ACH).

These infrastructures do not operate round-the-clock, so cash and securities must be in position to settle before the cut-off deadline if the transaction is a DvP or RvP.

Settlement timetables are shortening. They are at trade date plus one day (T+1) in the Americas already and European markets will follow suit on 11 October 2027. An eventual move in developed markets to same-day settlement (T+0) is probable. As a result, there is a shrinking window in which to ensure cash and securities are in place ahead of a settlement deadline.

A further complication for settlement will be the use of blockchain technology which enables atomic settlement. In this case, cash and securities are exchanged immediately or the transaction is cancelled. This form of settlement using blockchain does however increase the strain on liquidity and funding exerted already by shorter settlement timetables.

Shorter settlement timetables and blockchain technology are putting existing DvP mechanisms under pressure. In prospect are dual systems, in which new, tokenized settlement systems coexist alongside conventional securities and payments infrastructures.

Atomic settlement obviously requires tokenized cash to make payments on blockchain networks. Whilst no major currency is available yet as a Central Bank Digital Currency (CBDC), Stablecoins are spreading from their origins in the cryptocurrency markets to being used as mainstream payments. Tokenized deposits are being used intra-bank. Collateral, and money market funds useable as collateral, are being tokenized.

These are the challenges which the Breakout Session was invited to consider. Its first task was to propose solutions to the mounting pressure from end-investors for ever-faster settlement. Its second task was to outline a future operating model capable of reconciling conventional DvP with a novel infrastructure based on blockchain technology.

On the first task, the Breakout Session argued that current DvP arrangements are efficient enough to dispense with historic solutions such as contractual settlement and auto-credit. However, members of the Session were not confident that the existing system could support a further acceleration of settlement timetables beyond T+1, let alone facilitate same-day settlement (T+0) or intra-day settlement, as proposed for the repo market. It would certainly be unworkable for cross-border settlement.

The Breakout Session agreed that a move to same-day or real-time cross-border settlement would require wholesale restructuring of operational processes, risk management methods and technology platforms. It would also entail the replacement of existing forms of cash with tokenized money. A transition of this kind could not take place at once. Traditional and tokenized infrastructures would have to be run in parallel. How to make such parallel running work was the second task of the Breakout Session.

The solution its members proposed was obvious: a higher degree of interoperability between the current and future systems. However, the Breakout Session recognised that it would add considerable cost and complexity and persist longer than Securities Services firms would ideally prefer.

Parallel infrastructures imply, for example, that Securities Services providers must settle transactions in securities that might exist in both traditional and tokenized form, using cash that might also exist in traditional and tokenized form. Clients would choose continuously between the two forms and probably settle at different prices for different settlement timetables.

In practice, the difficulties of interoperating between the two infrastructures would extend beyond even these merely practical considerations. The ability of Securities Services firms to support different forms of settlement will influence the trading decisions of asset managers, brokers and end-investors. Interoperability also raises legal, regulatory and compliance issues, such as financial crime checks on counterparts.

ISSA can contribute to meeting these challenges by extending the work of the collateral sub-group of the Digital Asset WG to study infrastructural platforms that span the traditional and tokenized markets already, with a view to outlining the new operating model that will be needed.

Subsidiary aspects of the operating model that should be considered by the sub-group are the integration of tokenized collateral services; the balance of advantage between gross and net settlement in terms of the cost of liquidity; whether ratings agencies would distinguish between traditional and tokenized forms of money and securities, or regard them as fungible; and what the impact on existing financial market infrastructures, including central counterparty clearing houses (CCPs) as well as CSDs and RTGSs, is likely to be.

4. The Work of ISSA



4.1 The State of the Organization

ISSA is the global voice of the Securities Services industry. It connects its leaders from around the world and brings them together to address opportunities and challenges collaboratively. The 23rd Symposium attracted 127 leaders from seventy-one organizations based in Europe (84), Asia Pacific (22), North America (13), South America (1) and Africa (7).

