

SwissSPTC comments on the Accenture Recommendation for an ISO 20022 Migration Roadmap for the Swiss Securities Post-Trade Market

The ISO 20022 standard was conceived to cover information exchange in any and all business processes in the financial sector. Over the years, it has slowly developed as the emerging target standard for message flow automation globally. The Swiss post-trade market has been increasingly confronted with ISO 20022, to date in isolated business processes only. However, there is growing uncertainty in the securities industry as to whether and how firms should take on the migration challenge.

Against this backdrop, the swissSPTC established a Task Force last year which completed a technical analysis in November 2021. Costs and possible migration aspects for the Swiss market were deliberately excluded at the time. As a result of that first study, the swissSPTC had urged the Swiss securities market to assess for the pros and cons of a migration to ISO 20022, and also the consequences of maintaining the status quo.

As a follow-up action and to kick-start this second phase, the swissSPTC commissioned Accenture to address the open issues on a market level, but tailored to the actors in the Swiss value chain. The following pages contain the results of this analysis. This report is intended to be a contribution for discussion and decision making for the domestic market and all securities market stakeholders in Switzerland.

Irrespective of any decisions that may yet be taken on the level of the Swiss domestic market, *the swissSPTC recommends that all impacted firms start as soon as possible to – or continue to – pursue migration and implementation plans according to their own needs.*

As expected, the Accenture study confirmed that there is currently no compelling business case for an immediate migration of the Swiss post-trade market. At the same time, however, the study concludes that the ISO 20022 standard will over time prevail and that maintaining the status quo in the domestic market will result in growing risks and costs for market participants in the long run.

The swissSPTC agrees with the results, conclusions and recommendations of the Accenture study. However, it emphasizes that the timelines for a changeover contained therein are to be understood as a proposal. They can only be defined in more detail after a decision has been made by the Swiss market overall. The swissSPTC supports the proposed sequential approach and prioritization and agrees that it is of utmost importance to design a carefully calibrated roadmap for approaching each part of the value chain separately. Over the next few months the swissSPTC will be looking into this subject matter in greater detail.

The swissSPTC thanks all members as well as the members of the Task Force and Accenture for their active cooperation.

On behalf of the swissSPTC



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7 October 2022

Recommendation for an ISO 20022 Migration Roadmap for the Swiss Post Trade Market



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Introduction

Since its introduction in the early 2000s, the **ISO 20022 standard is struggling to prevail in security markets**. Globally **only very few financial institutions have completely migrated their respective part of the securities post trade value chain**.¹ In contrast to the payments sector, the business cases and benefits of an ISO 20022 migration have not been fully revealed yet.

Even though ISO 20022 has undoubted advantages in the fields of data structure, data granularity and individual user extendibility, these aspects seem not to be sufficient to a wide majority of security industry to consider a full migration. The necessity is further questioned since current ISO 15022 standard is regarded as highly effective especially in terms of (sufficient) straight through processing in key security areas such as settlement and reconciliation.²

Nonetheless, more than **twenty global market players (incl. CSDs, ICSDs and CCPs) have already triggered an ISO 20022 migration in at least one part of their respective post trade chain** (be it in clearing, settlement & reconciliation, collateral management, or mostly corporate actions).³

Against the background illustrated above, the **Swiss Securities Post-Trade Council** (SwissSPTC) conducted an **analysis report**⁴ looking at the Swiss but also the global market.

The main conclusions are:

- An upcoming **transition of the global post trade market into ISO 20022 standard is undisputed**, but there is no clear timeline when it will happen.
- **SWIFT** as network and standard provider is generally expected to push towards a migration but **currently does not take actions** since market demand is not yet high enough.
- Further there are no regulators which explicitly ask for a general ISO 20022 adaption in their markets, but **multiple regulatory initiatives ask for a uniform standard** where ISO 20022 becomes the mean to implement it.
- The **ECB** is **pushing for a wider ISO 20022** adaption through platform harmonization initiatives such as T2S-T2 and ECMS.

¹ International Securities Services Association, ISO 20022 Report, April 2021, Page 5

² International Securities Services Association, ISO 20022 Report, April 2021, Page 17

³ SWIFT, „Exchange of Information, Task Force Session 2 – “CSD initiatives for attracting and promoting foreign investors”, March 2019, Page 4

⁴ SwissSPTC Task Force ISO 20022 Information and Analysis Report can be found here: <https://six-group.com/de/site/swiss-sptc/dokumente.html>, Page 4

- **Swiss market players** are **not** directly **forced to migrate by domestic regulation** and do not identify an apparent need to immediately migrate.
- If the Swiss Market does not adopt towards ISO 20022 there is a **risk that it falls behind** or even loses its connection to **international markets**.
- A **big bang migration approach** is explicitly **excluded** due to economic and rational considerations.
- An ISO 20022 transition **roadmap** for the Swiss post trade market **shall be established**.

With the SwissSPTC analysis report as a starting point Accenture has been asked to look into **costs** and **pros & cons** of an **ISO 20022 migration** for the **Swiss Market** to suggest a possible **migration roadmap**.

Our analysis has been structured along all relevant market players in the Swiss post trade value chain.

The recommendation we outline in this document is founded on our view of the market and insights we got from representatives of exemplary institutions of each market player in the value chain.

Management summary

Accenture strongly recommends the Swiss Post-Trade market to **start planning its ISO 20022 migration in 2023**.

Taking **no action** will only **increase costs and risks** to adapt the new standard in the **long run** as it is undisputed that ultimately ISO 20022 will prevail.

We propose **a clear migration approach sequenced along three post trade clusters**. From a national market perspective, the **FMI** (especially **SIX SIS as CSD**) must take a **trigger role** in its home market for such a standard adoption. Further we advise **all market players** to **intensify communication of their perspective** of the ISO 20022 standard, especially with **technology vendors and smaller Swiss business partners**, to further enhance the awareness in the market and foster a consensus in terms of a migration roadmap.

Migration Timing:

Although there is **no immediate business case** for a market wide adoption of ISO 20022 within the Swiss post trade market which would justify migration costs in the near term the time to act is now because:

- The Swiss Market would get a **competitive disadvantage vs. markets embracing and adopting the new standard** (currently mainly EU markets) as it could not react quickly when use cases requiring the new standard arise. This not only brings **opportunity costs of missed growth potential** but also a **risk for increased market infrastructure costs** for the whole Swiss Market **if international business “co-funding” the Swiss Market infrastructure is moving away** to foreign players already offering ISO 20022 services.
- Costs arising for market players operating both standards due to mandatory ISO 20022 requirements in foreign markets they are connected to are not significant, but these requirements **increase complexity, operational risk**, and the further **build-up of IT debt**.
- All ISO 20022 migration plans require **a significant lead time** given the dependency many market players have with core banking platform providers who have not yet felt a strong need for ISO 20022 adoption given the limited explicit market demand so far.

ISO 20022 Benefits

There is a **common anticipation** among medium and large market participants that there will be further **future use cases which require ISO 20022**. Examples are:

- a. The **need for a “common language”** for a uniform messaging to address “digital first” clients who expect to work with a **self-servicing banking ecosystem**

- b.** An increased need to handle and structure **more information** for **compliance reasons**
- c.** **To facilitate interaction with growing technologies** (e.g. DLT, APIs) through a clear taxonomy that supports bridging the “new” with the “traditional world” irrespective of a transition period

Suggested Roadmap

Looking at the different parts of the post trade value chain they can be **clustered in three groups** from an ISO 20022 migration **roadmap perspective**:

- I. **Start** to plan and execute / complete a migration to ISO 20022 in **areas with high automation potential and significant external pressure now**: Asset Servicing and Collateral Management
- II. Tackle **areas requiring a clear migration plan to be future ready latest one year from now**: Clearing & Settlement
- III. **Only** include **opportunistic areas** in migration planning **when concrete demand / use cases arise**: Billing & Reporting

Concluding Remarks

Once a decision for the Swiss market is taken, an implementation roadmap is on the SwissSPTC agenda and topics like market practices / translation rules during a co-existence phase are to be defined, it is recommended to involve SwissSPTC expert groups and SASFS technical groups to ensure a market wide standard will be applied.

