FUTURE OF SECURITIES SERVICES

1. FOREWORD

The aim of this White Paper is to outline a set of key forces and strategic themes which are expected to impact the Securities Services industry over the coming five to ten years, to allow industry leaders to take informed actions and to foster collaboration among members of the International Securities Services Association (ISSA) in order to solve industry-level problems.

This report was produced by a working group comprised of selected ISSA members and Oliver Wyman and has been made possible through the support and engagement of the wider ISSA membership. The list of working group members is included in the appendix. The analyses and potential scenarios laid out are based on workshops held by the ISSA working group, ISSA industry insights and Oliver Wyman's analysis and market expertise. This version of the report has incorporated feedback from the webinars held with Members in October 2020.

2. EXECUTIVE SUMMARY

The Securities Services industry has generated relatively stable revenues driven by accumulation of Assets under Custody (AUC) or Administration (AUA) and underlying trading volumes, even during substantial market swings witnessed over the last decade. However, the last cycle has also seen continued fee compression and decreasing net interest margins at the core of the industry. Even the introduction of value-adding adjacent services has not sustainably offset fee pressure on core business models, since new services have typically been included in existing service offerings and have thus become subject to the same pricing challenges.

Looking forward, our analysis suggests that developments in the broader Capital Markets ecosystem will create continued top-line pressure for the Securities Services industry as we know it, which will make it difficult for some players to fund required investments and fend off the threat of potential disruption. For firms that can afford the required investment, there is a significant future growth opportunity arising from the servicing of new (digital) asset classes and leveraging of new technologies within Capital Markets, with higher margin for associated products and services.

On top of that, global geopolitical uncertainties increase the risk that the global Securities Services industry becomes regionally fractured. This might disadvantage firms that consequentially need to scale back their global business models. As a counterpoint, the firms that manage to retain global business models or which have a deep regional franchise in growing markets, may be able to increase their business.

With the knowledge that the Securities Services industry — as we know it — will undergo significant change over the next decade, but given the uncertainty of when and how this change will happen, we have taken a scenario-based approach to identify the drivers of change that are expected to have the largest impact on the industry.

The analysis of the working group, supplemented by research from Oliver Wyman and a survey of ISSA member institutions, all conducted for this report, identified ten important trends in Capital Markets and concludes that changes in investor behaviour, as well as changes in technology and technology-enabled competition, are likely to have the biggest impact on the industry:

Investor behaviour: A continuation of flows into alternative and digital assets, as well as further shifts towards passive/ETF structures combined with further globalisation of the asset flows and higher investor digital service expectations.

Technology and technology-enabled competition: Larger-scale adoption of Artificial Intelligence/Machine Learning/DLT, new business models based on new technologies, as well as new entrants to the industry from the technology sector.

Depending on the business model, scale and geographic footprint, four strategic considerations will be critical for players in the Securities Services industry:

Cost pressure to the core: Counter continued pressure on top-line revenues by placing additional focus on strategic cost reduction, doubling down on cloud-enabled modular fintech ecosystems to achieve higher levels of efficiency, forcing higher levels of service standardisation across clients, and pursuing strategic participation choices and industry consolidation.

New growth paths: Develop and seize new revenue opportunities by investing in new products and services, possibly built on data and Artificial Intelligence, recalibrating distribution channels and service offerings to reflect the increasing importance of buy-side clients and transforming underlying legacy IT infrastructure to increase flexibility for future innovation.

Industry disruption: Rethink positioning along the current post-trade value chain to ensure preparedness for potential industry disruption, potentially by filling capability gaps with partnerships and acquisitions, and reviewing insourcing and outsourcing decisions.

COVID-19 early lessons learned: Embed lessons learned from operating our businesses during the COVID-19 pandemic into future operating models by reviewing and rethinking existing (digital) transformation programs across the full value chain of activities, critically reviewing costly and manually intensive but non value-adding activities, and adopting new ways of remote and resilient working into Business as Usual (BAU) capabilities.

Considering the findings of this report, potential areas for collaboration within ISSA and between its member firms for the next three to five years could include the following topics. These are grouped according to strategic considerations and ordered within those groups by the feedback reflecting the early view of ISSA Members who participated in the webinars and the poll. This ordering has then been optimised for execution likelihood. Some of the ideas presented may not be achievable by ISSA and its members alone and/or may require extensive collaboration with other stakeholders.

COST PRESSURE TO THE CORE

Industry APIs: Joint development of standardised industry APIs for core industry processes together with key client/user groups on the buy- and sell-side. Standardised APIs will have a long-term industry value and facilitate data sharing and service interoperability between industry participants to counter the risk of API fragmentation that could arise if players develop their own APIs without broader industry interoperability.

Common data standards: Development of common data standards that facilitate data analytics creating value for clients that can be monetized in the industry and increase collaboration among industry players.

Front-to-back ecosystem cost reduction: Identification of areas that lead to inefficiencies for all Capital Markets participants and definition of potential measures to resolve these inefficiencies, which will also allow Securities Services firms to operate more efficiently.

Business Process as a Service (BPaaS): Options exist and further ones are starting to materialize within the BPaaS sector which as they grow can provide services at scale for the securities services industry. These could provide solutions to remove costs from the industry.

Cost sharing for selected R&D investments: Collaboration on key investments in digitalisation to improve cost efficiency in the industry and to accelerate a large-scale adoption and potentially reconsideration of industry utilities for non-value add and non-differentiating processes.

Consolidation within the industry: While further industry consolidation could be a lever for cost reduction it is out of the scope of this paper as ISSA would not be involved.

NEW GROWTH PATHS

Client value-add increase: Identification of areas where Securities Services firms can increase the value they provide to their clients, which in turn will allow firms to differentiate and expand margins.

Private Markets and digital assets: Development of a shared Private Markets/Alternative and Digital Asset infrastructure and common industry standards.

Pursue a more rigorous Front to Back cooperation: Identification of beneficial areas where ISSA can work with other trade associations to address opportunities to expand the services offered by our members. Additionally ISSA could open membership to firms who operate in the securities ecosystem with the intent to increase the effectiveness of the client experience.

Geographical cooperation: Facilitation of increased collaboration, specifically among smaller players without own direct networks; e.g. in specific Emerging Market countries to increase global reach and market coverage.

INDUSTRY DISRUPTION

Joint positioning: Joint efforts to accelerate the development of the securities services market standards for Environmental, Societal & Governance (ESG) or to develop common positioning for upcoming regulation.

Cyber threats arising from Cloud and Quantum Computing: Joint analysis and sharing of perspectives on risks that could arise from a mass adoption of Cloud and Quantum Computing in Capital Markets and Securities Services, specifically with regard to cyber risk.[1]

SaaS ecosystems: Development of an interoperable SaaS ecosystem for clients to obtain cloud-hosted data analytics and workflow solutions that are provided by different incumbents.

COVID-19 EARLY LESSONS LEARNED

Best practice sharing digitisation: Sharing of best practices and lessons learned from the accelerated digitisation efforts induced by running our businesses during the COVID-19 pandemic, to enable participants to review and improve own digitalisation programs.

Best practice sharing: Sharing of best practices with respect to the implementation of regulation and risk management/operational resilience, but also on digitisation and reduction of traditionally manually intensive processes.

Best practice sharing future of work: Sharing of best practices and lessons learned from operating our businesses during the lockdown induced by COVID-19 to enable participants to review and refine their views on the options available for the future of work.

1 ISSA Report: "Cyber Security Risk Management in Securities Services", Oct 2018

DEFINITIONS

We define Securities Services broadly as activities performed on behalf of issuers and investors to maintain and service securities across the life-cycle:

Investor Services: Consists of custody & settlement and fund services as well as ancillary services offered to custody clients, including custody-linked FX, securities lending, collateral management, liquidity services, and clearing.

Issuer Services: Consists of the corporate trust and depositary receipts businesses, proving trustee and agency roles such as Facility/Paying Agent, Common Depository, Trustee, Escrow Agent across Capital Markets areas (Structured finance, Project & Export Finance, Bonds & Debt Programs, Syndicated Loans), Notary function in the CSDs.

We segment the universe of Securities Services firms into:

Custodians: Custody-focused banks (for whom revenues are primarily generated from Securities Services activities) as well as Global Universal banks and Regional banks (for whom Securities Services is one revenue component amongst other retail and wholesale banking activities).

