Investment Funds Processing in Europe

A contribution to expedite convergence towards a more efficient processing environment

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Disclaimer:

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Table of Contents

Foreword

The European investment fund market has experienced strong growth. The value of assets invested in UCTIS funds doubled since 2002. Despite the current market setback that affects all asset classes, the long term upward trend continues.

Behind the invested assets, there are individual transactions, and associated transaction costs. Currently some 50 million fund transactions are processed annually in Europe, at a cost per trade that is many times higher than in the equity market.

Transaction costs are one issue, risk is another. European custodians engaged in cross-border business rate it as high. Some major custodians even report that 80% of their total operational losses are nowadays caused by fund transactions. The funds eco system, seeking to become more efficient, must also clearly address the risk issue, demonstrating how it learns from the financial crisis.

The seamless, pan-European capital market is still many years away. While progress is being made in various fields, European funds processing remains fragmented in many ways. Cross-border consolidation and convergence of market practice is slow. The next fundamental step for the European funds industry is the implementation of UCITS IV with the improvement of the passports for funds and for the fund management companies. Distribution will become key. The technical preconditions must be ready to accompany this major evolution and to help the industry to leverage its outcome for the investors.

This report is a contribution towards more efficient funds processing in Europe. It is the result of an effort by a small group of fund specialists (listed on page 62) who represent the major actors in European funds processing.

Achieving convergence of market practice in Europe is a bottom-up process which the ISSA Fund Working Group aims to expedite. In a first phase, the group described the major gaps and obstacles that hinder efficient cross-border processing. In a second phase, it analyzed existing solutions in the largest European markets. Using a pragmatic approach, the group is now highlighting existing best practice that should be known, shared and implemented over time on a pan-European level.

Throughout all discussions, the group emphasized the importance of having an end-to-end view, promoting paperless processes and seamless automation. Accordingly, this report is addressed to all parties that perform one or more functions along the fund order processing chain. Its objective is to cross-fertilize the industry and it should be seen as complementary to other current initiatives, not in competition to any of them.

The report focuses on operational issues, sometimes on a very detailed level. However, the work at hand must be seen in a wider context: Micro issues have a large impact on the overall understanding of the funds processing business. They may even determine to some extent the design of the entire market infrastructure.

Twenty years ago, the equities market infrastructure looked similar as the fund market infrastructure does today. The securities industry came a long way towards creating a vastly improved clearing and settlement environment for equities. We are confident that the same can be achieved in the funds world as well. The ten Guiding Principles that contain the essence of the group's work, should expedite that process.

The ISSA Executive Board wishes to thank all supporters for their personal contribution and their firms for having enabled their participation.

Edouard-François de Lencquesaing
Chairman ISSA Fund Working Group

Executive Summary

Background and objective

The seamless, pan-European capital market is still many years away. While progress is being made in various fields, European investment funds processing remains fragmented in many ways. Well established operating models are in use and accelerate their evolution both on a national and pan-European market level. Yet, none of them is perfect and cross-border consolidation and convergence of market practice is still slow.

Achieving convergence of market practice in Europe is a bottom-up process which the ISSA Fund Working Group hopes to expedite with the publication of this report. The group's mission statement was to "propose practical ways of gradually reducing barriers to operational efficiency in pan-European cross-border funds processing, aiming to re-duce costs and risks to investors, distributors, asset managers, custodians and other providers of securities services".

The scope of this analysis was limited to UCITS Funds distributed and safekept through the involvement of intermediaries such as custodian banks, order routing platforms and central securities depositories. However, the working group believes that all its recommendations are open enough to accommodate alternative funds in the spirit of the EU consultation on the AIFM directive.

Who should read the report?

This report focuses on operational issues, sometimes on a very detailed level. However, the work at hand must be seen in a wider context: Micro issues have a large impact on the overall understanding of the funds processing business. They may even determine to some extent the design of the entire market infrastructure. Accordingly, the report is targeted at all parties having an interest in the current state of the European investment funds 'backoffice' and related market infrastructures.

Structure of the document

This report is organized in three distinct parts:

1) The **Core Report** examines the subject matter, discusses the different stakeholders' needs and suggests best practice – on a rather high level - for the way forward in areas where change is recommended.
2) The **Order Processing Matrix** provides more detailed analysis of the fund order flow. It identifies the key issues and risks inherent in each processing step and offers recommendations for the improvement of that particular step.
3) Useful background information, position papers, case studies, and additional detail on certain issues was placed in **Annexes** and referenced in the main report or the matrix.

Working approach

The group pursued and recommends a bottom-up approach: start on the domestic market level, work up to a European level while bearing in mind that European solutions must ultimately facilitate global ones. Know-how gained locally should be used to cross-fertilize the industry as it has the potential to be re-used elsewhere without the need for reinventing the wheel.

A guiding principle was to abstain from promoting radical changes to the market but address its inefficiencies, step by step. A pragmatic and low cost approach was favored, recommending the re-use of solutions that already exist and have a realistic chance for adoption on a wider scale. The focus was on drafting recommendation that facilitate interoperability between the existing operating models, rather than seeking to design a new green field solution.

The group remained neutral towards commercial service offerings. The critical elements are the individual functions comprising the overall process. Those generic functions can be handled in different ways in a variety of operating models. Market forces decide to which solution the critical mass will flow.

The group examined these functions, looking for ways to optimize their execution:

- Messaging standards and reference data
- Account opening
- Order placement
- Order execution
- Settlement
- Transfer of holdings from one investor custodian to another
- Holding and transaction reporting
- Commission reporting
- Custody and asset servicing
- Distribution
- Miscellaneous additional issues

Ten principles to improve processing efficiency and model convergence

The report and in particular its section "Order Processing Matrix" contain numerous detailed and often small-step recommendations. For better orientation, a set of ten higher level principles were derived from them. The group is convinced that, if those were observed consistently, the European funds processing infrastructure would benefit immensely in terms of efficiency gains, risk mitigation and cost savings. The ten principles are listed on the following page.

Outlook: the evolutionary approach to shape the European market will continue

Turning these principles into reality will take time. Not all stakeholders have the same priorities and they move at different speeds. The European market place is evolving, often driven by events originating outside of the operations area. For that reason, the recommendations do not carry a suggested implementation time horizon. The group anticipated some major developments that will influence the market in the coming years, such as UCITS IV, the AIFM Directive and TARGET2 Securities. To the extent possible, their expected impact was taken into consideration when drafting the recommendations and higher level principles.

Contributors

Throughout all discussions, the group emphasized the importance of having an end-to-end view. Accordingly, the working group included the major actors that provide the European funds processing infrastructure or perform one or more functions along the order processing chain. The names of all participating firms and the individual contributors are listed on page 62. For general information about ISSA, visit www.issanet.org

Ten guiding principles to achieve higher efficiency and convergence of market practice in funds processing

1. **Paperless processes, straight-through processing based on ISO standards**
Paper should be removed from all processing steps and replaced by STP processes. All transaction related communication from order processing through commission payment between professional market participants should be electronic and adhere to ISO standards.

2. **Mitigation of operational risk**
Financial and operational risks should be mitigated, especially counterparty credit risk and those related to the payment process.

3. **Clarity of account structures**
Distributors should agree with the fund management company prior to the first transaction how they will place orders, detailing the accounts in which their investments will be held and the accounts used for settlement. This should include details of any external third parties such as custodians or depositaries with whom the distributor has contracted for such services. The fund management company should in turn provide these details to their transfer agent.

4. **Key identifiers**
Contractual agreements between a distributor and a fund management company should have a unique 'Agreement Identifier' and (where needed) a 'Local Identifier' which dictates the commercial terms to be applied in respect of all commission types. These identifiers should be quoted in all instructions relating to those agreements. The combined 'Agreement and Local Identifiers' and the relevant account numbers should be included in all fund orders.

5. **Commission reporting**
Where omnibus accounts are used, order marking or equivalent standardized position reporting mechanisms should be in place to ensure correct commission calculation. A standard format for position reporting should be developed.

6. **Fund Processing Passport**
Fund management companies should provide a complete Fund Processing Passport (FPP) for all funds. The fund prospectus must mention where the passport can be obtained. The industry should get organized to facilitate access to and distribution of FPPs.

7. **Completeness of data throughout the intermediary chain**
The order issuer is responsible for completing the order with all information required by the transfer agent. Each intermediary must pass on complete information.

8. **Acknowledgement of order receipt and confirmation of order execution**
Transfer agents should acknowledge the receipt of orders as soon as possible. They should also notify the execution of orders as soon as possible. Distributors and client side custodians should send execution confirmations to their clients only upon receipt of an execution confirmation from the transfer agent.

9. **Flexibility of position reporting systems**
Position tracking and reporting systems used by client side and fund side intermediaries as well as central market infrastructures, should support both trade date based and settlement date based reporting.

10. **Transfers of holdings**
Transfers of holdings should be automated and, where possible, the distributor identifiers (combined Agreement and Local Identifier) should be included in the transfer instruction message.

1 Mandate

The working group guided its activity through the following terms of reference:

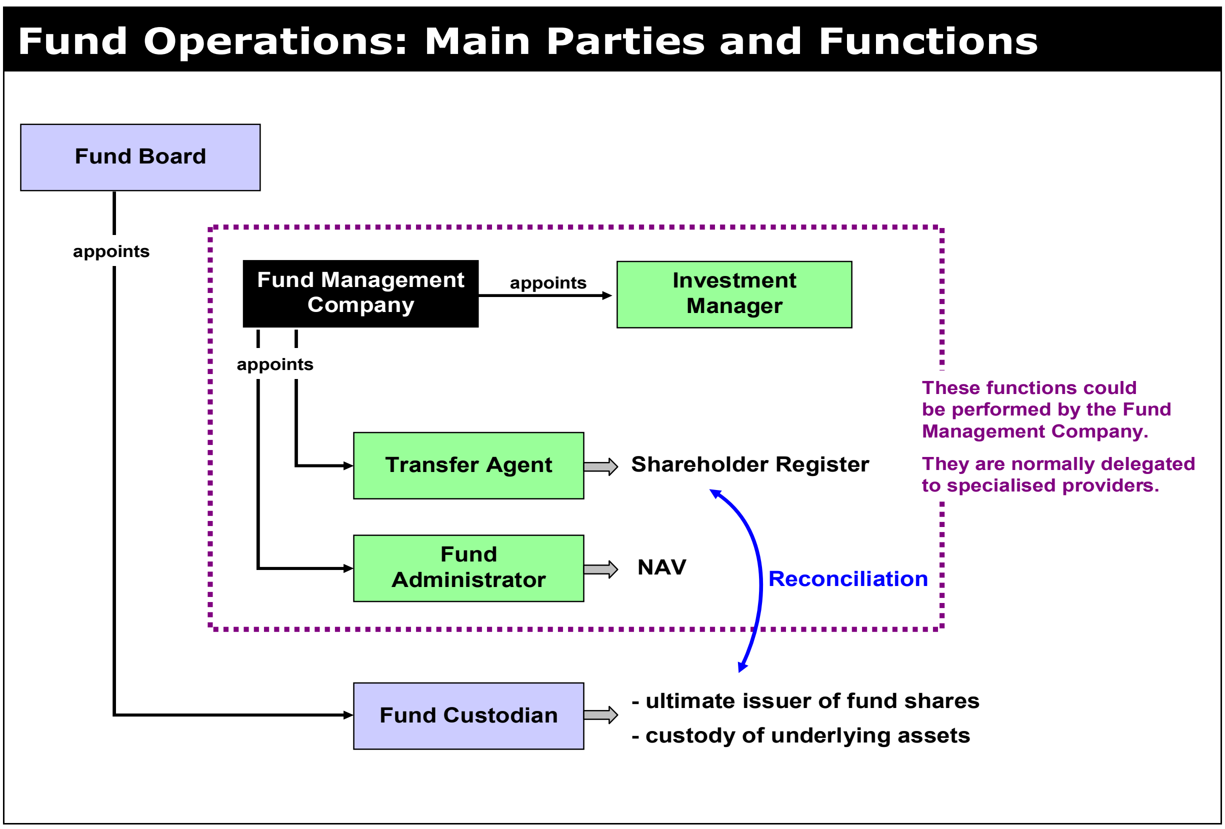
> The working group's mission is to propose practical ways of gradually reducing barriers to operational efficiency in pan-European cross-border funds processing, aiming to reduce costs and risks to investors, distributors, asset managers, custodians and other providers of securities services.

2 Introduction and Background

Investments in third party funds are increasing significantly in Europe, both domestically and cross-border. The value of assets invested in funds roughly doubled over a five year period (2002 – 2007). Despite the current setback that affects all asset classes, the long term upwards trend continues.

The parties involved in operating an investment fund

For better understanding, the main parties involved in setting up an investment fund, and their main functions, are shown in the picture below. This is a generic view, in reality there may be variations and additional service providers. The intermediaries involved with fund distribution and with processing orders, are not included here.



From an operational perspective, **the objective is to process all fund trades – including cross-border investments – at or near domestic transaction costs, and using convergent global practices**. Today, the unit cost of a cross-border trade in Europe is too high, for funds as well as for conventional securities. the cost for funds processing is significantly higher than that for other securities. In comparison with a domestic trade in the US which is often used as a benchmark, it appears even excessive. This implies that the cost of fund "backoffice" operations must come down significantly.

The objective should be to significantly reduce the cost of cross-border order processing, by promoting automation and best practices between custodians and transfer agents and by leveraging domestic experience and know-how to achieve "bottom up" convergence in Europe.

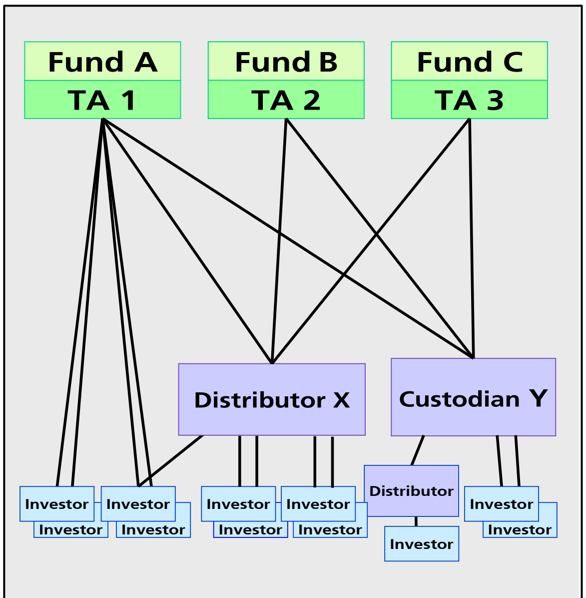
General approach and principles: interoperability and model neutrality

The single, pan-European capital market is still many years away. In the European market environment, efficiency gains can only be achieved in a step-by-step approach. It was stated several times that, even if a visionary and perfect new processing model was proposed which required radical change, the market in its current stage of development would not be prepared to adopt it. The established infrastructures and major market models are a given. However, there are inefficiencies in each, and those should be identified and eliminated.

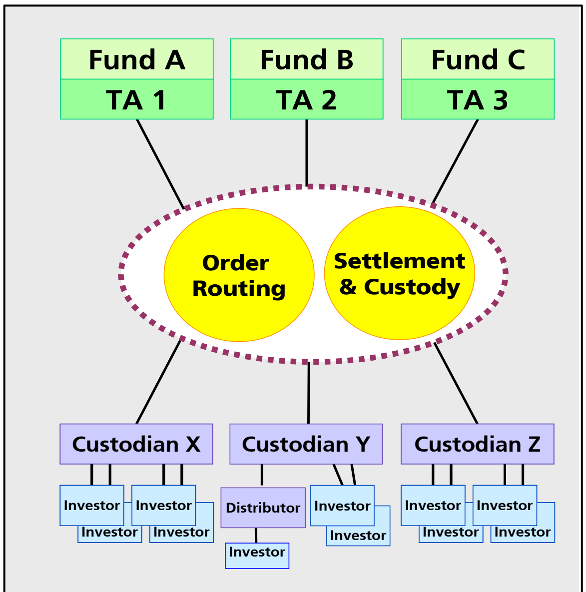
All national market infrastructures and operating models should become interoperable respectively convergent, ideally applying the same, or at least similar, principles to optimize their internal processes. This will facilitate convergence and consolidation over time and contribute towards lower processing costs.

The European fund industry works with two major order processing models, the **Transfer Agent (TA) Model** and the **Hub Model**; the latter exists in different variations.

In the cross-border market, the transfer agents are dealing with hubs and direct relationships at the same time. For the sake of clarity this report describes the two models separately. The objective is not to favor one over the other, but to make both models more efficient.



Transfer Agent (TA) Model
Many-to-many, like the securities market before CSDs



Hub Model
A central hub supports order routing or settlement & custody or both functions

The Transfer Agent Model is based on direct account relationships between fund distributors/investor custodians and fund transfer agents. This model is specific to the transfer agent-driven fund industry, mainly in Luxembourg, UK and Ireland. From the transfer agent's point of view, the TA model offers the easiest access to a wide range of distributors, both in terms of type and geography, which is of particular relevance for cross-border distribution into new markets beyond Europe, i.e. Asia Middle East and Latin America.

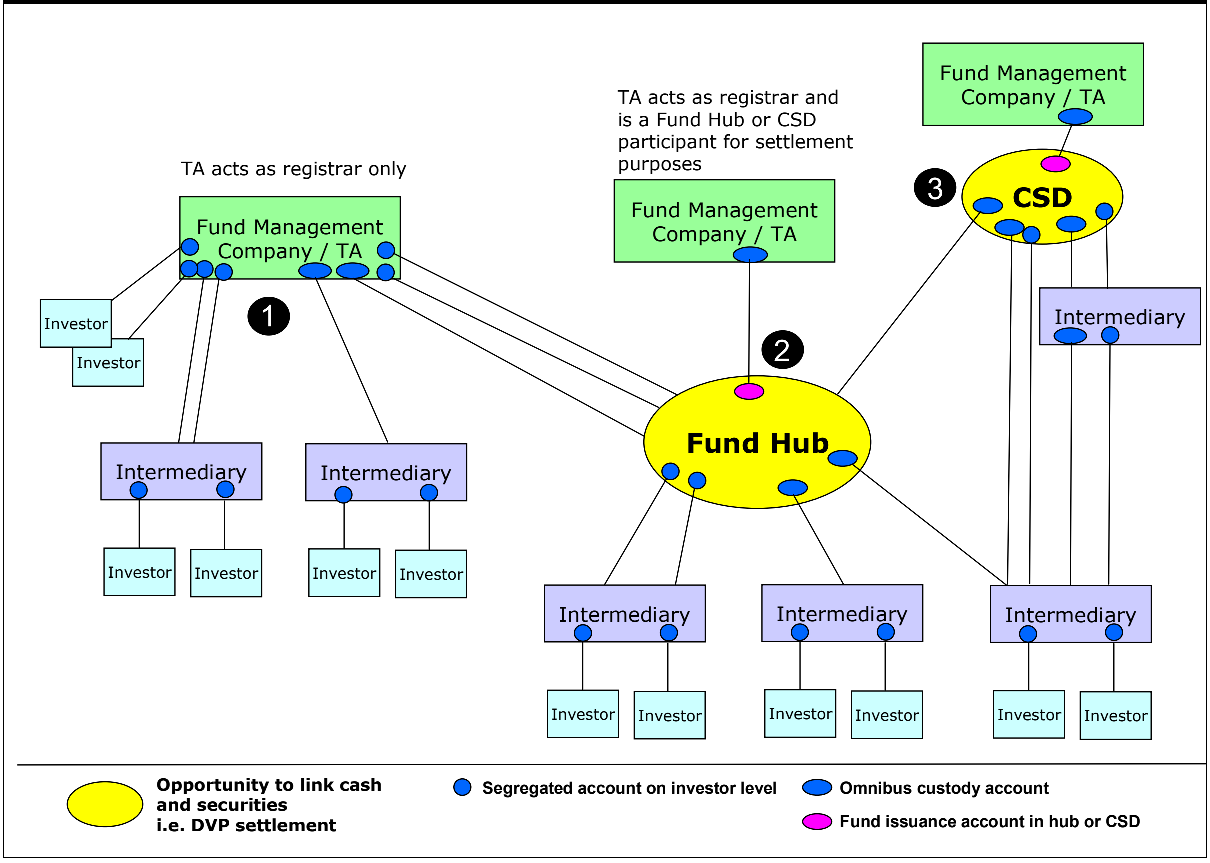
The Hub Model puts a centralized entity in the middle, in the sense of a market place where access is restricted to a number of eligible players both on the manufacturing and the distribution sides. The hub could be a communications hub only (order routing and related correspondence), or it could be expanded to include settlement and custody. The original Hub Model was created, in response to the needs of investor custodians, by re-using as much as possible from the established bond and equity processing infrastructure. Since the early design stage, changes have been made by the hub operators to accommodate the specifics of investment funds, making them more suited to the open architecture distribution model. **The objective must be to enhance the transparency of transaction messages routed through hubs**, in the sense that the fund management company, the transfer agent or the commission calculating agent receive all details about the distributor or investor they need to complete all tasks within their own responsibility. The existence and usage of a hub must not impair the work of subsequent parties in the chain of actors.