1. Current Situation for Swiss post trade market

Summary: *The fully ISO 15022 based Swiss post trade market stays in contracts to foreign (mainly EU driven) ISO 20022 initiatives / regulations with extraterritorial effects on Swiss market player who must cope with both standards.*

The **Swiss post trade market is fully on ISO 15022**, however **more and more players** in the Swiss market such as CSD, GCM and custodians are **affected by foreign ISO 20022 initiatives with extraterritorial effects** such as SRD II, T2S-T2 and ECMS.

These market players **already use ISO 20022 standard** in post-trade either due to business requirements (mainly driven by European business partners) or European regulatory requirements such as SRD II. Additionally, they see an increasing ISO 20022 usage in non-post-trade areas such as fund order executions.

Therefore, the respective market players are **already required to provide conversion solutions** to execute Swiss client business affected by these requirements, e.g. in terms of SRD II due to European stocks in their portfolios.

The extraterritorial impact of foreign ISO 20022 initiatives/ regulations on Swiss market players is growing, ECMS and SRD II are such examples. This increases the effort and risk that come with conversion solutions and the need for similar best practices in the Swiss market.

Consequently, the question arises, **if a structured and coordinated migration of the whole Swiss post trade market to ISO 20022 within the next 5-10 years is reasonable** and if yes, **what migration sequence** should be chosen.

2. Overview on global ISO 20022 migrations

Summary: *Despite the lack of a centrally forced ISO 20022 adaption (as done by SWIFT for payments) for securities, many global CSDs have started to migrate parts their message scope.*

Despite the very few regulatory initiatives forcing ISO 20022 migrations globally, a **significant number of global CSDs** has **started or already partially migrated a part of their message scope**.

Across Europe, a handful of CSDs which are not participating on T2S already migrated into ISO 20022 in the areas of corporate actions, settlement, clearing or collateral management.

Beyond Europe, the US American DTCC already migrated corporate actions into ISO 20022, and a significant number of key Asian market players provide ISO 20022 standard either for settlement, corporate actions, or both.

Network infrastructure situation (SWIFT)

The ISO 20022 standard will replace the current financial standards for payments and cash management, including ISO 15022, in November 2025.

Between November 2022 and November 2025, SWIFT will support both ISO 15022 and ISO 20022 payment messages, afterwards support if ISO 15022 will be terminated.

In terms of **securities**, **no final date for ISO 20022 migration has been set** (through SWIFT) yet, SWIFT is periodically reviewing the “market appetite” for migration.

Thus, market players can setup their own proceeding when to adopt ISO 20022 standard for post trade activities according to the readiness of their business partners and other relevant factors.

3. Recommendations for Swiss market players

Summary: *We recommend all Swiss market players to jointly push for an ISO 20022 adoption of the Swiss Post Trade Market. The market infrastructure as well as medium and large players share similar incentives to do so. It is a pre-requisite to get core banking software providers on-board as soon as possible given the additional lead time required to prioritize ISO 20022 requirements in their development pipelines. From a national market perspective SIX SIS as CSD must take a trigger role in its home market for an ISO 20022 standard adaption.*

For a common understanding of involved market players, a comprehensive overview (Figure 1) and uniform definition (Figure 9, Appendix) has been applied.

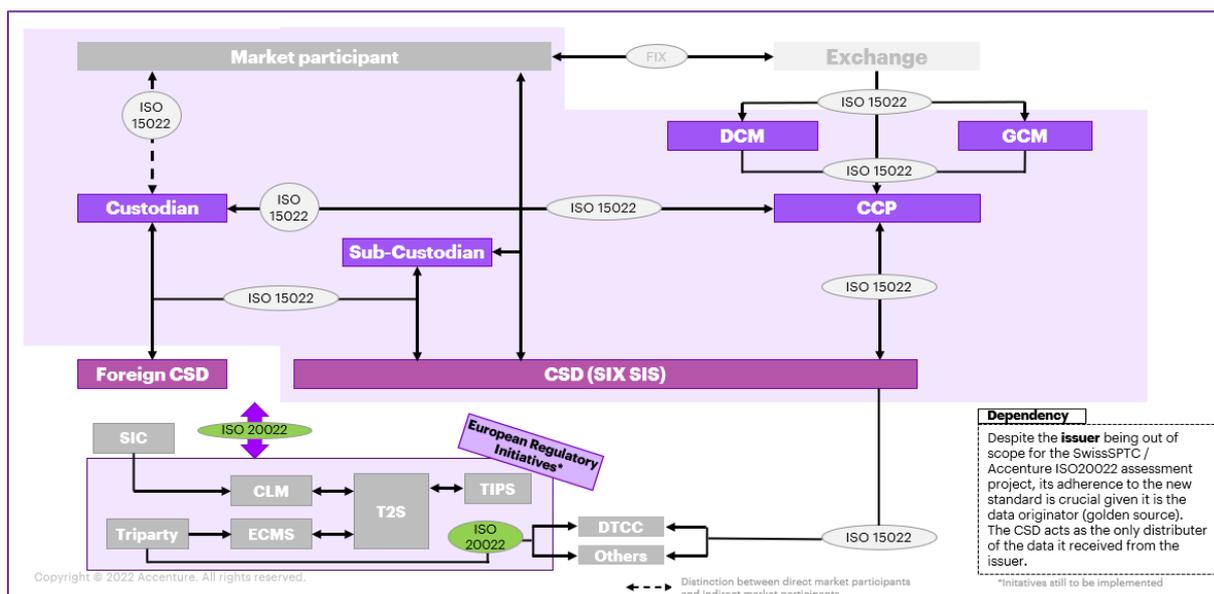


Figure 1: Swiss Post Trade Flow (simplified illustration)

Next to the individual market players technology providers need to be involved as well. As many banks operate at least parts of their post trade value chain with a core banking vendor platform, the **readiness of these software providers is a prerequisite for a market wide ISO 20022 adaption.**

Given the **limited market demand** so far **key vendors still lack support for ISO 20022 post trade messages.** To allow for an ISO 20022 adoption, **Swiss banks must raise the need** for it with their **software vendors**, to ensure ISO 20022 message support gets prioritized within their development pipelines.

General Clearing Member (GCM)

GCMs should push towards a wide ISO 20022 adaption in the Swiss Market across their value chain **given the growing ISO 20022 demand from foreign business partners.** Moreover, not to lose more time while their **IT legacy debt** continues to increase which eventually further complicates the (transitionally) required operation on two standards. Additionally, there is a growing necessity to provide conversion services for Swiss and foreign clients to connect them with foreign ISO 20022 adapted markets.

Direct Clearing Members (DCM)

DCMs have less direct pressure to push for an ISO 20022 adoption in the Swiss market than GCMs given their **higher focus on the Swiss market** which is still fully reliant on ISO 15022. However, we expect them to be also

confronted more and more by ISO 20022 conformity demands by their international business partners. Given the **long lead time** a **market wide ISO 2002** adaption requires we therefore **recommend them as well to push** towards a Swiss Market adoption for the same reasons outlined for GCMs.

