

ISSA



ISO 20022

Report

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Foreword

ISO 20022 promises many current and long-term advantages, but industry adoption comes at a cost. It is therefore of paramount importance that the Securities sector within the financial services industry gains as complete a picture as possible of institutions' readiness and willingness to adopt.

The purpose of this report is to provide ISSA Members, and the industry, with an update on the state of adoption of ISO 20022 within the Securities sector. It shares some insights and recommendations based on Working Group insights, analysis and discussion and incorporates the results of the 2020 ISSA ISO 20022 survey. The Working Group concludes with the next steps for ISSA and the Securities industry more broadly to overcome some of the challenges that have been identified and make the most of the opportunities that ISO 20022 presents.

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1 Introduction

In 2018, SWIFT surveyed its global community to assess the appetite for a migration to ISO 2022. The survey concluded that while the payments community was in favor of a migration, the response from the Securities sector was not clear-cut. Since then, a migration date has been agreed for payments flows – November 2025, but there is no globally accepted clear-cut way forward for the Securities industry to migrate to ISO 2022.

Growing pressure from regulators, coupled with the need for clarity so that Securities participants can plan for their futures, triggered ISSA to form an ISO 2022 Working Group (WG). The remit of the ISO 2022 WG was to gain insight into the willingness of the actors within the Securities sector to adopt the standard, as well as identify any possible opportunities for, or barriers to adoption.

An important consideration for the group was that ISO 2022 is much more than a messaging standard. Within the standard there are three identifiable layers:

- Conceptual layer – the ISO 2022 business model
- Logical layer – the ISO 2022 messages
- Physical layer – the technical syntax

The ISO 2022 WG members convened to explore the following areas:

1. Current usage levels of ISO 2022 and other standards
2. The extent of current and planned investments
3. Assessment on whether there is a clear business case around adoption
4. An approach to possible migration paths
5. How the industry can collaborate to encourage and facilitate adoption

In order to garner broader input, ISSA reached out to other industry bodies and chose to survey its Members as one additional method of gaining insights.

Over the summer of 2020, ISSA published a [context document](#) and surveyed its Members. Three segment reports were produced by the WG to represent: Banks, Financial Market Infrastructures (FMI) and Technology Providers. The full reports of each have been reproduced in Appendices 1, 2 and 3 of this report. There are other resources available for further education on the ISO 2022 topics including the «Dummies Guide to ISO 2022» which can be accessed at: <https://www.swift.com/swift-resource/184556/download>

This report shares insights and key findings from the WG review of the use and adoption of ISO 2022 in the Securities sector including results from the survey. It highlights and debates the opportunities and challenges for ISO 2022 adoption in Securities markets. The report concludes with recommendations and suggested next steps.

2 Summary of Key Findings

This section presents a summary of the key insights from the WG discussions and survey analysis. Overall, the survey insights were consistent across all segments (Banks, FMIs, and Technology Providers). The opportunities for adoption of ISO 20022 presented by these insights as well as the associated challenges are also discussed in the next section.

1. Nascent technology could be a driver for usage of ISO 20022.

The industry is evolving and needs to move beyond the traditional mind set around standards adoption. The adoption of ISO 20022 should not be a conversation about messaging syntax but rather about how the industry can use the data standard to enable the new asset classes and technical infrastructures to become interoperable with the old. Payments adoption of ISO 20022, the evolving wider use of Application Programming Interfaces (APIs) and Distributed Ledger Technology (DLT) in Securities markets are viewed as areas that may shift the business case and benefits of ISO 20022 adoption, but it is too early for the necessary depth of opinion to be a clear driver for adoption.

Adoption of ISO 20022 data model in Securities markets could help bridge the old world with the new.

2. Today, there is limited adoption of ISO 20022 across global Securities markets.

Where there has been adoption this has been driven by regulatory decisions (e.g. Shareholder Rights Directive II (SRDII)), regulatory reporting (e.g. Central Securities Depositories Regulation (CSDR) and Securities Financing Transactions Regulation (SFTR)), market infrastructure adoption (e.g. TARGET2-Securities (T2S) or The Depository Trust & Clearing Corporation (DTCC)) or changes to address a feature not covered by ISO 15022 (e.g. proxy voting/general meetings). It is noted that even though T2S uses ISO 20022 this is not often used between the CSD's users at the local market level. Current adoption levels of ISO 20022 are relatively low when compared to ISO 15022 – recent figures from SWIFT show that ISO 15022 accounts for two-thirds of the total Securities traffic exchanged over its network and of the 6,000 Securities participants who use SWIFT today, less than 300 use ISO 20022, whilst in some markets and segments ISO 20022 is not used at all.

Under existing trajectories and planned developments ISO 20022 will not become the preferred standard within the next 5 years.

3. Investment in ISO 20022 adoption is primarily driven by requirements set by regulators or FMIs.

The existing ISO 15022 messages fulfil their requirements with a high STP rate, particularly in settlement and reconciliation processes. Interest levels for any further adoption purely focus on areas where high rates of STP have not been achieved. The WG acknowledges, and the survey found, instances where ISO 20022 is being delivered as part of a «re-platforming» exercise.