Both models will coexist for an indefinite time. However, it seems possible and indeed necessary, to define principles which facilitate interoperability – if not convergence – towards common best practice. The search for efficiency gains must focus on internal process efficiency within each of the two models, while at the same time aiming for their convergence over time, to the extent possible, especially from the end user's perspective. **For distributors and order processors, the use of either model should be as neutral as possible as far as market practice or standardized interfaces are concerned**.

A possible, realistic target is to promote a dual approach: one fully automated Transfer Agent Model and one Hub Model, using the best elements from existing processes and using to the extent possible ISO standards for communication between professional counterparties. From the market user and the transfer agent perspectives the different functions in each model (account opening, order routing, order execution, settlement) should be processed similarly, through common interfaces.

An overview of the various possibilities to process funds in Europe is shown below:

Landscape of Connectivity in the European Fund Market



❶ Fund Management Company /TA acts as registrar only

- TA maintains register of shareholders and quantity of fund shares held. (The underlying assets of the fund are held with the fund custodian. The fund custodian is also the entity that ultimately issues or liquidates fund shares.)
- Funds shares not settled in a CSD or Fund Hub
- Separate cash correspondent required to handle the cash leg of a transaction
- No settlement instruction required for subscription and redemption orders

❷ ❸ Fund Management Company / TA acts as registrar and is a Fund Hub or a CSD participant for settlement purposes

- TA maintains register of shareholders and quantity of fund shares held. (The underlying assets of the fund are held with the fund custodian. The fund custodian is also the entity that ultimately issues or liquidates fund shares.)
- The TA mirrors all or part of the fund shares in a fund issuance account in the Fund Hub or CSD
- Settlement takes place on a DVP basis within the Fund Hub/CSD between the fund's issuance account and the intermediary's participant account.
- Certain markets enable DVP settlement and/or registrar functions for domestic funds within their CSD (e.g. Switzerland, Germany, France).
- A Fund Hub could be a participant in a CSD, thus enabling intermediaries to access fund settlement through their CSD account even though the fund/TA is not a direct CSD participant. (e.g. CFF account in Clearstream Banking Luxembourg)

[This page revised March 2010]

By promoting automation and best practices between investor custodians and transfer agents, the cost of order processing and settlement in those domestic markets dealing with a fully open architecture-type environment could be reduced substantially.

The critical building blocks for the industry are the individual functions comprising the overall process. Those functions need to be analyzed and optimized, neutral of the operating model. The functions can then be implemented in a variety of scenarios or operating models. Market forces will decide to which operating model the critical mass will flow.

Phase I: Describing the barriers

In June 2006, the 13th ISSA Symposium endorsed a status report on the work completed by the ISSA Fund Working Group up to then. That report identified ten major barriers and constraints to efficient cross-border funds processing, as follows:

1. Lack of harmonized information technology and interfaces
2. Lack of common identification and reference data relating to funds and to the counterparties to a transaction
3. Lack of agreed-on process life cycle for subscriptions, redemptions and transfers of holdings
4. Lack of ability to link the cash and securities leg in one transaction, and lack of clarity on finality of settlement
5. Know Your Customer (KYC) issues, and existence of professional intermediaries which are not regulated entities
6. Complex fund features requiring account segregation, disclosure, reporting
7. Lack of standardized distribution agreements
8. Lack of standardized processes to notify investors on changes to their investment schemes and in the distribution of entitlements
9. Lack of harmonized tax systems and tax processing requirements
10. Lack of standardized and efficient procedures to calculate and process commissions, trailer fees and similar forms of remuneration

Phase II: From barriers to solutions: a functional approach

At launch of Phase II - and throughout completion of the Phase III which is the core subject of this report - the working group was careful not to favor the Transfer Agent Model over the Hub Model, or vice versa. Rather, it looked at common generic functions and then examined how the barriers identified in Phase I could be overcome or lowered. The objective of this approach was to facilitate, over time, convergence towards an optimized funds processing environment.

Phase III: Refining the interim results

The functions were defined and prioritized by the group as follows:

1. Messaging standards and reference data
2. Account opening
3. Order placement
4. Order execution
5. Settlement

6. Transfer of holdings from one investor custodian to another
7. Holding and transaction reporting
8. Commission reporting
9. Custody and asset servicing issues
10. Distribution issues
11. Related issues

Criteria considered for setting the priorities included:

- Potential to achieve quick wins
- Time to market for best practice recommendations vs. the risk of coming late
- Potential for synergies with and acceleration of initiatives driven by other organizations, such as EFAMA, the Findel Group, the Dematerialised Mutual Fund Sales Agreement initiative
- Size of market impact – success in a marginal field is fine but not very effective
- Realistic chance to implement a recommendation

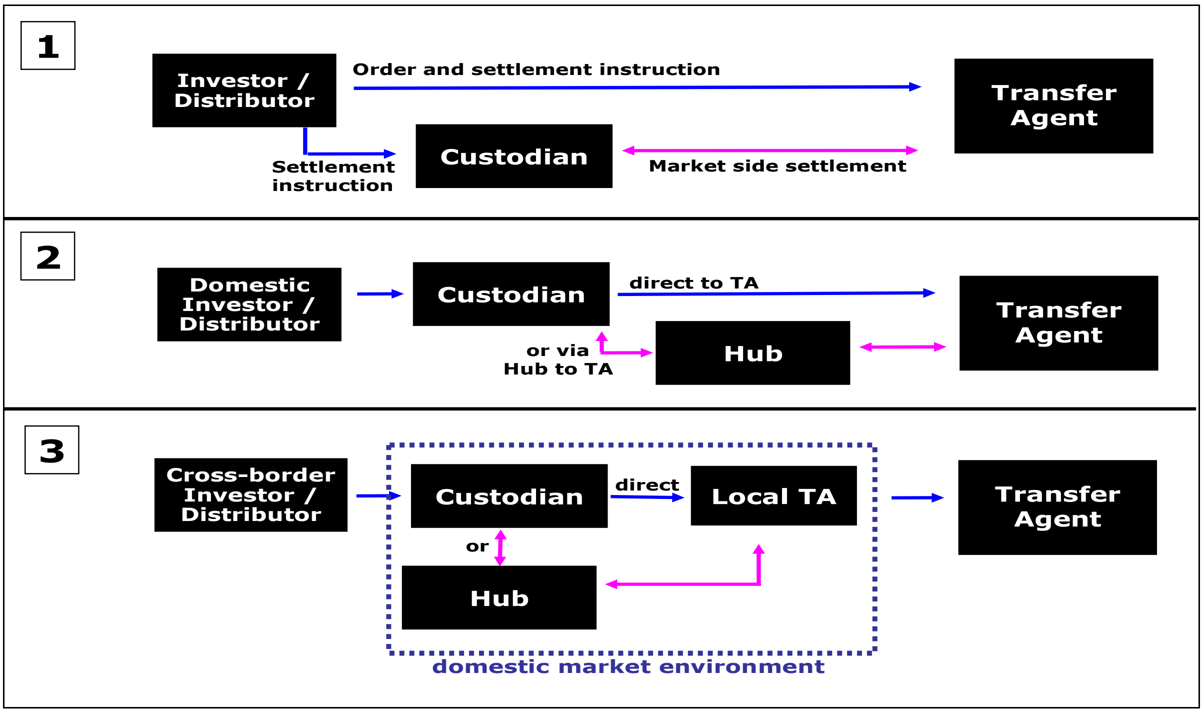
3 Governance, Scope and Methodology

The formal project sponsor was Jacques-Philippe Marson, President & CEO, BNP Paribas Securities Services. The working group chairman is Edouard-François de Lencquesaing, independent consultant. The working group represented the different stakeholders of the funds industry: asset managers, transfer agents, investor custodians and market infrastructures. The participating firms and the individual contributors are listed on page 62.

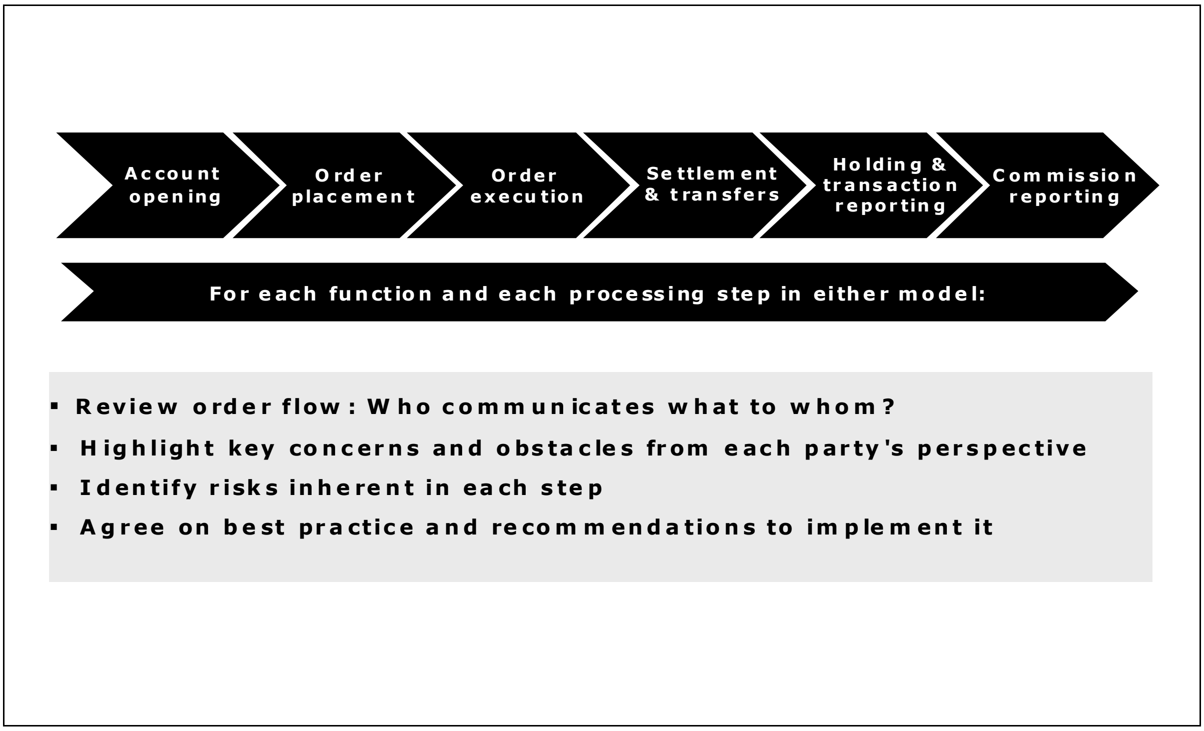
The product scope was funds registered for public distribution in Europe, with a focus on UCITS III funds. Only work flows involving intermediaries were addressed. More specifically, the scope was defined as follows:

Included	Excluded
European registered funds (UCITS Funds)	- Exchange Traded Funds (ETFs) - Alternative instruments, such as hedge funds with complex features
Funds distribution through the involvement of regulated distributors which are eligible for direct participation in CSDs and ICSDs, acting as intermediary between investors and funds	Direct account relationships between the ultimate investor and the fund/transfer agent, without the involvement of an additional intermediary
Needs of all parties when a custodial model that employs omnibus accounts is operative	Needs of end investors who hold their assets directly with the fund company/transfer agent
Settlement and asset servicing to include communications and reference data	Legal and regulatory barriers that impede marketing
Unique/country specific challenges of investors in such funds. (It is recognized that such funds are now sold into Eastern Europe, Middle East, Asia, South America well as Western Europe and challenges of all investors is within scope.)	Processing issues of investors in domestic funds
Legal and regulatory issues that may impede processing: - KYC ("Know Your Customer") requirements where intermediaries are involved - Tax reporting/withholding tax issues	Legal and regulatory issues that impact the processing of funds sold only to domestic investors

The picture below gives a simplified overview of the main actors and the basic market models. In reality, there are more variations and there may be additional parties involved. Scenarios 2 and 3 were the main focus for the group. The point to emphasize is that there are various distribution channels and ways to establish connectivity between investor and fund. The goal is to enable seamless transaction processing, whatever route an order takes.



The core processing functions were broken down into more detailed sub-processes. For each sub-process, the key issues and risks were described and the pair of actors affected by them identified.



The challenge at hand was to tackle the combination between the different options for order routing, and the functions to be performed along the order handling process. In order to achieve a truly comprehensive analysis, it would be necessary to examine the critical issues between each pair of actors in every possible order routing scenario, and for every processing function. The theoretical number of subsets is very large. For pragmatic reasons the group limited its scope to the most common scenarios. The results of analysis and discussion including the recommendations were condensed in a standardized format, the Order Processing Matrix, which is part of this report.

The matrix is covering each process and sub-process. The entry points are limited to those two functional levels. For each entry point it identifies major issues for each "couple" of interaction (for example, custodian to transfer agent, or custodian to hub, then hub to transfer agent). For each row of the matrix a recommendation is given.
The matrix should be seen as a useful and recommended tool for dealing with the complexity. Its contents are examples; not every possible combination is covered.

Where necessary or useful, additional background information was placed in Annexes and referenced in the main report and in the matrix document.

4 Order Processing Functions

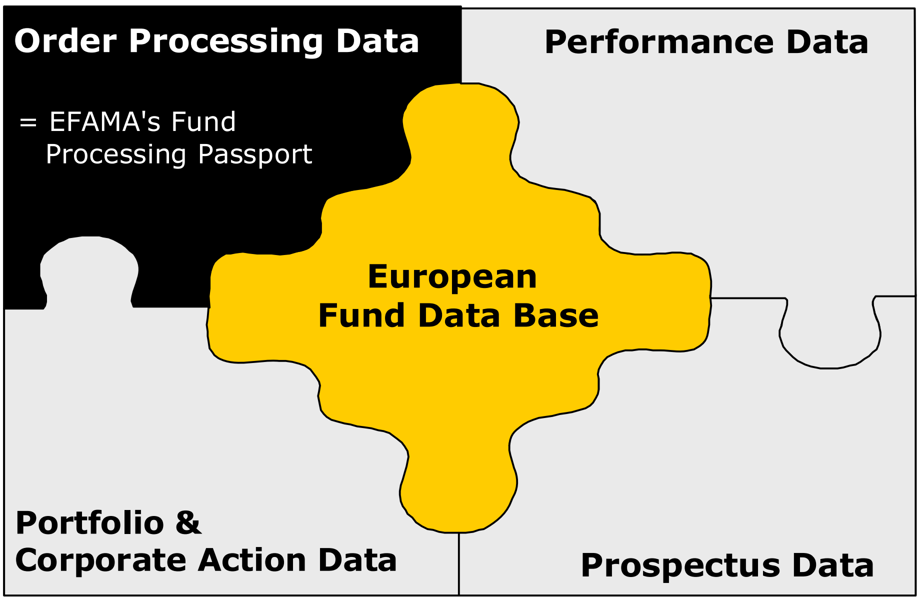
4.1 Messaging Standards and Reference Data

Efficient transaction processing starts with the availability of unique identifiers for the fund, all counterparties and intermediaries involved, and with the essential data required to process a trade.

There are already market initiatives to expedite the wide availability of fund reference data, notably driven by EFAMA. EFAMA developed the Fund Processing Passport (FPP) which is a standardized template to collect some 100 data items required by a distributor or an investor custodian to process a fund order.

The working group discussed the FPP in the context of the need for an overall pan-European fund reference data base.

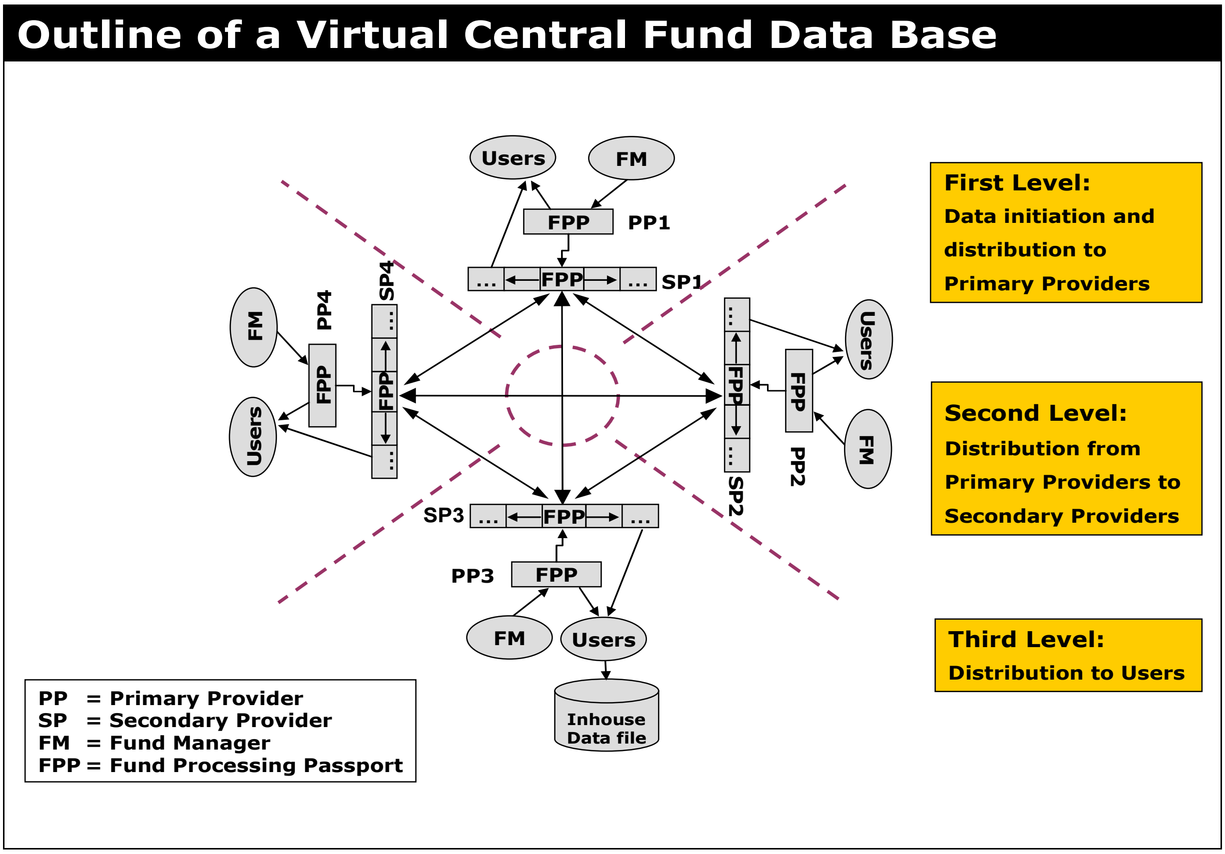
Ideally, there should be one central reference data base for all funds registered for distribution in Europe. "Central" should be understood in the sense of enabling institutional data consumers – market intermediaries in the business of processing fund orders, or distributors – to access the data base through a single window, irrespective of the physical location of an individual data set or the national organization of such aggregated data. "Central" would also imply an overall architecture that minimizes redundancy, risk and therefore cost involved with maintaining the same data in multiple locations. The EFAMA FPP would be a core building block of such data base. In a later phase, other dimensions could be added to meet additional needs by diverse stakeholders: The fund's Net Asset Value, performance data, fund portfolio data (though not on a real-time basis), corporate events data, the full prospectus, etc. Conceptually, this could be illustrated as follows:



The concept is beginning to take hold. For example, Finesti (formerly CCLux) is in the process of implementing a service offering along these lines for the Luxembourg market.

The working group convened an industry roundtable in 2008, bringing its own members, EFAMA, and a selection of Europe's key financial instrument data vendors together (see Annex A for the list of participants).

The objective was to confirm the need for such a database, to explore the chances for success, and to define some high level guidelines to ensure implementation in the best interest of all stakeholders operating in a European cross-border market environment. A generic model for a "virtual central" database was sketched as a basis for discussion:



For the purpose of proper analysis and structured discussion, the "fund data universe" was split into two roles or functions, to be tackled separately:

- "Primary data" and their providers: this is the area of the core FPP data;
- "Secondary data" and their providers and users: this is the area of data for value added services beyond the basic FPP data: Net Asset Value, fund prospectus, corporate actions, fund performance, etc.

Obviously, in real life, many providers of primary data may at the same time also be providers of data in the second category.

The two roles or functions identified above, lead to three process layers that need to be analyzed and defined, in order to arrive at an end-to-end process:

1. *The collection of "primary data":* The investment managers (or other providers of primary data) have started to get organized on a national basis. An industry-wide, collective common solution needs to be defined more closely, including a clear set of principles on issues such as for instance the allocation of responsibility for data accuracy.

2. *The collection of "secondary data":* Here, the issue of the optimal overall data base architecture assumes a greater relevance: is the preferred goal one *virtual* hub, one *real* central hub, a decentralized model, or something else? The objective is to define conditions and criteria to facilitate the decision for or against specific options.
3. *The distribution of data:* This involves looking at the different types of data users and their specific needs, as well as at the data base maintenance processes.

Below is a summary of the main discussion points and findings that emerged from the roundtable.