Central Securities Depositories: Core Market Infrastructure groups (CSDs and ICSDs) providing securities settlement and associated services.

Digital assets, also referred to as **crypto assets,** are categorised in this paper into three main groups, based on prior work performed by other industry bodies and regulators.[2] These are:

- **Payment Tokens,** which sub-divide into Crypto Currencies, Stablecoins (generally tokenised fiat currencies) and Central Bank Digital Currencies (CBDCs).
- **Securities Tokens,** which sub-divide into Asset-Backed Securities Tokens, also known as “non-native tokens,” because they represent non-digital assets, and Digital Native Securities Tokens.
- **Utility Tokens,** which give investors access to an actual or prospective product or service, such as an app.

The time horizon of this paper is five to ten years into the future, whilst the agenda for ISSA and its members has a time horizon of three to five years.

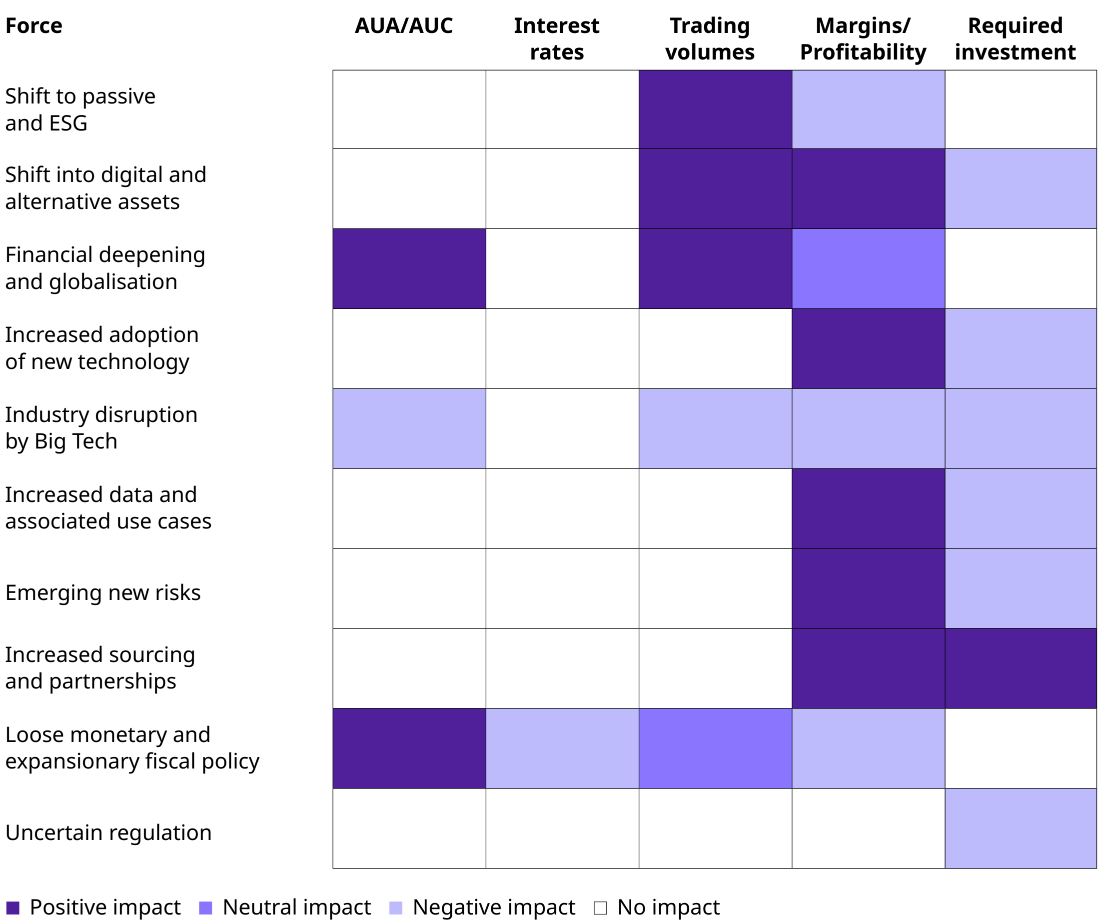
2 ISSA “Crypto Assets: Moving from Theory to Practice”, November 2019

3. KEY TRENDS AND CHALLENGES ACROSS CAPITAL MARKETS

The economics of the Securities Services industry are driven by overall values in AUC and AUA, trading volumes, interest rates and margins for services provided. A minimum profitability is required to stay in business and to fund investments for future growth and other initiatives.

We have identified ten forces (or trends) in the broader Capital Markets ecosystem whose development will most likely determine how these underlying drivers and the Securities Services industry itself will develop. The longer-term trend of margin compression is expected to continue and our analysis (see Exhibit 1) suggests that developments in the broader Capital Markets ecosystem will create continued top-line pressure in the future, whilst requiring participants to fund significant investments into new innovative products and services to deliver required growth, expand margins and fend off potential disruptors to the industry.

Exhibit 1: Impact of Capital Markets ecosystem trends on key drivers for the Securities Services industry from the ISSA Working Group analysis



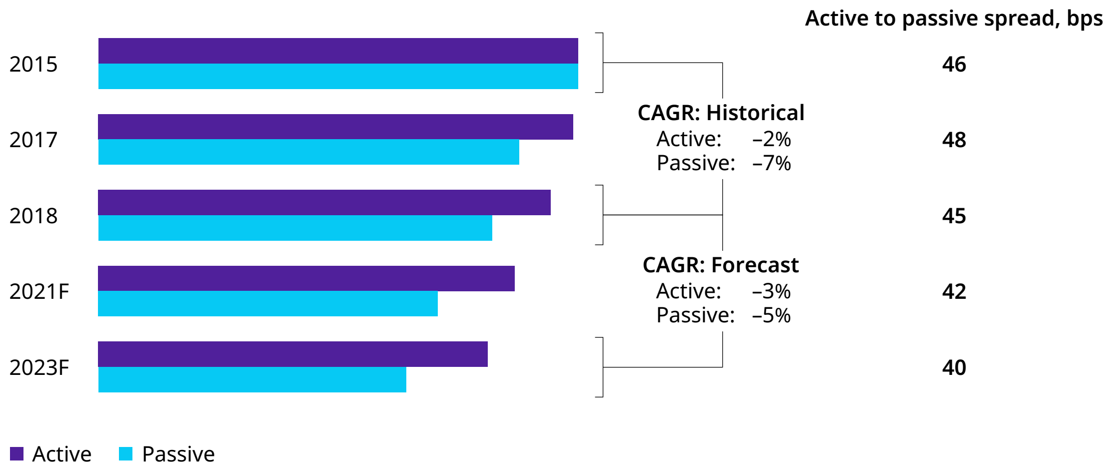
Source: Oliver Wyman

FORCE 1: SHIFT TO PASSIVE AND ESG

The needs of investors, together with the mix of services they will look to consume, will define the growth and margins of different elements of the Capital Markets ecosystem. Over the long-term, we expect continued growth in passive and ETF structures which will continue to lower overall fees in the Asset Management space by c.20% to c.38% by 2023. This shift will subsequently lead to lower revenues and potentially lower margins in the Securities Services industry but could involve a higher number of transactions.

We expect that COVID-19 will lead to an acceleration in investments into ESG or sustainability-linked products. Investors are now more aware of the susceptibility of certain sectors to macro risks and will consequently shift their portfolios to be less vulnerable to future macro risks, such as climate change. Securities Services can support this transition by providing increased transparency and reporting services for ESG.