Industry participants are only adopting ISO 20022 when they have to rather than as a strategic choice.

4. The Industry does not see the business case for a full adoption of ISO 20022.

In part this is because the high-volume ISO 15022 messages are broadly adequate and adoption of a new ISO standard in areas where there are already high rates of STP is viewed as being costly. In addition, firms' own data models are generally proprietary and unlikely to be driven by ISO 20022 as they cover the gamut of required front to back data transportation. While it is acknowledged that there are theoretical areas of benefit in adopting ISO 20022 (e.g. additional functionality, technical features, and payment consistency) these do not outweigh the cost of migration to this new standard and are not large enough to generate a high value business case. A number of the survey participants have recently moved to ISO 15022 and need a return on that investment before future expenditure.

There is no global business case to migrate to ISO 20022, each firm's business case depends on its individual strategy, systems, Market Infrastructure requirements and customer needs.

5. Asset Owners (AO) and Investment Managers (IM) will not drive adoption of ISO 20022.

The buy side expects interoperability between themselves and their suppliers. The provision of better quality standardised «data» from the Securities Servicers opens up the possibility to create value add services and insights. The integrated platforms that AO and IMs use must be able to interact with the rest of the Securities Services industry and ISO 20022 provides the ability to solve for this.

Interoperability is a key feature which the Securities market must enable, for the good of the whole market and not expect «client demand» to be the driving force.

6. There is no industry appetite for a big bang adoption of ISO 20022 within the next 5 years.

However, there is clear support for a phased adoption approach – by business area. Although none of the respondents to the survey intend to adopt ISO 20022 fully across all categories within the next 5 years, ISO 20022 is acknowledged to be the standard of the future in the Securities markets. There is little support for a migration plan with a time-line of less than 5 years.

ISSA members need to prepare for prolonged co-existence.

7. Co-existence and co-maintenance are required during any transition.

Where adoption occurs within a specific business case there is an appetite for co-existence and co-maintenance to enable firms to migrate at their own pace and to facilitate the development of tools that can support this transition.

Any plans made to move a set of products onto an ISO 20022 paradigm must allow for interoperability and a transition period.

Although there is a clear level of support and opportunities for adoption of the ISO 20022 standard, there is also a need to focus on resolving some of the barriers that exist to both encourage a path towards greater adoption and gain wide industry support.

2.1 ISO 20022 Opportunities in Securities

From both discussions and the survey, the WG identified opportunities in the adoption of ISO 20022 to improve capability as well as to prepare to capitalise on future technological and business innovations.

- **Early adoption of ISO 20022 is key to benefiting from future market innovations.**

All survey participants overwhelmingly agreed that ISO 20022 provided a good foundation on which future innovations could be unlocked by enabling interoperability across markets. Data sharing through interoperable APIs based on a common ISO 20022 data repository was seen as big opportunity for innovation, e.g. integration with Distributed Ledger Technology (DLT). This has been the case with Open Banking and PSD2 initiatives in consumer and commercial banking and addresses some of the opportunities observed in the ISSA [«Future of Securities Services»](#) paper.

Today ISO 20022 is a machine-processable repository of content including the definitions of business concepts, messages and processes required to describe financial transactions that are based on business events that are occurring today (e.g. trade matching). These business processes must be enriched to effectively support the way institutions interact in the cases of DLT and APIs. One example would be how a financial institution connects and interacts with a DLT network through an API for «digital» processes, e.g. instant /atomic settlement. ISSA should build on the existing industry momentum behind ISO 20022 to address this short coming.

These definitions of business concepts, messages and processes can, and should, be used to underpin the standardisation of the Securities market going forward to allow long term interoperability between markets and their participants for both securities and tokens in their various forms (e.g. Central Bank Digital Currency [CBDC], DLT native and non-native tokens etc.).

ISSA should publish from the ISSA DLT WG (and elsewhere outside of ISSA) education material for «digital providers», so these providers understand the benefits of using the ISO 20022 Data Dictionary for their new paradigms to reduce the risk of fragmentation.

- **ISO 20022 is critical to enabling Securities integrate with future payments infrastructure.**

Over 30% of the SWIFT payments traffic is initiated from Securities businesses. As these payments messages begin to migrate to ISO 20022 individual firms will need to assess whether it is efficient for their Securities departments to operate on a different standard and what the operational consequences of that might be, for example when it comes to providing consolidated reports to customers or screening transactions.

- **Regulatory & FMI instigated change provides an opportunity to consider a more holistic approach.**

There have been, and will continue to be, changes made by the regulators and FMIs in respect to the adoption of ISO 20022. Securities market participants should look at these requests and grasp the opportunity of the required implementations to think more holistically, on an end-to-end basis, about what more they can implement to bring further business benefit.

- **Technology providers have the capability to support migration.**

Overall, technology providers have the capability and experience to support migration. Their own interests to provide solutions for their clients align perfectly and they are starting to see market interest in the solution offerings. There are also opportunities

for these vendors to provide improved services to support interoperability during the adoption phases of ISO 20022. Aligning further with the standards community including FIX and FpML could also create additional benefits throughout the whole value chain and the technology providers are well positioned to enable this.