Central Clearing Party (CCP)

x-clear as the Swiss CCP plays a central role in an ISO 20022 adoption of the Swiss clearing market. Hence, we **recommend** them **to join forces with their connected DCMs, GCMs and SIX SIS**, who either already face concrete business needs to accelerate their ISO 20022 readiness or are expected to do so in the near or mid-term, and **jointly lay out a strategy for ISO 20022 adoption**. The planned rollout of a new Swiss Clearing Platform (SCP) with a third-party product (NASDAQ) at its core which has already been successfully piloted for SIX' Nordics market could serve as trigger to accelerate the planning. However, **x-clear will always be in a follower position given the competitive environment they are in**, the **pressure to migrated needs to come from their DCM and GCM clients and SIX SIS**.

CSD - Settlement

SIX SIS as the Swiss CSD **has already experience with ISO 20022**.

Their **Swiss CSD platform (SECOM) still relies on ISO 15022 for messaging within the Swiss Market** and most other markets it connects to (50+ markets) but already adapted to ISO 20022 for certain international interfaces e.g. T2S, Finnish market.

Additionally, **SIX SIS already had projects where the processing of ISO 20022 was required in addition to existing ISO 15022 messages in non-settlement related areas**, e.g. SRD II. More projects are planned / have started, e.g. ECMS.

The SECOM platform is built in a modular structure, for internal processing messages are translated to an internal format which reduces the impact of any type of ISO 20022 adoption compared to market players who use any ISO type also for their internal processing.

As **efforts (operations and maintenance) to support ISO 15022 and ISO 20022 in parallel exist until ISO 15022 is decommissioned globally** (at least with all markets SECOM is connecting to), timing of a Swiss market ISO 20022 adaption is not relevant from a maintenance and operations point of view.

From a CSD perspective, **pressure to adapt ISO 20022 comes from the business side with a growing demand of mainly international clients to**

communicate in ISO 20022. The **Swiss Market risks to fall behind its competition** if it is **not ready to do the same**.

From a national market perspective **SIX SIS as CSD** must take a **trigger role in its home market** for an **ISO 20022 standard adaption**.

CSD - TPA Services- Collateral Management

SIX' TPA will participate as a direct member of ECMS and hence **prepare itself for ISO 20022 requirements** in this context.

Moreover, they see a **clear demand** by international **business partners to provide ISO 20022** in domestic post trade markets. Additionally, ISO 20022 brings **high potential in terms of additional data richness for a growing market of sophisticated collateral**. The **growing operational risk of truncation** that comes with conversion solutions and **benefits the new standard can bring as "bridge" towards new technologies** such as DLT are additional arguments for a standard adaption.

Considering all these aspects, **the time boxed push for a market wide ISO 20022 adoption** SIX' TPA services are pursuing is **the right thing to do** from our point of view.

Custodian

Swiss **custodians** (active in cross-border post trade business and affected by SRD II) are **already required to migrate ISO 20022 standard for proxy voting**.

Given their role in the clearing and settlement market and the outlined arguments for other market players, **a full adoption towards ISO 20022 across the post trade value chain should also be in their interest**.

Sub-custodian

Swiss sub-custodians are also **directly exposed to foreign business partners' demands**. Although the communication with them is still predominantly in ISO 15022 we expect a growing demand for ISO 20022 adaption.

An adoption of ISO 20022 in the Swiss Market would hence also be in line with the changing international environment.

Non-Clearing Members (NCM) / Small Market Players

Many small market players have **outsourced either their post-trade operations and / or the hosting and maintenance of corresponding core banking platforms** to external service providers.

Small players even **lack the awareness of the new ISO 20022 standard**. To allow for a timely transition in the Swiss market **these players should be “shielded” from the new standard by market players providing them access to the Swiss post trade market**, i.e. they would run conversion services for their small player clients.

Nevertheless, **such services should not have to be maintained for too long** to enable a market wide adaption. Therefore, it is **crucial to raise the awareness of upcoming ISO 20022 migrations with small market players and their service providers**.

4. Business Values

Summary: ISO 20022 brings a variety of business values / benefits such as efficiency gains, operational risk reductions or adaption to future client / technology needs / use cases. Additionally, it ensures the competitiveness of the Swiss Market infrastructure.

Business values of an **ISO 20022 adaption differ per section of the value chain**. However, **three values** apply to **all four main sections**.

- **Information richness**, i.e. the ability to transfer more data in a structured way can serve different types of future use cases, as it not only facilitates integration with technologies such as DLT and API, but also allows to store more data that may become relevant for compliance reasons. The new standard will function as a “common language” for a **uniform messaging** to address “digital first” clients who expect to work with a **self-servicing banking ecosystem**.
- **Operational Risk Reduction** mainly refers to the reduction of **manual interventions**, avoidance of conversion services if two standards have to be maintained and implicit risk of **truncation** when translating from one standard with higher information density into one with a lower one. Additionally operational risk can lead to **business / reputational issues**, e.g. if proxy voting timelines get missed by key shareholders.
- ISO 20022 ready infrastructure will be crucial for the Swiss Market Infrastructure to not fall behind its international competition and ultimately helps to avoid a **“capital drain”** of international business which “co-funds” the Swiss platform.

	Scaling abilities	“Capital drain”	Higher STP rate	Information richness/ uniform standard	Operat. risk reduction
Clearing	X	X		X	X
Settlement		X		X	X
Asset Servicing	X	X	X	X	X
Collat. Mgmt.		X		X	X

5. Cost Estimates

Summary: *A quantification of ISO 20022 migration cost for the Swiss post trade market is not yet possible at this stage. However, it became clear that delaying a migration only increases costs in the long run.*

The cost analysis revealed that market players are not yet able to provide sufficient input for a reliable cost estimation due to a lack of post-trade ISO 20022 analysis preparation work within their organizations. This is a clear wake-up call for these players to prioritize such work accordingly as part of their planning.

Migration Costs

To get a rough idea of migration costs for Switzerland's **central post trade market infrastructure** the bulk items to be looked at are (i) the **SECOM platform** and supporting systems on which CH issuer but also custody services and asset servicing for Markets outside of Switzerland are run (ii) the **new SIX clearing platform (SCP) with a third-party product (NASDAQ) at its core** (iii) **additional applications** relevant for **TPA services**.

A **quantification** of ISO 20022 migration cost **would require a more thorough analysis** on the IT side. However, from a **qualitative point of view** one can state that:

- **Costs** are **not assumed to differ significantly depending on when the Swiss Post Trade Market migrates to ISO 20022** as one will anyway have to cope with different standards per channel if at least one global consumer still expects ISO 15022.
- **CCP migration cost** may be reduced if a migration could be timed with the planned renewal of the clearing platform (SCP with NASDAQ at its core) for the Swiss Market. The new platform has already been successfully piloted for SIX' Nordics markets and offers ISO 20022 "out of the box" with a translation in place to generate ISO 15022 where required.
- TPA services are planned to fully adopt ISO 20022 by November 2023.
- For SECOM **main effort drivers** will be:
 - Receiving and sending ISO 20022 incl. **conversion (and validation)** from ISO 20022 to the **internal SECOM format** (and vice versa).
 - **Changes in the processing** of a message e.g. due to changed business processes or new functionality not already covered in the existing system.
 - **Displaying** the fields from a message in a **User Interface (UI)**, displaying the original message itself in a UI if required.