The attendees were drawn from all segments of the industry. In addition to twenty-five custodian banks, ten domestic and international CSDs, ten other financial market infrastructures (FMIs), four asset owners and asset managers and twenty-one technology vendors and consultants attended this year.

All members of ISSA recognise the work of the organization in shaping the future of Securities Services is more urgent than ever. The industry is being buffeted by geopolitical unpredictability; advancing technologies such as artificial intelligence (AI) and blockchain; growing cyber-threats; market volatility; mounting pressure to raise standards of governance, oversight and due diligence; and a transformational shift from fiat currency and securities to digital money and digital assets.

In formulating an effective response to these external developments, the ISSA Symposium provides a vital space. It enables Securities Services leaders to share their knowledge, experience and ideas. In combination, the collective wisdom of members of ISSA helps the industry continue to increase efficiency and reduce risks today. It also helps the industry adapt to a challenging external environment and begin the work of re-designing its operating models to meet the tests of tomorrow.

4.2 Priorities for the future

In the final session of the 23rd ISSA Symposium, a panel of ISSA's Board members discussed and reviewed the key priorities highlighted during the three days. They included areas that should be the focus for ISSA as its next objectives.

4.2.1 Talent

The investment in human capital in the industry was considered a clear priority.

Both education and training are traditional antidotes to the disinclination of young people to consider a career in Securities Services and ISSA has played a role in offering these to new entrants to the industry. However, these human capabilities are the product of experience as well as learning and there was a level of concern raised that the implementation of AI could undermine both.

This is a hidden, but looming, risk of an industry reliant on AI. As those with firsthand experience retire or leave the industry, they take with them the tacit knowledge of how to operate without technological support. When crises arise, Securities Services firms are already finding it necessary to turn to retired colleagues to access the relevant experience. The panel therefore highlighted that, whilst the industry is quick to remind young talent that AI is likely to reduce the demand for purely technical skills, it is increasing the demand for critical thinking and skilful judgment – including when to rely on AI.

The view was that ISSA had a role to play in helping train the next generation to ensure that this transition to a different way of working encourages new entrants to join and remain in our industry. It was proposed that a small group of SMEs were brought together to better understand the key hurdles to finding and retaining talent. By sharing their combined experiences with the members, it is hoped that organizations can implement policies that better meets the needs of the talent of the future.

4.2.2 Clients

In Securities Services, the discussions at the Symposium noted that client expectations have surpassed the traditional customer service models, with their slow turn-around times and high fees. Clients now expect a great level of service with reduced fees. They are also pushing for services to be instantaneous, customized to their needs and made available over a longer period of time, be it 23/5 or even 24/7.

With Securities Services providers focused on meeting regulatory and operational challenges - such as the transition to shorter settlement timetables - client expectations and industry capabilities are sometimes at risk of misalignment. ISSA has sought to alleviate this mismatch by bringing the client perspective directly to its Symposia and its WGs.

Translating the client perspective into better outcomes and experiences for clients in day-to-day operations will be key.. Securities Services providers must invest in service innovation and expansion while continuing to increase resilience and deliver business-as-usual services such as settlement and safekeeping flawlessly.

4.2.3 Risks and the need for Resilience

Risks can no longer be considered episodic but structural. Therefore, understanding and managing the multiple risks facing the industry needs to be a priority for all Securities Services providers. Ensuring the resilience of all part of organizations will help to decrease and mitigate risk.

ISSA is already focusing on helping organizations better understand some of these risks through their WGs. Examples include:

- Accelerated Settlement WG which is looking at the risks associated with the current move to T+1 as well as T0 in the future
- Alternative Investments WG which is assessing the challenges and risks – as well as potential solutions - associated with investing in alternative asset classes
- Digital Identity and Onboarding WG considering the risks for institutional clients when onboarding

It was also noted that additional risk and resiliency themes should be considered by ISSA, including:

- AI risk and the need for good governance and resiliency models
- Managing the risk around a Black Swan event, e.g. the impact of the US stop providing technology
- Better understanding the risks from the intersection of cash and securities, particularly with the move to digital assets

4.2.4 Emerging Ecosystems

Building and operating the complicated networks that enable capital to flow efficiently between markets is the *raison d'être* of the Securities Services industry and its fortunes have waxed in the three and half decades that have elapsed since the Berlin Wall came down in November 1989. However, that globalized marketplace is now shifting and, in some cases, fragmenting.