- **Platform upgrades provide the opportunity to adopt a more flexible standard in ISO 20022.**

Numerous firms are looking at renewing their technology platforms over the next decade. The use of ISO 20022 to form the data standards underpinning these renewals would change the business case dynamics as the use of ISO 20022 provides a richer functionality that makes it easier to build a new technology solution.

- **Turning unstructured messages into a structured and machine readable format.**

There are still a number of areas in Securities processing that are not automated, for example Account Opening is recognised as an issue in the industry but the existing ISO 20022 messages are not utilised at the moment and could be optimised or further implemented across the industry. Using ISO 20022 protocols to create new business value through the automation of complex and manual processes has a substantially better business case than moving mature processes, e.g. Settlements and Reconciliations, from ISO 15022 standards.

- **Corporate Actions automation appears to be the biggest opportunity for ISO 20022 adoption.**

There is also an opportunity to establish stronger industry wide market practice rules to increase levels of STP and predictability in Corporate Action processing. Firms should look at the adoption of ISO 20022 in this business area and establish whether the increase in client satisfaction, increase in efficiency and reduction in risk creates a compelling business case.

- **Due to lack of big bang migration appetite, we must drive industry momentum from selective high benefits areas.**

Although there is no support for a big bang migration there are clear drivers and opportunities in some areas to create value as ISO 20022 is adopted. For example, General meetings (including Proxy) and Account Opening were identified as business processes with high risk, low client satisfaction. Improved automation levels are available using ISO 20022.

2.2 Challenges Impacting ISO 20022 Adoption

Several challenges and threats hindering adoption of ISO 20022 were highlighted.

- **The business case for a wholesale adoption of ISO 20022 is unfavourable.**

The market believes that the move to ISO 20022 does not have the benefits case that it needs to re-write all the data models and messages within the Securities markets.

- **Client demand from end investors and asset managers is nascent.**

The ultimate clients of the services are sheltered from the messaging concerns as their servicers provide propriety links to them or their IT providers provide the solution and so there is no compelling need for the Securities industry's customers to want to change.

- **Migration approach and timing not aligned or clear.**

The industry would prefer a coordinated approach to timing, but the general consensus is that the migration of Securities messages would only make sense after the migration of the Payments messages in late 2025 and should be aimed at post 2027 to allow appropriate resourcing and planning.

- **ISO 20022 is constrained by ISO 15022.**

The ISO 20022 XML schema offers a significantly richer data set than ISO 15022. However, to facilitate co-existence and translation there is a market agreement that for Corporate Actions and Settlement Flows ISO 20022 and ISO 15022 message sets should evolve in lock step. Hence changes made to ISO 20022 are also applied to ISO 15022, and so ISO 15022 acts as a brake on ISO 20022's evolution.

- **Long term, it is possible that Artificial Intelligence (AI) may make «messaging migrations» obsolete.**

Syntax of messaging is important now but given the emergence of new techniques such as Natural Language Processing (NLP) and other AI, it is not clear if the need for structured standardized message formats will hold such importance over the medium term. Whether it will make sense to take a traditionalist's approach to messaging convergence in the future is an open question. However, underlying standards (the business model) will still be needed for AI and NLP to work between parties.

- **Many Securities transactions are cross-border and no single regulator oversees these flows.**

The roadmap for alignment between different regulators both in terms of banking and local Securities markets makes it hard to envisage any global alignment in the short to medium term. Firms will need to navigate largely uncoordinated approaches on Securities standards, but this may translate into a core need to ensure that they can accommodate the highest standard levels when transacting cross border.

3 Recommendations & Proposed Next Steps

Based on the expertise of the WG and the industry feedback, the ISSA WG has made the following recommendations to support the industry in benefitting from ISO 20022 adoption:

1. ISSA should help educate and inform the Securities industry on issues related to ISO 20022 adoption and business drivers.

- There are poor levels of industry transparency on take up of ISO 20022, and these will be further complicated by the shift from classic messaging channels to a multi-channel data exchange model. The WG needs to agree a model to track status on industry adoption of ISO 20022.
- Many firms struggle to assess the benefits of ISO 20022 adoption. There is material benefit from the ISSA membership providing insights and a framework for assessing the merits of these models.
- There is a lack of understanding about ISO 20022 and the WG should encourage and help ISO to educate the market.
- To help adoption, the tools to access the ISO 20022 Data Dictionaries should be improved to allow developers (such as API developers) who are not familiar with the standards to interact more easily with them.

2. The Securities industry should focus on developing ISO 20022 capabilities in areas that are sub-optimal in current operating models, rather than attempting to force a holistic migration agenda.

- The shift to a multi-channel data engagement model between industry players makes a forced migration impractical without a regulatory mandate.
- The growth in API usage under proprietary standards places the past standards work at risk, unless collective focus is given to alignment to a set of standards.
- The growth of digital assets and new venues provides an opportunity for early adoption of an industry preferred standard, if given focus.
- There are clear areas of interest in areas of Securities processing that are poorly automated such as account opening and tax processing; further interest is in discovering options, to enhance Corporate Actions messaging.
- The WG recommends that industry groups and regulators should not force a wholesale migration as there is a substantial cross border element to the Securities industry.
- Migration and decommissioning of ISO 15022 message standards should be further in the future than 2027.