A general **quantification of costs arising with GCMs / DCMs and (Sub)-Custodians is not feasible** as they depend highly on the current IT setup of affected market players and the degree of implementation depth they will chose, e.g. fully adapt ISO 20022 within their internal processing chain vs. only adopting an external layer while keeping legacy formats internally. Costs can be assumed to be high given the amount of involved legacy applications many of the Swiss market players have. On the other hand, an upcoming ISO 20022 migration for asset servicing and collateral management driven by foreign ISO 20022 initiatives can be a **trigger to approach piled up renewals of legacy applications**. In many cases such renewals need to be tackled anyway due to the “end-of-life character” of many applications which bring high change costs with every release and an increasing operational risk.

For smaller **market players a release upgrade of their core banking software** would be required. Costs of former release upgrades can serve as benchmark. However, one needs to be careful to not attribute these costs fully to an ISO 20022 migration as regular release upgrades also need to be done for other reasons.

Costs of doing nothing / delaying a migration

For central players (CCP, CSD) **no direct cost** (maintenance and operations) **are assumed** given their modular setup and the need to support ISO 15022 and ISO 20022 in parallel until ISO 15022 is decommissioned globally.

However, we see a **huge risk of shrinking revenues** in case of a delayed ISO 20022 adaption if **international clients move to foreign players who offer a better and faster ISO 20022 service** when they demand for it.

For **(sub-)custodians, GCMs and DCMs** costs of doing nothing are again **hard to quantify** given they depend highly on their individual IT setup but we clearly expect an ISO 20022 migration **to become more and more expensive the further it is delayed**, as the **IT legacy debt** increases and workaround solutions to cope with foreign ISO 20022 initiatives will make a future migration more complex.

One can also state that **the more “synchronized”** a migration can be executed **the lesser the costs** will be, as a high parallel adoption of a new standards in the market decreases the operational costs of translation failures. **Smaller players** like NCMs **are expected to be “shielded” by DCMs / GCMs** until they are migrated and hence are **not expected to carry costs of a delayed migration**.

Incurring Costs independent from a Swiss Market migration

Market players who have and will have to adopt to ISO 20022 due to drivers external to the Swiss market, carry the **costs to operate two standards in parallel** (operations and maintenance) and running conversion services for players who have not adopted to the new standard. Given these **costs are incurred as long as there is no global ISO 20022 adoption**, it is assumed that they are **independent from the timing of a Swiss ISO 20022 migration**.

Such **costs increase if an automatic translation from ISO 15022 to ISO 20022 and vice versa is not possible** (e.g. if an ISO 20022 message contains more mandatory fields or if there is no corresponding ISO 15022 message).

Higher efforts also arise **if additional exception handling is required**. An example is the SRD II implementation where not all participants had done the mandatory migration on time. Such scenarios lead to **lower STP rates**, more **additional manual effort** (mainly in business operations) and to **new short-term workarounds / fixes** (with or without IT support).

Conclusion

From a cost perspective one can **conclude** the following:

Given the **challenges** for the Swiss Market infrastructure (CCP, CSD) and market players (GCMs, DCMs, (Sub-)Custodians) **to offer both standards (ISO 15022 and 20022)** to domestic and international business partners (since there are differences in their migration pace), one can argue that **IT maintenance and operations cost will increase independently of a Swiss migration date**. Operation costs are expected to increase more than IT maintenance costs assuming a high degree of manual exception handling (Figure 2).

However, two **factors are increasing migration costs** for the **Swiss market the longer a migration is delayed**:

1. The risk of **indirect costs** resulting from **“capital drain” of international business**, which is “co-funding” the Swiss market infrastructure due to a better ISO 20022 offering abroad. Given the indirect costs of the Swiss market infrastructure are ultimately borne by all Swiss participants they do **affect all players in the Swiss Market**. Additionally, **offering new standards ahead of its competition** can also serve as catalyst to **grow the client base using Switzerland’s market infrastructure** (Figure 3, Figure 4).
2. **Increasing IT legacy complexity / debt**, which is **built up with mandatory foreign ISO 20022 initiatives**, market players

exposed to foreign ISO 20022 initiatives ((Sub-)custodians, GCMs, DCMs) must implement. This goes along with a “**hockey stick risk**” if an ISO 20022 migration had to be forced into a short time period with limited budget, resources etc (Figure 4).

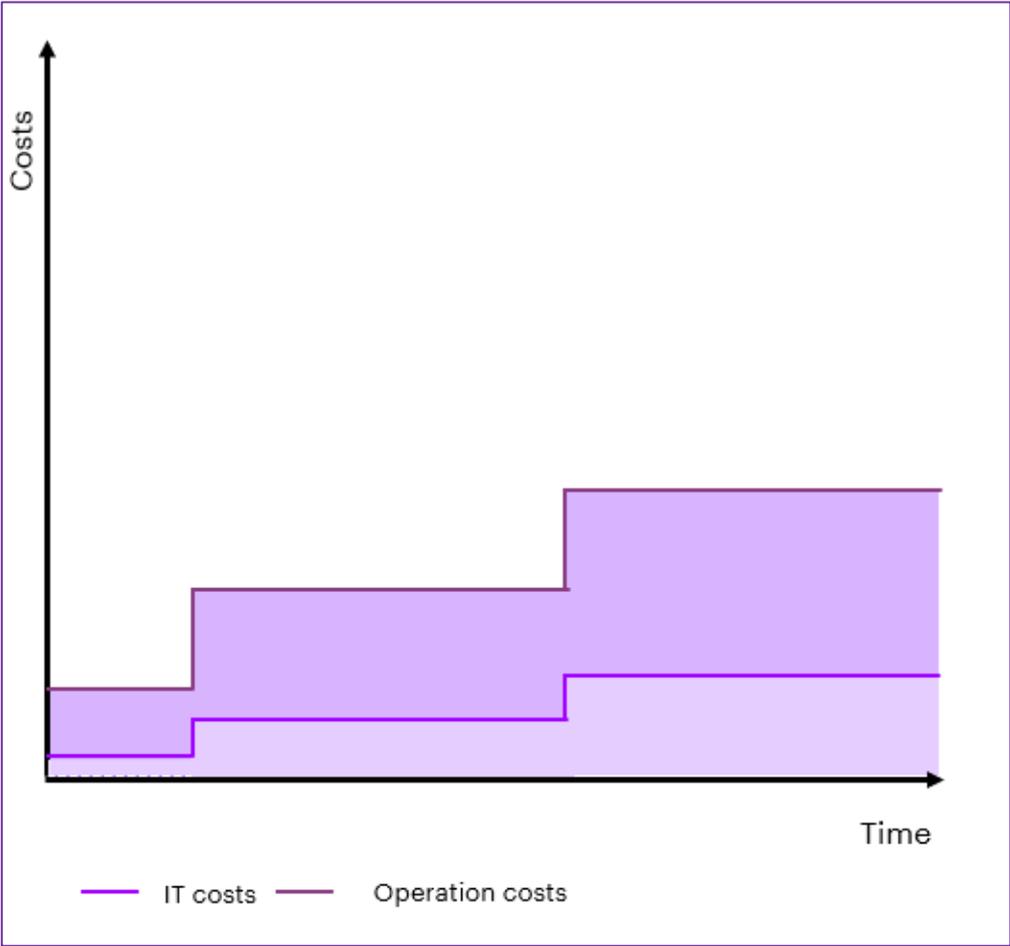


Figure 2: Expected cost in case of migration (market infrastructure providers and market players)