I. Industry Needs

The fund order processing industry needs and wants a single entry point to consolidated data for all pan-European funds, in a consistent format

From the distributors' and the fund order processors' point of view, the process of funds distribution has two dimensions:

- On one hand, fund management companies conclude sales agreements with distributors. A distributor then obviously knows where to obtain fund reference data.
- On the other hand, in an open architecture environment, where there is no ex-ante agreement between distributor and fund, investor custodian banks receive subscription orders from clients for any fund, very often funds domiciled abroad. In this case, the bank first needs to locate the fund and all information required to process the order. Today, too many tasks to obtain those parameters need manual intervention or queries. With the growing popularity of cross-border investing, this scenario is becoming ever more frequent. More efficient ways are needed for accessing such parameters and feeding them into the distributors' and investor custodians' internal funds information system, in order to automate the order processing function from end to end, and in order to ensure the highest data quality.

Internationally active investment managers support a centralized data repository

Investment managers producing funds for distribution in multiple countries welcome ways and means that help their distributors achieve safe and cost effective processes. An easy delivery mode for the FPP is one important element. A precondition and the first step, however, is to establish an optimized mechanism to collect and compile those data. It would be particularly welcome if investment managers could supply their own fund data to only one, or a few collecting points, for onward dissemination into the market; as opposed to providing them to a separate data vendor in each country.

The data providers welcome a standardized format for the collection of fund data

For the existing data providers, the FPP is an opportunity to facilitate the collection of fund data in a standardized format, to assure coherence between those data and the equivalent data they maintain for other investment instruments. Under this perspective, they may become consolidators of FPPs, integrating the delivery of pan-European fund data into their overall service offering.

II. Areas of Agreement, Common Basis for Further Discussion

The EFAMA Fund Processing Passport is recognized as the first major building block

There is consensus that the EFAMA FPP initiative is of great value to the industry and should be used as a major building block for a larger database. Obviously, the scope of the FPP does not cover all stakeholder interests. It was never intended to serve that purpose. The FPP was specifically developed to facilitate one particular step in the fund processing life cycle. The data providers present stated that the FPP contents represent around 5-10% of the total fund data universe. The remaining categories are mentioned in the introductory paragraph above. The industry's first priority is the creation and collection of FPPs on a national basis.

Each investment manager should appoint a "Primary Provider" to maintain its FPPs

The initial production and subsequent maintenance of the FPP are critically important functions to ensure the success of the project. To that effect, each fund management company should designate one party who assumes this responsibility, referred to as the Primary Provider (PP). The Primary Provider could be a third party which might specialize in collecting all FPPs in a local market; it could also be the fund management company itself. Obviously, FPPs may also reside on the website of the respective fund management company or its representative (transfer agent / *centralisateur / Depotbank*), for direct access by investors.

The Primary Provider's task is to make the FPP available to individual investors (institutional and retail) on the one hand and to the professional wholesale data vendors for onward distribution into the market on the other hand. In the model scenario sketched on page 18, those data vendors are collectively called Secondary Providers (SP).

To meet the needs of retail investors, publication of the FPP on a public website will in most cases be sufficient. For the Secondary Providers, a more "industrial strength" mode of transportation is required. See the paragraph on ISO 20022 below.

A strong appeal was made to all Primary Providers, to now strictly adhere to the FPP template as the one and binding standard, and to refrain from creating any sub-standards.

Connecting existing infrastructures is preferred over building a new database

The large data vendors in Europe are already used to distributing data (including fund data) to their customers through different channels. Those data are usually collected from various countries. To that effect, the vendors have communication channels between them in place already; reciprocal client/supplier relationships are already well established. Against this background, it may not make sense to build a new central data base from scratch "only" for FPPs. The preferred approach is to improve and expand the existing infrastructures in a way so as to achieve a virtual central database, with multiple access points.

Likewise, the professional clients of the data vendors have no interest in building links to yet another data source. Ideally, they want to be able to obtain all fund data from the same source, and in the same format they already use to access all other financial instrument data. Therefore, the large data vendors may become Secondary Providers for FPPs. They add value to the market by assuring the best level of consolidation of such data, in response to their customer needs.

ISO 20022 is the preferred FPP delivery method to professional data consumers

Today, the data vendors obtain financial instrument data from their original sources, or exchange them with other intermediaries, in a variety of formats. Although the industry can live with the current situation, a further proliferation of standards is certainly not desirable.

The meeting participants agreed that, over time, the ISO 20022 standard is the delivery method of choice. A pragmatic best practice recommendation could read as follows: "The Primary Providers may choose to distribute the FPP data to the Secondary Providers in as many formats they wish, but ISO 20022 must be among them."

In this respect, several tasks were agreed to be tackled by a SWIFT ad-hoc working group:

- Translation of the FPP into ISO 20022 message format; this is meanwhile completed.
- Implementation of the new messages on the SWIFT network; completed as well.
- Definition of an end-to-end process (and the appropriate messages) to cover all types of "actions" that may occur between the different parties along the processing chain: Creation of an FPP, delivery of an FPP, partial update or modification of an FPP; and including the communication between investment manager and Primary Provider or end user, between Primary and Secondary Provider, and between Secondary Provider and end user. Further aspects to cover included the handling of cut-off times, data circulation on a pull- or push basis, transmission of individual FPPs or data sets versus file transfer of multiple sets; and possibly other issues. A proposal drafted by SWIFT can be found as Annex B.

Pricing and other commercial issues to be left to the market forces to decide

The roundtable participants strongly suggested that all commercial and pricing issues should be left to self-regulation by the market forces. They saw no value in a best practice recommendation in this area.

That said, the industry is very interested in seeing pricing models that support the key objectives of the FPP, namely to create value as a sales tool to reach new investors, and for the investor custodians and other order processors to reduce their processing cost.

New and more cost efficient business models should emerge at the level of Primary and Secondary Provider to facilitate the dissemination of FPPs and their integration into existing service offerings. Some principles for pricing models, based on current practice, were mentioned:

- Free or very low price access for end users requesting individual FPPs through a basic communication protocol (pull system)
- Higher price for access through a more sophisticated protocol
- Secondary Providers may receive the data through a push, low cost mode based on a standard protocol. Neither pricing nor technical issues must hinder the FPP dissemination.

Liability issues must be clarified through robust Service Level Agreements

The FPP contains data which, should they be erroneous, entail a potentially high risk in terms of financial consequences. An example is the cut-off time for submitting orders. Service Level Agreements must clearly assign tasks and responsibilities to the parties involved. Agreements will be required on three levels: between investment manager and Primary Provider, between Primary and Secondary Provider, and between Secondary Provider and end user. In principle, on each level the degree of responsibility is in correlation to the difference in quality between data received and data passed on. Those are however classical issues applicable to the entire financial instrument data industry.

Database: Several models are possible, connectivity through standards is important

The discussion clarified several aspects of the model describing a "virtual" central database with Primary Providers (PP) and Secondary Providers (SP):

Even though, for operational reasons, the implementation of this model relies on domestic initiatives, it is necessary to introduce two dimensions about the emergence of PPs, relating to their role as data collectors. Market forces will drive the structures of this new service,

- firstly **at the domestic level** under initiatives taken by the fund industry. Multiple models can be observed at this level: multiple offers in Luxembourg, cross-border offer in the UK [FundConnect], one PP in France [as a portal],
- secondly, large **pan-European** investment managers may wish to feed all their fund data to a single Primary Provider, rather than working with one in each country where the investment manager distributes its funds. Conversely, a PP may decide to collect fund data from more than one country.

As a result, in the midterm, the industry will face multiple PP in Europe without a clear correlation between PP and countries, and between fund domiciles and PP. At this stage it is still important to support all bottom-up initiatives to create FPPs under the responsibility of the fund promoter and to implement a mechanism to make them accessible to distributors and order processors.

SPs will develop several functions in their role as data consumers: collect and centralize FPPs, from the diverse PPs, assure coherence between FPPs and their existing funds related data, and distribute FPPs along their existing distribution model. Obviously, a PP may choose to be a SP at the same time.

The stakeholders in this eco-system should define standardized conditions (standards and practices) to develop the best mechanism for the circulation of fund reference data end to end, from the fund via PP and SP to the final user. Obviously, the market will develop multiple solutions. It will be important that they share the same ISO based standard and that one common mechanism exists, based on SWIFT's industry role.

It was highlighted that those data are very risk sensitive. Wrong or outdated data may create market risks. It is then crucial to develop in parallel three functions: the first to assure that a golden copy of the FPP remains the collective reference under the responsibility of the fund promoter; the second that a registry function enables the users to determine easily in which PP location a FPP resides; and third that a mechanism assures that modifications of sensitive FPP data are notified to the market as fast as possible and with a certain lead-time. In this context, the ultimate objective is to support the successful roll-out of the EFAMA FPP.

The role of SWIFT in the FPP Process

In the context of the need for standardized messages to request and obtain FPPs, the potential role of SWIFT was discussed. Three levels of potential SWIFT involvement in the overall process could be envisaged:

Level I: SWIFT delivers ISO messages which the market participants use to communicate directly with the providers of FPPs.

Level II: SWIFT delivers ISO messages and in addition maintains a central registry of all locations were FPPs are maintained. Similar registry or directory services are offered by SWIFT already today. SWIFT could then route the request for an FPP to the party holding the FPP, and that party would send the FPP to the requesting party.

Level III: SWIFT itself manages a central data base. In the terminology used in the roundtable meeting, SWIFT would thus become a Secondary Provider, distinguished from competitors such as Telekurs, WM Datenservice etc. by the fact that the data universe covered by SWIFT would be limited to fund data.

Level I is a basic industry utility function. Level II could be described as a "value added" utility function. Level III is a commercial business offering.

The immediate industry need is on Level I, i.e. the need for ISO messages to connect the Primary Providers, Secondary Providers and the data users. SWIFT meanwhile delivered a message to request an FPP, and the FPP itself was converted into an ISO format.

Beyond that, however, the large users of ISO standards-based messaging call for a more comprehensive end-to-end FPP process including messages to cover all types of "actions" that may occur between the different parties along the processing chain. They insist that it is crucial for risk management purposes that the “maintenance” messages should be implemented shortly after the creation of FPPs. The list of “actions” to address includes (not necessarily complete, detailed analysis required):

- Creation of an FPP
- Request for an FPP
- Delivery of an FPP (different modes could include a single FPP or a selection of FPPs)
- Modification of an FPP
- Deletion of an FPP, if a fund is liquidated or merged

An "FPP Distribution Framework" proposal drafted by SWIFT can be found in Annex B.

Questions related to the FPP modification process: Will a full new FPP be delivered each time one field changes and subscribers need to define an inhouse process to detect the change; or will subscribers receive the changed information only and need to define an inhouse process to locate and update the corresponding FPP in their inhouse database? How are lead times handled if crucial FPP elements change, for instance the cut-off time to submit orders?

The role of SWIFT in process automation and standardization

Beyond its involvement with the FPP, SWIFT holds a key role in supporting the funds industry to automate and standardize its processes through the creation of ISO standards and messages, and by driving or assisting the development of international and local market practices. A more detailed description of SWIFT's role and some case studies can be found in Annex C.

Summary of the Roundtable conclusions and recommendations relating to messaging standards and reference data

1) The fund order processing industry needs and wants a single entry point to consolidated data for all pan-European funds, in a consistent format. Internationally active investment managers, too, support a centralized data repository however not necessarily in the form of a single physical facility. The major European data providers welcome a standardized format for the collection of fund data.

2) The ISSA Fund Working Group proposes a generic model for a pan-European fund database. Its preferred approach is to link already existing infrastructures to a "virtual" central European database. It is however recognized that an "actual" central database built from scratch remains a valid alternative if the proposed concept of the virtual central database does not materialize within reasonable time. The selection and implementation of a particular business model is influenced by commercial issues and those should be left to self-regulation by the market forces.

3) The EFAMA Fund Processing Passport (FPP) is the first major building block of a comprehensive fund data base. The successful roll-out of the FPP can be supported by:

- EFAMA exerting its influence with the investment managers to complete FPPs
- ISSA calling on the investor custodians/distributors to exert pressure on the investment managers whose funds they are holding for clients, to complete FPPs as soon as possible.

4) The accountability for the accuracy of the data comprising the FPP must not be divided between several parties. Logically, the "Golden Copy" should be produced and maintained by the fund promoter.

5) Each investment manager should have an obligation to provide its FPPs to at least one Primary Provider (term explained in the model description, page 18).

6) The investment manager should mandate its appointed Primary Provider(s) to actively distribute the FPPs onward, to at least one Secondary Provider (term explained in the model description).

7) The Primary Providers may choose to distribute the FPP data (initial data and updates) to Secondary Providers in as many formats as the wish, but ISO 20022 must be among them. ISO 20022 is the preferred FPP delivery method to professional data consumers.

Expediting the wider production and use of Fund Processing Passports

As of mid-2009, several local fund databases implemented an infrastructure to support the distribution of FPPs: KNEIP and Finesti in Luxembourg (a position paper by Finesti can be found in Annex D), FundConnect in Denmark, WM Datenservice in Germany, OeKB in Austria. In France, a dedicated website portal has been created where French asset managers have started to publish their FPPs (http://www.france-fpp.com).

The fund promoters, however, note a low demand for FPPs from the distributors. There is a chicken-and-egg situation: Many investment managers state that they would be happy to produce more FPPs if they were convinced of the demand. The large distributors generally welcome the FPP but do not consider retrieving it in Excel or PDF format. The data vendors are reluctant to move the FPP up in their internal priority list, as they experience little pressure from their major clients to do so.

In the current market environment, obtaining budgets for projects to promote and increase the use of FPPs is very difficult for all parties. Implementing a structured FPP process obviously creates "visible" set-up costs which should be offset by more overall efficiency. On the other hand, distributing and obtaining FPP data today through various channels creates "invisible" costs that are not sufficiently recognized.

Imposing the completion of FPPs as a priority item on the investment managers is no viable approach in the context of the current crisis. However, it is still needed for an efficient funds processing environment. As it appears difficult to justify a business case based on the collection and distribution of FPP data alone**, it is necessary to find acceptable compromises. A pragmatic approach suggests the following:**

- **to integrate the FPP in a wider process of financial data processing and distribution, so as to expand its business plan base;**
- **to facilitate the collection and centralization of those data;**
- **to facilitate the distribution of FPPs by using existing channels.**

As a quick win and interim step, EFAMA launched a tender in mid-2009 to interested service providers for the creation of an internet based "portal" through which FPP seekers would be guided to the location where a specific FPP can be accessed and downloaded as an Excel or a PDF document. The results of the tender and the next steps are expected to become known in the last quarter of 2009.

The group developed some ideas that could further help to expedite the FPP production process:

- Initial reduction of the "required contents" of an FPP to a selection of core data fields only.
- Looking back, addressing with first priority the data vendors to provide FPP distribution mechanisms may not have been the best approach, as the data vendors sit in the middle between the FPP producer and the FPP user. The next efforts should focus on the investment managers and on the distributors and investor custodians.
- For marketing purposes, the FPP should be positioned not only as an administrative help for distributors and investor custodians, but also as a tool helping the investment managers promote sales.
- Most investment managers do not have the data for the FPP in one source system only. To produce FPPs efficiently they would need to integrate data from several in-house systems, but they see no benefit from the effort. They could be motivated if a group of large distributors jointly issued a statement that they need the FPP and want the investment managers to speed up FPP production.
- The investment managers shy away from the requirement that they should be fully responsible for the accuracy of all FPP data at all times. This is a key reason why not more FPPs are available already. The entire financial instruments data industry works on a "best effort" basis. Nobody produces inaccurate data sheets willfully. Therefore, the strict liability requirement could be relaxed a bit.

A further option, meant as an interim solution and for an initial phase, was discussed but rejected: A fund reference database will always be an evolving structure. Since the large financial instrument data providers already have the data required for many fields of the FPP, they could start producing FPPs based on those available data, even if some FPPs would initially remain incomplete. This however creates a conflict with the requirement to keep a "golden copy" complete and up to date. It was concluded that the circulation of incomplete FPPs may rather harm than benefit the FPP concept. It may also raise potential liability issues.

4.2 Account Opening

Account opening in this discussion refers to an intermediary, such as a distributor or an investor custodian, opening an account with the transfer agent to place orders on behalf of an underlying client (an exception is the French market where the transfer agents or *centralisateurs* do not open accounts for the participants of Euroclear France). Account opening is a key function as it determines the level of identification of distributors / investors all along the chain. It has an impact on the account structures in the investor custodian's and the transfer agent's books and on the customer reference file information systems and their maintenance practices. The efficiency of the account opening process determines the time when the first order in a particular fund can be executed for a new investor. Increasing the level of automation and the use of standards by all involved parties is a prerequisite for achieving higher efficiency in this function.

The process of an end-client opening an account with a custodian, a distributor or directly with the transfer agent is outside of the scope of this discussion.

The transfer agent should be able to rely on the intermediary having completed, prior to contacting the transfer agent, all "Know Your Customer" requirements with regard to its underlying client. The ultimate investor "belongs" to the distributor or another intermediary and his identity is normally not disclosed to the transfer agent.

Investor custodians, distributors and transfer agents have different views – driven by different needs - as to what represents an ideal account set-up.

Transfer Agent View

The transfer agent needs to identify all fund holdings in its books in two ways:

1. By total holding per distributor/investor custodian, for the correct allocation of fund dividends and other entitlements. The investor custodian will distribute such entitlements to its own account holders without further transfer agent involvement.
2. By individual sales agreement, for the correct allocation of trailer fees and commissions. In most cases, not all clients of an investor custodian will be subject to the same sales agreement (and some clients will not be counterparty to a sales agreement at all). Therefore the transfer agent needs to have a "look-through" all the way down the intermediary chain to the counterparty to each sales agreement. There are different ways to fulfill this need.

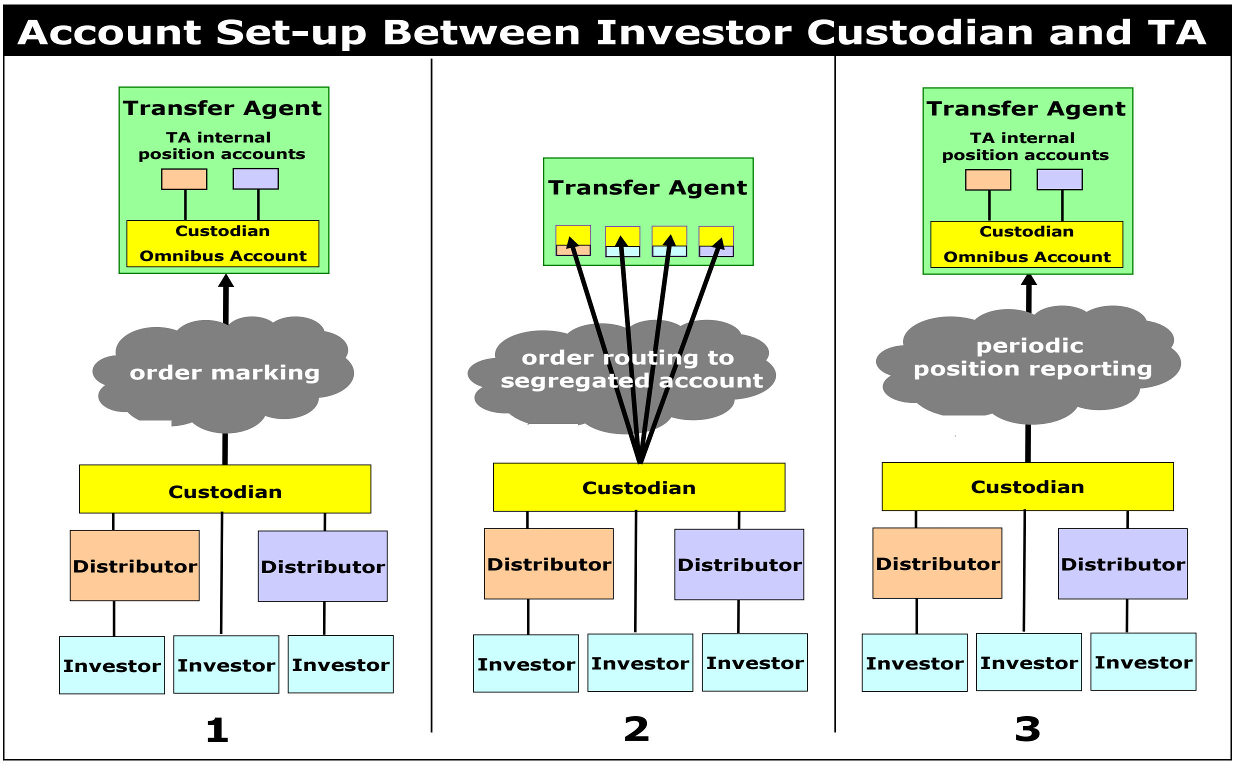
Investor Custodian View

From an investor custodian's point of view, a fund transfer agent performs basically the same role as a subcustodian agent appointed to handle equities, bonds or other asset classes.

In the securities market, investor custodians try to keep the number of accounts held with their subcustodian agents small – ideally limited to a single omnibus account - because more account relationships mean more operational complexity, more reconciliation effort and more maintenance cost. Generally, the larger the number of client-side accounts a custodian maintains, the greater is its need to keep the number of market-side accounts maintained with subcustodians small.