For 25 years, Anti Money Laundering (AML), Countering the Financing of Terrorism (CFT) and sanctions screening obligations have steadily forced the Securities Services industry to divide the world into good and bad actors as well as friendly and unfriendly jurisdictions. That process is now culminating in the revival of outright protectionism and growing distrust even between erstwhile allies.

Securities Services providers need to focus on their strategic approach and the impact of this discontinuity. Current operating models are being assessed leading to the creation of new partnerships and collaborative arrangements. At the same time, new players are moving into the market risking potential disintermediation of those players who don't react and evolve.

To help members navigate this uncertainty, ISSA has created an Emerging Themes WG. Focusing on key themes as they arise, the WG aims to facilitate a better understanding of what firms need to do to ensure that they can evolve to meet the demands of the future.

4.3 Conclusion

The 23rd ISSA Symposium stands as a testament to what is possible when the brightest minds in Securities Services come together with a shared purpose. Bringing 127 leaders, from seventy-one organizations spanning five continents, together for the event created a rare and invaluable space for the kind of open, frank and forward-looking dialogue that no single firm or market could generate alone. From geopolitical risk to agentic AI, from digital assets to cybersecurity, the breadth and depth of the conversations held in May 2026 reflect an industry that is clear-eyed about its challenges and energized by the opportunities ahead.

What makes ISSA uniquely powerful is not just its ability to convene stakeholders but the quality of its follow-through. These include:

- The organization's WGs — spanning accelerated settlement, alternative investments, digital assets, financial crime compliance and beyond — translate the energy of the Symposium into concrete, collaborative action
- The creation and involvement in industry events to share the outcomes from the Symposium, WGs and other collaborative efforts
- The spirit of non-competitive collaboration with members, the broader Securities Services industry – and beyond – to share and educate on the key themes of the day

As the Securities Services industry navigates a world reshaped by geopolitical fragmentation, technological disruption and evolving client expectations, ISSA's role as the global voice of the industry has never been more vital. ISSA's efforts are helping the industry not merely keep pace with change - but to shape it. The conversations started in May 2026 will ripple outward into white papers, standards, best practices and regulatory engagement that will strengthen the industry for years to come. That is the enduring legacy of ISSA: not just a gathering, but a movement.



5. APPENDICES – WORKING GROUPS

ISSA Working Groups (WGs) provide one of the few opportunities in a career for individuals to experience and address industry issues from outside their own firm. They also present participants with opportunities to gain experience about industry issues, grow and develop their own careers, network with peers and improve their communications skills.

Participation in an ISSA WG enables thought-provoking discussions with industry colleagues who approach the same issues from a different perspective, though many WGs have members who participate to learn only. However, participants do not just talk about or listen to industry problems; they are involved in solving them too.

As the Securities Services industry is constantly evolving, the problems mutate and the roster of WGs adapts to update the work of predecessors or address entirely new issues. Since the 22nd ISSA Symposium in 2025, two WGs have completed their work, three new Groups have started and one has shifted its focus.

5.1 Accelerated Settlement

Securities markets continue to move towards shorter settlement timetables. The European Union (EU), Switzerland and the United Kingdom will adopt a trade date plus one day (T+1) settlement cycle from 11 October 2027, following the examples set by India (January 2023) and Argentina, Canada, Mexico and the United States (May 2024).

With settlement on T+1 having passed uneventfully in the Americas two years ago, regulators and market participants are already pondering a shift to settlement on trade date (T+0). In China, equities traded on the Shanghai and Shenzhen stock exchanges already settle on T+0. However, in other markets it requires radical changes in current processes, especially to support cross-border transactions.