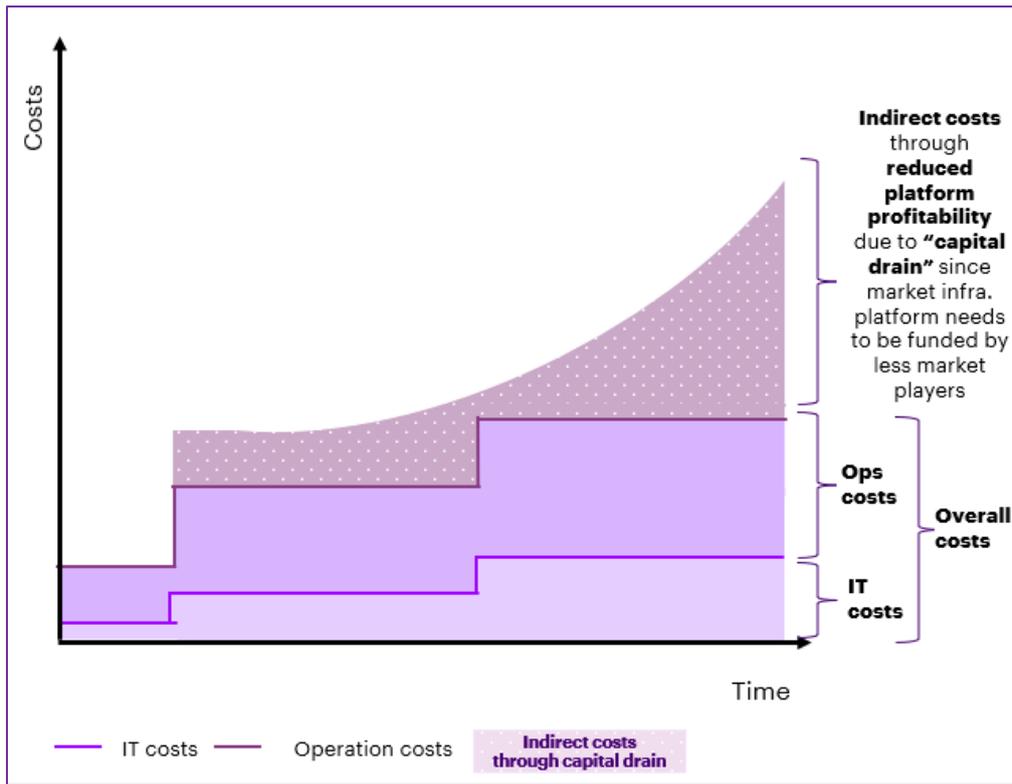


Figure 3: Expected cost structure with status quo (market infrastructure providers)

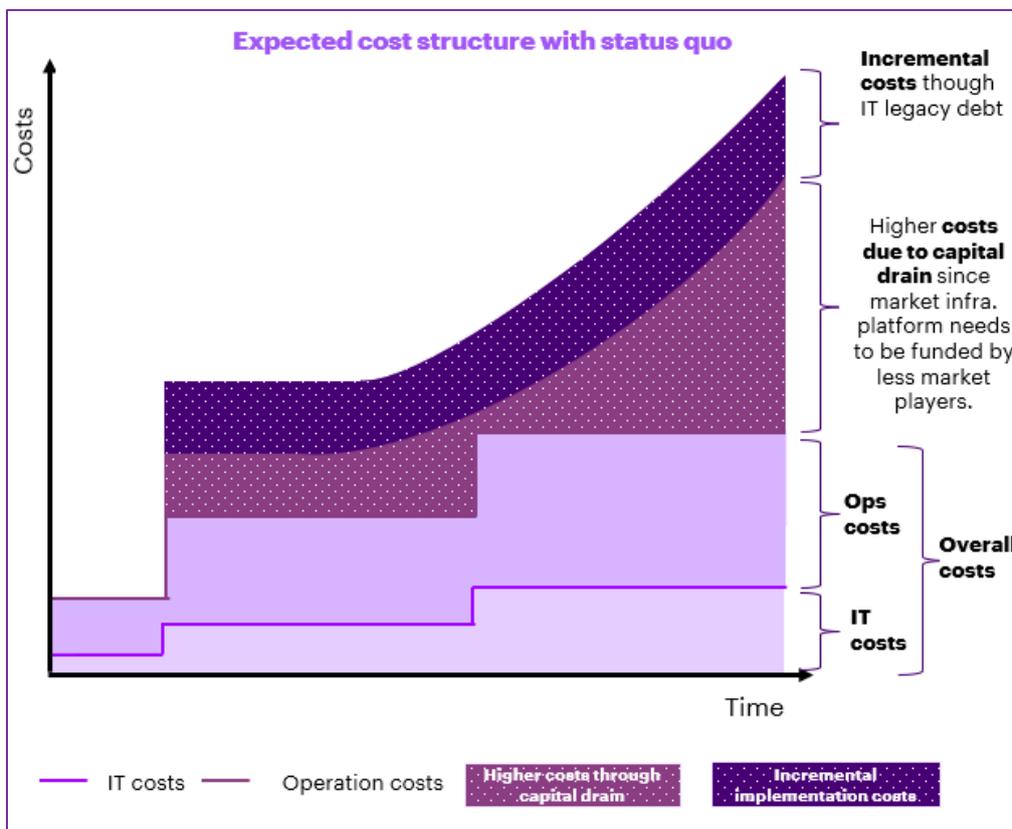


Figure 4: Expected cost structure with status quo (Swiss market players)

6. Migration proposal for the Swiss Post Trade Market

Summary: We see three migration clusters (“Asset Servicing & Collateral Management”, “Clearing & Settlement”, “Billing & Reporting”) considering migration need, complexity, and interdependencies between the individual parts of the value chain.

We agree with the conclusion of the Swiss SPTC analysis report to migrate in sequence and **avoid a big bang**. To sequence the migration, we see **three migration clusters** along the post trade value chain:

These clusters are:

- **Asset Servicing & Collateral Management** offering significant automation potential through an ISO 20022 migration.
- **Clearing & Settlement** with expected future use cases requiring an ISO 20022 migration.
- **Billing & Reporting** can be pursued opportunistically, i.e. a migration must only be planned when concrete requirements or business cases arise.

Asset Servicing & Collateral Management

The business areas of asset servicing and collateral management already face requirements to migrate from both sides, regulatory and business:

- Swiss market players **affected** by **foreign regulatory initiatives** with extraterritorial impact such as SRD II and ECMS are already adapting corresponding services to ISO 20022.
- Since corporate actions communication typically involves a high degree of manual effort with ISO 15022, ISO 20022 offers **high automation benefits**.

Moreover, sophisticated collaterals requiring more attributes than offered in ISO 15022 are becoming more popular.

Clearing & Settlement

Like market players in asset servicing and collateral management, participants in the Swiss clearing and settlement business are confronted with rising expectations of **foreign business partners** to establish ISO 20022 communication readiness.

Given the **long lead time** a market wide ISO 20022 is requiring, planning for it should start soon.

Billing & Reporting

In contrast to the two clusters above, an opportunistic (and non-proactive) approach is suggested for billing and reporting processes. E.g. one only moves billing and reporting message to ISO 20022 if they are directly involved in an ISO 20022 adoption in another area. An example is admin.005 message relevant for ECMS reporting.

Additional Considerations

Once a decision for the Swiss market is taken, an implementation roadmap is on the SwissSPTC agenda and topics like market practices / translation rules during a co-existence phase are to be defined, it is recommended to involve SwissSPTC expert groups and SASFS technical groups to ensure a market wide standard will be applied.

7. Migration roadmap

Summary: Migration priorities go in sequence. We see the highest migration priority with the cluster “Asset Servicing & Collateral Management” followed by “Clearing & Settlement”. The three clusters have little interdependencies between each other.