Investor custodians may have client confidentiality rules to observe which prevent them from disclosing the identity of their clients to subcustodians or other third parties. Omnibus accounts meet that requirement. If custodians maintain segregated accounts with subcustodians, the most frequent drivers are tax-related (different withholding tax rates applicable to different client types or domiciles) or legal and compliance-driven segregation criteria. It may also be the result of individual client requests.

There are different variations of account set-ups with a transfer agent, depending on the presence and role of intermediaries in the transaction chain, and depending on those intermediaries' preferences. The chosen account structure has implications on the order placement and on the commission calculation and reporting function. In the funds market, investor custodians are faced with a trade-off: A simple account structure requires more post-trade effort to handle the commission payment and reconciliation process. Multiple accounts require more transaction management and reconciliation effort but facilitate the commission process. The three basic set-ups are shown below:



1. The investor custodian maintains an omnibus account with the transfer agent and passes on a unique distributor ID to the transfer agent with each trade. The unique distributor ID is defined in the distribution agreement contracted at the beginning of the commercial relationship. The ID is used by the transfer agent to compile the individual holdings positions per distributor from the commingled holdings in the investor custodian's omnibus account.
2. The investor custodian maintains with the transfer agent segregated accounts by underlying distributor (or end-investor) and routes each order to the respective subaccount. There is an ISO standard in place (used in the SWIFT message "Order to Buy or Sell") which allows the precise identification of the settlement account as part of the order details.
3. The investor custodian maintains an omnibus account with the transfer agent and periodically sends the transfer agent a breakdown of its total holdings by positions subject to a particular distribution agreement. Distribution agreement related information is decoupled from the trade settlement related information.

Principles around the account opening process

1. In an institutional business environment, a common business practice should be defined to facilitate and automate the account opening function and guarantee its completion intra-day. There should also be a defined permissible time lag between the account opening and the first order that will follow.
2. Distributors should agree with the fund management company prior to the first transaction how they will place orders, detailing the accounts in which their investments will be held and the accounts used for settlement. This should include details of any external third parties such as custodians or depositaries with whom the distributor has contracted for such services. The fund management company should in turn provide these details to their transfer agent.
3. An account with the transfer agent should be open and operational within 24 hours upon receipt of all required information and documentation, provided that the information is complete and correct.
4. Where omnibus account structures are preferred, order marking or equivalent standardized position reporting mechanisms should be in place to ensure correct commission calculation. A standard format for position reporting should be developed. For trades in a market with an order marking system, even the very first order must carry the distribution agreement identifier.
5. Common identification codes must be agreed for each investor custodian and distributor. These codes should be documented in the distribution agreement with the distributor code being carried in each transaction order sent to the transfer agent. Those codes should conform to ISO 20022 standards.

   For instance, a BIC One code could identify the distributor, and an extension to the BIC One code could identify the distribution agreement. (BIC One: an "unofficial" BIC code used in some markets for identification purposes but not recognized as a standard in ISO messaging.) Alternatively, investor custodians could maintain a segregated subaccount for each counterparty to a distribution agreement with the transfer agent. The order message would then indicate the appropriate settlement account number.

   Investor custodians, Clearstream and FundSettle today already identify for each client and each fund ISIN the corresponding "TA reference". That reference can be an account number, a distribution agreement number, a name, a tax identification number, a short code, or any other type of reference. The "TA reference" is normally defined in a technical annex to the sales agreement.

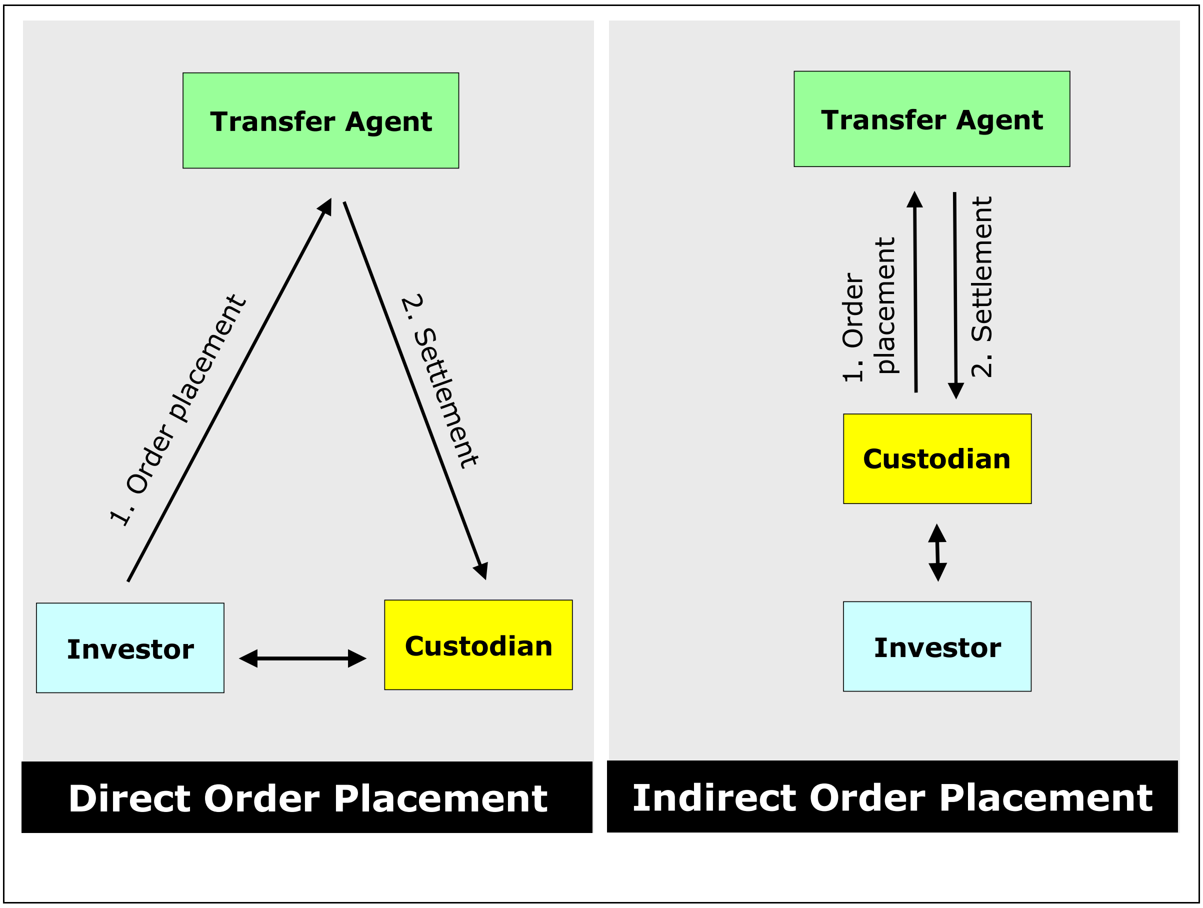
   EFAMA recommends to use the BIC code (BIC11) plus an extension if necessary, as the "TA reference" to identify a distributor. This has been implemented in France. There is an ISO standard in place (used in the SWIFT message “Order to Buy or Sell”) which allows the precise identification of the settlement account as part of the order details. Going forward, the focus should be on MX messages and ISO 20022 standards.

4.3 Order Placement

The relationship between investors and their custodians needs to be examined. Ordinarily, the investor will operate either:

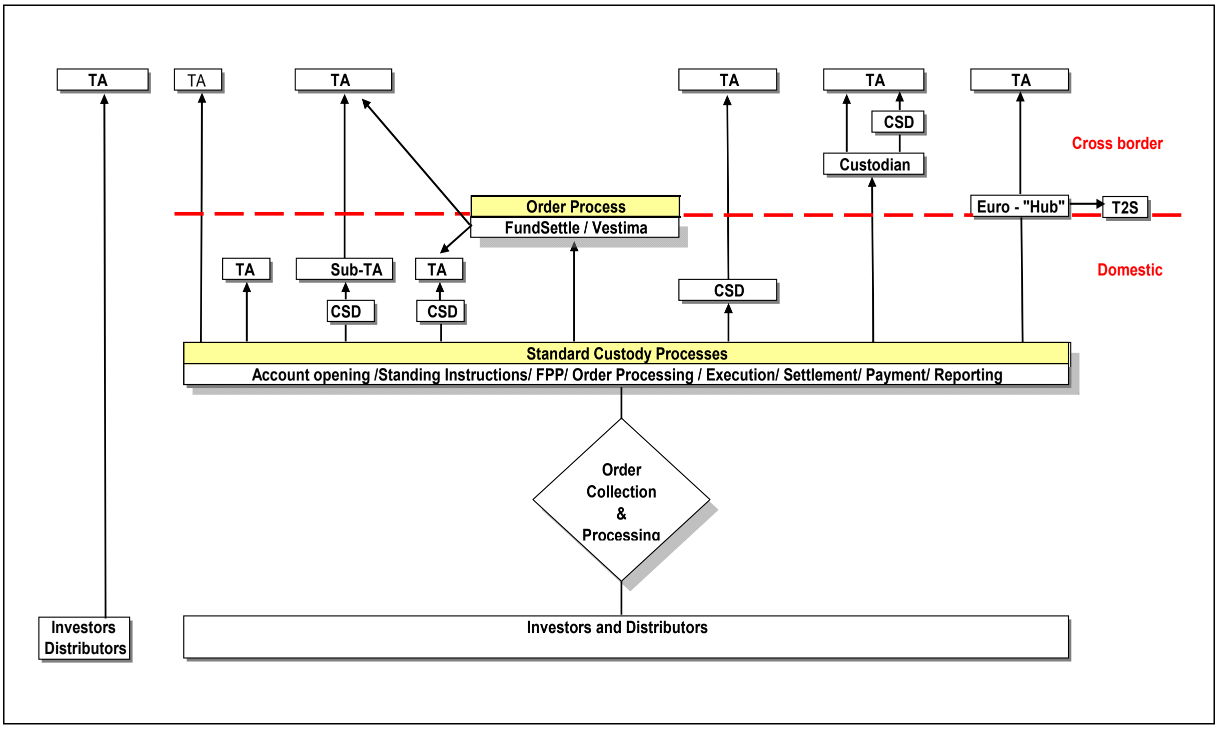
- **directly,** by placing deals with the transfer agent for settlement through the account of the investor custodian;
- **indirectly,** by placing orders with the investor custodian who in turn instructs the transfer agent and settles the trade on behalf of the investor.

The direct relationship investor – transfer agent, without the involvement of a custodian, is out of scope of this report.



In the direct order placement scenario, the investor will need to have a trading authority issued by his custodian, authorizing him to place deals with the transfer agent for settlement in the custodian's account. The trading authority will usually be limited to a maximum amount, as agreed between investor and custodian. The trading authority at the same time authorizes the transfer agent to accept trades from the investor for settlement in the custodian's account. The investor will usually be required to copy the custodian of all trades placed with the transfer agent, to enable the custodian to monitor adherence to the trading limits specified in the trading authority.

The order processing environment has a **domestic** and a **cross-border dimension**. For direct orders, domestic market and cross-border processes are largely equivalent except for the payment part. In the specific case of Luxembourg and Ireland, the standard is mainly a cross-border process. For indirect orders, the domestic process flow is based on domestic market practices. In the cross-border settlement process, a variety of set-ups are in use today, due to the fragmented national market infrastructures. The diagram below shows a selection of scenarios; additional variations are possible.



The diagram illustrates that handling cross-border transactions requires the involvement of additional intermediaries. As a vision, and as shown in the right hand side of the diagram, funds processing should eventually converge towards a uniform operating mode across Europe. The same vision is followed in the European payments environment and in the securities market, where TARGET2 and TARGET2 Securities are the major convergence initiatives.

Order routing

In an indirect order placement scenario, typically the investor custodian opens an account with the transfer agent on behalf of clients (in France, transfer agents receive orders from Euroclear France participants without maintaining accounts for them). The account set-up should reflect that the investor custodian acts as an intermediary.

The major options for setting up accounts with a transfer agent are discussed under Account Opening.

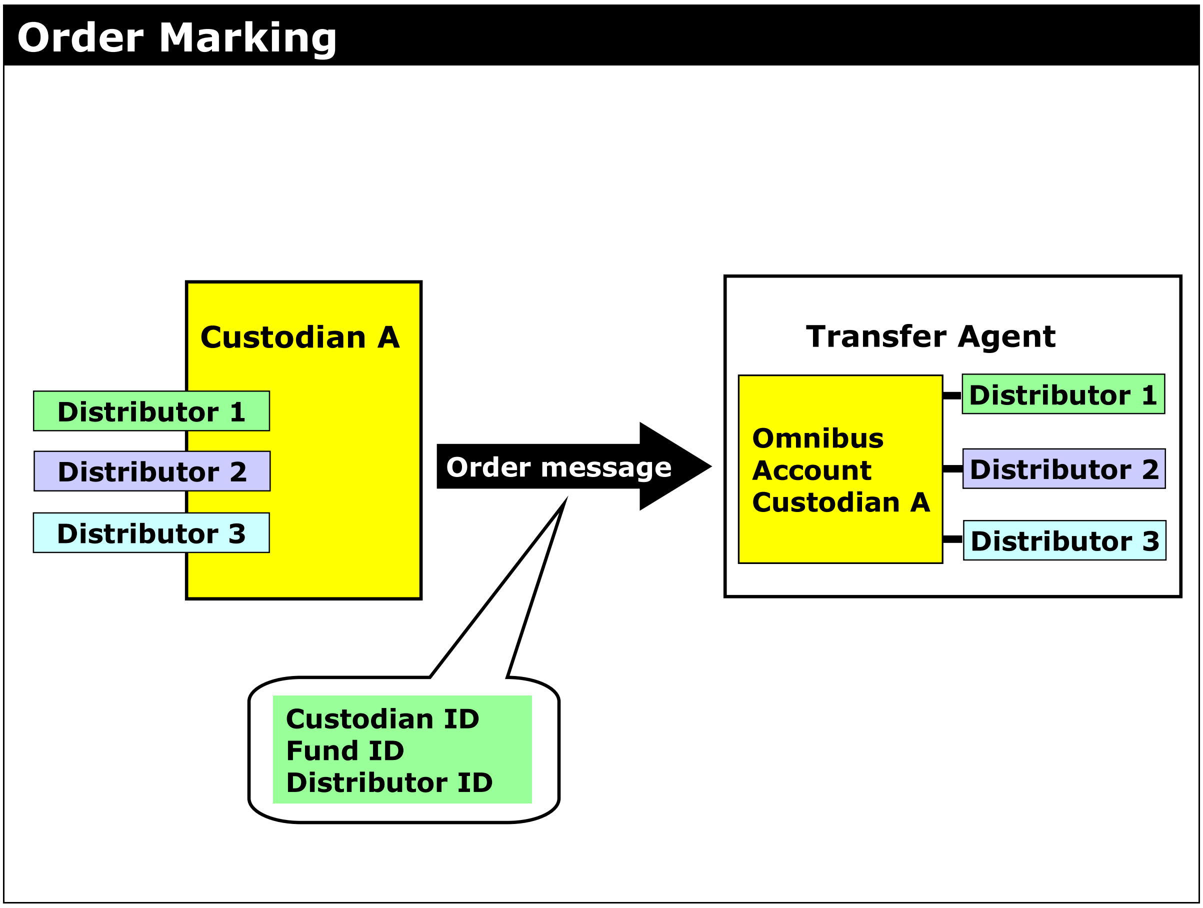
Irrespective of the order placement model (direct or indirect), each order message should enable the transfer agent to identify the sender of the order, the distributor entitled to sales commission, and the sales agreement that governs the transaction. This requirement, however, cannot be readily satisfied across Europe today, as individual order marking to identify the distribution agreement is not the prevailing practice in all markets.

Matching an order to the applicable sales agreement

Assuming an investor custodian maintains an omnibus account structure with the transfer agent, there is an operational risk that the transfer agent pays sales commission twice: once to the custodian and once to the underlying distributor if that party claims it directly from the transfer agent and processes are not properly organized. There are two methods to enable the transfer agent to match transactions and holdings to the applicable sales agreement: Order Marking and Position Reporting.

Order Marking

Under the order marketing method, each order passed by the investor custodian to the transfer agent carries the related distributor ID. As the transfer agent is advised immediately and continuously for each transaction of the sales agreement to which it pertains, the transfer agent thus has a real-time picture of all subscription and redemption activity of each distributor. This however requires the transfer agent to maintain its own internal records for each distributor's positions and share movements, which must be reconciled against the investor custodian's omnibus account.



The issues are:

- Identifiers for the applicable sales agreement are not always defined between the fund management company and the distributor. The logical place to do so is in a technical annex to the sales agreement. In the evolving DMFSA Initiative (see page 52) the Agreement Identifier is defined as a key data element which is required for efficient order handling.

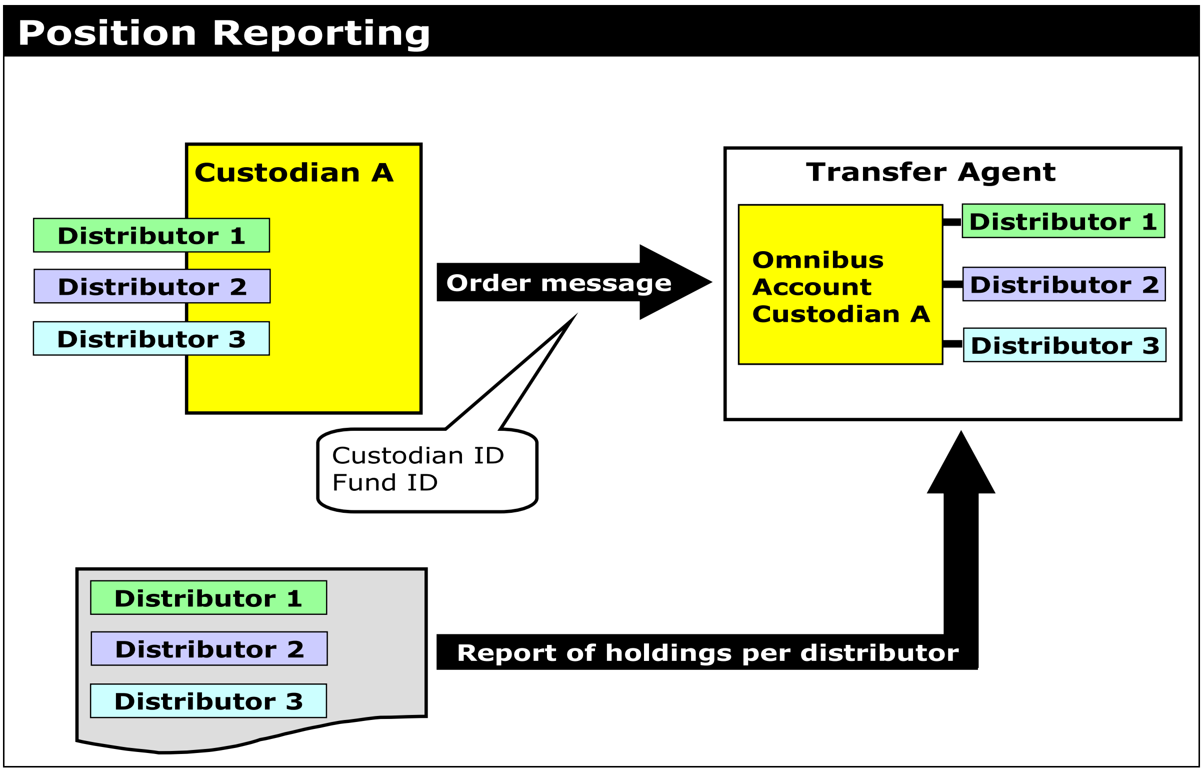
- There is no industry standard for the sales agreement identifier. Individual references are agreed bilaterally between the distributor and the investment manager.
- The identifier may be agreed but is not carried through the full processing chain.
- Identifiers may be outdated (data maintenance problem)
- Order marking is not applied to all transaction types: If fund shares change hands as the result of secondary market trading, or if they are delivered from one distributor to another because an end-investor changes his custodian, then no "marked orders" are created. The transfer agent's records are not complete.
- If an investor custodian has clients who are distributors for multiple funds, then the custodian must maintain and manage on a trade-by-trade basis a corresponding number of unique client ID codes ("TA references") in its internal reference data files.
- Compared with the Position Reporting method described below, the order marking method limits an investor custodian's ability to bulk orders because each order must be attributable to a specific distributor or sales agreement.

Annex E contains more information on identifiers and references.

Order marking is the preferred method in France where 95% of the orders are marked with a distributor ID. In 50% of the cases, that ID is a BIC One code. Non standardized references agreed bilaterally between the investment manager and the distributor are used in the remaining 50%.

Position Reporting

Under the position reporting method, distributor or sales agreement IDs are not part of each order message. Communicating sales agreement related information is decoupled from daily order processing. The investor custodian periodically sends the transfer agent a breakdown of its total holdings by positions subject to a particular sales agreement. Position reporting is the preferred method in Germany, Austria, and Switzerland.