Exhibit 2: Active and passive fees and spreads (%)
2015-2023F, indexed to 2015



Source: Oliver Wyman

FORCE 2: SHIFT INTO DIGITAL AND ALTERNATIVE ASSETS

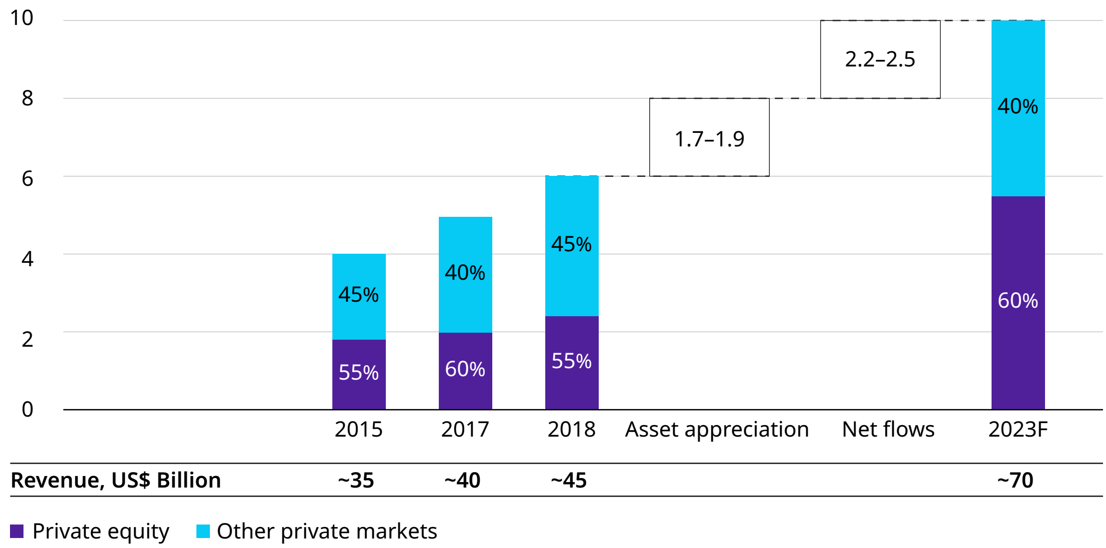
A shift from public to private, fractionalisation and a shift to digital have far reaching consequences for the Capital Markets ecosystem, which is largely built on the back of trading of traditional public assets.

The past decade saw an unprecedented shift from public into private and alternative assets. We expect this trend to continue in the future, as lower interest rates will encourage investors to increase their allocations towards private and alternative assets to generate additional yields. We foresee that the growth in alternatives will expand to additional asset classes (e.g. infrastructure and natural resources). Fractionalisation and tokenisation will increase the fungibility and liquidity of alternative assets and fuel further growth.

Digital assets are experiencing increasing demand from investors and the industry is steadily developing new products, services and infrastructures for the digital asset ecosystem. This will open new growth paths with attractive margins for Securities Services players who can afford to invest in the required infrastructure and risk management, but leave others with a shrinking pool of assets under custody and administration in traditional assets. We expect that only those firms able to invest heavily on their own or via partners will be able to grow in the new scenarios we have forecasted.

Exhibit 3: Private Markets AUM by segments, 2015-2023F

US$ Trillion



Note: Other private markets include Real Estate, Natural Resources, Private Debt and Infrastructure

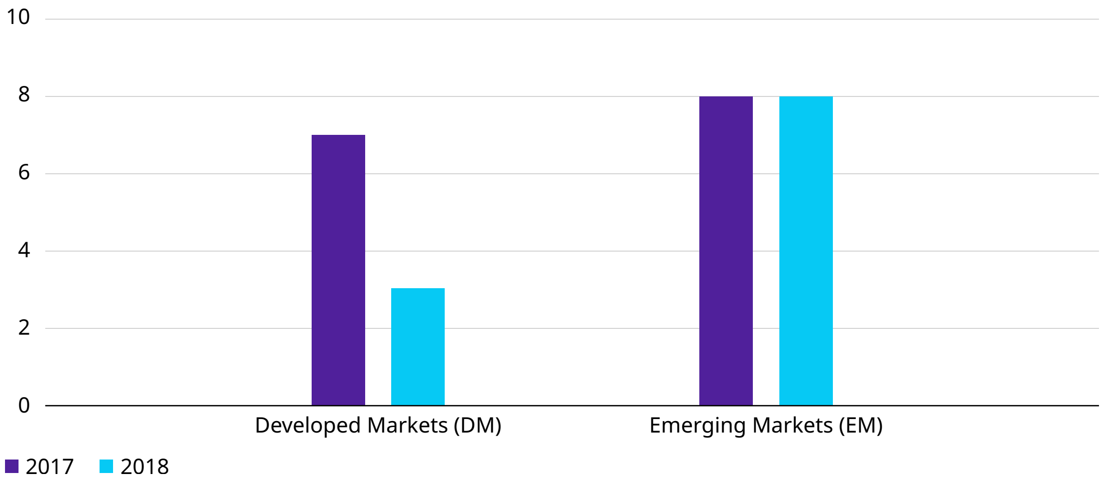
Source: Oliver Wyman

FORCE 3: FINANCIAL DEEPENING AND GLOBALISATION

The evolving and shifting distribution of wealth globally and levels of cross-border securities transactions are impacting the Capital Markets ecosystem. Growth in emerging markets, specifically in Asia and Latin America, will increase local savings and provide fuel for the growth of assets in the coming years. Developed markets investors will increasingly invest in EM, whilst EM investors will increasingly invest “at home” as local market infrastructure and capital markets develop. As a result, net flows into EM are increasing. The COVID-19 pandemic provided a setback both for wealth creation and cross-border transactions, but we expect the general trend to remain intact over the long-term. This trend will negatively impact Securities Services firms that fail to build up a global business model with an integrated EM footprint, whilst Securities Services firms with a truly international reach will benefit in relative terms from higher levels of assets under custody and cross-border transactions. Financial deepening in developed markets, specifically in Europe, has not occurred in a meaningful way over the last decade, with projects such as the EU Capital Markets Union (“CMU”) yet to deliver the desired results.

Exhibit 4: Net asset under management flows developed vs. emerging markets

% of previous year AUM



Source: Oliver Wyman, Morningstar

However, ongoing geopolitical uncertainties present the risk that the global Securities Services industry could become more regionally fractured as protectionist forces reduce market access for firms or diverging regulatory approaches put pressure on global business models. As we expect investors to continue to invest globally and in EM over the long-term, a potential regional fracture would make it even harder for some Securities Services firms to participate in this growth. However, firms who can nevertheless sustain a global model (standalone, or with partners) or who have a regionally deep presence embedded in growing EM regions can benefit over proportionally as other firms withdraw.

FORCE 4: INCREASED ADOPTION OF NEW TECHNOLOGY

Innovation in underlying technology is driving change across the Capital Markets ecosystem. Some firms in the industry do not have the advanced capabilities in new technologies that could be needed to deliver the services clients may want, exposing them to a risk of disruption from Big Tech players (see Force 5). New technologies are on the brink of moving from the experimentation to the adoption stage, but implementation will require incumbents to fund significant upfront investments before reaping the potential long-term. In recent years, many Capital Markets participants in the Banking and Market Infrastructure space have made inorganic investments to bring new technological capabilities in-house.

For Securities Services, the most tangible use cases for new technology (e.g. robotic process automation, artificial intelligence/machine learning) are aimed at increasing the efficiency of highly operationally intensive processes and can ultimately help to lower the industry cost base. However, experience has shown that cost savings are often passed on to clients and result in stagnant or even lower overall industry margins over the long-term. This could adversely affect smaller players who lack the required scale or who fail to adopt new technology to reduce their cost base. More innovative technology has yet to be widely adopted and deployed at scale (e.g. DLT), but in theory, has the potential to disrupt core industry processes.

For example, DLT's new approach to data management and sharing could help realise major operational efficiencies via transparent, harmonised and real-time data, along with more efficient settlement of transactions and processing. A number of exchanges and other types of marketplaces are embracing DLT already and changes to the post-trade landscape are significant (e.g. T+0 settlement).

With regards to new technology improving client usability, it is crucial to ensure that the benefits can be monetised and thus also accrue to the Securities Services industry. Lessons learned from the payments industry have shown the difficulties in pricing these client benefits, even after heavy investment from incumbents. A proven option to adequately monetise client-benefitting new technology is to proactively consider value-added service packages and the most appropriate forward-looking commercial models while implementing the new technology.

FORCE 5: INDUSTRY DISRUPTION BY BIG TECH

Over the long-term, we expect new entrants from the technology sector (including, but not limited to Big Tech) to enter Capital Markets and challenge incumbent business models as they have done in other sectors of the Financial Markets, either by launching services on their existing market platforms, making acquisitions, or by entering via partnerships with incumbents. Established Big Tech players could look to abruptly position themselves in the ecosystem, potentially by leveraging their existing interfaces already used by end-clients and investors as well as their technological leadership. This disruption could inflict pressure on incumbents in the rest of the value chain who are suddenly no longer in sole command of core industry processes or margins.