3. ISSA should look to promote interaction between ISO 20022 and other key industry standards.

- Interoperability between different message standards (e.g. ISO 15022, ISO 20022, FIX and FpML) and different technologies (e.g. DLT and APIs) is key and the industry should work towards this.
- The WG recognises that the investment industry uses multiple standards across the front to back office and alignment to a single end to end syntax is unlikely, but alignment on a single data model is desirable.
- The WG needs to invest time to explore how ISO 20022 currently interfaces with other prominent data standards and work to ensure that ISSA pursues a model where this is made explicit so that it can facilitate end to end communication and integration.

4. The Industry should collaborate to define a set of standardized «utility APIs».

To avoid everyone building similar APIs that will result in re-work and market fragmentation, the WG should look at the Business elements of ISO 20022 and collaborate, with ISO, to ensure that they evolve and are relevant for APIs and DLT / digital assets. There is also a need to make ISO 20022 resources more readily available and user friendly, so that API developers can easily integrate with the standard. The collaboration with ISO should also address new business processes such as Atomic Settlement and Finality Updates.

Based on these core recommendations, ISSA will pursue the following next steps:

- A.** The WG will start work in 2021 with ISO and others to improve and promote the available educational materials to facilitate the adoption of ISO 20022 including the developer tools to enable easier access.
- B.** At the next call, the ISSA DLT group will extend the WG focus on standards to actively consider ways to leverage ISO 20022 for digital asset interfaces and DLT workflow solutions.
- C.** Form a WG on API standards to consider the paths to harness the existing fragmented API models that are rapidly evolving (Q2 2021).
- D.** The ISO 20022 WG will consider approaches to improve interoperability with different leading industry standards (Q4, 2021).
- E.** Create an ISO 20022 best practices paper that looks to advise firms and industry bodies on the benefits and drivers of ISO 20022 adoption, especially with regard to Corporate Actions. (Q4, 2021)
- F.** Sponsor an annual survey to measure ISO 20022 adoption rates and provide feedback to the industry (Q2, 2022).

Appendix 1:

ISO 20022 Working Group – Stream Banks

A. Summary Findings

- The banking segment currently has limited adoption of ISO 20022.
- Respondents have indicated that any wholesale adoption needs to be driven by either the regulators or market infrastructure providers.
- The reason for the focus on regulatory or market driven adoption is because the business case for a discretionary or voluntary adoption is not strong enough to make it a priority for firms.
- It was also expressed by respondents that for securities messages, the existing ISO 15022 messages fulfil their requirements with a high STP rate at the current time.
- The respondents are unclear whether they actively want and would advocate for a regulatory or market infrastructure driven mandate for the end to co-existence to force the adoption of ISO 20022 or, whether at this current time, respondents would prefer to leave the adoption to the discretion of market participants. Banks prefer to deploy ISO 20022 where it solves a problem, or a business case makes it an economically viable option.

B. Survey Participant Profile

- The August 2020 ISSA ISO 20022 survey received 39 responses from various organizations, or parts of organizations in the case of universal banks. These break down into 19 banks (universal, custodian and investment), 10 Financial Market Infrastructures ((I)CSDs and exchange groups) and the rest being technology or data providers.
- Of the banking respondents, 80% of respondents' roles were focused on Securities Services. With 70% having global coverage and the remainder being split equally between regional and a domestic focus.
- The majority of respondents in the banking stream had transaction flows of over 10million settlements per year. There were 9 firms who processed less than 10million settlements with the lower bound being <500k. The remainder were service providers to the industry.
- With 19 responses from banks, including some coverage from regional and domestic respondents, including known responses from large universal banks with both global clients and offices in many local markets, the coverage of the ISSA community is reasonably strong, so no further outreach was deemed necessary at this stage just to drive more coverage.

C. ISO 20022 Usage and Capability

Core Survey Findings

- Overall usage of ISO 20022 is low, when focusing on core areas of functionality, 58% (11/19) respondents had no capability in Settlements and Reconciliation, 73% (11/15) had no capability in Corporate Actions and Income and none (15/15) had capability in Tax Management.