Periodic reporting requires the investor custodian to develop a reliable reporting mechanism based on its client accounts. Position breakdown reports produced manually tend to be error-prone and involve a lot of manual reconciliation work.

Position reporting will include those positions that moved into or out of a distributor's account as the result of secondary market trade settlement, or as the result of a free of payment transfer of holdings (the typical scenario being an end-investor switching his custodian relationship), or as the result of corporate actions of the fund.

Position reporting enables an investor custodian/distributor to bulk orders to the maximum during the day, down to a single aggregated order for all subscriptions, and a single aggregated order for all redemptions, to be sent to the transfer agent prior to cut-off time.

<u>Best practice recommendations therefore are:</u>

Investor custodians/distributors must be able to apply either the order marking or the position reporting method.

Where order marking is preferred:

- Distributor and fund management company must define a unique agreement identifier for the applicable sales agreement.
- Such identifier should adhere to an ISO standard wherever possible
- All order routing mechanisms must have the ability to receive that info and pass it on
- The distributor must include the agreement identifier when creating an order. It is important that the identifier is included in all kinds of orders, irrespective of the execution channel and the nature of the transaction (against or free of payment).
- All parties involved in processing the order must pass the agreement identifier on to the next party
- All identifiers and similar data sets must be kept current at all times

Where position reporting is preferred:

- Reporting should be in a standardized reporting format. As a longer term objective, the industry should agree on an ISO standard.

Order routing in a CSD environment

Central Securities Depositories (CSDs), unless they have a special service offering for funds processing, do not maintain distributor information. They only track the total number of shares per ISIN, broken down by CSD participants. Maintaining segregated accounts on CSD level for CSD participants' underlying clients is not standard practice throughout Europe, more likely to be found in the Nordic region than elsewhere. Within the Euroclear Group, Euroclear UK and Ireland, Euroclear Sweden and Euroclear Finland permit for accounts to be opened on the end-investor/beneficial owner level, as do the CSDs of Norway and Denmark.

Where a CSD does not know the underlying clients of its direct participants it will not readily know whether distributors are among them, and which portion of a participants' total position is attributable to which sales agreement. See Annex H for the cross border solutions implemented by the International CSDs (Clearstream/Vestima and Euroclear/FundSettle) and an overview of the US hub solution.

The DMFSA initiative (see page 52) provides a mechanism that is suitable to improve the required transparency to the transfer agent for transactions that are routed through the ICSDs or similar hub types: The Agreement Identifier and, where needed, Local Identifiers which dictate the commercial terms to be applied in respect of all commission types. These identifiers should be included in all orders and need to be passed along all participants in the intermediary chain.

Order Acknowledgement

The question was raised whether an order acknowledgment was necessary in the first place, given that only an extremely small percentage of all orders received at the transfer agent are rejected, and that an execution confirmation is issued as a standard practice.

From the investor custodian or distributor's point of view, an acknowledgment is clearly required. They need to be able to inform their clients whether or not their order was accepted, and what the anticipated execution day is.

An *ideal* acknowledgment would read: "Your order was received at 11.59 on April 14 and it will be processed for execution on April 15, 200X".

However, from the transfer agent's point of view, this is not possible. The acknowledgement can only be a technical receipt, confirming to the sender nothing more than the fact that the order was received. In particular, it does not guarantee that the trade will or has been executed yet. Even if an order is formally complete and is received by the transfer agent in time, it must pass a number of validations before it can be released for execution, some of which cannot be completed instantly. A list of checks (not necessarily complete) is as follows:

- Was the order received prior to cut-off time?
- Does the order contain a valid ISIN code?
- Does the order contain a valid account number?
- Does the order contain a number of units?
- Does the order contain a valid trading currency?
- For subscriptions: is the minimum subscription amount reached?
- For redemptions: does the account have sufficient balance? There might be unsettled subscriptions or other pending transactions preventing immediate processing of the order.
- For switch orders expressed in currency amounts: the NAV must be known before confirmation can be given that the order will be properly processed on date "D".

In an automated processing environment, transaction status intimations are standard and used heavily. An ISO message exists that can be used for acknowledgments ("Order Status Update"). Its use is optional but recommended by the Securities Market Practice Group (see www.smpg.info for more information about the organization and its role).

Should any aspect of the order cause non-execution, the transfer agent should send an order rejection notice to the order sender as soon as possible. ISO message "Order Status Update" can be used.

Orders placed close to the cut-off time

The cut-off time for accepting orders is a crucial moment in the processing schedule. Orders submitted very close to cut-off time entail a number of uncertainties and risks.

Missing the cut-off time will normally exclude an order from being executed in the 'current' processing cycle. On the other hand, meeting the cut-off time is no guarantee yet for execution of the order at the next available NAV. Transfer agents generally would like to receive orders as real-time as possible, since they prepare intraday cash projections that are used by the investment manager. This conflicts with the interest of the distributors who often aggregate orders during the day and send a single pooled order to the transfer agent shortly before cut-off (this is less of an issue where orders are automated, as the post receipt processing time is significantly reduced. More details on the principles followed by transfer agents with regard to "order cut-off time" can be found in Annex G.

A practical example: Cut-off times in the hub and ISO message based environment

Vestima time-stamps each order before it is passed on to the transfer agent. The transfer agent will apply another time stamp upon receipt of the order in its system. Vestima sends a status message (currently MT 509) to the client to confirm receipt of the order in Vestima, followed by a second message to confirm that the transfer agent received the order from Vestima. Some transfer agents use the first time stamp applied by Vestima to determine if an order has met the cut-off time, others use the time stamp applied by themselves.

Access to order routing and execution platforms / Counterparty risk

In the past, order placement and execution platforms were accessible only to regulated financial institutions, generally banks and brokers. The transfer agents note a trend that investment managers open such platforms to third parties, such as insurance companies, independent financial advisors (IFAs) or even private investors. At the same time, individual order sizes are increasing, and large orders tend to be placed through fewer accounts. These factors increase counterparty credit risk and operational risk for the transfer agent. There are market practices in place to mitigate the counterparty credit risk:

- In the case of new direct investors the fund promoter agrees with the transfer agent a framework within which the transfer agent is allowed to accept orders, based on the screening of the client. Hence the transfer agent would only be accountable in case of breaching the framework. In some cases, the screening might result in the creation of a credit line.
  There was a debate around liability issues: some participants questioned the fairness of the fund absorbing the cost of payment failure: pre-funding certain clients is a preferential treatment, and taking the cost of a loss due to a failed prepayment punishes all unit holders.
- The subscription terms will state the consequences of delayed payment, including the fund’s right to claim interest, the right to cancel fund units issued, reverse the subscription and claim compensation for any loss incurred.
- According to the investment managers, transaction volumes coming from direct relationships between end-investor and fund are marginal but growing. Most orders are placed through a bank, broker, independent financial advisor or other intermediary. If an investor uses an IFA or similar intermediary, the order will designate a custodian bank for settlement. The basis of this appointment is a power of attorney (a trading authority) issued by the custodian bank in favor of the IFA. That power of attorney will only enable the IFA to instruct settlements against the bank account up to a certain limit which the bank feels comfortable with. The consequences for overstepping the limit would have to be borne by the IFA.

4.4 Order Execution

The execution function includes order execution itself, followed by the issuance of the contract note to the party that had submitted the order. In all models, this is the responsibility of the investment manager, usually delegated to the transfer agent. No other parties are involved.

Discouraged practice

Some distributors send execution confirmations to their clients immediately upon receipt of the Net Asset Value either from the Transfer Agent or from a third party data vendor. This entails the risk of having to cancel the confirmation in the event that the order was not executed as anticipated. Prudent market practice suggests that intermediaries should send client side confirmation notes only based on the execution confirmation received from the transfer agent.

4.5 Settlement

Moving towards a coherent settlement framework

Discussing the feasibility of a single European settlement and custody hub for funds is premature. Even in the securities markets with much larger volumes, a single European CSD (or other form of central settlement hub) is not a reality yet. The linking of domestic hubs is still difficult although initiatives are ongoing to improve interoperability, TARGET2 Securities (see page 43) being a particularly important development. However, the cross-border dimension in fund distribution is a reality.

In some local markets (mainly Luxembourg) the funds business is predominantly a cross-border business. In others, it has remained more local to date. As volumes increase in those markets, too, the goal should be to leverage existing initiatives in all markets and converge progressively, using a bottom-up approach, towards a pan-European scheme. Pan-European hub solutions for order routing and settlement exist already: FundSettle (Euroclear) and Vestima (Clearstream) concentrate orders on a pan-European basis and route them into various settlement processes chosen by their users.

Some funds use sub-transfer agents in different distribution countries. Those sub-transfer agents process funds according to local rules and practice and then liaise with the main transfer agent in the fund's domicile. Transfer agents should not be forced to have their register in any one specific CSD, and investors should not be forced to use any specific CSD (direct or trough an intermediary) to access the transfer agent.

The last few years have seen many discussions about the distribution models existing in Europe, often with an opposition being made between the so-called TA model and the CSD model. After sometimes heated debate, there is now a general agreement on the fact that both models have pro’s and con’s and will co-exist for the foreseeable future. At the same time, there are also clear signs of convergence between them which, we believe, will intensify going forward.

A better understanding of the local solutions in the major European markets is the basis for best practice recommendations towards common solutions. The major markets France, Germany and United Kingdom were reviewed as they have already established, or are in the process of doing so, a hub-based processing model. The Swiss and Austrian markets work along the same principles as the German market. The case studies France, Germany and UK can be found in the Annexes N, O, and P.

This section identifies commonalities between the major European fund markets which are likely to be characteristics of a European model going forward. It also **highlights how the existing TA and CSD models are converging**, at least partially, in a number of countries. The following table provides a high level comparison between the French, German, UK and Luxembourg markets on the following criteria:

- **Funds in domestic CSD:** are the funds domiciled in the market considered eligible with the CSD of that market (foreign funds are not considered in this table);
- **Record Keeper of reference**;
- **Transparency**: mainly for the purpose of commission calculation: How visible are the investor/distributor positions for the fund or its commission calculating agent;
- **Local order routing platform**: is there a domestic order routing platform available in the market considered;
- **Availability in the international cross border** platforms: the availability of the funds considered in the ICSD’s order routing and or settlement platforms.

	France	Germany	UK	Luxembourg
Total net assets in million EUR *	1’301’438	902’518	438’954	1’526’563
Number of Funds	11’881	6’053	2’968	12’200
Funds in the domestic CSD	Yes. Most of the French funds are settling in Euroclear France. This is not an obligation, however once admitted in Euroclear France, the entire issue has to be held in Euroclear France (all or nothing). Settlement at the CSD occurs on a delivery versus payment basis in central bank money. Orders are received by a "centralisateur" agent appointed by the fund and then settled in Euroclear France against the account of the order issuer. As a general market practice, direct orders are not accepted i.e. centralisateurs will only accept orders coming from another Euroclear France participant.	Yes. The bulk of the publicly offered funds settle in Clearstream Banking Frankfurt. This is not an obligation and although it is generally the practice not all trades need to settle in CBF (for a fund eligible in CBF). Orders have to be sent to the Depotbank appointed by the fund which will then settle them on a delivery versus payment basis in central bank money in Clearstream Banking Frankfurt against the account of the order issuer. The delivery of physical shares is theoretically still possible although this feature is not really used anymore.	In process. UK funds are gradually being made eligible within Euroclear UK and Ireland through a plan in several phases. So far, funds positions are recorded in the fund register operated by a transfer agent appointed by the fund management company. Orders are to be sent to the fund manager who will then instruct the TA to update the shareholders register accordingly. After the implementation the UK CSD model will co-exist and complement the TA model.	No. There is no CSD in Luxembourg at this stage although the important and growing flows in LU funds handled in the ICSDs (Euroclear Bank and Clearstream Banking) or in other CSDs (Euroclear France and Clearstream Banking Frankfurt predominantly) demonstrate the appetite for centralised settlement shared by a number of market players. Funds positions are recorded in a shareholder register which is operated by the transfer agent appointed by the fund. Orders are to be sent to the TA which will process them by booking the new shares in the shareholder's registered account on trade date. Cash settles separately on a TD+x basis (depending on the fund). In the context of the implementation of T2S, a CSD will be created in Luxembourg where funds will be eligible. Once implemented, the Luxembourg CSD model will co-exist with and complement the TA model.

***** Source: EFAMA Quarterly Report "Trends in the International Fund Industry (Q1 2009)"

	France	Germany	UK	Luxembourg
Record Keeper of Reference	For funds admitted in Euroclear France, the positions recorded at the CSD are recognized as the official holdings of reference in the fund involved.	The positions recorded at the level of the Depotbank (which is responsible for the issuance of fund shares) are the records of reference.	The positions recorded in the shareholders register operated by the transfer agent are the records of reference. This will remain the case once the UK CSD model for funds will be implemented.	The positions recorded in the shareholders register operated by the transfer agent are the records of reference.
Transparency	Low but being addressed in various ways: While the positions of French custodians in Euroclear France are easily identifiable, the underlying positions of distributors are not easily traceable. The French market is addressing this problem since a few years now through the marking of the orders (with a BIC/BIC1 code sometimes complemented with a bilaterally agreed reference) allowing to identify the distributor to be allocated to a trade. This will be complemented in the near future through the implementation of a new market function referred to as the "TA-Light" which will be in charge of tracking "distributed" positions.	Low. Clearstream Banking Frankfurt can provide the fund management companies with a holding report detailing the positions held in a certain fund by its participants. When underlying positions from distributors need to be identified, this is generally achieved through a reporting provided by the custodian involved. BVI (the German Investment and Asset Management Association) has developed, with its members, a specific report for that purpose.	High, as investors positions are held on a segregated basis in the shareholders register. This will remain the case when the UK CSD model for funds will be fully implemented.	High, as investor positions are held in the shareholder register on a segregated basis. This transparency is sometimes reduced by the use of omnibus accounts consolidating the flows of several distributors by some custodians. In such case a position reporting mechanism from the custodian to the fund promoter or its agent is generally put in place.

	France	Germany	UK	Luxembourg
Local order routing platform	Euroclear France has implemented, with the support of the local community an order routing platform for funds eligible on its core system. The market is currently migrating onto the order routing solution.	Two local order routing platforms co-exist: - Investro; - Vestima (in addition to its cross-border capabilities, Vestima is an official product of Clearstream Banking Frankfurt).	EMXCo, owned by the Euroclear Group, is the local UK solution providing automated order placement and order confirmation. It is being combined with the Euroclear UK and Ireland settlement and asset servicing capabilities.	There is no Luxembourg domestic order routing platform. However, most transfer agents based in Luxembourg have generally developed a sophisticated communication infrastructure (supporting a.o. SWIFT connectivity) while at the other hand large chunks of the activity are channeled through the two cross border platforms i.e. FundSettle and Vestima.
Availability in the international cross border platforms	▪ French funds are available for order routing (Vestima), settlement and custody in Clearstream Banking *****; ▪ They are available for order routing, settlement and asset servicing in FundSettle (the Euroclear Bank fund service) *****. ***** *See note below*	▪ German funds are available for order routing (Vestima), settlement and custody in Clearstream Banking; ▪ They are available for order routing, settlement and asset servicing in FundSettle (the Euroclear Bank fund service).	▪ UK funds are available for order routing (Vestima), settlement and custody in Clearstream Banking; ▪ They are available for order routing, settlement and asset servicing in FundSettle (the Euroclear Bank fund service).	▪ Luxembourg funds are available for order routing (Vestima), settlement and custody in Clearstream Banking; ▪ They are available for order routing, settlement and asset servicing in FundSettle (the Euroclear Bank fund service).

* Note: The default place of settlement for French fund orders routed through Vestima or Fund Settle is Euroclear France. Settlement in Clearstream Banking or Euroclear Bank is possible but follows a different process.

Evidence of convergence

Looking at the evolution of the funds order processing and settlement environment over the last few years, there are elements of convergence, at least in partial areas and this is likely to continue in the coming years.

In typical CSD markets (e.g. France, Germany), where the settlement of funds transactions is centralized, relatively cheap and very much standardized there has been a recognition that the CSD model lacks transparency. This has led to the development of concepts like the marking of orders (with an identifier of the underlying distributor) and the "TA Light" model in France which is in a project phase. A different approach to achieve the same goal is the development of a standardized position reporting by investor custodians to the fund managers like in Germany. All these initiatives aim at increasing transparency towards the fund promoters.

On the other hand, the so-called TA markets (e.g. Luxembourg, Ireland), are characterized by high flexibility and transparency – the investor/distributor details are recorded directly in the shareholders register operated by the transfer agent - but they are generally less efficient from a settlement point of view. The market is very fragmented, with many different settlement procedures to accommodate and generally one payment per trade. Over the last few years, those markets have seen an increasing proportion of their transactions settle in central hubs like the ICSDs (Clearstream Banking S.A. and Euroclear Bank) or CSDs (Euroclear France, Clearstream Banking Frankfurt).

While not yet being mainstream, such trend highlights the fact that central, standardized settlement is seen as attractive for an increasing number of market players, particularly when it builds on the usage of settlement infrastructures already in place for other asset classes like bonds or equities. This allows for re-use of existing systems and procedures, global pooling of cash and/or credit lines, achieving economies of scale and a reduction of operational risk.

Settlement instructions should adhere to ISO standards

Settlement instructions are necessary for the transfer agent to settle the order. Business practice must ensure that complete and accurate settlement instructions are passed on to the transfer agent. There are two ways for the transfer agent to receive settlement instructions (this is mainly relevant to the direct order placement scenario):

- Each order contains the full settlement information; or
- Each order will be settled in accordance with standing settlement instructions held on the register of shareholders, as set up when the account was opened. This set of data complements the issues mentioned under "Account opening". With a view to fraud prevention and Anti Money Laundering Rules, effecting settlement based on standing instructions is encouraged over the one mentioned above.
  In theory, settlement instructions could also be retrieved from a standing instructions database maintained by a third party, but this is not current practice today.

It was noted that standards and best practice recommendations (e.g. by EFAMA or SMPG) with regard to the contents and formatting of settlement messages already exist. Compliance is a matter of market discipline which however seems difficult to achieve. It was also noted that, when defining new message standards for the pan-European market, they must be global at the same time i.e. they must be open enough to accommodate the needs of markets in other parts of the world.

A Central Counterparty does not add value in a primary market settlement

A central counterparty between the order execution platform and the settlement location is not a vital element. It offers none of the advantages to the fund market that it does to the equity, fixed income or derivative instruments secondary market.

Exchanging cash for fund units

Achieving a "true DVP" (Delivery versus Payment) process, as is standard best practice in the equity market, cannot be adopted one for one in the funds market. The funds market is not a secondary market business where securities issued previously are traded and delivered against simultaneous receipt of payment. The funds market is a primary market business, where new shares are created with each subscription. Moving the newly issued shares to the instructed settlement location, and handling the associated payment, are distinct steps. Cash settlement may need to be made in advance if credit terms are not agreed, before the new shares are issued. Since value is not exchanged for countervalue simultaneously, achieving a process that *guarantees* settlement (i.e. a link between payment and share delivery, but not necessarily a simultaneous link) is of key importance.

Whether settlement finality is achieved by settling the cash leg of the transaction in central bank money or in commercial bank money, is of lesser relevance than it is in the securities market. Market participants have a choice between both options today. The group did not consider a recommendation necessary.

To illustrate, the working group representatives of the established hub solutions explained the relevant features in their models which find broad and unquestioned market acceptance, without a true DVP process:

- FundSettle applies a DtP (Delivery then Payment) process, where the cash and securities leg are linked, albeit not simultaneously. The share settlement is a reflection of the share settlement done in the transfer agents' books. The cash settlement ensures the payment flow between the investor custodian's account with Euroclear and the external cash account of the fund.
- Clearstream's Central Facility for Funds (CFF) does not actually hold the transfer agent's fund shares. CFF *reflects* share positions which the transfer agent posts to its own issuance account. Cash and shares are therefore not "physically" exchanged on the same platform.
- A third model is in the process of implementation in the French domestic market through Euroclear France, referred to as a "delegated hub DVP process". This involves a mirrored issuer account, held by the *centralisateur* in the books of the CSD.

Counterparty credit risk

The issue of counterparty credit risk rises in importance in the funds settlement environment: Large investors placing simultaneously large orders for multiple funds with several transfer agents create a potential systemic risk if payment is not made on time. The transfer agents cannot be expected to absorb that risk. This is an issue to be addressed in the agreement between investment manager or transfer agent and distributor.

Aligning the settlement cycles of funds with those of their underlying instruments

The working group suggested a recommendation to align the settlement cycles of the funds with those of their underlying instruments. It was noted that EFAMA issued a recommendation to that effect: *"Settlement should occur on T+3 (where T is the date on which the order is priced) or earlier, according to the settlement cycles of a fund's underlying assets. In exceptional cases, the nature of a fund's assets and the associated settlement timeframes may require a longer period."* This concept was supported. There are however fund portfolios composed of asset classes with varying settlement cycles. In that case, the fund's settlement cycle should be that of the asset class having the longest settlement cycle.