A likely mode of entry for technology firms could be the expansion of existing (client) platforms to include Capital Markets products and services (e.g. moving into retail and then into institutional client base). Direct entry into the industry by acquiring an incumbent may be a potential option, though this could face challenges over required regulatory approvals and anti-trust rules, specifically in Europe. Securities Services firms could move to protect their position in the value chain by proactively partnering or acquiring smaller technology companies to enhance connectivity, offering better or cheaper services, or building a modular ecosystem around them. The existing data pools of industry players represent a significant advantage over Big Tech and can provide a meaningful advantage to industry incumbents if they are used successfully to provide proprietary insights and solutions.

FORCE 6: INCREASED DATA AND ASSOCIATED USE CASES

The evolving role of data across the Capital Markets ecosystem will pose both threats and opportunities for participants. Going forward, we expect that data-related use cases (e.g. analytics, visualisation, combination of proprietary with publicly available data or traditional with alternative data) will have a larger share in overall value creation in Capital Markets, while the underlying data becomes increasingly commoditised (e.g. a continued demise of research). The Securities Services industry has the opportunity to draw on their existing data assets to provide analytical services. This is a unique chance to transform into data-led organisations that can face-off to technology firms, leveraging the existing wealth of data on securities flows and beneficial ownership in order to provide insights to clients (e.g. on collateral optimisation opportunities, market alerts based on combining securities flows with real economy data) and further build out solutions (e.g. advanced reporting, yield maximisation tools). However, data ownership and privacy considerations will need to be carefully considered.

FORCE 7: EMERGING NEW RISKS

The Capital Markets ecosystem will need to respond to “new” risks such as cyber risk and indirect risk types such as environmental risk. This will require the industry to invest into its own processes but may also open up new revenue pools to help participants manage these risks. Specifically, although new technologies offer enormous promise, significant caution is also required to control and mitigate emerging cyber risks. The over-riding requirement to guard against cybercrime and to preserve operational resilience is so critical to service provision that it cannot be compromised by the rushed adoption of new technology. Other risks, such as climate change, will have a first order impact on the Banking and Asset Management industry, but will also indirectly impact Securities Services.

The COVID-19 pandemic has recently highlighted the importance of cyber resilience in times of crisis and the increased importance of home network security to cyber experts. The rapid enforced shift to remote networking led to a spike in cyberattacks and, in particular, the attack surface increased due to the remote distribution of the workforce. The industry must now quickly adjust to the “new normal” way or working caused by the COVID-19 pandemic and prepare diligently for future possible cyberattacks and other “black swan” events. To do so, risk assessments should be performed ahead of any potential crisis, testing and refining the planned crisis response. Communication and response in the event of cyberattacks should also be developed ahead of any such attacks. An accelerating adoption of both cloud utilisation and quantum computing will amplify the risk for potential cyber risks.

Similarly, the COVID-19 pandemic has also reminded us that non-financial issues such as environmental risk or climate change can have significant financial impacts. The industry will have an important role to play in supporting its Banking and Asset Management clients in measuring, monitoring and reporting the environmental and broader sustainability performance of their assets (e.g. physical and transition risk). It will also have to shift its own model towards a more sustainable path.

Exhibit 5: Oliver Wyman proprietary cyber resilience framework

1	Target Operating Model (TOM): Cyber risk strategy, Reporting, roles and responsibilities		
2	• Data Classification policy • Security controls • Vendor/3rd party management • Incident response playbooks	• Cyber Ops policy • Cyber Risk management policy • Compliance policy • Physical/Network security policy • Threat intelligence policy	• Asset management policy • Security management policy • Endpoint management policy • Data back-up and recovery policies • Business continuity policy
3	• Cyber Risk Quantification • Vulnerability management • Penetration testing	• Risk Identification • SDLC security testing	• Red teaming • Risk mitigation and response • Risk analysis and evaluation
4	• Cyber Risk Appetite + Dashboard		
5	• Reporting to regulators and shareholders		
6	• Asset management • Data classification • Endpoint security • Application security • Network security	• Data security • Identity and access management • Cyber threat intelligence • Security monitoring	• Forensic tools • Data recovery • Incident response tools
7	• Training for senior management and board • General awareness • Training for CSOC and Cyber risk teams • Training for IT operators and developers	• Linkages to performance management/KPIs • Certifications for IT operators and developors	

Short-term target Long-term target

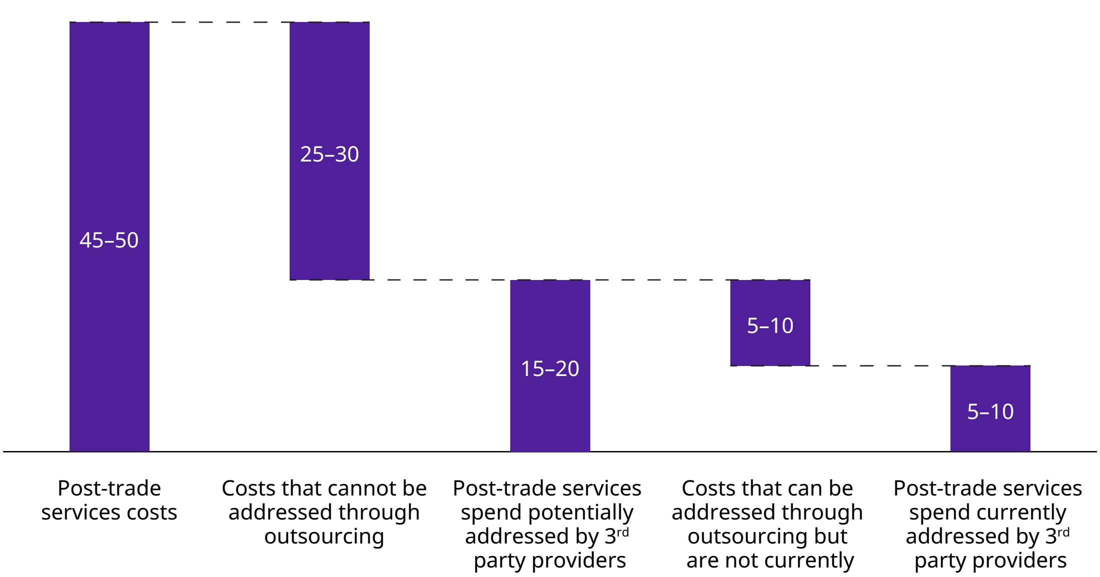
Source: Oliver Wyman

FORCE 8: INCREASED SOURCING AND PARTNERSHIPS

Capital Markets participants continue to scrutinise their high cost bases and explore measures to increase efficiency by forming strategic partnerships or sourcing of lower cost vended/managed services and solutions. There is room for further cost-sharing and outsourcing. Of post-trade associated costs that could be outsourced by global Tier-1 and Tier-2 sell-side institutions, just c.30-50% are currently outsourced. We also expect the buy-side to continue recent focus on reductions to their cost base by removing intermediaries, outsourcing of additional services and next generation software and platforms.

The Securities Services industry has the opportunity to help these Capital Markets participants reduce costs by providing some of the services (e.g. trade execution, data, reconciliations, analytics and reporting) as outsourced or managed services. Similarly, Securities Services itself could explore a more modular approach and form partnerships with technology companies to address capability gaps and advance cost solutions. A more modular approach would require firms to upgrade third party risk management frameworks in order to better manage risks arising from critical dependencies on third parties — the recent experience from the COVID-19 pandemic should be taken as an example of a “stress scenario” that led to disruption for some BPO firms. One of the key impediments for clients to source more from external providers, or for Securities Services to provide holistic solutions, is the lack of standardisation in the industry. This might be an area which requires further cooperation towards an industry-wide solution. Further standardisation of data standards and protocols would allow the industry to mutualise and reduce costs by making decisions that lead to similar technology solutions and needs. This could also allow a reconsideration of previously failed attempts to form industry utilities for non-core processes.