- Strongest capabilities and usage are in Proxy and AGM, with 47% (7/15) having capability either on the market side or via translation tooling. Feedback on this indicates that it is likely to be linked to regulatory initiatives such as a response to the second Shareholder Rights Directive.
- Usage of the messages was primarily over the SWIFT network (15 respondents) with emerging use over APIs (6 respondents). There was limited use over file transfer (5 respondents), VPN/leased lines (4 respondents), DLT (2 respondents), SFTP (2 respondents) and over the internet (1 respondent).
- Most participants have plans to materially increase the use of ISO 20022, with four respondents planning to do so in the next year and another 11 in the next three years. Four respondents have no developments planned.
- Of those planning to develop ISO 20022, there is a heavy focus on Corporate Actions (12 respondents have plans) and Proxy (11 respondents have plans). Only nine have plans for Settlements and Reconciliation as well as for Regulatory Reporting, seven for Collateral Management, six for Investment Funds. No respondents have plans for the development of ISO 20022 for Tax or Account Opening.
- There was a mixed view between developing a full data model (9 respondents) and deploying data translation tools (7 respondents) although the two are not mutually exclusive.
- 18 respondents indicated that developments of ISO 20022 were driven by a central market or regulatory requirement. Limited development is linked to discretionary investment. The regulations which were driving ISO 20022 were predominantly European in source, respondents quoted SRD II, CSDR, SFTR, ECMS as well as requirements from T2S.
- Banks have clarified that there is no demand from buy side / asset managers for ISO 20022.
- There is no clear alternate to ISO 20022 emerging as a new industry standard. Respondents either expect to remain on ISO 15022 or use proprietary standards. There is neither clear agreement as to whether the adoption of ISO 20022 by FpML would drive a business case for full migration.
- Very few firms have a data model built around ISO 20022. Most are either on proprietary models or ISO 15022 based models although some are starting to build on ISO 20022 where new platforms are being developed.

D. ISO 20022 Development Business Case

Core Survey Findings

- The majority of survey participants do not find that there is a clear business case to justify investment unless driven by an external requirement. In the current environment there are competing priorities for investment spend and other initiatives have a stronger business case and are considered higher priority. Respondents articulated concerns as to the high cost to deliver the full adoption of ISO 20022.
- It was also noted by the banking respondents that there was a lack of demand from clients for the implementation of ISO 20022 which in turn detracts from a possible business case.

- The banking respondents did identify that there are benefits to implementing ISO 20022, with additional functionality (11 respondents) cited as the main reason, however, did not express that this was strong enough to justify the implementation. In this context respondents cited that ISO 15022 has a high STP rate and performs most if not all functions well. Where there are specific use cases, ISO 20022 can be deployed for that purpose, without full adoption (as seen with SRD II).
- Despite not having a strong business case to adopt ISO 20022 for Securities, most respondents confirmed their plans to adopt the new standard for payments messages.
- Where respondents have a business case for the further adoption of ISO 20022, many are driven by regulation or through a mandate of the market infrastructure provider, although there is an emerging interest for ISO 20022 as a potential standard for API solutions. Respondents did indicate that demand from clients would drive a business case, but at this time many stated that this was not the case.
- Adoption of individual use cases / message types is unlikely to drive a tipping point. More FMIs mandating ISO 20022 may drive full adoption but it is still business case driven.
- Banks acknowledge that the messages with low or no STP on ISO 15022 offer the best business case, but not necessarily for full adoption. The areas are Corporate Actions, Proxy Voting/Meetings, Account Opening. The use of ISO 20022 as a Data Dictionary for APIs was also reconfirmed.
- Concerns were raised that the greater depth offered by ISO 20022 also creates more complexity and opportunity for divergence from a single standard. Also, there were observations that the current deployment of ISO 20022 was not consistent between CSDs.
- Very little appetite to move from ISO 15022 for Settlements which are high in STP.
- The majority of respondents indicated that they felt that the reasonable lead time for adoption was «after 5 years» (13/15 respondents) but only 1 replied «never». This would imply that it is an accepted inevitability.

E. ISO 20022 Adoption Approaches

Core Survey Findings

- The banking segment is highly aligned in favor of an industry driven solution, with all but one respondent indicating that a five-year implementation timeframe was reasonable. However, this position appears to be in contradiction to the statements made by respondents to the questions regarding the business case.
- There were mixed views as to whether market infrastructure providers should stop carrying ISO 15022 messages (46% of respondents were in favor of this) or whether they should continue to carry ISO 15022 messages but remove the co-maintenance (33% of respondents were in favor of this). This removal of co-maintenance is surprising, if participants would like to continue to use ISO 15022 messages, why would they not want them to be maintained?
- There was a common view that adoption by area would be more viable than a wholesale approach. Settlements as a high-volume area was considered a priority along with Corporate Actions, which was identified as a potential area of interest given the lower STP rates.

- Banks confirmed that during the transition period, ISO 15022 must be maintained although there was a mixed view as to whether banks would offer a translation service or just accept both formats.
- There is no consistent view on whether any full adoption should be mandated by FMIs or regulators or done through the choice of the community, with arguments in favor of all the options, but having a consensus within the community to drive adoption was the most consistent message.

F. ISSA and Industry Roles

Core Survey Findings

Banks think that «ISSA should be an interested participant, helping the market create the principles of adoption and helping create best practices to adopt».

Appendix 2:

ISO 2022 Working Group – Stream FMI

A. Summary Findings

- The FMI segment is not yet very advanced in the adoption of ISO 2022.
- The business case to support such important development remains weak.
- FMIs believe that there will need to be a market migration driven by regulatory bodies.
- There is no clear position on decommissioning ISO 15022 (or proprietary formats) to offer only ISO 2022.
- There is clear support for a phased approach to migrate from the current to the new ISO standard.

B. Survey Participant Profile

- The FMI (Financial Market Infrastructure) segment includes 10 (20%) of the 44 FMI ISSA Members. 80% are regulated market infrastructures or (I)CSDs.
- 80% of these FMIs have top tier volumes, so in terms of total volume coverage the Working Group feels that the views represent many of ISSA's largest FMIs. Survey respondents generally had business profiles.
- The majority of respondents had transaction flows of over 10million settlements per year. There were 9 firms who processed less than 10million settlements with the lower bound being <500k. The remainder were service providers to the industry.