Risk issues between trade date and settlement date

In a CSD environment, all orders settle inhouse between the issuing agent's account and the account of the CSD participant that acts as intermediary for the ultimate investor. Where a CSD accepts only regulated financial entities as direct participants, the transfer agent will always settle against a regulated entity. Inhouse settlement in a CSD allows a DVP settlement mode. However, in the funds' primary market environment (unlike in the equities and bonds market), the key concern is to *link* the movement of share to the corresponding payment; the exchange does not necessarily have to occur simultaneously.

In the order handling process in a non-CSD environment, there are a number of "critical moments" where operational and/or credit risks pass from one party to another, or where certain rights are created, like for example the entitlement to corporate actions. Such critical moments are: order receipt at the transfer agent, order execution, creation of shares by the transfer agent, creation of shares in a depository (where applicable), settlement, change of legal ownership.

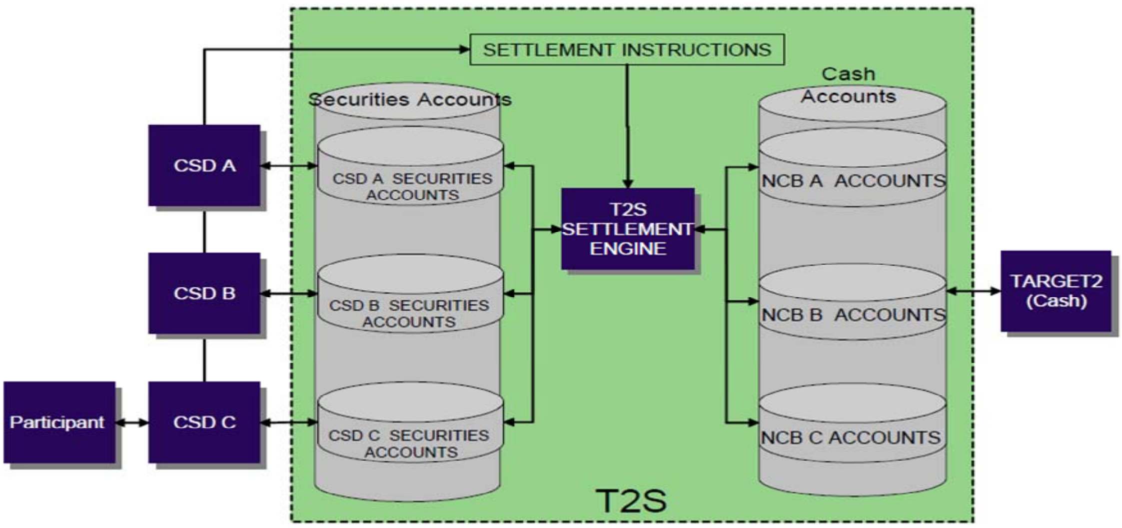
More information and an overview of current market and legal practice in major European markets can be found in Annex I.

Outlook: How will TARGET2 Securities impact funds settlement?

TARGET2 Securities (T2S), to be operated by the Eurosystem, is one of the major convergence initiatives in the European securities market. The Eurosystem comprises the European Central Bank and the National Central Banks of the Euro currency zone.

TARGET2 Securities is an extension of TARGET2, the Eurosystem's real-time, large value payment platform. The T2S platform will be the common technical basis for securities settlement in Europe, at least for all euro-denominated trades. All settlements are in a true DVP mode against central bank money. The securities leg of a trade will settle in T2S via the securities accounts of the connected CSDs. The cash leg will settle via the TARGET2 cash accounts of the connected National Central Banks. A very high level outline of T2S is shown below.

Outline of TARGET2 Securities



NCB = National Central Bank

Source: European Central Bank

Participation in T2S is not limited to CSDs within the Euro zone or to CSDs in a member state of the European Union. Some CSDs outside of the current Euro zone have already decided to outsource, in addition to Euro trades, the settlement functionality of their domestic currency trades to T2S as well.

T2S is scheduled for completion in June 2013. The project is currently in the specification phase. Development of the IT platform will start approximately in mid-2010.

T2S has not been designed with the funds market in mind. The current assumption is that the range of T2S-eligible ISINs will include for each participating CSD all ISINs that it handles as an issuer CSD (some exceptions exist). Today, CSDs in the Euro zone generally accept local fund ISINs. They may not provide all service steps involved in processing a fund order, but they can deliver funds shares against or free of payment, and they provide custody services (corporate actions etc.) for the funds which they accept.

At least initially, direct participation in T2S is limited to Central Securities Depositories. It is not foreseen today that settlement or custody hubs for funds, or even individual transfer agents, could maintain accounts directly in T2S.

Based on the current information, two scenarios are possible and their implications are described below.

A) Fund ISINs are T2S eligible

For CSD markets, the fund settlement process will be the same as for equities. The cash side of each settlement (assuming that it is in euro) will be in central bank money if the transfer agent's correspondent bank maintains an account with a central bank that is linked to the T2S settlement engine via TARGET2.

There is no direct impact on the CSD participants, as they will have no interaction with T2S.

With respect to cross-border funds distribution through T2S, the extent to which T2S will make a positive impact, depends on the participating CSDs more than on T2S itself: a CSD must be willing and able to include foreign funds in its service offering before settlement can take place in T2S. For instance, an Italian investor will only be able to manage French and German funds through his account in Monte Titoli, if Monte Titoli offers custody services on those funds in addition to settlement; and this would require an account relationship with the CSDs in France and Germany outside of T2S. The same precondition applies to cross-border settlement of any other instrument types.

B) Fund ISINs are excluded from T2S

No impact of T2S on today's processes. Where CSDs are involved with fund settlement today and wish to continue providing this service, they will need to maintain a separate settlement infrastructure for funds (and possibly other non-T2S eligible ISINs), with associated extra operating and maintenance cost. Fund settlement will then represent an exception processing. The transaction cost for a fund settlement is likely to rise to a level higher than today.

4.6 Transfer of Holdings

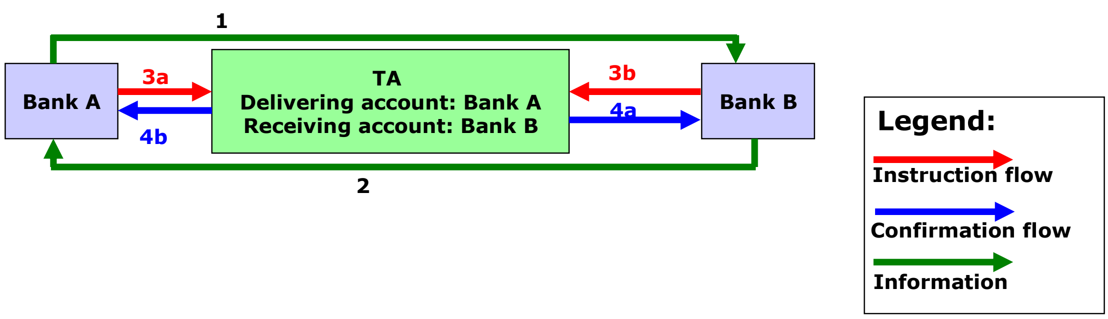
End investors may choose to change their custodian relationship at any time and for any reason. If a fund position which is linked to a particular sales agreement is moved from custodian A to custodian B, it is essential that the transfer agent is informed of the change without delay, as it needs to re-direct the commission payment stream.

A transfer in this context means the scenario where an investor changes his custodian bank relationship – or a global custodian changing a subcustody agent - and instructs his "old" bank to deliver the assets to his "new" bank without a change in beneficial ownership taking place.

Transfers of holdings between investor custodians, if not advised to the transfer agent without delay, lead to incorrect calculation and allocation of commission entitlements if one custodian is a distributor for the fund in question and the other is not, or if both custodians are distributors but whose commission schemes with the fund are not based on identical economic terms.

Basis of the discussion was a best practice proposal to automate fund transfers drafted by the Luxembourg based Findel Group. The group considered the proposal workable, but discussed an addition which is inserted in the picture below as Steps 3a and 3b: Upon exchange of the relevant information between Bank A and Bank B (green arrows) both banks should send a deliver instruction message (Bank A) and a receive instruction message (Bank B) to the transfer agent. The Single Leg proposal thus becomes a Dual Leg model.

Transfer of Holdings (Luxembourg Market)



1. **Bank A provides Bank B with an "I deliver message", message contains a Bank A specific transaction reference and any underlying client detail**
2. **Bank B provides Bank A with an "I accept transfer – here is my information" message, message contains a Bank B specific transaction reference**

3a. Based on 2, Bank A instructs TA of outgoing transfer, transfer instructions contains two references that enable TA to know that the transfer communication / notification between Bank A & B has taken place

Amendment put up for discussion:

Step 3b: Based on Step 2, Bank B sends an "I expect to receive" message to the TA

4a & 4b: TA confirms transfer to Banks A and B, including the two transaction references. Banks A and B match the transfer confirmation with reference numbers to the original reference numbers they gave each other, to enable reconciliation

Arguments in favor of the change – this was a minority view:

- Sending matching instructions is best practice in the equity and bond market. It is a standard between custodian banks, and between custodian banks and central depositories.
- The need to send a receive instruction may remind the receiving bank that it may first have to open an account relationship with the transfer agent if none already exists.

Argument against the change – this was the majority view:

Receiving banks frequently are not informed by their new clients that a transfer of holdings was instructed to the client's former bank, what the exact holdings are and what the expected transfer date is. Transfer agents experience that a very high percentage (80% was mentioned) of transfer attempts which are rejected by the receiving bank fail because the receiving bank is unprepared. The transfer agents do not want to be "stuck in the middle" with the responsibility of having to chase matching messages from both sides. Also, the matching process cannot be automated easily on transfer agent level.

There is an additional obstacle which hinders STP, mainly concerning the UK market but also to be found in Luxembourg and Ireland: Transfer agents require original transfer documents, signed by the beneficial owner to authorize the transfer. An initiative is underway in the UK aiming to allow this to happen in electronic form.

Conclusion

The coexistence of the Findel Group solution and the dual leg instruction solution is justified for as long as there are transfer agent markets and central hub markets in Europe.

The Findel Group model is designed for cross-border funds (predominantly Luxembourg domiciled) traded on a range of hubs/CSDs.

In a domestic CSD market environment, the "dual leg" or two-sided instruction model, based on an automated exchange of ISO messages is a mandatory standard. The group reviewed process descriptions for the French, Swiss and German domestic markets, which are almost identical. The full Findel Group proposal can be fund in Annex J. The process descriptions for the hub markets France, Switzerland and Germany are in Annexes K, L and M.

The two key points to pursue in the current environment are 1) that the transfer agent *does* receive a transaction reference from the receiving bank and 2) that standardization of the transfer of holdings function is improved to the extent possible, in a way that allows automation.

4.7 Holding and Transaction Reporting

This function has two major dimensions: information about the investors required by the investment manager; and information about the investment instrument and the fund for the benefit of the investor. More specifically, this function deals with account segregation requirements on transfer agent level and reconciliation issues between the investor custodian's and the transfer agent's position ledgers.

During the initial phase of this initiative, the previous ISSA working group had summarized the main challenges and their underlying causes. For a variety of reasons, transfer agents may require a "look-through" at least to the level of the distributor, if not to the end-investor. These requirements prevent the fungibility of funds and order aggregation opportunities. The listing below may not be exhaustive; not all aspects may be relevant for UCITS funds:

- Transfer agent requirement to know the distributor for commission handling and marketing reasons
- Prohibition by some fund management companies/transfer agents to perform in-house settlements between omnibus accounts within a ICSD/CSD. Underlying reason is again commission tracking.
- Products for which the tracking of holding periods or other account history is necessary (e.g. aged trailers, number of transfers allowed in a given time period, restriction on switches, etc.)
- Special commission structures, such as Contingent Deferred Sales Charges (fee charged only when a special circumstance occurs, for example if a holding period applies and the investor decides to sell the fund prematurely)
- Legal/regulatory needs to obtain as many details as possible on the beneficiary (e.g. late trading/market timing; refer to SEC Rule 22c-2 in the United States)
- Tax/regulatory restrictions on transferability (e.g. stamp duty on UK funds)
- Tracking and reporting of individual or aggregate ownership limits in the fund
- Tracking and reporting of foreign ownership levels

Trade date vs settlement date accounting

Transfer agents' administration systems use a trade date based view, whereas investor custodians' administration systems are generally settlement date based. The reconciliation process between the two always requires adjustments. A suggestion was made for a best practice recommendation to bridge the two views.

<u>Recommendation</u>: Transfer agents' and investor custodians' position tracking systems should support both a trade date based and a settlement date based view.

Non- standardized communication of holdings

Data flows are often done through unstructured spreadsheets, faxes, account statements issued by custodians etc. Securities industry standards like the ISO message "Statement of Holdings" are not yet used widely.

<u>Recommendation</u>: Transfer agents' and investor custodians' communication should be based on the use of ISO 20022 standards wherever possible.

Management Information System needs

As part of the discussion on order identifiers, the transfer agents stated a need for better transparency with respect to the true origin of orders. Transfer agents or investment managers would like to know who is behind a global distributor. For instance, not all orders a Luxembourg fund receives from a major distributor's central fund dealing desk in Switzerland are orders from Swiss investors. Submitting order breakdowns with sub-agent codes would help. This is an issue for transfer agents' Management Information Systems (MIS). It is worthy of mention here as a potential future requirement as cross-border fund distribution increases. It is however not a focal point of this project.

4.8 Commission Reporting

For simplicity reasons, it is assumed here that all commission aspects are handled by the transfer agent. In reality, there are various types of commissions and fees. All or some related tasks may be performed by a third party commission calculating agent appointed by the fund management company.

The need for the transfer agent to track data required to correctly determine the eligibility of a position to trailer fee entitlements and other forms of remuneration, is the largest barrier preventing the full alignment of funds and equity processing. The complexity is multiplied by the large number of methods in place to calculate such entitlements. The entire issue of "commissions" has two aspects that have the potential for standardization and automation:

a) the way they are calculated

b) the way they are reported

Calculation formulae are not within the focus of this group. There is a dedicated EFAMA working group on harmonization in this area.

Issues related to commission reporting are tied closely to the account structures implemented between transfer agents and their distributors. The section "Account Opening" highlights the key aspects and the Order Processing Matrix contains further issues and recommendations.

4.9 Custody and Asset Servicing

Dematerialization of fund certificates

The group calls for the full dematerialization – or at least immobilization – of all funds registered for distribution in Europe. In fact, paper should be removed from the entire funds processing cycle, to the extent possible.

Recommendation: Unless prevented by law, all funds registered for distribution in Europe should be fully dematerialized. As a minimum, circulation of physical fund certificates should be immobilized to the greatest extent possible.

In a CSD environment, the transfer agent will maintain a fund issuing account for each fund ISIN in the CSD. If all outstanding shares are held in the issuing account, then the fund can be fully dematerialized, assuming no legal restrictions prevent dematerialization.

Within the context of dematerialization, the question was raised where the location of ultimate finality was: In the transfer agent's issuing account in the CSD, or with the transfer agent itself. Transfer agents need to accommodate fund promoters distributing funds internationally. They may find it operationally efficient to maintain multiple issuing accounts in the markets where they distribute. At least in cross-border or multi-market distribution scenarios, the place of ultimate finality of the shares in issue (total number) is the fund's custodian, with the transfer agent maintaining the individual records at the level of the named shareholder.

Client information reporting

The mode of reporting underlying client information by intermediaries to transfer agents was identified as an area with room for improvement. Almost every transfer agent has its own specifications concerning information contents and reporting formats.

Common best practices for the intermediary chain

With regard to the relationship between the transfer agents and distributors, investor custodians or hubs, the general recommendations are to accelerate the convergence of business practice between them, and to continue the drive towards a paperless operating environment, to increase efficiency and reduce costs and risks.

Investor custodians' due diligence process with regard to subcustodians

On several occasions, the group pointed out the need to strengthen risk management in general. The subcustodian due diligence process was mentioned specifically.

In the securities market, global custodians are selecting their sub-custodians and other agents with great care. Usually they have a choice amongst several competitors. In many markets, global custodians engaging subcustodians or other local agents have legal or regulatory due diligence requirements they must comply with; compliance is verified by internal and external auditors.

In the funds market, a seemingly analogous set-up between investor custodian and the transfer agent is very different in reality: Investor custodians have no choice between alternative transfer agents for a given fund. There is only one transfer agent, appointed by the fund management company (leaving aside sub-transfer agent set-ups where funds are distributed in multiple jurisdictions). The transfer agent maintains the register of shareholders but does not hold the fund's underlying assets. (See page 9 for an overview of the parties involved in operating an investment fund and their main functions).

In the event of a transfer agent bankruptcy, the investor keeps his entitlement to the fund shares which were ultimately issued by the fund custodian.

Under an asset safety perspective, the parties to look to are firstly the fund management company with whom the investor contracts at the time he subscribes to a particular fund, and secondly the fund custodian who is appointed by the fund management company to hold the fund's underlying assets. The fund custodian is also the registrar i.e. the entity that reconciles the number of shares shown in the transfer agent's records as outstanding, against the authorized number of shares issued.

Know Your Customer issues (KYC)

The discussions revealed that in Europe, more and more funds no longer insist on knowing the beneficial owner. They realize that, in a world of global distribution and multi-tiered distribution channels, they can no longer control the entire intermediary chain down to the ultimate investor. Most funds distributed cross-border are nowadays held through nominee accounts (estimate: 70-80%). Some transfer agents therefore limit themselves to a look-through to the counterparty to the sales agreement. The 'Know Your Customer' account documentation requirements are handled by the party that holds the beneficial owner account.

Dividend reinvestment

There are many variations of dividend distribution in addition to the two basic share types, i.e. accumulation shares where all income is re-invested, and distribution shares where all income is paid out. From the viewpoint of operational efficiency, the options should be limited to those two. All other permutations increase operational cost and complexity, with limited or no benefit to the shareholder.

4.10 Distribution

Within the context of "Removing paper from the process flow", the group supports the Dematerialised Mutual Fund Sales Agreements (DMFSA) initiative lead by Schroders and driven by a number of investment managers and banks as a collaborative project. The overall objective is to make it easier to create sales agreements for mutual funds. Sales agreements should be **standardised** to the extent possible (mainly a legal issue), and they should be **dematerialised**, meaning that they should be made suitable for electronic creation, transmission and storage (mainly an operational issue). The project uses a phased approach which could be summarised as follows:

Step 1: Create the legal foundation: the Master Agreement

Create a standardised "Master Agreement" for the distribution of mutual funds which is recognised in the funds industry in the same way as the ISDA Master Agreement is recognised in the derivatives industry. This requires agreed-on definitions of the relevant commercial terms. The current project documentation contains a draft master agreement and the definitions of the key terms. The terms and their definitions are like the single pieces of a mosaic. They can be arranged in many different ways to compose different pictures, but all variations are always based on the same standard elements.

In the context of order processing, a key term is the Agreement Identifier i.e. the unique identifier that the fund management company and the distributor give to the sales agreement. An important extension of the Agreement Identifier is the Local Identifier, which is assigned to certain sections of the sales agreement. The Local Identifier's purpose is to permit the counterparties to the sales agreement to refer easily and precisely to particular commercial terms in their correspondence and in their operational processes. For instance, a Local Identifier could be inserted into an order to serve as "contrast marker", indicating to transfer agents and commission calculating agents which party the order is related to, and what commission that party is eligible to receive under the particular agreement. The combination of Agreement ID and Local ID could be used to improve the transparency of transactions flowing through intermediaries such as CSDs and global custodian omnibus accounts, while at the same time maintaining client anonymity to third parties.

Step 2: Create the technical foundation to support the dematerialisation process

The use of standardised electronic messages, and their exchange using a suitable message protocol and a suitable infrastructure, will permit the industry to "dematerialise" the agreements. The initiative promotes open standards and the use of existing systems.

Step 3: Create the capability to compose agreements electronically

Schroders developed a software prototype which supports the process of selecting the required elements of a new agreement, and putting them together electronically. The finished agreement could then be printed. The vision of course is to ultimately abolish the printed paper and store the final agreement electronically.

Step 4: Create an end-to-end process

An end-to-end process must be designed around the agreement itself - based on the exchange of standardised messages – to manage the full sales agreement life cycle: to offer an agreement to a counterparty, to accept or reject it, store it, cancel it, modify or reject individual elements. This is very much in analogy to the need for an end-to-end process discussed for the EFAMA Fund Processing Passport.

The initiative has a dedicated public website at www.dmfsa.info and a discussion forum at www.swiftcommunity.net/dmfsa

It may take several years until the Master Agreement has reached common acceptance and step 4 has been reached. It is however a visionary approach; even reaching step 1 would realise great benefits to the fund industry in terms of efficiency gains and cost savings. The more widely the model agreement is used by investment managers and distributors, the higher the benefit for the fund industry will be (the "network effect").

The EFAMA Fund Processing Passport follows a similar concept: a core section of universally applicable data, and country add-ons for target distribution market specific data.

Also, the technical framework of the DMFSA initiative, which will contain the commercial terms agreed by the contractual parties, has overlaps with the data contained in the EFAMA Fund Processing Passport. There may be synergies between the FPP process and the DMFSA process.