Recommended priorities for an overall migration roadmap

1. Since certain Swiss market players need to fulfill ISO 20022 requirements in cross border collateral management business until 2023 (ECMS) and the cluster holds the highest automation potential the **cluster “Asset Servicing and Collateral Management”** is ranked with the **highest priority** to migrate.
2. Given the long lead time required to migrate the Swiss clearing & settlement market to ISO 20022, combined with the risk of a growing IT complexity if one must act unprepared due to the growing pressure on internationally connected market players, a **Clearing & Settlement** migration should be thoroughly planned, and an implementation triggered as **next priority**.
3. **Billing & Reporting** is associated with the lowest complexity and hence an ISO 20022 migration can be tackled **opportunistically**.

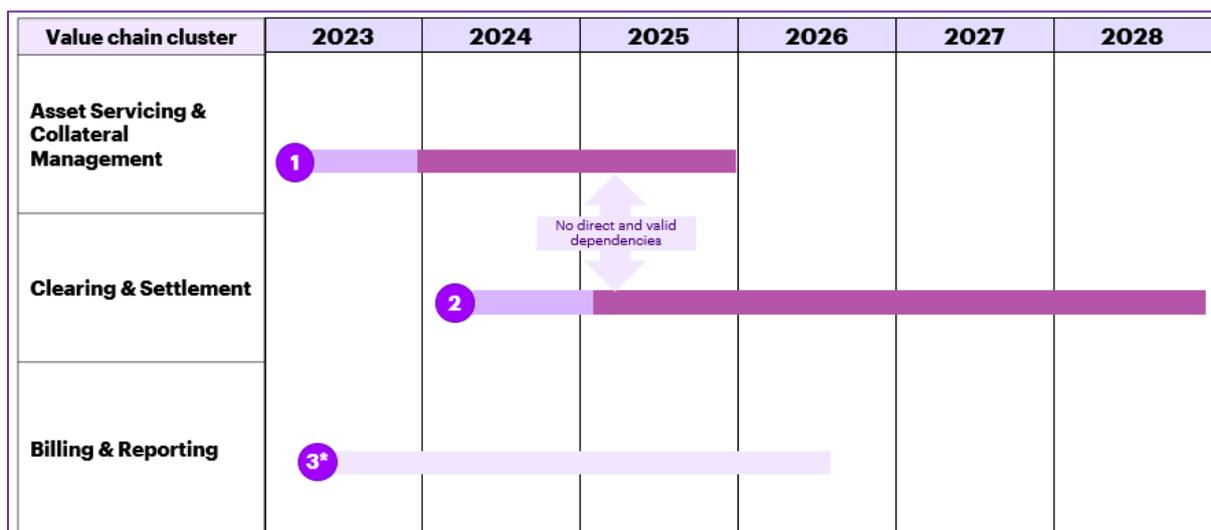


Figure 5: Overall migration roadmap for Swiss post trade market; *no certain period proposed

Recommended migration approach for cluster 1 “Asset Servicing & Collateral Management”

We highly recommend migrating **all business process of this cluster at the same time** after a three-year planning and implementation period to reduce complexity and the following reasons:

- A transition time would carry the risk of increasing operational costs and truncation.
- A respective lead time for core banking software adaptations (e.g. for custodians, sub custodians, small market players) **is included** in the migration period of three years.
- **Corporate action SMEs** strongly **disadvise** a **migration split along asset classes** (equity / fixed income) and hence back the big bank approach for the cluster.
- **Conversion truncations** are expected since cases where a backward conversion from ISO 15022 to ISO 20022 are not possible have already been identified.
- **Direct effort** for small players is assumed to be **limited given** they have their core banking operations often **outsourced** to a **larger service provider**.

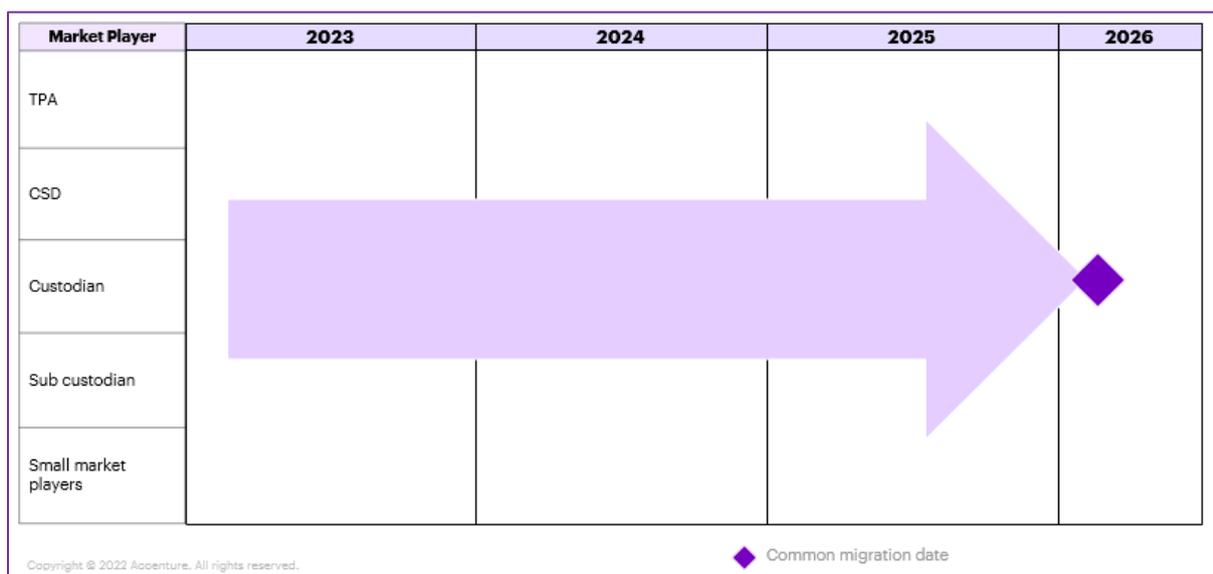


Figure 6: Recommended migration approach for cluster “Asset Servicing & Collateral Management”

Recommended migration approach for cluster 2 “Clearing & Settlement”

Due to **relatively low business complexity conversion solutions are seen as appropriate tool** to enable a **sequenced migration approach** considering the high number of involved players

The **CSD** is supposed to migrate first, given its central position to provide conversion solutions.

The **clearing business** requires a coordinated migration approach between all respective market players, DCMs, GCMs and the CCP.

The **CCP** follows the needs of its clients and hence is not supposed to build up pressure on them.

Thus, if **DCMs** and **GCMs** decide to foster migration, the CCP will join to deliver the requested new standard and migrate along with them.

Depending on their arrangement with GCMs / DCMs, the **non-clearing members** (NCMs) are ranked with the last priority to migrate. However, we highly recommend a sufficient preparation and planning phase of at least two years to assure a smooth migration.