Exhibit 6: Current and potential post-trade outsourcing 3rd party provider spend
US$ Billion; Global Tier 1 & Tier 2 sell-side institutions only



Source: Oliver Wyman

FORCE 9: LOOSE MONETARY AND EXPANSIONARY FISCAL POLICY

Governments and Central Banks may set the broad direction of travel for the Capital Markets ecosystem by influencing interest rates and asset prices with policy decisions. Specifically, post-COVID-19 pandemic, we expect a “lower for longer” interest rate environment and in some countries the continuation of negative interest rates, these will impact the Securities Services industry negatively via a lower achievable net interest margin. This will also lower yields for investors who will become even more cost-sensitive and seek to reduce the prices they pay to their service providers across the value chain. However, lower interest rates will encourage debt issuance and inflated asset prices. Together with expansionary fiscal policy, overall assets under custody and administration may therefore increase. Geopolitical uncertainties may continue to drive short-term spikes in market volatility and trading volumes.

FORCE 10: UNCERTAIN REGULATION

Similar to the last decade, regulation will continue to be a key driver for the overall Capital Markets ecosystem and determine the direction of policymakers at a global, supra-national and national level. The introduction of new regulation and standards, specifically on topics such as Climate Risk and ESG, Cyber and overall operational resilience (but also resolvability and recovery & resolution planning for critical infrastructures), will require investments from the industry. It remains to be seen to what extent regulations and standards will be drafted to guide the adoption of new technology and refine the framework for data requirements and reporting. Considering recent geopolitics developments and also the impacts of the COVID-19 pandemic, a continued fracturing of regulation has become more likely, which will add further compliance costs for the industry.

CONCLUSION

Among these ten forces, the ISSA working group believes that the most impactful forces for the Securities Services Industry revolve around changes in investor behaviour (i.e. shift to passive and ESG, digital and alternative assets, globalisation of asset flows) as well as changes in technology and technology-enabled competition (i.e. adoption of new technology, industry disruption by Big Tech). These two composite forces are analyzed in Section 5 of this paper following a discussion in Section 4 of strategic considerations for the industry to view those composite forces through.

4. STRATEGIC CONSIDERATIONS FOR THE SECURITIES SERVICES INDUSTRY

The key trends and challenges laid out in the previous section are expected to exacerbate recent developments and impact industry top-line revenue and investment requirements.

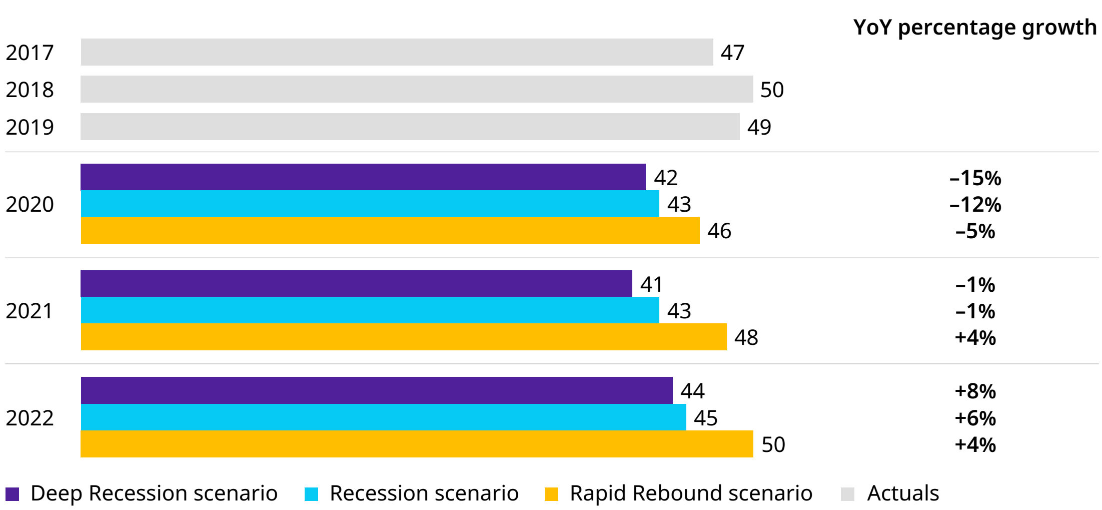
The Security Services industry has generated relatively stable revenues (+1% CAGR, 2014-2019) driven by accumulation of assets under custody or administration and trading volumes, even during the substantial market swings experienced over the past decade. However, the last cycle has also seen continued fee compression and decreasing net interest margins in the core industry. Even the introduction of value-adding services has not sustainably subsidised fee pressure in the core business, as new services were often packaged within existing service offerings and became subject to the same pricing pressure.

Looking forward, our analysis suggests that developments in the broader Capital Markets ecosystem will create continued top-line pressure for Securities Services as we know it, which will make it difficult for some players to fund required investments and fend off the threat of potential disruption. We expect core industry revenues in 2022 to be lower than in 2019 in two out of our three outlook scenarios. For firms that can afford the required investments, there is a significant future growth opportunity arising from the servicing of new asset classes and leveraging of new technologies within Capital Markets, with higher margins for associated products and services. These growth opportunities can potentially subsidise the decline in core industry revenues.

Depending on the business model, scale and geographic footprint, four strategic implications will be critical for players in the industry.

Exhibit 7: Securities Services industry outlook

Revenues in US$ Billion (excluding custody-linked FX and securities lending)



Source: Oliver Wyman

STRATEGIC CONSIDERATION 1: COST PRESSURE ON THE CORE

In a world where there is continued downward pressure on fees and further shifts from higher to lower margin solutions, the Securities Services industry should pursue different levers to offset pressurised top-line revenues.

These strategies can be put into practise by placing additional focus and urgency on strategic cost-cutting initiatives. At the same time, the IT infrastructure needs to be updated to be able to operate as a cloud-enabled modular fintech ecosystem to achieve higher levels of efficiency across the value chain of activities. Forcing standardisation across core workflows and clients enables further efficiency gains. Another lever would be pursuing strategic participation choices by refocusing the business portfolio, utilising or withdrawing from low margin services or driving scale via M&A.

STRATEGIC CONSIDERATION 2: NEW GROWTH PLANS

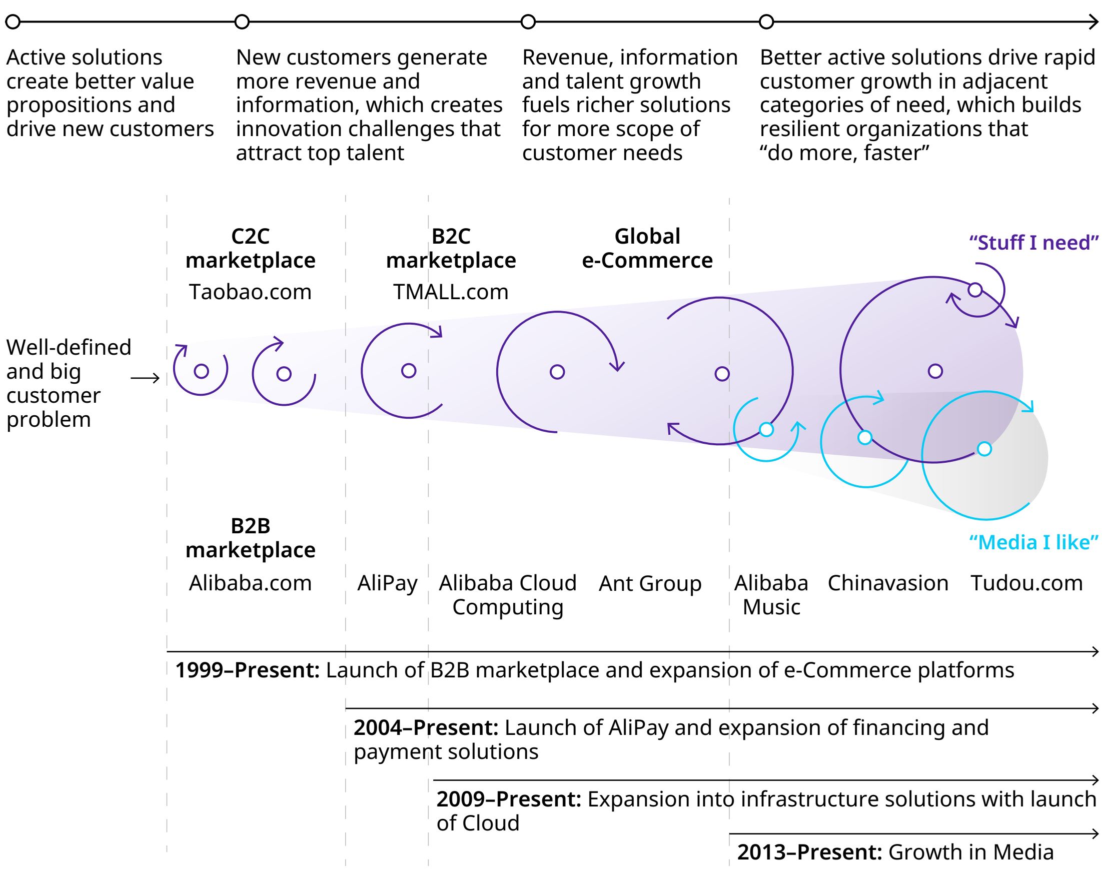
Demand for new solutions (e.g. for digital assets) or yet unaddressed client problems (e.g. global real-time asset holding and collateral management) exists and provides white space for Securities Services to grow and diversify revenue streams. Particularly the data management and analytics space provide untapped potential for the Security Services Industry. Changes in investor behaviour have increased demand for digital services, which in turn requires investment in digital platforms and capabilities that Big Tech players already have and are rapidly improving. This will require the industry to invest significantly into new products and services (e.g. new services such as outsourced trade execution etc.). In addition, legacy IT infrastructures need to be transformed to increase flexibility and enable future innovation (e.g. a cloud-based infrastructure allows for modular development of additional services or onboarding of new fintech partners). Improving infrastructure can also give rise to new standards for interfaces or in wider technological infrastructure changes. Lastly, distribution channels need to be recalibrated and services for different client groups reimagined (e.g. growing importance of buy-side clients), while further capabilities are added (e.g. advanced AI-based data analytics).