The Accelerated Settlement WG has, since its inception, conducted analysis to help Securities Services firms, and their buy-side clients, adapt successfully to shorter settlement cycles. It is now assessing the business case for moving to a T+0 settlement timetable, with a particular focus on the impact on non-domestic investors.

A new white paper will be published by the Group outlining the elements of a global business case for a potential move from a T+1 to T+0 settlement timetable. In 2026 the Group is conducting a study of the various models of T+0 settlement and the questions they pose across eight areas of trade and post-trade processing.

Members of the WG are actively engaged with the transition to T+1 in the United Kingdom, including through membership of groups working on preparatory workstreams designed by the United Kingdom Accelerated Settlement Task Force (UKAST). The Group is providing feedback on UKAST plans and collaborating with ValueExchange on surveys of industry readiness.

Likewise, the WG is engaged with the work of the EU T+1 Industry Committee, whose members include European trade associations, financial market infrastructures, market participants and regulators. As an “observer” industry association member of the Committee, the WG provides input to plans as they are formulated.

5.2 Alternative Investments

The Securities Services industry has for many years serviced assets that fall outside the established post-trade processes and infrastructures used to settle and safekeep financial instruments such as publicly listed equities and bonds. These growing asset classes were the province of the Out-of-Network Assets WG formed in 2012, after a review of hidden risks to the industry.

Since the Out-of-Network Assets WG published a seminal report in 2014 in conjunction with the Association of Global Custodians (AGC)¹⁰, the range and variety of out-of-network assets has continued to multiply. Out-of-network assets now encompass substantial markets in private equity and credit, digital assets, cryptocurrencies, physical assets, derivatives, loans and deposits.

This growth and diversity argued for re-titling the Out of Network Assets WG as the Alternative Investments WG. Its renewed purpose is to develop a series of best practices frameworks to help Securities Services firms manage the legal, regulatory, operational and risk management issues created by their responsibility for safekeeping and servicing alternative investments.

The other priority of the WG is to publish a document that will identify the material gaps in current financial market infrastructures and asset servicing models; deliver clarity on legal issues; align industry practices with regulatory obligations; and recommend workable solutions and risk mitigants to improve transparency, governance and operational efficiency in alternative investment servicing.

To fulfil these twin goals the WG will work with market participants to assess current market practices and infrastructures to understand how existing solutions can be developed to support the safekeeping, administration and supervision of alternative investment assets; identify legal and regulatory as well operational gaps; and recommend practical steps Securities Services firms can take to mitigate risks, enhance transparency and improve operational efficiency in alternative investment servicing.

5.3 Asset servicing

Asset servicing remains challenging for Securities Services firms. Capturing accurate corporate actions announcement data, processing corporate actions instructions in time to meet deadlines, voting proxies accurately and in good time and managing class action lawsuits on behalf of end-investors are all operationally intense.

The primary purpose of the Asset Servicing WG is to devise and issue best practice guidance to Securities Services practitioners for existing services. However, the Group also explores how asset servicing might be done more efficiently and proposes alternative approaches where these are judged to be faster, more accurate or less expensive.

In 2025 the WG published a white paper entitled A Call for Collaboration to Enhance Efficiency in Corporate Actions and Proxy Processes¹¹, which called for greater collaboration between issuers, agents, central securities depositories (CSDs), exchanges, data vendors and Securities Services providers to enhance the speed and accuracy of the information flows between issuers and investors.

The chief recommendation of the white paper was the establishment of a collaborative task force made up of issuers, transfer agents, CSDs, exchanges, data vendors and custodian banks to analyse existing processes and assess the benefits of fully automating announcements “at source.” This has the potential to create accurate and timely or “golden” records of corporate action and proxy voting information.