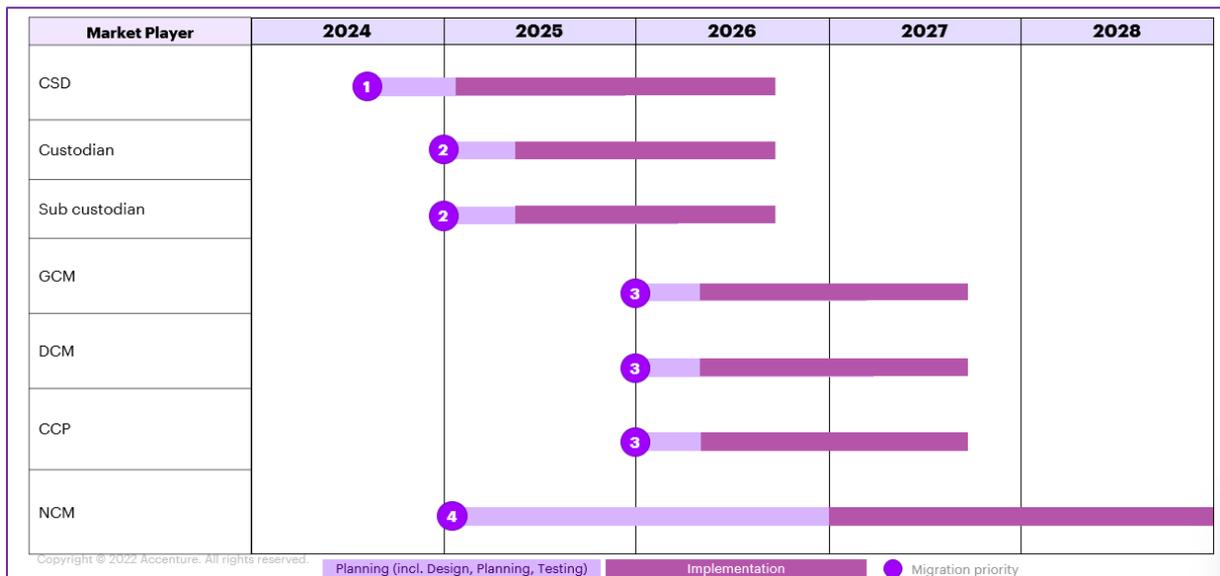


Figure 7: Recommended migration approach for cluster “Clearing & Settlement”

Recommended migration approach for cluster 3 “Billing & Reporting”
 “Billing & Reporting” is associated with lowest complexity and hence an ISO 20022 migration can be tackled opportunistically in case of concrete requirements in this area.

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8. Appendix

Market Player	Definition
Central Securities Depository (CSD)	Exchange-traded securities are physically stored at an authorized central securities depository or are registered there as book-entry securities. The central securities depository initially handles the settlement of securities transactions. The CSD also ensures the proper safekeeping of securities and the registration of intermediated securities. In addition, the central securities depository must ensure that relevant transactions related to the securities, such as interest or dividend payments, capital increases and other corporate actions, can be executed centrally (corporate actions).
Triparty Agent (TPA)	TPAs provide services such as automatic selection and allocation of the collateral, valuation and substitution, optimization of the composition of the triparty pool (“allocation cycles”) and corporate actions processing. A collateral giver and collateral taker enter into a triparty transaction managed by a TPA.
Custodian (cross border holdings)	<p>The role of a custodian includes holding assets on deposit, issuing and redeeming units, and handling payments processing. A custodian can delegate the safe keeping of fund assets to third-party or central securities depositories in Switzerland or abroad where this is appropriate. Investors must be informed in the fund prospectus and key information document of the risks associated with this kind of delegation (Art. 73 para. 2 CISA).</p> <p>Custodian banks must also ensure that the fund management company or SICAV complies with the law and the fund regulations. It verifies that:</p> <ul style="list-style-type: none"> - Calculation of the net asset value and issue/redemption prices complies with the law and the fund regulations; - Investment decisions comply with the law and the fund regulations; - Profits are used in accordance with the fund regulations.
Sub Custodian	As a representative for a global custodian the sub-custodian hold assigned securities in the foreign (national) CSDs.
Central Counterparty (CCP)	The CCP acts as an intermediary in on-exchange and in some over-the-counter (OTC) markets. It acts as the seller and buyer in a transaction, thus assuming the function of a performance guarantor. In order to be able to ensure proper settlement and performance of transactions for the buyer and seller in case one of the two parties fails to meet its duty of delivery or payment, the CCP demands collateral from all trading parties in the form of cash and securities.
Direct Clearing Member (DCM)	A member of a clearing house that clears on its own behalf and on behalf of its customers.

General Clearing Member (GCM)	A member of a clearing house that clears on its own behalf, on behalf of its customers and on behalf of other market participants.
Non Clearing Members (NCM)	A member of a regulated market that uses a general clearing member to access a clearing house’s services. All trades must be settled through a clearing member.

Figure 8: Uniform definition of market players active in Swiss Post Trade Market

To get deeper insights into the situation of individual market players a contact person of a representative institution for each player was chosen for an interview, to gain a clear understanding of their:

- Current situation in terms of used formats
- Requirements and customer demands
- Parameters to help sizing a cost estimation for an ISO 20022 migration and potential maintenance costs

The detailed take aways of these interviews can be found below.

Stakeholder	Example (non exhaustive)	Contact	Workshop Date	Value Chain Section					
				Clearing	Settlement	Asset Servicing	Collateral Mgmt.	Billing	Reporting
Market participant - direct T2S participant	BNP	Urs Frey	05.07.22	✓	✓	✓	✓	✓	✓
Clearing	General member	UBS	Michael Hupfer	13.07.22	✓	✓	✓	✓	✓
	Direct member	ZKB, Vontobel	Peter Reto, Achim Kerber	08.07.22	✓	✓	✓	✓	✓
	Non member (covered through DCM & GCM)	-	-	-	✓				
	CCP	X-Clear	Simon Haab	28.07.22	✓	✓			✓
CSD	Settlement**	SIX SIS	Philipp Auf der Maur	14.07.22		✓	✓	✓	✓
	Collateral Mgmt. - including TPA role	SIX SIS	René Eberhard	08.07.22		(✓)	✓	✓	✓
Custodian - including TPA role	BNP	Urs Frey	05.07.22		✓	✓	✓	✓	✓
Sub Custodian	SIX	Alessandro Vitacca	19.07.22		✓	✓	✓	✓	✓
Outsourcing Provider	Swisscom	Olga Leis Claus Halbherr	17.08.22		✓	✓	✓	✓	✓
Post Trade infrastructure	SECOM-IT	Kathrin Scharpf	02.09.22		✓	✓	✓	✓	✓

Figure 9: Market players defined for Swiss post trade market including interview schedule

General Clearing Member (GCM) – Interview takeaways

The clearing business of Swiss GCMs is only obligated to Swiss regulation and thus not affected by additional regulatory requirements.

Therefore, the current message standard used between the analysed GCM and its (Swiss) stakeholders is ISO 15022. Moreover, no inquiries from stakeholders for ISO 20022 readiness have been recognized yet.

However, to connected to foreign stakeholders (such as Eurosystem CSDs) business requirements in terms of communication standards differ e.g. messages with Clearstream have to be established through ISO 20022 until end of 2023.

A first step towards readiness (including Swiss market players) is the current implementation of proxy voting messages in ISO 20022 standard concerning European Union / European Economic Area securities.

Simply put, for the Swiss market currently no regulatory but business reasons are expected to drive ISO 20022 readiness / migration.

Inhouse translators converting ISO 15022 messages to inhouse settlement messages may be leveraged for a transition period to an ISO 20022 messages and hence keep the costs for such a period small. A detailed analysis conducted by the interviewed market player planned until end of the year will help to quantify associated costs

Direct Clearing Members (DCM) - Interview takeaways

In terms of ISO 20022 requirements, Swiss direct clearing members face a similar situation as general clearing members. As pointed out before, binding regulatory requirements do not currently exist for the Swiss post trade market. Furthermore, there are no immediate business needs to adapt to the new standard.

Nonetheless, through their cross-border activities, business requirements set by foreign stakeholders are relevant but none in regard to an ISO 20022 migration have been received yet.

So far, participants in the Swiss clearing business seem to be satisfied with the current ISO 15022 standard.

Messages are recognized as well standardized and displaying information / content appropriately and precisely.

However, from a DCM perspective, the already implemented SRD II showed that there may be a demand for more information richness in the short or mid-term (and hence ISO 15022 may not remain sufficient in other areas as well), but concrete business use cases have not yet been identified, except for SCoRE driven adaptations in the collateral management space.