STRATEGIC CONSIDERATION 3: INDUSTRY DISRUPTION

The current industry structure and post-trade value chain poses both opportunities and risks for incumbents. Big Techs may enter the industry and create ecosystems and platforms that take away strategic control and thus profits from incumbents. In some sectors, the entrance of Big Techs has increased the market size for all players by addressing unserved client needs. In other sectors, services from Big Techs have overlaid existing infrastructure and substitute traditional products and services. Currently, the overall presence of Big Tech in finance is still nascent and mostly prevalent in specific niches such as payments and front-end client-facing functions. However, with the growing importance of customer-centric capabilities and data, even in traditional value chains, the likelihood of Big Tech market entries are increasing. To mitigate risks and seize opportunities from a potential disruption of the industry structure by technology firms, the industry should redefine established post-trade value chains to increase client value and focus on areas with a competitive advantage. This may require further outsourcing of activities in utilities (e.g. KYC, corporate actions), requiring high levels of coordination across the industry and creating capacity for new value-added solutions such as data analytics, liquidity, and collateral management or outsourced trading. Capability gaps can potentially be filled, and delivery can be accelerated, by forming partnerships or acquiring technology firms. Investment in digital platforms require particularly careful consideration as the experience in the payments industry suggests that the returns of this investment may accrue almost entirely to customers via enhanced services for little or no incremental revenues.

Independent of whether new value-added solutions are created internally or externally via partnerships or M&A, the industry should consider using a flywheel approach for innovation. In this approach, an active solution is created for a well-defined and significant customer problem, creating a better value proposition and generating new customers. New customers will generate more revenue and information and attract more talented staff to join. In turn, this revenue, information and talent will fuel richer solutions beyond the initial narrow customer problem. Ultimately, these richer solutions will drive further customer growth in adjacent areas. This flywheel momentum will make it difficult for competitors to catch up.

Exhibit 8: How a flywheel momentum is generated — Alibaba example



Source: Oliver Wyman

STRATEGIC CONSIDERATION 4: COVID-19 PANDEMIC EARLY LESSONS LEARNED

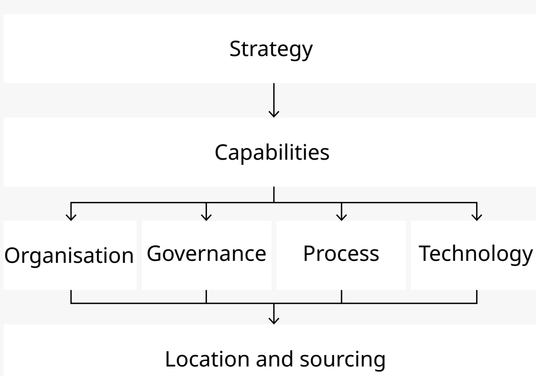
The COVID-19 pandemic will accelerate/decelerate global megatrends and the industry needs to make sure that the “positive” lessons learned from the pandemic are retained for future operational models (e.g. accelerated trends: digital and data, public debt crisis, remote working; decelerated trends: global mobility, economic globalisation). To achieve this, the industry needs to review and rethink existing transformation programs across the full value chain of activities to ensure that digitisation and the adoption of new technologies is accelerated. A “post COVID-19 pandemic” framework needs to be set up to ensure that operating models adopt productivity gains achieved during the pandemic. A post COVID-19 pandemic framework also includes building resilient and asset-light organisations that can be fully productive and responsive whilst working remotely (e.g. higher number of client meetings and quicker service response times to service inquiries), critically reviewing costly, but non value-adding, and non-essential internal and external activities. This pandemic may also influence FMI’s and regulators to rethink some physically and manually intensive processes (e.g. AGMs/EGMs) that have a significant knock-on effect on the Securities Services industry.

Focus on Digitisation in Securities Services

As the analysis in this report has shown, digitisation initiatives are at the centre of most strategic considerations for the industry, cutting across the various elements on the overall strategic agenda and critically determining success for the industry in the future. COVID-19 has reinforced the importance of digitisation and acted as an accelerator to existing initiatives.

Cost pressure to the core	**New growth plans**	**Industry disruption**	**COVID-19 pandemic early lessons learned**
Success in digitisation initiatives aiming at IT infrastructure cost reduction (e.g. cloud), automation of manual tasks (e.g. RPA) and other initiatives will determine the success that the industry has in resolving the cost pressure to the core.	Success in digitisation initiatives aiming at the development of new services (e.g. in data and analytics) or the creation of new digital infrastructure (e.g. for private assets) will determine the success that the industry has in developing new growth plans.	Success in digitisation initiatives aiming at outsourcing of activities (e.g. KYC, Corporate Actions) and the filling of capability gaps via partnering with FinTechs will determine the success that the industry has in fending off a potential disruption from the outside.	Success in digitisation initiatives aiming at the redesign of opaque and obsolete processes to increase operational resilience and definition of new operating models for the organisation will determine the success that the industry has in operating in a post COVID-19 pandemic world.

Example target operating model



This means that digitisation needs to become a priority topic for management boards (where this is not already the case), but more importantly that digitisation should not be considered and approached in a siloed manner for one of the above-mentioned dimensions only.

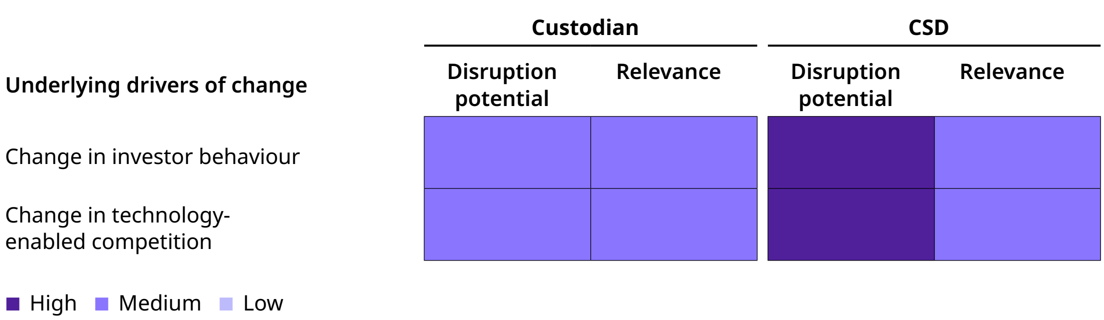
Digitisation initiatives usually are both dependent and reinforcing to each other. A top-down approach is required that defines a “Digital” or “Virtual” Securities Services firm across all elements of the target operating model (see Exhibit 9), ranging from the overall vision and strategy down to the sourcing strategy for IT infrastructure.