¹⁰ https://issanet.org/content/uploads/2013/04/2014-04_ONA_Report_Final.pdf

¹¹ https://issanet.org/content/uploads/2025/11/Asset-Services-WG-2025-White-Paper_FINAL.pdf

The WG is now monitoring industry developments in response to its automation “at source” recommendation. In the next year, the WG will publish a follow-up report, prepared in collaboration with issuers and their transfer agents. It will outline industry plans for implementing the recommendation.

The second priority of the WG is to improve how institutional investors take part in class action lawsuits. A report on the operational inefficiencies for Securities Services firms in processing class actions is in preparation. It will make recommendations for automation, standardisation and harmonisation of class action processes, to reduce costs and risks and increase speed and accuracy.

5.4 Cyber

Cyber-threats to Securities Services firms have increased in both number and variety. This has increased interest in threat detection and risk mitigation techniques to reduce the impact of cyber-attacks on individual firms and on the wider financial markets. It has also increased interest in the industry on best practices to follow when a counterparty is attacked successfully.

It was to address these needs that a Cyber WG was set up. The first task of the newly formed Group is to update the cyber-security advice published by ISSA in October 2018 in a paper entitled *Cyber Security Risk Management in Securities Services*.¹² That paper highlighted the then under-appreciated threats to money movements orchestrated by the securities service industry.

While the advice given in the 2018 paper remains valid, the update will add a forward-looking section on how AI and quantum computing will change the nature of cyber-threats. Importantly, the section will recognise that the industry itself is not static but evolves technologically.

The updated paper will offer advice on how firms can use new technologies to improve their own cyber-defences. Once that advice is settled, the WG will then explore whether it is necessary to update the 2020 ISSA White Paper entitled *Cyber Security Guidance Paper – Responding to an Attack*.¹³

The 2020 paper proposed actions that Securities Services firms might consider when responding to a cyber-incident. They included attaining an agreed minimum standard in terms of responsibility, planning, documentation and testing before an incident. The paper also proposed communication, impact assessment and recovery protocols to be followed after an incident has taken place.

5.5 Digital Assets

Digital assets is a term which encompasses a broad spectrum of instruments. They include cryptocurrencies, digital forms of money such as Stablecoins, tokenized deposits and central bank digital currencies (CBDCs), tokenized securities and funds, tokenized alternative assets such as private equity, private credit, real estate and infrastructure, and non-fungible tokens (NFTs).

Digital assets have yet to achieve substantial scale in any of these asset classes. But they are growing. Increased regulatory clarity, rising investor interest, widening use cases and effective remedies for the lack of interoperability between digital assets and between digital assets and traditional assets are giving digital assets considerable momentum. A trend is turning into a steady transformation, asset class by asset class.

¹² https://issanet.org/content/uploads/2013/04/ISSA_Cyber_Risk_in_Sec_Serv_October_2018.pdf

¹³ https://issanet.org/content/uploads/2020/08/ISSA_Guidance_to_Parties_affected_by_a_Cyber_Incident_FINAL.pdf

As a result, digital assets are becoming increasingly impactful in the Securities Services industry. Their potential benefits include improved efficiency, security and innovation in post-trade services. As they evolve, digital assets will also offer new ways to create, store and transfer value, challenging the status quo in the Securities Services industry from the front office to the back.

The Digital Assets WG was created to help the members of ISSA, and the wider Securities Services industry, to manage the opportunities and risks these developments represent. The overriding aim is to identify where adoption of digital assets is most likely to generate meaningful value in the short term and propose practical steps to increase the chances of successful adoption by the industry in the long term.

The starting point for the WG is the annual DLT in the Real-World survey, which is prepared by ValueExchange in collaboration with ISSA. It provides invaluable intelligence on where firms involved in the Securities Services industry are investing in digital assets, or planning to invest in digital assets, or withdrawing investment from digital assets. Its key findings will be published by the WG.

One area where the survey finds considerable and rising interest is the tokenization of collateral. The WG will assess the value of redesigning how collateral in tokenized form is identified, mobilised, valued, serviced and retrieved, against widespread expectations that existing processes can be transformed. A white paper on how tokenising collateral improves its mobility will be published.