C. ISO 2022 Usage and Capability

Core Survey Findings

- Overall usage of ISO 2022 is low. Only one respondent has full capability in more than one product, 2/3 claim to have partial usage and 1/3 report no capability.
- Strongest capabilities and usage are found in Settlement, Corporate Action / Income, Proxy / AGM & Investment Funds. The majority of interactions are between Custodians and market infrastructures. Hardly any FMIs use ISO 2022 for Tax, Account Opening and Collateral Management purposes.
- Currently ISO 2022 is mainly used over a SWIFT channel, and in general there is limited use of ISO 2022 through APIs or file exchanges. For CSDs, respondents report that the evolution towards APIs will position ISO 2022 as the preferred standard, as the Data Dictionary to support APIs.
- CSDs usually implement ISO 2022 in response to regulatory requirements (e.g. SRD II) or as a result of mandatory market driven initiatives such as ECMS, or cross-border migration to ISO 2022 in Payments.

D. ISO 20022 Development Business Case

Core Survey Findings

- The majority of survey participants reported that there is no clear business case to justify investment in ISO 20022 unless it is driven by an external requirement, for example a market or regulatory compliance need (CSDR & SRDII mainly). The cost of maintaining different formats and data models as well as client demand are also supporting elements to the business case. It should be noted that only a minority of FMI respondents believe that there is a business case for full migration.
- 80% of FMIs have development plans to cover Settlement & Reconciliation as well as CA & Income within the next 3 years or less. For GM / Proxy and Collateral, the adoption is mandated through regulatory changes (SRD II, ECMS), so plans are already ongoing to adopt ISO 20022 and benefit from the added value of this standard (one CSD is planning to use ISO 20022 for OTC and Repo Market messages).
- While respondents acknowledge the improved technical features, ease of integration and additional new functionalities offered by ISO 20022 standards, there are still major barriers to adopt ISO 20022 which include a weak business case, a lack of sufficient client demand, lack of readiness of agent bank networks and the many other business priorities that need to be conducted in parallel. A broader adoption would also bring consistency with the payment area.
- CSDs see value in setting up their Core data model in ISO 20022 when a new IT platform is being developed and this is particularly true in the Corporate Action domain. Adoption of ISO 20022 may also support to decrease levels of manual intervention by replacing unformatted fields used today in ISO 15022 with more standardized data.
- No strong business case was identified for ISO 15022 Securities messages to be migrated to ISO 20022, except where market development requires it or where there is a regulatory mandate for adoption. ECMS will definitely create a market trend in Europe to move to ISO 20022. The Settlement area already enjoys high levels of STP with ISO 15022 and so the benefits of ISO 20022 should be highlighted more clearly – a move to the ISO 20022 syntax alone will not bring any incentive to migrate in this business area.

E. ISO 20022 Adoption Approaches

Core Survey Findings

- The FMI segment is highly aligned (75%) in favor of an industry driven adoption solution rather than the on-going co-existence. In addition to domestic market infrastructures, Custodians have a key role to play if the industry as a whole supports broad adoption. Additional drivers to adopt ISO 20022 will be client demand and the modernisation of IT platforms which will provide an opportunity to review the data set and bring more harmonisation. Adoption may also be triggered by an expansion in the use to APIs.
- Most respondents favor the adoption of a full ISO 20022 data model in their infrastructure rather than the use of translation interfaces. Respondents support a migration in phases (no big bang), with a 3-5 year transition with a limited period co-existence based on market demand and readiness, supported with the deployment of efficient translation tools. The FMI group supports an adoption by Securities area, starting with GM /Proxy, followed by Corporate Actions / Income and then finally Settlement & Reconciliation.

- Based on a limited number of responses to this question, financial infrastructures have a balanced view on whether they should stop carrying ISO 15022 or continue without maintenance of ISO 15022. A market solution might help to support the evolution of the ISO 15022 standard in line with ISO 20022 and ensure translation rules remain valid during the co-existence period.

F. ISSA and Industry Roles

Core Survey Findings

The FMI segment unanimously reported that ISSA should play a supporting rather than a leading role in this space.

Appendix 3:

ISO 20022 Working Group – Stream Technology Suppliers

A. Summary Findings

- The technology provider segment is ahead as compared to other segments in terms of developing ISO 20022 capabilities in their solutions but the support for standards is still limited to and strongest in the functional areas such as Proxy Voting and Corporate Actions. Where there is a demand from other segments such as banks and FMIs then indirectly technology providers drivers link to the same drivers as for their client segments – that is primarily regulation or market infrastructure driven changes.
- The primary reason for technology providers' adoption to be ahead is that technology providers enhance their technology solutions based on demand from a few clients in other segments rather than waiting for the entire industry to adopt ISO 20022. In addition, technology providers need to be ready to support this in case some new changes like regulation cause the industry to move towards ISO 20022.
- Primary drivers behind the business case as mentioned above seem to be regulation (SRDII, CSDR) and market infrastructure (T2S & DTCC). The barriers seem to be lack of client demand due to other investment priorities and the general weak business case.
- The segment seems to take a lead on adopting the standards for different technologies, such as API and DLT, which they feel will be the key strategic drivers behind ISO 20022, as these technologies might be adopted at a large scale in the future and today technology providers are investing and building solutions in a fragmented way.
- Technology providers support a mandatory migration and an industry driven approach seemingly due to the cost of co-existence (the segment wants that to happen within the next 3 years) although there are some contradictory views with regard to the support of ISO 15022 but they are open to support clients during transition.
- In a nutshell, this segment can support the wider industry adoption but is still dependent on other segments for the business case acceptance.