5. OUTLOOK FOR THE SECURITIES SERVICES INDUSTRY

With the knowledge that the Securities Services industry, as we know it, will undergo significant change over the next decade, but the uncertainty of when and how this change will happen, we have taken a scenario-based approach to distil the drivers of change that we expect will have the largest impact on the industry. A survey with ISSA member institutions from the working group, conducted for this report, finds that the industry expects changes in investor behaviour, changes in technology, and technology-enabled competition will have the biggest impacts going forwards. As part of this survey, we have analysed the underlying drivers of change for those two areas (i.e. changes in investor behaviour and technology/technology-enabled competition) and looked at potential disruption impact[3] and relevance for the overall Securities Services industry. Participating member institutions were allocated to two groups (Custodians vs. CSDs) and evaluated the impact on the overall industry from their respective perspectives. Overall, the CSD group predicted the impact from these two scenarios on the Securities industry would be greater than the impact predicted by the Custodian group.[4] This survey was conducted in early 2020, before the outbreak of COVID-19 and whilst we expect long-term drivers of change to remain the same, the relative priority for some drivers might have shifted due to Wave 1 of the COVID-19 pandemic (e.g. there is now a higher priority on investor demand for digital service delivery).

Exhibit 9: Survey result overview

Summary of impact on the overall Securities Services industry as ranked from the perspective of the Custodian and CSD survey groups respectively



Source: ISSA member survey

3 Disruption impact defined as size and velocity of impact compared to industry readiness

4 In depth survey methodology outlined in the appendix

CHANGES IN INVESTOR BEHAVIOUR

The survey shows that continued asset flows into alternative and digital assets, as well as into passive funds and ETFs, are the most important and relevant disruption drivers. Our survey also shows that CSDs assess the relevance and disruption impact on the overall industry as higher than Custodians. As these results are based on self-assessed criteria, it remains open to debate whether the results indicate that CSDs actually have a higher susceptibility to these changes than Custodians, or if this is merely the view of our survey participants.

Exhibit 10: Change in investor behaviour theme[1]

Average ratings of disruption potential and relevance for the industry from the perspective of Custodians and CSDs

	Custodian		CSD	
Underlying drivers of change	**Disruption potential**	**Relevance**	**Disruption potential**	**Relevance**
Continued flows into alternatives and digital assets	Medium	Medium	High	High
Investor demand for digital service delivery	Medium	Medium	High	Low
Continued flows into passive funds and ETFs	Medium	High	High	High
Rise of "Generation-Z" investor type	Low	Low	High	Medium
Growing importance of retail over inst. investors	Low	Low	High	Medium
Growing self-direction of investment decisions	Low	Medium	Medium	Medium
Accelerating technology adoption	Medium	Medium	Medium	Medium
Growing demand for personalised services	Medium	Medium	Medium	High
Growing demand for data solutions	Medium	Medium	Medium	Medium
Accelerating trust in technology solutions	Low	Medium	Medium	Medium
Globalisation of asset flows	Low	Medium	Medium	Medium
Relaxation of data sharing and privacy rules	Medium	High	Low	Medium
Relaxation of suitability rules	Medium	Medium	Low	Low

■ High ■ Medium ■ Low

1. Includes the following relevant forces from Section 3: increased adoption of new technology, financial deepening and globalisation, shift into digital and alternative assets and shifat to passive and ESG

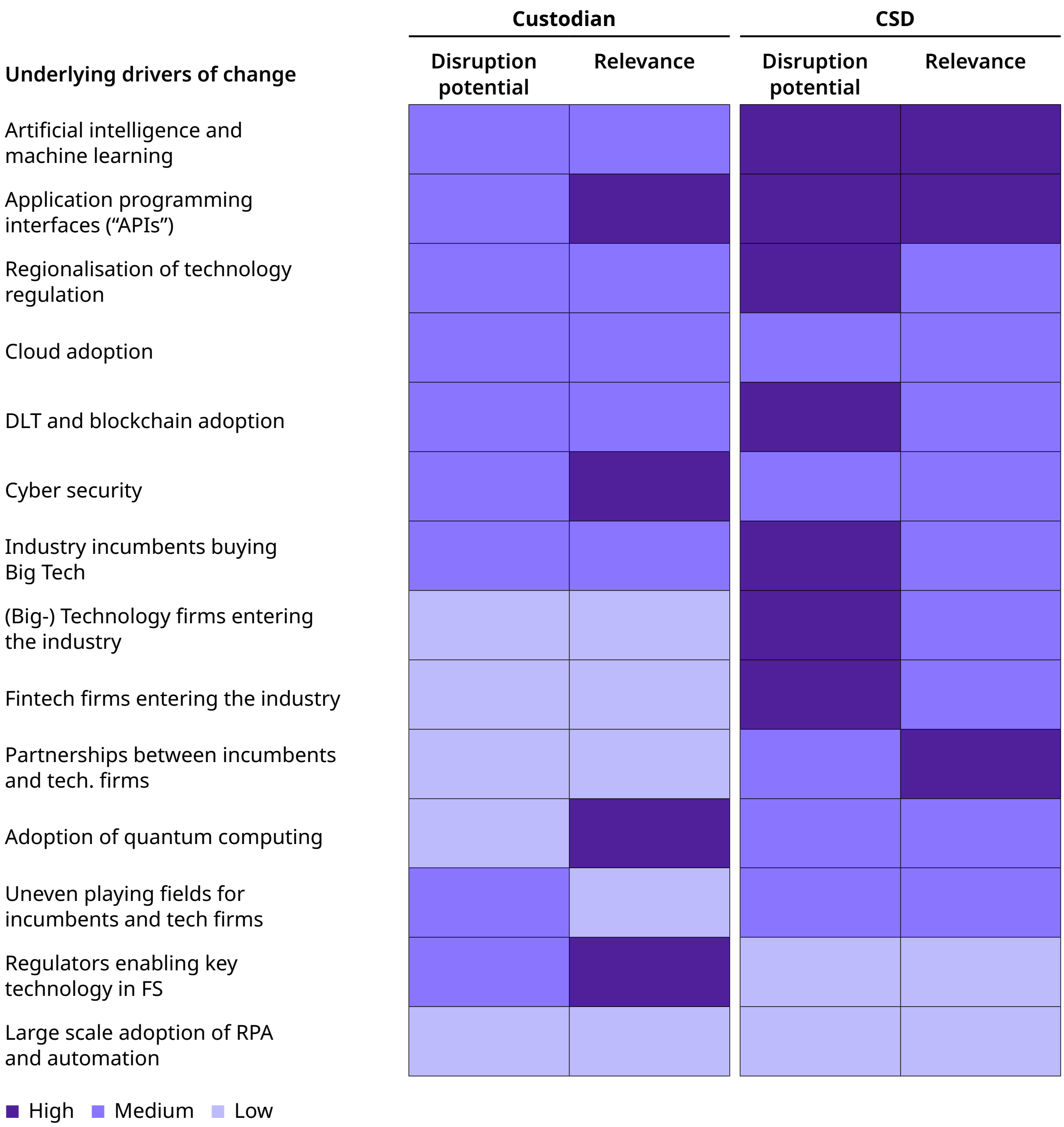
Source: ISSA member survey

CHANGES IN TECHNOLOGY AND TECHNOLOGY-ENABLED COMPETITION

A large-scale adoption of AI/ML and APIs has been identified as highly relevant and disruptive for the industry. New competition enabled by technology could highly disrupt the industry but is currently believed to be less relevant. Again, CSDs attach a higher disruption impact and relevance to some of these changes than the Custodians in our survey. Again, it remains open to debate whether the results indicate that CSDs actually have a higher susceptibility to these changes than Custodians, or whether this is only the view of our survey participants.