Another area where the WG will follow interest identified by the survey is digital forms of payment. The initial focus is on using Stablecoins to meet payment obligations. A report will be published on the benefits and challenges of using Stablecoins to make payments.

Importantly, the report will include best practice guidelines when implementing a Stablecoin payments service. Once the Stablecoins study is published, the WG will explore other digital asset payments possibilities, such as tokenized deposits and tokenized money market funds.

5.6 Digital Identity and Onboarding

Completion of Know Your Client (KYC), Anti-Money Laundering (AML), Countering the Financing of Terrorism (CFT) and sanctions screening tests at onboarding is one of the main points of friction between the Securities Services industry and its customers. It is manual, duplicative, unstandardised, repetitive and prolonged.

The barriers include lack of standards, lack of transparency, repeated documentation requests and legacy systems, including the cost of integrating effective third party or collective answers into those systems. The answers put forward include centralised document repositories, sourcing data from third parties rather than clients, simplifying internal processes and adopting enabling technologies.

The Digital Identity and Onboarding WG was set up in 2022 to explore how the onboarding process could be improved. It published a paper itemising the obstacles to efficiency in August 2024¹⁴ and a second paper proposing solutions to those obstacles in November 2025.¹⁵ Chief among the solutions is digital identities, provided they meet agreed industry standards and requirements.

The current purpose of the WG is to define those industry standards. With a target of covering 90 per cent of use cases in the thirty most active securities markets, the standards are multi-asset class and multi-jurisdictional. The Group intends that the standards secure official support in each jurisdiction and provide a foundation for third parties to design services that turn the standards into day-to-day operational reality.

¹⁴ <https://issanet.org/content/uploads/2024/08/ISSA-Digital-Identity-and-Onboarding-defining-the-problem-final-05082024.pdf>

¹⁵ https://issanet.org/content/uploads/2025/11/ISSA-Onboarding-Solutions-Paper_FINAL.pdf

Standards have the potential to lower costs, reduce customer friction and mitigate risks in the onboarding process, but they need to be adopted. One step towards adoption is webinars and events to educate the industry about the merits of a revised approach to customer onboarding.

A second step is to recognise that adoption of identity and onboarding standards must be driven collectively rather than by individual firms. Asset managers, end-investors, central securities depositories (CSDs) and regulators as well as custodian banks and fund administrators need to support change in industry behaviour at onboarding.

5.7 Domestic CSDs

Domestic central securities depositories (CSDs) are a crucial component of the infrastructure that channels international capital into local securities and money markets. If domestic CSDs are inefficient, or fail to invest in their systems and people, or fall behind international standards, it disrupts the flow of capital around the world.

Yet domestic CSDs face many issues and challenges in fulfilling their crucial role. It was to understand what those issues and challenges are, and prescribe best practices to resolve them, that the Domestic CSDs WG was established. The goal is to reduce costs, increase operational efficiency and improve the user experience by lifting the performance of domestic CSDs.

The WG has since its inception published papers on *The Domestic CSD and Remote Working*¹⁶ (2022), *The Domestic CSD and Resilience*¹⁷ (2022), *Domestic CSD Due Diligence Processes*¹⁸ (2023), *Best Practices for Frontier and Emerging Markets Attracting Foreign Portfolio Investment* (2024) and *Managing Change from a Central Securities Depository Perspective* (2025).

Work ignited by the August 2023 paper, which addressed how to make the due diligence questionnaires (DDQs) issued by custodian banks to domestic CSDs less onerous, continues. The WG is engaging with the industry trade associations that issue DDQs, including the Association for Financial Markets in Europe (AFME), the World Forum of CSDs (WFC) and the Association of Global Custodians (AGC). The objective to refine and standardise CSD DDQs to make them easier to complete.

The second major initiative of the WG is a fresh examination of the challenges CSDs face in settling cross-border securities transactions at a time when settlement timetables are tightening. The Group is preparing a survey on the challenges facing CSDs managing cross-border transactions. Its findings will inform a paper on reducing the operational, legal, and regulatory frictions in settling cross-border securities transactions.