If eventually, the two initiatives could be aligned and the document containing a funds key operational data (= the FPP) could be linked to the document containing the funds legal terms for distribution, both in a standardized and electronic format, a significant step towards removing paper from the funds processing flow could be realized.

4.11 Related Issues

Secondary Market Trading

The topic of "secondary market trading of funds issued in the primary market" – not to be confused with Exchange Traded Funds (ETFs) - was touched upon on several occasions. There were divided opinions with regard to how relevant it is and whether or not it presented significant operational challenges to the transfer agent. At least the German exchanges view it as a strategic business line. The group reviewed the post-trading issues that need to be addressed, so that smooth order processing is possible if and when an exchange decided to offer secondary market trading, and investors choose that order execution venue over the standard subscription or redemption process with the transfer agent.

Scope of secondary market trading

Secondary market trading currently exists in **Germany** only. Settlement is on T+2.

In **Austria**, the Vienna Stock Exchange is basically prepared to offer secondary market trading, but there is currently no active market maker. Settlement would be on T+7.

In **Switzerland**, only one category of funds is traded on-exchange, namely Swiss real estate funds. This is an exception, caused by certain provisions in the law governing investment funds. The market makers are the investment bank divisions of the same banks that act as issuers of those funds. There are no particular operational issues or risks that would need improvement. Settlement is on T+3.

In the **Netherlands**, secondary market trading used to exist but, in 2004, an expert commission concluded that there was a lack of price transparency in the secondary market, compared against subscribing/redeeming fund shares directly with the fund or its agent. As a consequence, Euronext Netherlands discontinued secondary market trading. It now offers a fund order *routing* infrastructure (Euronext Fund Services) but orders are not *executed* on the exchange.

An inquiry placed with ISSA members in all European countries yielded no additional markets whose exchanges currently offer secondary market trading of funds issued in the primary market.

Secondary market trading in Germany

Secondary market trading in Germany was discussed in the form of a case study. Key features:

- Fund trading is offered by several German exchanges. Some 80% of the total market share, measured by number of trades, is controlled by the Frankfurt (43%) and the Hamburg (26%) stock exchanges. On an annual basis, peak volumes were 2 million trades in 2007, 1.5 million trades in 2008, and a downward trend in 2009 reflecting the overall market situation. (Buy and sell orders are counted separately, the figures therefore represent a double count.)
- At the end of 2008, the Frankfurt Stock Exchange migrated its funds business from the floor trading system to the more powerful electronic XETRA trading platform. Motivation was to extend the product's reach to all 280 institutional XETRA trading members.

- Currently some 2'800 funds (ISINs) are offered, both German and foreign domiciled funds. The 250 most active funds represent 90% of the total order book turnover. The ten largest investment companies whose funds are traded represent more than 40% of the total order book turnover.
- The funds are traded in the regulated unofficial market segment. For that reason, the exchange may trade a fund without having to obtain prior permission to do so from the investment manager. To be eligible for trading, a fund must however meet two minimum criteria:
  1) the fund must be licensed by BaFin (the German Federal Financial Supervisory Authority) for distribution in Germany
  2) the fund must be eligible for settlement in Clearstream Frankfurt
- All German funds (DE ISIN) are settled through the CASCADE settlement system in Clearstream Frankfurt, on T+2 (same process as for equities). Many Luxembourg funds (LU ISIN) licensed for distribution in Germany are CASCADE-eligible and settle through the same channel. Luxembourg funds not included in CASCADE actually settle in Clearstream Luxembourg (but are deemed to settle in Clearstream Frankfurt for legal reasons, since Clearstream Frankfurt is only designated settlement place for the Frankfurt Stock Exchange).
- Funds are not cleared through a central counterparty.
- There are currently two active market makers. Each fund has only one assigned market maker who is commissioned by the exchange to provide liquidity. The minimum order sizes and maximum price spreads are regulated to ensure an orderly and fair market.
- The market makers try to emulate each fund's NAV during the day, based on public information only, and they will fix bid and ask prices as close as possible to the anticipated NAV.
- Market makers may have long or short trading positions during the day. In principle, they are required to offset the balance against the fund at end-of-day. There are however specific rules authorizing the market makers to carry balances through several trading days if they so choose. In theory, there can be more fund shares in "virtual circulation" in an unsettled status during the trading day, than there are shares outstanding. The exposure is with the market maker.

Reasons why investors decide to buy/sell trough the exchange, rather than to subscribe/redeem with the fund:

- Certainty of immediate order execution throughout the trading day (09.00 – 20.00 in Frankfurt)
- Immediate knowledge of the execution price
- Attractive for investors interested in intra-day trading
- Brokerage commission may be cheaper than the sales load charged by the fund/distributor
- For currently closed funds (mainly real estate funds), there is no alternative to the exchange

Experience shows that exchange trading of funds is used by a small proportion of investors only, mainly well-informed, technology-minded investors who use internet banking facilities. The proportion of exchange-traded fund turnover to total fund turnover in Clearstream is very small, even though there is a long term upward trend. A large majority of investors place orders with their bank. Order routing and execution will then follow the primary market channel. The situation is similar both for retail and institutional investors.

Discussion of potential obstacles raised by various stakeholders

Difficulty in trailer fee and commission tracking

This is the biggest obstacle from the transfer agent's point of view. As a result of exchange trading, fund shares move from one distributor (investor custodian) to another without the transfer agent's knowledge. The effect is the same as with free of payment transfers of holdings between distributors if an investor changes his provider of custody services.

All on-exchange transactions have to be reflected in the book of the transfer agent. The transfer agent may obtain the relevant information from the CSD or it has to rely on the information provided by the beneficial owner. If the transfer agent would like to reflect all activity in its own register without relying on beneficial owner data, then daily reconciliation against the CSD books should take place.

Know Your Customer (KYC)

With exchange trading, investors buy and sell funds without establishing an account relationship with the transfer agent. The investors act through intermediaries. Transfer agents are unable to conduct a KYC process on end-investor level.

According to the transfer agents present in the group, for transfer agents distributing funds through intermediaries, the need for a full look-through to the ultimate investor is generally no longer an issue. The responsibility to conduct a proper KYC process is with the intermediary who "owns" the account relationship with the ultimate investor.

Different settlement cycles between trading places

In the current market environment, the same fund may have different settlement cycles depending on the trading place: T+3 when dealing with the transfer agent, T+2 when trading on a German stock exchange, T+7 when trading on the Vienna stock exchange (currently suspended). This may result in settlement fails: Assuming an investor keeps fund shares in direct custody with the transfer agent and sells them on-exchange in Germany, transferring the fund units to the buyer may take more time than the T+2 settlement cycle.

This issue was considered a case of insufficient investor education, rather than an inherent weakness of the fund market. In addition, those cases where an investor could sell shares through an intermediary without first having created a long position in his trading account with the intermediary, should be very limited.

Interpretation of "Best Execution" under MiFID

The interpretation of MiFID as to which trading place constitutes "best execution" in the fund market, is an open issue with opinions differing from country to country, and between the market participants in certain countries.

The advantage of on-exchange trading is a continuously updated price and a commission usually lower than a front load asked by the distributor. A further advantage is the same day execution advice.

The advantage of a trade done through the transfer agent is that the price is not one determined by a market marker, but based on the official NAV. Price transparency therefore is better.

In Germany, the current regulatory interpretation is that the "Best Execution" requirement means that an order should be executed by the transfer agent at a price based on the official NAV, not by a market maker at a price based on less transparent criteria. This view is currently being challenged by the market makers.

Bankruptcy of the market maker

The question was raised who would protect the investor if he traded shares through the exchange and the market maker went bankrupt (presumably in the period between trade date and settlement date). In that situation, neither the fund nor the transfer agent would provide any investor protection. This situation would not be different for the investor from any other on-exchange trading activity. The stock exchange's rules and regulations would provide guidance – but not necessarily protection.

Conclusion and recommendations

With the exception of the trailer fee and commission tracking issue, which is a problem not uniquely caused by exchange trading and which can be solved through suitable position reporting, the group came to the conclusion that secondary market trading does not create significant operational issues. Two recommendations address the trailer fee and commission tracking issue:

- Distributors, investor custodians and hub operators should agree with the transfer agent to supply statements of holdings as of the dates required by the transfer agent. Such position reporting will reflect the result of all fund share movements, irrespective of the nature of the underlying transaction type (subscription, redemption, exchange trade settlement, change of custodian and also corporate actions).
- There must be flexibility to produce trade date based or settlement date based reporting, as required.

The Evolving Role of the Transfer Agent

The discussion on the role of the transfer agent so far centered around the "classic TA services". In reality, however, at least some major transfer agents progressively move to another type of activity, namely the support of cross-border distribution, including distribution beyond Europe. Whereas in some European markets, Know-Your-Customer issues might become less of a focus for the transfer agent, they are still a crucial element in other distribution countries where the transfer agent acts as the fund's representative agent. The transfer agent must be capable of maintaining a complex distribution network, calculate trailer fees accurately, keep beneficial owner records including static data such as mailing addresses and payment instructions.

Also, the transfer agents perform value added services which require that the complete order data sent to a global order hub must be available to them without delay. For instance, transfer agents provide intraday cash projections to the investment manager - before order placement cut-off time - and this depends on the immediate availability of all order data from the hub.

The ability to deliver such added value services is key for the transfer agent's future. It must therefore be ensured that recommended changes and their technical implications on the transfer agent take into account the transfer agent's need to remain flexible and able to adapt to future specialized service requirements.

Glossary of Key Terms Used in the Report

Agreement Identifier	The unique identifier given to a particular sales agreement concluded between the fund management company and its counterparty to that agreement (the distributor).
AIFM Directive	EU Directive on Alternative Investment Managers (draft, published in April 2009). Provides a regulatory framework for managers of hedge funds, private equity firms and other alternative investment vehicles. Drafted in response to concerns about the adequacy of the regulatory and supervisory frameworks of EU financial markets in the wake of the financial crisis and the perceived lack of supervision of investment activities.
Beneficial Owner	The party that ultimately holds the fund shares for their own economic benefit. Synonym: Ultimate Investor.
BIC Code	Bank Identifier Code (ISO Standard 9362). Reference code used to identify an individual bank or other financial institution. There are two official types of BIC: 8 character BIC (also called "BIC8") and 11 character BIC ("BIC11"). A BIC8 identifies a financial institution in a country or a location. A BIC11 identifies the financial institution’s branch. BIC One: an "unofficial" BIC code used in some markets for identification purposes but not recognized as a standard in ISO messaging.
Central Securities Depository, CSD	An entity that holds and administrates securities and enables securities transactions to be processed by book entry. Securities can be held in a physical (but immobilized) or dematerialized form (i.e. so that they exist only as electronic records). In addition to the safekeeping and administration of securities, a CSD may incorporate clearing and settlement functions.
Custodian	See Fund Custodian and Investor Custodian
Custodian versus Platform	The investor custodian is the institution that "owns" the investor (sometimes an intermediary rather than the end-investor) and maintains that party's cash and securities accounts. CSDs or cross-border facilities act as a hub or platform to facilitate the many to many relations between investor custodians and transfer agents.
Distributor	A party that has a contractual undertaking in the form of a distribution agreement (sales agreement) with the fund management company. A client side institution that promotes the sale of fund units. The distributor may at the same time act as the investor custodian and act as the client's agent in the order placement process.

DMFSA	Dematerialised Mutual Fund Sales Agreements initiative. A collaborate industry project driven by Schroders, to make the creation and maintenance of sales agreements more efficient and suitable for process automation, without restricting the commercial freedom with which fund management companies sell mutual funds. *www.dmfsa.info*
DVP	Delivery versus Payment. ISSA defines DVP as follows: "Simultaneous, final, irrevocable and immediately available exchange of securities and cash on a continuous basis throughout the day"
Fund	A pool of assets collectively owned by the end-investors and invested by the investment manager according to its chosen investment strategy.
Fund Administrator	The fund administrator, appointed by the fund management company, supports the process of running a collective investment scheme. Examples of fund administration tasks include the preparation of financial statements, the calculation of the fund's Net Asset Value and the maintenance of the fund's accounting books and records.
Fund Custodian Fund Depositary	The custodian appointed by the fund board to hold the fund's underlying assets. Also known as the fund depositary. The fund custodian also acts as the fund's registrar, i.e. it monitors that the total number of fund shares recorded as outstanding in the register of shareholders, does not exceed the total number of authorized shares.
Fund Management Company	A company that manages the affairs of one or multiple investment funds for the account of investors. The fund management company will appoint and coordinate investment managers, transfer agents, fund administrators and other service providers (though not the fund custodian who is appointed by the fund's board). It is responsible for formulating investment objectives, distribution policies, appointing distributors, promoting the fund, and all general policies necessary to support the activities of the fund.
Hub, CSD, ICSD	An entity that manages and centralizes communication and/or coordinates settlement among the various intermediaries and the transfer agent. The term "CSD" is not meant to describe a Central Securities Depository in the narrow sense of the definition, but in a generic or purely functional way, for any kind of a central processing facility in the Hub Model. The same applies for the ICSD (International CSD).
IFA	Independent Financial Advisor

Investment Manager	The company that is responsible for the management of a fund. The investment manager may allocate the management of different investment portfolios of a fund to separate *fund* managers.
Investor Recognised Investor (RI) Non Recognised Investor (NRI)	The party who appears as the registered holder (also referred to as the named shareholder) in the books of the transfer agent. The investor is not necessarily the beneficial owner of the fund shares. The investor may be an intermediary acting on behalf of the beneficial owner, or of additional intermediaries. The Recognised Investor is known to the transfer agent. He may or may not "belong" to a distributor. A Non Recognised Investor belongs either to the custodian or to the distributor but is in any case not known by the transfer agent.
Investor Custodian	A financial institution holding fund shares in custody on behalf of the beneficial owner or another intermediary; usually as part of a diversified investment portfolio. The custodian may or may not act as a distributor itself for the fund in question, meaning it may or may not have concluded a sales agreement with the fund. As a major component in the order processing chain, the investor custodian must be identified at the transfer agent level. Also referred to as client side custodian.
ISIN	International Security Identification Number (ISO Standard 6166). Reference code to identify an individual security.
ISO	International Organization for Standardization *www.iso.org*
Local Identifier	Key term used in the DMFSA initiative. The Local Identifier is an extension of the Agreement Identifier. A Local Identifier can be assigned to any section of the sales agreement. Its purpose is to permit the counterparties to the sales agreement to refer easily and precisely to particular commercial terms in their correspondence and in their operational processes. For instance, a Local Identifier could be inserted into an order to serve as "contrast marker", indicating to transfer agents and commission calculating agents precisely which party the order is related to, and what commission that party is eligible to receive under the particular agreement.
NAV	Net Asset Value
Omnibus Account	An account held in the name of an intermediary which commingles positions of multiple unrelated beneficiaries (= Non Recognised Investors).
Order Issuer	The party sending an order to the transfer agent for execution. Normally the fund distributor or the investor custodian who may or may not be a distributor of the fund in question.

Registered Holder	see Investor
STP	Straight-Through Processing
Sub-Custodian	Appointed by a client side (global) custodian or a fund depositary. A sub-custodian can be a bank, a trust company or other organization which holds and safeguards asset held on behalf of the global custodian or the depositary respectively. Such assets can be held in the vaults of the sub-custodian, or in immobilized or dematerialized form with a local CSD or transfer agent.
TARGET2 Securities T2S	A single IT platform for the settlement of securities in central bank money, primarily in Euro but also in other currencies. The project was launched by the European Central Bank in 2006. Completion is scheduled for June 2013. Main objective is to improve the efficiency of cross-border securities settlement in the European Union.
Transfer Agent TA	An entity appointed by the fund management company that processes subscription, redemption and switch orders and usually maintains the register of shareholders. The functions performed by the transfer agent may slightly vary by country (for instance in France, the *centralisateur* does not maintain a register). For reasons of simplicity, it is assumed in this report that the transfer agent also acts as the fund's commission calculating agent. In reality, the two roles could be performed by different parties. The transfer agent is known as *centralisateur* in France and as *Depotbank* in the German speaking countries.
UCTIS UCITS Directive	Undertakings for Collective Investment in Transferable Securities. The UCITS Directive established a set of EU wide rules governing collective investments schemes. Funds set up in accordance with these rules can be sold across the EU subject to local tax and marketing laws.
Ultimate Investor	The party that ultimately holds the fund shares for their own economic benefit. Synonym: Beneficial Owner.

Working Group Members

Institution	Name	Function	
	Edouard-François de Lencquesaing	Consultant, WG Chair	
AXA Asset Managers Deutsch-land GmbH	Vanessa Grüneklee	Head of Cross-Border Client Management	
BBH Limited	Simon Cleary	Senior Vice President, Investor Services, Funds Solutions	*
BBH Limited	Sebastien Chaker	Vice President, Investor Services, Funds Solutions	*
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BNP Paribas Securities Services	Christine Bodolec	Global TA Operations, Funds Services	
BNP Paribas Securities Services	Florence Dwyer	Market Manager, Funds Services	
BNP Paribas Securities Services	Laurence Caron	European Affairs Department	
CACEIS Bank Luxembourg	Etienne Carmon	Head of International Product Development	
Caceis Investor Services	Eric Derobert	Head of Market Infrastructures	
Citigroup International Plc (Luxembourg Branch)	Stefano Pierantozzi	Head of EMEA Fiduciary Oversight & Research	
Clearstream Banking	Philippe Van Hecke	Senior Vice President, Market Management, Investment Funds Services	
Clearstream Banking	Christian Westerholt	Head of Product Management, Investment Funds Services	
DTCC	James Kiernan	Director, Wealth Management Services	*
Euroclear	Lieven Libbrecht	Director, Product Management Funds	
Euroland Consulting	Yann de Saint Meleuc	Head of Asset Management	
Franklin Templeton Investments	Sarah Nicklin	International Transfer Agency	*
HSBC Trinkaus & Burkhardt AG	Götz Röhr	Director, Head of Network Man-agement	
HSBC Trinkaus & Burkhardt AG	Gregor Busshoff	Account Manager Custody	
Schroders Fund Services	Gary Janaway	Head of Operations	

Société Générale Securities Services	Miriasi Thouch	Senior Adviser, Strategy and Market Infrastructures	
SWIFT	Jean Sonneville	Head of Fund Services	
SWIFT	Sven Bossu	Market Manager, Fund Services	
UBS AG	Erhard Heumann	Market Infrastructure and Market Initiatives	*
UBS AG	Peter Gnepf	ISSA Secretariat	

* Until end 2008

Order Processing Matrix

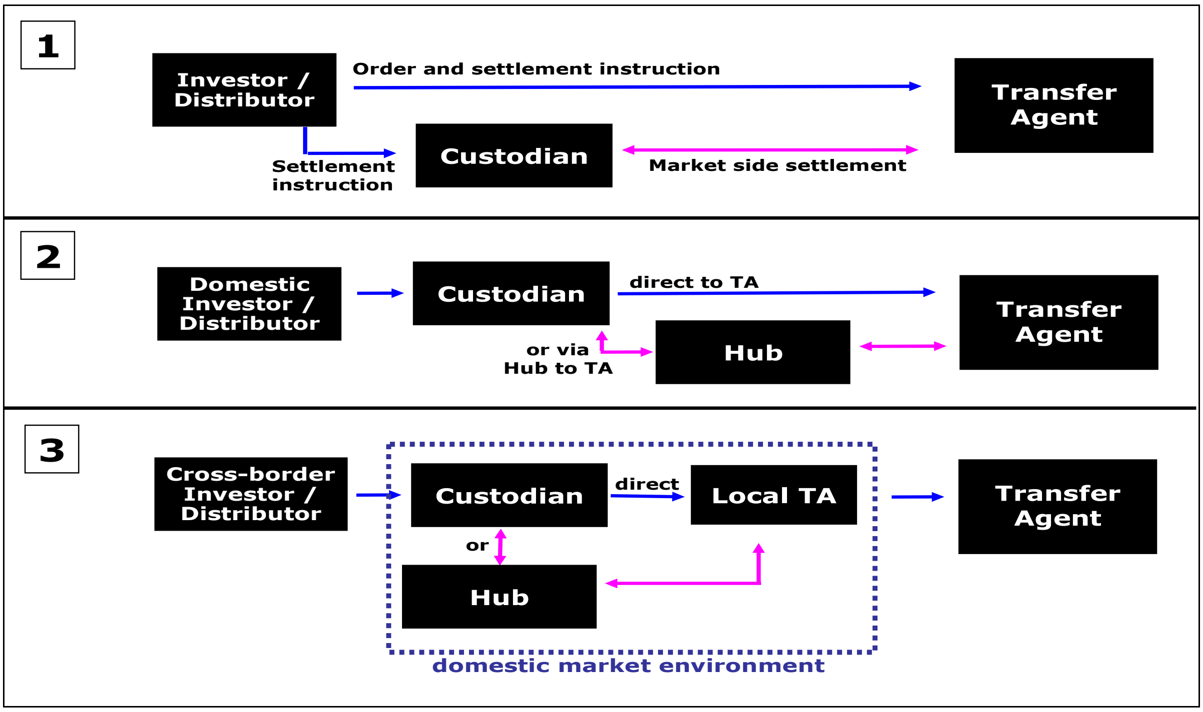
This section is a key part of the project documentation as outlined in the description of the group's methodology on pages 14-16**.** The group used the simplified overview shown below of the main processing environments and actors to analyze the order processing workflow. Scenarios 2 and 3, involving intermediaries, were the main focus.