Exhibit 11: Change in technology and technology-enabled competition

Average ratings of disruption potential and relevance for the industry from the perspective of Custodians and CSDs



Source: ISSA member survey

Each industry participant will continue to closely monitor the development of these change drivers in order to seize opportunities and mitigate the risks that are potentially arising. For some change drivers, early (warning) signals that trends are materialising are already observable in the industry. Meanwhile, other trends are still in their infancy and it is not clear whether they will materialise at all. Whilst this analysis will be included in every institution's strategic planning process, some themes will be better and more impactfully dealt with on an industry level via collaboration among industry participants.

6. DISCUSSION OF AREAS OF FOCUS FOR THE SECURITIES SERVICES INDUSTRY OVER THE NEXT THREE TO FIVE YEARS (ONCE FINALISED THIS COULD INFORM THE AGENDA FOR ISSA GOING FORWARD)

Foreword

The ideas presented in this section are meant to inform and guide a discussion within the ISSA membership on the areas of focus for the industry in light of the potential future scenarios and impacts presented in this document. The following areas include feedback from the first syndication with the Membership in October 2020, and reflect the priority given in that feedback.

The 2021 ISSA Symposium will be the next major milestone for Members to debate the relative priorities. This will underpin how ISSA's strategy and three to five year agenda might evolve to support these industry efforts. Some of the ideas presented may not be achievable by ISSA and its Members alone and/or may require extensive collaboration. The final three to five year agenda will be the result of a syndication and feedback process with the entire ISSA Membership, Committees and agreement of the Board. This section outlines a second draft of industry focus areas as the continuation of this syndication and feedback process.

Ideas for discussion

The members of the International Securities Services Association can work together on specific themes, identified via the analysis conducted for this report, and help the Securities Services industry to transform and better meet future client demands.

We recommend discussing the outlined industry focus areas with the following goals in mind. Ideally, items to be included in the final version of this paper should:

- Be critical for the future success of ISSA members and the Securities Services industry overall.
- Be addressable within the next three to five years.
- Benefit from a collaboration among industry members, common positioning and standard setting.

The following ideas are clustered according to the strategic considerations from Section 3 (Key Trends and Challenges across Capital Markets) and have been detailed and prioritized including new topics identified in the first broad syndication and feedback process with ISSA Membership in October 2020:

STRATEGIC CONSIDERATION 1: COST PRESSURE ON THE CORE

Industry APIs: Development of standardised industry APIs for core securities processing and settlement processes that allow Capital Markets participants to further simplify and streamline their operating model and remove costs (for example, regulatory reporting or processing of corporate actions). This should counter the risk of API fragmentation that could arise if various players develop own APIs without broader industry interoperability.

Standardised APIs should become the conduit of information in the industry that allows firms to perform and monetise additional value add services. These APIs will also simplify operating models for key client groups on the buy- and sell-side, and ideally these client groups should determine their preferred standard setting body and co-develop preferred solutions.

Common data standards: Development of common data standards that underpin the development of industry APIs and facilitate data monetisation in the industry and collaboration among industry players.

Front-to-back ecosystem cost reduction: Identification of areas that lead to inefficiencies for all Capital Markets participants and definition of potential measures to resolve these inefficiencies, which will also allow Securities Services firms to operate more efficiently.

Business Process as a Service (BPaaS): Options exist and further ones are starting to materialize within the BPaaS sector which as they grow can provide services at scale for the securities services industry. These could provide solutions to remove costs from the industry.

Cost sharing for selected R&D investments: Collaboration on key investments in digitalisation to improve cost efficiency in the industry. Joint proofs of concepts and prototypes (e.g. for RPA and AI/ML) for example in a joint sandbox could help to lower investment requirements for individual players and significantly accelerate a large-scale adoption in the industry. Another consideration of an expansion of industry utilities could be worthwhile, even though previous attempts have often failed. This could allow Securities Services firms to move non-core processes to utilities in order to lower costs and redeploy resources for value-adding activities.

Consolidation within the industry: While further industry consolidation could be a lever for cost reduction it is out of the scope of this paper as ISSA would not be involved.

STRATEGIC CONSIDERATION 2: NEW GROWTH PLANS

Client value-add increase: Identification of areas where Securities Services firms can increase the value they provide to their clients (e.g. via mass customisation), which in turn will allow firms to differentiate and expand margins based on the additional value that is provided to clients.

Private Markets and digital assets: Development of a shared Private Markets/Alternative and Digital Asset infrastructure and common industry standards with focus on both market coverage as well as cost efficiency. The aim should be to mutualise and lower required investment cost specifically for smaller players. Given the challenges of developing a shared infrastructure, the industry could, as an alternative, pursue the development of joint standards that ensure the infrastructure developed by different players would be interoperable and hence result in lower operating costs and higher efficiency for the industry overall.

Pursue a more rigorous Front to Back cooperation: Identification of beneficial areas where ISSA can work with other trade associations to address opportunities to expand the services offered by our members. Additionally ISSA could open membership to firms who operate in the securities ecosystem with the intent to increase the effectiveness of the client experience.

Geographical cooperation: Increased collaboration, specifically among smaller players, to increase global reach and market coverage via different partners, to benefit from increasingly global assets flows into EM.

STRATEGIC IMPLICATION 3: INDUSTRY DISRUPTION

Joint positioning: Joint positioning efforts for key industry topics to proactively influence and drive the industry agenda (e.g. joint participation in industry consultation processes for upcoming regulations and the creation of market best practices). Key topics for joint positioning efforts could be the securities services market standards for Environmental, Societal & Governance (ESG) or the development of Capital Markets (for example the European Capital Markets Union) or other initiatives. Key focus shall be to avoid a further regionalisation and fracturing of markets and regulation in a post COVID-19 pandemic world.

Cyber threats arising from Cloud and Quantum Computing: Joint analysis and sharing of perspectives on risks that could arise from a mass adoption of Cloud and Quantum Computing in Capital Markets and Securities Services, specifically with regard to cyber risk.

SaaS ecosystems: Development of an interoperable SaaS ecosystem in which (buy-side/sell-side) clients can obtain cloud-hosted data analytics and workflow solutions that are provided by different incumbents.

STRATEGIC CONSIDERATION 4: COVID-19 PANDEMIC EARLY LESSONS LEARNED

Best practice sharing digitisation: Sharing of best practices and lessons learned from the accelerated digitisation induced by COVID-19 to enable participants to review and improve their own digitalisation programs.

Best practice sharing operational resilience: Sharing of best practices for the implementation of regulation, risk management/operational resilience, and digitisation of manually intensive processes specifically on topics where the overall industry is interconnected and events or changes have knock-on effects on the Securities Services industry.

Best practice sharing future of work: Sharing of best practices and lessons learned from operating our businesses during the lockdown induced by COVID-19 to enable participants to review and refine their views on the options available for the future of work.

APPENDIX: WORKING GROUP PARTICIPANTS

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APPENDIX: SURVEY METHODOLOGY

The survey conducted for this report with ISSA member institutions, followed a two-step approach. In the first step, working group members from both Custodian and CSD side discussed and aligned on the key drivers of change for the two scenarios. In the second step, working group members from the CSD side and working group members from the Custodian side separately evaluated the implications of each driver of change for the entire industry. Both the CSD and the Custodian groups consisted of four survey participants.

The evaluation criteria were:

- Proximity to “core” Securities Services industry capabilities
- Size of impact
- Velocity of impact
- Readiness to respond

These evaluation criteria were then translated into Relevance (Proximity to “core” Securities Services industry capabilities) and disruption potential (Size of impact/Velocity of impact/ Industry readiness).

Disclaimer

It is ISSA's intention that this draft report will be updated after a broader syndication and feedback process with ISSA members and committees. As such, this version of the report shall only be distributed to ISSA members and committees for the sole purpose of collecting feedback on the contents of the report and for developing a shared agenda for ISSA for the next three to five years.

This document does not represent professional or legal advice and will be subject to changes in regulation, interpretation, or practice.

None of the products, services, practices or standards referenced or set out in this report are intended to be prescriptive for market participants. Therefore, they should not be viewed as express or implied required market practice. Instead, they are meant to be informative reference points which may help market participants manage the challenges in today's securities services environment.

Neither ISSA, nor the members of ISSA's Working Group listed in the Appendix, nor Oliver Wyman, warrant the accuracy or completeness of the information or analysis contained in this report.

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