Swiss DCMs do not expect distinctive efficiency benefits from ISO 20022 migration since the current ISO 15022 clearing messages already have a high STP rate.

Converter solutions are considered as appropriate tools for a transition period if ISO 20022 migration is required (or agreed) and might be established with reasonable efforts.

Furthermore, maintenance costs for a limited transition period where two standards are used in parallel are expected to be manageable.

Central Counter Party (CCP) - Interview takeaways

For the Swiss Stock Exchange trading flow several CCPs can be selected for clearing services by the Swiss Stock Exchanges participants. Hence, the interoperable clearing providers directly compete against each other and are striving to provide efficient services to their stakeholders.

The current messaging with Swiss stakeholders (exchange, DCM, GCM, CSD) is managed via ISO 15022. There is no client demand for switching to ISO 20022 communication registered so far.

In the international business selected connections to Nordic CSDs such as Euroclear Finland have already adapted the new ISO 20022 standard. The remaining CSDs, where the interviewed CCP is connected to, still operate on legacy standard. The interviewed CCP has recently implemented a new clearing platform for the Nordic markets which natively supports ISO 20022. From an IT assessment perspective, it is assumed that the new standard would increase STP and processing rates.

The maintenance costs for the provision of both standards are not assessed to be significant but bring higher operational risk due to increases IT complexity.

Swiss CSD -Settlement - Interview takeaways

SIX SIS uses two real time settlement infrastructures, SECOM the CH issuer platform and T2S as European settlement platform used by a “closed” environment of European CSDs.

The SECOM infrastructure also operates custody services and asset servicing for markets outside of Switzerland. It is hence interlinked with a larger amount of national and international market players than T2S and hence affected by format changes imposed by any of these players.

E.g. the communication with the US American CSD (DTCC) is only feasible via SECOM or an equivalent infrastructure (not T2S).

An option for ISO 20022 communication is already established on the provider side, but not on the client side.

Moreover, a wide variety of other formats can be received, processed and sent over SECOM.

From a settlement perspective, the current message standard (ISO 15022) can carry all required information, hence the new standard (ISO 20022) only changes the format. Hence the ISO 20022 standard is not expected to add any business value in the short or midterm.

Given SECOM’s ability to operate with both standards, maintaining them in parallel does not seem to be a significant cost / effort driver.

However, despite this perception, a migration should be linked with a clear time frame for ISO 15022 termination (on SECOM), since the operational

efforts and complexity (e.g. staff which needs to be trained and updated continuously for both standards) will not decrease.

Swiss CSD -TPA - Collateral Management - Interview takeaways

The interviewed TPA will participate as a direct member of ECMS and therefore follows SCoRE guidelines.

In this context the TPA is currently setting up the respective project which is monitored by the European Central Bank. The impact analyses for ISO 20022 have started. The TPA understands itself as an international service provider out of Switzerland in the Swiss post trade market and thus will continue to provide both standards to its stakeholders after ECMS go live in November 2023. In particular, the TPA will convert received and sent messages according to the stakeholders required standard (ISO 15022 in ISO 20022 and vice versa).

TPAs are already inquired by major stakeholders regarding a timeline of ISO 20022 readiness which can be interpreted as an overall market expectation. It is in the TPA's interest to be compliant with international standards and therefor to reach its international client base.

Clear business benefits of ISO 20022 standard in collateral management still need to be identified. Potential is expected in a lean and smooth processing of security messages and increased efficiency through single standard of worldwide messaging in collateral management business.

Further the new standard might reveal as more efficient in order to process more sophisticated collaterals, a market segment which is expected to grow significantly in the future. Additionally, the clear and rich ISO 20022 taxonomy can facilitate a bridge to future Distributed Ledger Technology (DLT) based markets.

An estimation about the maintenance efforts to run two standards can be derived from dual processing of TPA business on SWIFT and proprietary standards and are expected to be significant. Especially when mapping old to new message standard (as TPA messages are quite complex to process).

Custodian - Interview take aways

The custodian selected for interview is the Swiss dependence of a large European institution and participating as a direct T2S member. Therefore, the ISO 20022 standard is already in usage for transactions settled through T2S. ISO 15022 is parallely used for the Swiss post trade market and its stakeholders.

From the custodian's perspective, T2S is the only interface which requires ISO 20022 format next to SRDII messaging with various counterparts (FMI, appointed issuer agents, clients and proxy providers). Funds and more and more cash related messaging is moving to ISO 20022 or has already adopted.

Through the established transnational settlement platform (covering Europe & Asia) of the custodian which is operated by a large IT team, the efforts in providing the old and new standard in parallel are not seen as material. The ISO 15022 standard is regarded as highly appropriate and efficient for settlement activities so far.

Significant savings for the custodian are only (potentially) expected if all business partners fully apply to migrate and thus only ISO 20022 had to be provided.

Moreover, the potential and benefits of the new ISO 20022 standard are currently not required for settlement business since messages are based on a (relatively) “simple” information content.

Business benefits might be achieved with future use cases in the fields of quality and risk management. More precisely, future requirements for information / messages content (regulation, sanctions, AML etc.) might create a need for settlement messages to migrate into new standard.

Sub custodian- Interview takeaways

Swiss sub custodian business (including cross border transactions) provides services to stakeholders located outside of Switzerland. In this context the predominant message standard is ISO 15022.

The first (and only) push towards ISO 20022 is generated through T2S requirements which compromises e.g. SIX SIS sub custodian business. No other post trade market such as Singapore or UK demands ISO 20022 readiness for Swiss sub custodian players. However, first signs for ISO 20022 aspirations are recognized from DTCC in the US (e.g. corporate actions).

Nonetheless, the interviewed sub custodian has already (partially) implemented ISO 20022 in terms of SRDII requirements (proxy voting). Operations costs related to the new proxy voting process are considered significant, however this is driven by the complication that many stakeholders still “reply” in ISO 150022 whereas the process expects them to be ISO 20022 ready already as well.

According to these experiences, participation on ECMS is scheduled at the second migration wave in November 2025 (corporate actions) to benefit from a wider adoption of the overall market. The target of the sub custodian is to be technically ready for the first wave (to receive and process ISO 20022 messages) but not to go live for their clients before November 2025.

Hence, significant benefits are only expected to reveal (at full potential) when all market players (custodians, CSD) switch to new format (including US, UK, etc.). From that date on, STP solutions will be reasonable.

Looking at the wider corporate actions space (beyond proxy voting) benefits of ISO 20022 (if all stakeholders / clients will use the same standard and messages are structured accordingly) will be a significant reduction of

operation efforts (up to 75%) through a significant increase in STP rates and reduction of operational risk.

Core banking providers – Takeaways from global Accenture network

For many banks an ISO 20022 adoption of post trade messages is mainly affecting their core banking systems. Hence the ability to implement the new standard also highly depends on the development roadmap of their core platform provider. Looking at the ISO 20022 adoption roadmap of main platform vendors in Switzerland shows that a reasonable lead time, allowing them to adapt their software packages first, will be required to plan a feasible migration roadmap for the overall market.

Provider 1 (International and Swiss clients):

ISO 20022 format is supported for post-trade messages with a new module. However, the module is not yet live with a Swiss bank hence significant adaption costs can be assumed.

Provider 2 (International and Swiss clients):

Only few ISO 20022 post trade messages (SRDII, funds) are covered in the currently available versions of their software. Given the lack of demand a support of further message types is also not foreseen in their current development pipeline: A higher demand for ISO 20022 in Asia will mainly drive their development pipeline.

Provider 3 (Mainly Swiss clients):

ISO 20022 is currently not on their radar given the lack of a current client demand.