The challenge at hand was to tackle the combination between the different options for order routing, and the functions to be performed along the order handling process. In order to achieve a truly comprehensive analysis, it would be necessary to examine the critical issues between each pair of actors in every possible order routing scenario, and for every processing function. For pragmatic reasons the group limited its scope to the most common scenarios.

The matrix is covering each process and sub-process. The entry points are limited to those two functional levels. For each of those entry points it identifies major issues for each "couple" of interaction (for example, custodian to transfer agent, or custodian to hub, then hub to transfer agent). For each row of the matrix a recommendation is given.

The matrix should be seen as a useful and recommended tool for dealing with the complexity. Its contents are examples; not every possible combination is covered.

The matrix was kept as concise as possible. Where appropriate, explanations and supplementary information were placed in the Annexes.



Process	Sub-process	Risks / Issues	Actor relationship	Recommendations	Annex
1. Account Opening	**1.1 Account structure**	• Omnibus accounts vs segregated accounts per distribution agreement by the TA for the distributor or platform	Transfer Agent ⇔ Distributor/ Investor Custodian	• Distributors should agree with the fund management company prior to the first transaction how they will place orders, detailing the accounts in which their investments will be held and the accounts used for settlement. This should include details of any external third parties such as custodians or depositaries with whom the distributor has contracted for such services. The fund management company should in turn provide these details to their transfer agent.	
	1.2 Time frames	• Timeliness of account opening; risk of having pending trades while the account is not operational yet	Transfer Agent ⇔ Distributor/ Investor Custodian	• A common business practice should be defined to facilitate and automate the account opening function and guarantee its completion intraday. There should also be a defined permissible time lag between the account opening and the first order that will follow. • An account with the TA should be open and operational within 24 hours upon receipt of the required information, provided that the information is complete and correct. This applies as a minimum to accounts opened by an existing distributor. If a distributor is new, a TA may need additional time. For trades in a market with an order marking system, even the very first order must carry the distribution agreement identifier.	
	1.3 Account ID definition	• The TA needs to identify holdings in two ways: by total holdings per investor custodian for the purpose of dividend and other entitlement allocation; and by holdings subject to a specific distribution agreement • Availability and use of ISO standard vs proprietary ID	Transfer Agent ⇔ Distributor/ Investor Custodian	• Where ISO standards for counterparty identifiers exist (such as BIC codes), they should be used. • Up to three IDs are required in an order message to ensure that the order will be correctly processed by all parties: * The reference of the order sender to the TA (ID 1) * The distributor reference (ID 2) * The distribution agreement reference (ID 3) • These references must be passed on by each intermediary along the full processing chain. • For ID 1, the reference issued by the TA should be used. • For ID 2 and 3, the references used should be those defined by the asset manager.	**E**
	1.4 Identification of distributor receiving fees	• Unable to calculate commissions due and payable for services rendered • Possible non payment for a sustained period. Over-	Transfer Agent ⇔ Distributor	• On completion of contracts (distribution agreements, economic terms, purchasing agreement) exchange a distributor unique identifier code and similar promoter code. • Identify all distributor accounts in an attachment to the distribution agreement. • Record the unique identifiers on respective systems to holdings per promoter (in the distributor's records), holdings per	**E**

Process	Sub-process	Risks / Issues	Actor relationship	Recommendations	Annex
		stated revenues of the Promoter, under-stated in the Distributor's books or reduced cash flow		distributor (in the transfer agent's records).	
	1.5 Look through to end distributor	• Intermediation in the distribution order channel prevents accurate holding position being attributable to Distributor • Possible conflict in the payment of fees to an intermediary for forward payment, consider commercial terms and sensitivity	Transfer Agent ⇔ Distributor/ Investor Custodian/ Fund Platform	• Describe the account holder structure within the legal contracts. Use a unique distributor code in all order correspondence and messages used to place trades with the promoter's transfer agent. • Transfer agent to use unique distributor identifier in all correspondence with the distributor, particularly in the payment of commission, even if paid to an intermediary acting on behalf of the distributor. • More generally, make sure that the promoter/asset manager precisely identifies all information he requires from the transfer agent, and that the transfer agent can provide it.	**E**
	1.6 Account details to pay trailer fees	• Common practice to hold different bank details for payment of commission and for payment of redemption proceeds (corporate vs client division) • Notification of Distributors details, bank accounts payment personnel not notified to Commission Paying Agent, failed payments or non receipt	Transfer Agent ⇔ Distributor	• Exchange bank mandate details on the completion of contracts. • Establish intermediary or direct personnel details and capture in initial documentation. Use generic addresses where possible i.e. department names rather than individuals and develop the behavior of referring to parties' distributor and promoter unique identification code. • Quote identification codes in cash payments instruction sent to bank to effect payment. This will aid in identification of returned payment amounts or where payments go astray.	**E**
	1.7 Identification of holdings	• Basis of payment incorrect, leading to over or underpayment or no payment • Payment made to incorrect Distributor or intermediary, leading to loss of income or interest • Inaccurate	Transfer Agent ⇔ Distributor	• Glossary of standard payment calculation to be drafted and agreed for use across the industry. This should not be exhaustive nor exclusive to force change but to assist in the evolution and convergence of common standards for the most regular standard commission models.	**E**

Process	Sub-process	Risks / Issues	Actor relationship	Recommendations	Annex
		records of holdings may lead to shareholders missing communication from the fund			
	1.8 Identification of sub advisors or sales regions and attributable sales	• Limited Management Information Systems prevent identification of salesperson: reduces ability to recognize individual efforts, or provide Distributor with sales analysis	Promoter ⇔ Distributor / Promoter	• Exchange of complete agreement details between promoter, transfer agent and distributors. • Consider the development of data schemas to map sales structures to reference data tables for inclusion in orders. • Use of international codes for countries to identify the origin of sales etc.	**E**
	1.9 Consolidation of group terms on multiple accounts	• Incomplete information results in shortfall or overpayment of commissions due • Corrective calculations are highly manually intensive where tiers and different rates per product type exist	Transfer Agent ⇔ Distributor / Promoter	• The transfer agent (or commission calculating agent, if different), should launch no commission calculations and release no payments before all required information is complete. • Foresee in the distribution agreement that relevant information is updated at regular intervals.	**F**
	1.10 Calculation of rates with tiers set at holdings thresholds	• New products do not fall into existing categories and incorrect tiers are applied that impact amounts due or paid • New accounts are not incorporated under agreement and excluded from calculations	Transfer Agent ⇔ Distributor / Promoter	• Exchange of complete agreement details between promoter, transfer agent and distributors. • The transfer agent (or commission calculating agent, if different, should launch no commission calculations and release no payments before all required information is complete. • Foresee in the distribution agreement that relevant information is updated at regular intervals.	
	1.11 Applying timely update of economic terms	• Economic terms are not updated prior to the effective date, systems calculation may be invalid • As with any later payment or underpayment there may follow	Transfer Agent ⇔ Distributor / Promoter	• Exchange of complete agreement details between promoter, transfer agent and distributors. • The transfer agent (or commission calculating agent, if different, should launch no commission calculations and release no payments before all required information is complete. • Foresee in the distribution agreement that relevant information is updated at regular intervals.	

Process	Sub-process	Risks / Issues	Actor relationship	Recommendations	Annex
		claims for loss of interest			
2. Order Placement	**2.1 Order initiation – fund side issues**	• Lack of timely access to information on the fund: - exact identification of the fund (ISIN) - Transfer Agent or Centralisateur - cut-off time - type of price (known/unknown) - communication options (fax, electronic…)	Order Collector ⇔ Transfer Agent	• The order collector is responsible for completing the order with all required information relating to the fund, to ensure smooth processing. • Each fund should publish a Fund Processing Passport (FPP) as promoted by EFAMA. The fund prospectus must mention where the FPP can be found. • The communication to request and deliver the FPP should be based on ISO standards. As an interim solution, access to the FPP should be possible through the same channel which provides all other financial instrument reference data.	**B D**
	2.2 Order initiation – investor side issues, and order capture	• Acceptance of the order by the order collector • Identification of conditions to be applied to the order • Manual vs automated order capture, need to avoid errors by re-keying order information multiple times	Order Collector ⇔ Transfer Agent	• The order collector is responsible for completing the order with all required information relating to the investor, to ensure smooth processing. • Validation of information received from the investor in accordance with rules defined at the time of account opening (refer to the different client types and corresponding risks as defined in the Account Opening section) • Where applicable, the order is to be completed with information referring to specific agreements between the fund and the investor. Such information needs to be exchanged among all parties along the intermediary chain who need to know it. • The party responsible for adding such information is the party converting the original order into an electronic format. That party is also responsible for keeping the information up to date at all times. • An order may have to contain up to three references to ensure correct processing: 1. ID of the party submitting the order to the transfer agent; issued by the transfer agent 2. Distributor ID; issued by the fund or its asset manager 3. Distribution agreement ID; issued by the fund or its asset manager • The creation or modification of any ID should be communicated by its issuer to all affected parties without delay. • Wherever possible, IDs should be issued in line with ISO standards. • The order capture process should be electronic and all electronic messaging should be based on the use of ISO standards. • Transfer Agents may accept subscription orders with incomplete investor details on a tentative basis, but strictly refuse incomplete redemption orders.	**E**

Process	Sub-process	Risks / Issues	Actor relationship	Recommendations	Annex
	2.3 Order routing	• Co-existence of different means of routing: – manual (phone / fax) – electronic in ISO format – electronic in proprietary formats – direct to the TA – via hub to the TA Depending on the degree of automation (or lack thereof), operational cost and risk, and inefficiencies exist	Order Collector ⇔ Transfer Agent	• Phone orders are discouraged and should be avoided. • Orders should be routed to the transfer agent electronically and in ISO format. Proprietary formats should be avoided. • Order routing hubs should be used as this will expedite process convergence, automation and standardization. • The order collector is responsible for following up if no order confirmation is received within the expected time frame. • The order collector is responsible for following up immediately in case the order confirmation contains any irregularities In case of phone or fax orders: • Phone orders must be confirmed by fax sent by the order collector before the cut-off time • The TA should match the phone order and the confirmation fax before the cut-off time and confirm receipt • In case of differences between the phone order and the confirmation fax, the TA should contact the order collector immediately • The order collector bears the responsibility for any differences between the order transmitted by phone and confirmed by fax.	**E**
	2.4 Order acknowledgment	• Validation of the order by the TA • Orders submit-	Order Collector ⇔ Transfer Agent	• The transfer agent has to accept all orders sent for the 'current' trade date, irrespective of the date of transmission (provided that the cut-off time is respected). • Submitting orders for execution on a future trade date is discouraged. • An order acknowledgment is optional but recommended. • Acknowledgment message should be sent as soon as possible after the order receipt. • Acknowledgment messages should be sent continuously or in scheduled batches • The acknowledgement message should use the same transmission media as the incoming order. An automated environment using ISO standards and ISO 20022 format is the envisaged target solution. • The validation process and the dispatch of a rejection notice (where necessary) should absorb as little time as possible, to give as much time as possible to the order collector to correct the cause of the rejection and re-send an amended order prior to cut-off time. • If there is any doubt about the trade date applicable to the order or any other information that could impact its correct processing the acknowledgment message should indicate it.	**G**

Process	Sub-process	Risks / Issues	Actor relationship	Recommendations	Annex
		ted close to the cut-off time		• The cut-off time mentioned in the prospectus is binding on the transfer agent. The acceptance of an order received after the official cut-off time for inclusion in the current processing cycle should be subject to a written authorization issued by the fund's board of directors or the asset manager.	
	2.9 Error processing	• Duplicated • Modified or cancelled orders	Order Collector ⇔ Transfer Agent	• The order collector is responsible for the correct transmission of orders to the transfer agent. If there is a risk of order duplication, the order collector has to alert the transfer agent and indicate the reference(s) of the orders in question. • If the transfer agent detects a potential duplication, it must contact the order collector immediately. However the responsibility remains with the order collector. • Requests for the modification or cancellation of orders must be transmitted to the transfer agent before the cut-off time, and only concerning orders transmitted before the cut-off time. The request must include the reference of the order in question. • The transfer agent informs the order collector as soon as possible if the request for modification or cancellation is accepted (through an acknowledgement message)	
3. Order Execution	**3.1 Receipt of the NAV and order confirmation**	• Late receipt of the NAV at the Transfer Agent • Late confirmation of the order execution	Fund Accountant ⇔ Transfer Agent Transfer Agent ⇔ Order Collector	• The transfer agent should have an escalation process in place in case of late or non-receipt of the NAV. It should maintain a list of the expected delivery time frame for each NAV, so as to be able to react as soon as possible. • The transfer agent should send confirmation notes as soon as the NAV is available from the fund accountant and the order has been executed. • In an automated environment, the transfer agent should send an execution confirmation message to the order collector preferably using ISO standards and ISO 20022 format. • Execution confirmation messages should be sent continuously or in scheduled batches • The delivery of execution messages sent by Fax should be tracked automatically, and failed transmissions should be repeated automatically. • An order collector should not send a confirmation to its client before having received the execution confirmation note from the transfer agent.	
	3.2 Application of fees – calculation of order amount	• Incorrect application of distributor and/or sales agreement terms	Order Collector ⇔ Transfer Agent	• See 2.2 above	

Process	Sub-process	Risks / Issues	Actor relationship	Recommendations	Annex
	3.3 Creation of shares	• The time lag between the moment of share creation and settlement of the order creates potential risks	Order Collector ⇔ Transfer Agent	• Review of relevant dates in the major markets, and of the rules for defining the transfer of legal ownership. This will clarify which party bears financial risk at any given time while settlement of the order is pending.	**I**
4. Settlement	**4.1 Access to settlement related information**	• Settlement period not always mentioned in fund prospectus • Settlement periods vary between funds, usually depending on the nature of their underlying asset classes	Order Collector ⇔ Transfer Agent	• The settlement period must be mentioned in the prospectus and in the FPP • Non-settlement dates (due to holidays or any other reasons) should be published and be easily accessible to all parties. • Settlement periods should be harmonized in line with the standard settlement period for a fund's underlying assets. Where a fund invests in asset classes with different settlement standards the fund's settlement period is determined by the underlying instrument having the longest settlement period.	
	4.2 CSD/ICSD Settlement	• Financial risk between share creation and settlement • Difficulty in dealing with direct orders	Order Collector ⇔ Transfer Agent	• In a CSD environment, best practice is to apply the same true DVP settlement process as is used in the securities market.	**I**
	4.3 Non-CSD Settlement	• Financial risk between share creation and settlement • Cash payment and share delivery are disconnected => Risk of creating the shares without receipt of cash, or conversely risk of making payment without receiving the shares	Order Collector ⇔ Transfer Agent	• Payments should carry the reference of the order to which they belong.	**I**
	4.4 Cash payment	• Coordination between the different actors in case of non-DVP settlement	Order Collector ⇔ Transfer Agent	• Payments should carry the reference of the order to which they belong. • Where cash payments are bulked, the above is mandatory.	
5. Transfer of holdings	**5.1 Transfer in the TA model, i.e. without CSD involvement**	• Manual process • Lack of standardization • Execution delay due to rejection of the shares by the receiving custodian because it was not in-	Delivering custodian ⇔ Transfer Agent and receiving custodian ⇔ Transfer	• Adoption of the account transfer model proposed by the Findel Group • Eliminate the need for physical transfer documents (legal issue).	**J**

Process	Sub-process	Risks / Issues	Actor relationship	Recommendations	Annex
		structured by its client to expect the incoming delivery • Need for original paper transfer documents signed by the transferor (unique to the UK market). Causes delays and manual processes	Agent		
	5.2 Transfer in the CSD model	• Execution delay due to rejection of the shares by the receiving custodian because it was not instructed by its client to expect the incoming delivery • Need for original paper transfer documents signed by the transferor (unique to the UK market). Causes delays and manual processes	Delivering custodian ⇔ CSD; and receiving custodian ⇔ CSD	• Sending custodian and receiving custodian to exchange information prior to instructing the CSD, to ensure that the CSD receives mirroring instructions by both custodians. • Eliminate the need for physical transfer documents (legal issue).	**K L M**
6. Holding and Transaction Reporting	**6.1 Transactions not identified and associated with distributor**	• Transactions unclearly labeled in pooled accounts will cause incorrect commission calculations • Transactions and holdings are incorrectly allocated to the wrong Distributor	Transfer Agent ⇔ Distributor	• Use of unique distributor code in all order transactions, including transfers. • A reporting system for transactions and/or holdings separate from daily transaction processing –but using the codes described above - is an alternative approach. • Use of unique distributor codes in all confirmation of trades, holding, statement and valuations. This should allow integrity checks to improve quality or cross reference trades to accounts. Most commonly an issue that will affect trades on pooled accounts and transfer of data from transfer agents' register of shareholders to commission paying systems if these are not one and the same.	
	6.2 Transfers of holdings are not executed using a standard trade date	• The holdings on which fees are calculated are incorrect leading to incorrect payments to the transferring parties	Delivering custodian ⇔ Transfer Agent and receiving custodian ⇔ Transfer	• As above, use of unique distributor codes in transactions will eliminate the source of the problem. Should consider extending the use of codes to cover all intermediaries involved in the order routing chain. • Transfer agents to ensure that account transfers are recorded in their books with a trade date and are included in commission calculations.	

Process	Sub-process	Risks / Issues	Actor relationship	Recommendations	Annex
			Agent		
	6.3 Dividend reinvestment not included in distributors holdings	• Dividends are treated as corporate actions, often notified to different departments in distributors' organizations • Typically there is no STP involved in notifying amounts reinvested or prompting an update of distributors' records	Transfer Agent ⇔ Distributor	• Agree a common protocol on notification format and document the processes and terms on how dividend reinvestment corporate actions are executed. • Consider automation \ message types to communicate [limited return!] • Consider preferred use of accumulation units or distribution units that pay dividends but no reinvestment?	
	6.4 Holdings form part of a general nominee account	• Commission paying agent is subject to many claims or forms of paying commission based on holdings registered in large nominee accounts • Difficult to identify contact personnel in organizations operating large nominee accounts who can or are able to disclose holdings information	Transfer Agent ⇔ Distributor	• Use of unique transaction codes should enable the analysis of holdings in pooled accounts which resolves the problem as all holdings are identifiable. • A reporting system for transactions and/or holdings separate from daily transaction processing – but using the codes described above - is an alternative approach. • Consider a review of various protocols for the determination of fees due to ensure use of identifier codes covers all or most scenarios.	
7. Commission Reporting	**7.1 Complete transaction and holding data is unidentifiable**	• Commission statements are incomplete and missing data is difficult to identify and rectify • Commission systems are not currently designed to recalculate amounts based on revised holdings data and produce revised statements (manual work required)	Transfer Agent ⇔ Distributor	• As above, use of identifier codes in transactions and established contact points in the commission chain will address the completeness and barriers to resolution. • Focus on complete and fully referenced data to ensure completeness 'first time'. Can assert influence to encourage adoption of best practice, not prudent to extend into commercial systems design. • Promote the use of standards, such as those outlined in the "Dematerialised Mutual Fund Sales Agreements" (DMFSA) initiative.	
	7.2 Basis of fee calculation differs, e.g. trade date vs	• Different commission paying agents operate on a different basis	Transfer Agent ⇔ Distributor	• Document the few methods of establishing reference and distribute to the investment funds industry. • Use national investment industry associations to distribute and promote 'term	

Process	Sub-process	Risks / Issues	Actor relationship	Recommendations	Annex
	settlement date	• Commission paying system and transfer agency systems account for transactions on a different basis		sheets'. • Promote the use of standards, such as those outlined in the "Dematerialised Mutual Fund Sales Agreements" (DMFSA) initiative. • All reporting systems should have trade date based and settlement date based views.	
	7.3 Basis of number of days used to calculate fees differs.	• Number of days included in commission calculation periods differ across the industry	Transfer Agent ⇔ Distributor	• Document various methods, consider recommendation of common standard(s) or one. • Promote standards or other work via industry associations.	
	7.4. Holdings data does not match to amounts held on the register	• Query resolution causes delay and payment and additional manual procedures. • Missing or additional data can change commission values significantly	Transfer Agent ⇔ Distributor	• Covered under 1.2 above with the use of identification codes and clear documentation of economic terms at the contracting of agreements. • Consider agreeing a protocol for the treatment of pooled accounts. Need to consider the scope [seek views], could extend to best practice or firmer recommendations. • Agree on an internal escalation process to expedite query resolution.	
	7.5 Group entities are not captured	• Incomplete payment to Distributor Groups. • Incorrect collective Group special rates applied in calculating holdings values	Transfer Agent ⇔ Distributor	• Considered above. Develop standards data schemas to capture data to allow the identification of group sales structures. • Consider further whether this should be done as a separate update or performed on a periodic basis as an exchange between distributors and promoters.	

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