B. Survey Participant Profile

- The August 2020 ISSA ISO 20022 survey received 39 responses from various organizations, or parts of organizations in the case of universal banks. These break down into 19 banks (universal, custodian and investment), 10 Financial Market Infrastructures ((I)CSDs and exchange groups) with the rest being technology or data providers. 64% of the respondents' roles were focused on Securities Services, with 66% having global coverage and the remainder being split equally between regional and a domestic focus.
- Most respondents had transaction flows of over 10million settlements per year. There were 9 firms who processed less than 10million settlements with the lower bound being <500k. The remainder were service providers to the industry.
- Within the Technology segment, 3 out of 9 respondents were focused on communications network provision and the remaining 6 were IT Vendors.

C. ISO 20022 Usage and Capability

Core Survey Findings

- The majority of the technology providers, between 87% to 100% of the total, have either full or partial ISO 20022 capability in the 3 areas of General Meeting and Proxy Voting (62% - full adoption), Corporate Actions & Income (57% - full adoption) and Settlements & Reconciliation (42% - full adoption). The upcoming SRDII regulation could be the driving factor here.
- This is a higher level of capability than in the banking segment and illustrates that the tech providers are prepared for their clients (Banks, FMIs) adopting ISO 20022 in case the market does move that way.
- Respondent numbers are much lower for technology providers (50%) in areas of Account Opening and Tax or Collateral Management. Only one has a full capability and the rest (1-2) have partial capability.
- When looking at market participants with which ISO 20022 is used, there is a high response rate (89-100%) from technology providers. 35% of the respondents cover all major flows (participant to MI, MI to MI, custodian to custodian, client to custodian) whereas 35-50% say these flows are not applicable to them.
- SWIFT is a high usage communication channel in the technology segment. However, technology providers also show high usage of API and file-based channels. A broader overall observation is that technology providers will generally lead other segments in new technology adoption such as APIs. The US DTCC, which has re-engineered its CA process to use ISO 20022, could also be a driver being a major market for all technology providers.
- Nearly all technology providers plan to undertake development of ISO 20022 Securities messaging within next year unlike banks and custodians, which plan to do more over the next 2-3 years.
- Adoption across nearly all segments is primarily driven by regulatory and market requirements. The common regulatory and market drivers for technology providers are SRDII, DTCC, T2S, CSDR and SFTR. For universal banks and market infrastructures there are additional regulations like ECMS and MIFID / MIFIR.
- Tech providers generally have the data models and capabilities that enable them to support many different market standard messaging protocols and even proprietary messages. Some might have data models originally aligned to a certain standard such as ISO 15022 but they have also tweaked them to support newer protocols based on evolving regulatory, market and client requirements.

D. ISO 20022 Development Business Case

Core Survey Findings

- The majority of IT & Vendor survey responses see regulation and mandatory market requirements as the main driver of client requests for ISO 20022, with SRDII and CSDR dominating the regulations that are driving this.
- T2S and DTCC dominate the market requirement drivers for IT & Vendor responses with the most focus into Corporate Actions, Proxy and General Meetings, followed by Settlements and Reconciliations.
- Over 70% of IT & Vendor responses highlight a clear strategic intent to cover ISO 20022.

- This segment feels that the business case drivers are led by the expanded business functionality that ISO 20022 brings, followed by enhanced technology and integration benefits with alignment to ISO 20022 payments as a far lower benefit.
- Barriers to developing ISO 20022 are viewed as primarily due to lack of clear client demand based on regulatory and mandatory priorities, other investment priorities and the general weak business case.
- Further investigations with respondents clearly established that business case drivers are strongly towards regulation and market infrastructure drivers followed by client experience and meeting client needs. Higher levels of STP and automation were not viewed as a leading benefit, surprisingly.
- There is a consensus that ISO 20022 is a richer messaging standard and can facilitate better automation, optimised workflows and inter-company communication. The majority of the firms are of the opinion that business functionality not covered in ISO 15022 is the key benefit for adoption of ISO 20022 and the extension of data models for other areas of Account Management etc.
- The areas of Proxy Voting followed by Corporate Actions, that have a lot of unstructured information today, seem to have the stronger business case for possible benefits. ISO 20022 for Proxy Voting has already been adopted due to SRD2 and hence it is now lower on the list.
- The majority of firms do not see a strong business case for a shift from ISO 15022 to ISO 20022, and are of the firm belief that mandatory policy or regulation would enable the broad acceptance of ISO 20022.
- The strongest future drivers for expansions in the eyes of the IT and Vendor segment are the adoption of new technology platforms including APIs and DLT followed by market requirements and then regulation drivers. The cost of co-existence was not viewed as a top 3 driver.
- While most firms consider a mandatory requirement critical to the widespread adoption of ISO 20022, in the absence of this, firms feel that a widespread industry requirement or use of APIs and channels will have the strongest bearing on adoption. There is a clear consensus across segments to use ISO 20022 as the Data Dictionary for API.
- The use of other standards like FpML, FIX etc. is less of a hindrance as compared to the lack of a business case around ISO 20022 and regulatory and FMI push remain the only drivers for tech providers' clients.