5.8 Emerging Themes

The Securities Services industry is shaped and re-shaped continuously by a fluctuating external environment. Macroeconomic, regulatory, technological, operational and commercial developments have a substantial impact on the industry in the medium to long term. Though their impact is often predictable, the industry has invested minimal time and effort in understanding external trends and preparing for their impact.

The Emerging Themes WG was set up to address that gap. Instead of focusing on what is affecting the industry already, the newly created WG aims to identify future impacts, and consider whether ISSA can contribute to mitigating, accelerating or managing the consequences.

¹⁶ <https://issanet.org/content/uploads/2022/03/ISSA-Domestic-CSDs-WG-Remote-Work-final.pdf>

¹⁷ <https://issanet.org/content/uploads/2022/03/ISSA-Domestic-CSDs-WG-Resilience.pdf>

¹⁸ https://issanet.org/content/uploads/2023/08/ISSA-Domestic-CSDs-due-diligence_Aug-2023.pdf

Once an impactful “theme” is identified, its possible implications are reviewed at a high-level only, with any formal reports produced within four to six months. The reports will recommend to the ISSA Board and Operating Committee topics that the WG considers worthy of further review by other WG.

The Emerging Themes WG has already identified its first subject. This is operational issues associated with securities which are restricted because of sanctions measures and countermeasures. The WG will publish practical guidance on the handling of restricted securities while they are blocked and on the management of the securities when restrictions are lifted.

The second “theme” pursued by the WG is a mapping of the potential evolution of Securities Services ecosystems. The Group will assess the impact of external trends, identify potential new competitors that might emerge and consider new partnerships and alliances that could be formed.

On the basis of the findings of the assessment, the WG will make diagrammatic predictions about what ecosystems might emerge in Securities Services in the future, including profiles of new or different market participants.

5.9 Evolving Technologies and AI

As a digital industry, Securities Services are affected profoundly by developments in digital technology. Its roles in clearing and settling transactions and safekeeping and servicing assets through data exchange are affected by Cloud computing, blockchain, AI, Application Programming Interfaces (APIs) and other emerging technologies such as quantum computing.

The Evolving Technologies and AI WG was set up in 2024 (as a successor to the Digitization WG formed in 2022) to help decision-makers in the Securities Services industry understand developments in digital technology, and how they might disrupt existing processes and systems or be used to generate additional value by enabling firms to transform the status quo.

In the potentially open-ended sphere of digital technology, the WG has a broad but limited remit. It covers Cloud; confidential computing; AI and large language models (LLMs); data management, quality and analytics; user experience (UX) and user interface (UI) design; APIs; digital assets infrastructure and blockchain; cyber risk management; and quantum computing.

In October 2025, the WG published a paper on *Digital Transformation in Securities Services – Client Communication*, which explored the persistence of manual processing in many parts of the industry. It discussed the internal and external catalysts for investing in the digitisation of manual processes and the various obstacles to progress. It also recommended a series of measures to increase the standardisation and digitisation of workflows.

A second paper followed in May 2026. *Big Tech and Securities Services: A Partnership-Driven Approach to Achieving Data and AI Goals* examined the partnerships several Securities Services firms have formed with Big Tech firms such as Amazon, Google, Microsoft and Open AI.

The paper included observations on how to identify areas that can benefit from a partnership, and how to enter and manage such partnerships. The WG is now preparing formal guidance for Securities Services firms contemplating partnerships with Big Tech firms and AI start-ups.

The second priority of the WG is to evaluate the progress of the Securities Services industry in deploying AI tools, both internally and in customer-facing services.

The results of a survey conducted in partnership with ValueExchange will be used to inform a white paper that will assess the readiness of the industry to adopt AI (including but not limited to data readiness), review actual deployments (including any new products and services) and examine the value created by the deployments.