E. ISO 20022 Adoption Approaches

Core Survey Findings

- Most of the technology providers (83%) are in favor of having an industry driven migration date over the co-existence model and as per survey they saw this occurring in the next 3 years (67%). However, further investigation though revealed that there is not enough confidence even around a timeline of 5 years for ISO 20022 adoption unless regulatory driven. It is more assumption based and there is a lack of a clear view on a tipping point for adoption. This tilt towards industry driven migration seems to be based on the fact that technology firms have to bear a significant cost of co-existence and the Technology stream wants to move away from supporting multiple standards.

- Mandatory migration seems less favored among other segments who also seem to need more time and tech providers generally need to support both ISO 15022 and ISO 20022 standards during the transition phase to support their client base where it is not a straightforward answer to stop ISO 15022 immediately and mandatory changes might still be required. Tech providers will provide translation services as that is always seen as a key requirement during such a transition.
- Most respondents (73%) favor adoption targets by Securities area, e.g. Corporate Actions, Settlements, etc. High priority areas of focus seem to be Corporate Actions & Income, General Meetings & Proxy Voting and Settlements & Reconciliation.
- All technology respondents (100%) believe that a mandatory policy or regulation is required to drive full adoption in comparison to 87% for banks and 75% for FMIs. This is similar to the business case section.
- The tech provider view is that regulators should collaborate and come up with a plan. Domestic market infrastructures must set up the path for the market to migrate and custodians should decide their own plans based on FMI, client demand and regulation.
- While there is a comparable view between the technology providers (83%) and FMIs (89%) that Market Infrastructures should stop supporting ISO 15022, there are some conflicting views among the bank respondents.
- Banks (90%) and technology providers (67%) believe that the industry should focus on adoption plans for all segments while the FMI segment is in favor of intermediaries and Market Infrastructure (45%) versus all segments (32%).
- The overarching theme is that technology firms are ready to adopt but the industry needs to adopt across all pockets and segments.

F. ISSA and Industry Roles

Core Survey Findings

Half of the technology respondents felt that ISSA should be the driving market force for adoption of ISO 20022. The other half believed that «ISSA should be an interested participant, helping the market create the principles of adoption and helping create best practices to adopt».

Appendix 4: Glossary

| Term | Definition |
|-------|--|
| API | Application Programming Interface |
| CSD | Central Securities Depository |
| CSDR | Central Securities Depositories Regulation |
| DLT | Distributed Ledger Technology |
| FIX | Financial Information Exchange Protocol |
| FpML | Financial products Mark-up Language |
| ISO | International Standards Organisation |
| NLP | Natural Language Processing |
| SFTR | Securities Financing Transactions Regulation |
| STP | Straight Through Processing |
| SRDII | Shareholder Rights Directive II |
| T2S | Target-2-Securities |

Appendix 5: Working Group Participants

| | | | |
|-----|-----------------|-----------------|--------------------------------------|
| Ms. | Vicky | Kyproglou | UBS Business Solutions AG |
| Mr. | Giles | Elliott | TATA Consultancy Services Limited |
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| Ms. | Christine | Gallemaert | Euroclear SA/NV |
| Mr. | Nicholas | Hamilton | J.P. Morgan |
| Ms. | Sofie | Janssen | BNY Mellon |
| Mr. | Satyananda | Kumar | Tata Consultancy Services Ltd |
| Mr. | Robin | Leary | Citibank |
| Ms. | Duangphon | Lowatcharasonti | The Stock Exchange of Thailand |
| Ms. | Quinnie | Luong | Fidelity Corporate Actions Solutions |
| Mr. | Emad | Messiha | Credit Suisse Services AG, |
| Dr | Chisanga | Mwelwa | Deloitte |
| Mr. | Alexander | Nam | NSD |
| Mr. | Colin | Parry | ISSA |
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| Ms. | Galina | Pervova | National Settlement Depository |
| Ms. | Daphne | Ratliff | FIS Global |
| Ms. | Yukolthorn | Sakdasathaporn | The Stock Exchange of Thailand |
| Mr. | Gabriel | Sampaio | BNP Paribas Securities Services |
| Mr. | Ed | Savage | Deutsche Bank AG |
| Mr. | Les | Turner | Broadridge Financial Solutions |
| Mr. | Stuart | Warner | HSBC Bank plc |
| Ms. | Axelle | Wurmser | BNP Paribas Securities Services |
| Mr. | Ankush | Zutshi | IHS Markit |