5.10 Financial Crime Compliance

Financial crime is a critical risk management issue for Securities Services firms. The industry is subject to a series of laws and regulations that make firms responsible for combating money laundering, the financing of terrorism, sanctions evasion and everyday theft and fraud. Any failures are punished by regulatory fines and intensified surveillance.

Indeed, the Financial Crime Compliance WG was created in 2014 after two Securities Services firms were fined by regulators in the United States for failures in financial crime compliance.

That experience led to the publication by ISSA in August 2015 of a set of Financial Crime Compliance Principles for Securities Services firms to adopt. Revised in 2019¹⁹, the principles remain a crucial compliance tool, especially in markets where omnibus and commingled account structures are used.

The Principles are accompanied by a Due Diligence Questionnaire (DDQ) for completion by sub-custodians and other intermediaries that provide custody services. Its purpose is to make the assessment of financial crime compliance processes and procedures in the securities industry - as opposed to the correspondent banking industry – more efficient, by standardising the questions asked.

The DDQ remains a useful risk management tool that helps Securities Services firms comply with Know Your Client (KYC), Anti-Money Laundering (AML), Countering the Financing of Terrorism (CFT) and sanctions screening obligations. It also helps the industry to grow, not just by adding efficiency, but by promoting transparency and trust between organizations.

To keep it up to date, the WG reviews the DDQ regularly. Revised in 2019, 2021 and 2024, it is being revised again in 2026 to take account of newly emerging asset classes. The WG intends, once the updated version of the DDQ is complete, to add it to the due diligence platforms operated by Myriad Group Technologies (CODUDE) and SWIFT.

A new initiative undertaken by the WG aims to develop a securities lifecycle model that takes sanctions screening challenges and risks into account. The intention is to better understand current practices in sanctions management, with a view to identifying opportunities for improvement. Once the research is complete, the Group will publish a report. It will include best practice guidance on sanctions screening and a vision for standardising sanctions screening throughout the industry.

Finally, the WG is classifying instrument types from a compliance risk perspective, especially instruments that are regulated lightly or not regulated at all. By enabling the key compliance risk characteristics of an instrument to be matched against each instrument type, the new classification will enable Securities Services firms to manage compliance risk actively.

5.11 Investor Solutions

Securities Services providers settle transactions and safekeep assets on behalf of both end-investors and the intermediaries that service end-investors, such as asset managers and wealth managers. This means that the Securities Services industry is densely intertwined with buy-side institutions.

Transactional information flows from end-investors to asset and wealth managers and Securities Services firms, and from asset and wealth managers to Securities Services firms. Securities Services firms aggregate and process the transactional information into reports that are delivered back to end-investors and to asset and wealth managers for onward transmission to end-investors.

¹⁹ https://issanet.org/content/uploads/2023/01/2019-05-21_ISSA_FCC-Principles_second_revision_May_2019_final.pdf

These recursive information flows mean that changes in the behaviour of end-investors – such as the current transition to passive investment and growing interest in alternative asset classes²⁰ – alter the behaviour of asset and wealth managers. These in turn necessitate alterations in the behaviour of Securities Services firms.

The purpose of the Investor Solutions WG, which was set up in 2025, is to better understand this feedback mechanism. Its first task is to map the life cycle of a transaction from the end-investor to the Securities Services provider. Its second task is to understand any barriers to investment that persist within the life cycle.

The investigation aims to identify and remove those barriers. The first to be identified by the WG are limited digitisation of investor investment journeys and lack of standardised data. These shortcomings inhibit real-time and holistic access to information, and create downstream problems in the middle office, transfer agency and fund accounting functions.

To address the barriers, the Investor Solutions WG will compose and publish two papers. The first will share a set of key considerations that govern the level of digitisation of an investor journey. The second will itemise ways of standardising data, including the use of artificial intelligence (AI) and making it available to investors and intermediaries in real-time.

²⁰ See 2.3 “The Client Perspective” and 3.4 “Navigating in an Uncertain World” above.