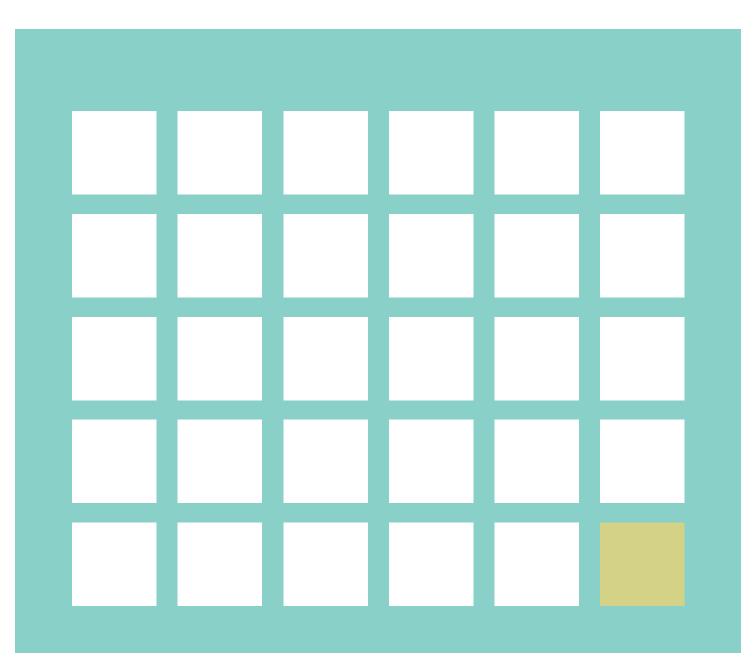


# Operational challenges facing investment managers in 2015

Research findings from an independent survey of the investment management industry





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### 1. Introduction

During the spring and summer of 2014, SWIFT interviewed the heads of investment operations and fund distribution at six of the ten largest investment management firms to assess the current and future operational needs of the investment management industry. These firms and their counterparts at more than 30 other investment management houses (encompassing the long-only, alternative only and both long-only and alternative sectors), completed a detailed questionnaire. By conducting this research SWIFT aims to capture and better understand the operational challenges facing this important sector, with a view to working together with the industry to find shared solutions.

SWIFT is a global financial cooperative that provides a secure, resilient network which enables more than 10,800 financial institutions to exchange information in standardised message formats, and provides industry-wide data and utility services. Investment managers typically use SWIFT messaging services to support automated post-trade processing. These messages are based on standards, which facilitate the straight through processing of the data they contain. Through these messaging services and related standards, SWIFT can help to cut costs and risks by increasing automation of information that investment managers exchange with counterparties such as custodians and service providers.

#### In this white paper, we discuss the industry challenges uncovered by this research, including:

The heavy impact of regulation on investment managers – Managing regulatory reporting and compliance is taking up considerable time and effort. As a result, less time is available to innovate and respond to new client demands.

Specific pressure resulting from KYC, AML and sanctions screening due diligence – Investment managers are looking for utility solutions to provide more efficient sources of reliable data.

Mitigating outsourcing risks – Investors and regulators are encouraging investment managers to focus on business continuity and risk mitigation, especially in the case of outsourced services.

Inefficiencies in corporate actions processing – There is clear appetite for a single, authoritative source of reliable corporate actions information (perhaps as a shared utility), and greater demand for enforceable rules binding issuers.

The growing importance of collateral management – Post-crisis regulation is prompting investment managers to address the costs and risks of managing collateral.

A lack of standardisation in post-trade processing of transactions – The processing of some asset classes (notably OTC derivatives, but also repos, collateral movements, stock loan and investment fund settlement and registration) continues to be impeded by low levels of standardisation.

New forms of fund distribution support are needed – Investment managers face challenges in distributing an expanding range of fund types into a number of geographical markets through a growing range of infrastructures adopted by investors.

We are pleased to share these findings with you and welcome your feedback. We look forward to working with the industry to help resolve many of the challenges identified in this document.



### 2. The heavy impact of regulation

### Compliance is recognised as a major operational burden for investment managers

Regulation was identified as the most important challenge facing investment management operations today. Three out of four managers surveyed named it as an operational pain-point, and it is also the greatest single source of expenditure (see Table 2). By prioritising regulatory compliance, investment managers appear to have major regulatory challenges under control (see Table 1), but it is clear from Table 2 that significant operational challenges remain, particularly related to Know Your Customer (KYC), Anti-Money Laundering (AML) and sanctions screening compliance.

### There are multiple reporting templates to complete with limited overlap

Over the last three years, investment managers have prioritised completion and submission of reporting templates required by the Dodd Frank Act (Forms ADV, CPO and CPO PQR), the Alternative Investment Fund Managers Directive (AIFMD Annex IV), the European Market Infrastructure Regulation (EMIR, which requires reporting derivatives to repositories), and the upcoming revisions to the Markets in Financial Instruments Directive (MiFID II, which requires clearing swaps as well as extending the cash instrument reporting obligations). Investment managers report little or no synergies between these reporting exercises, leading to time-consuming duplication of effort.

### Diversion of resources to meet regulatory demands

The sheer number and diversity of regulatory obligations, and the frequent lack of clarity over implementation requirements, combined with fixed deadlines, and the fear of incurring financial penalties for non-compliance, are impacting investment managers' organisational structures, investment budgets, recruitment, and data management priorities. This in turn affects clients, as investment operations departments struggle to keep pace while simultaneously running day-to-day functions. These factors are considered to limit available time to meet client demands for new services and reporting.

#### Pressure to meet regulatory deadlines

To ensure they meet the demands of regulators on time, investment managers have re-configured links between compliance and investment operations departments, established oversight groups, and charged specific teams with delivering particular regulatory projects. One difficulty in meeting the expectations of regulators is the lack of clarity surrounding some regulations. "Regulatory compliance projects have to run in parallel, rather than sequentially, and firms have to make assumptions due to lack of clarity in the regulations," said one manager. "This is placing significant pressure on firms in terms of resource capacity."

#### Investment in technology and headcount to meet regulatory obligations

Managers are redesigning and rebuilding technology to retrieve timely data for regulatory reporting purposes. Some have built data warehouses to consolidate data from multiple back office systems. "It is not just about investment in technology but the purchase of legal expertise and hiring compliance people too," explains one manager. Another describes regulatory reporting as "a project rather than a business-as-usual undertaking, not so much in terms of the quantity of data as in terms of the quality and consistency of data reported to different regulators."

#### Internal and external data aggregation is necessary to populate regulatory reports

To report to multiple regulators on a consistent, accurate and timely basis, data has to be retrieved from external (executing broker, prime broker, clearing broker, custodian, fund administrator) as well as internal (equity, fixed income, derivatives) systems. This creates dependence on timely delivery of accurate data by third parties, and can lead to risks of data corruption that cannot be controlled when third party systems are upgraded or changed. "We own some of those systems, but not others," explains a manager. "How do we ensure nothing adversely impacts our reporting? If something has, how do we identify it? That is the bit that really keeps me awake."

#### Focus on data sourcing, validation and formatting to manage regulatory risk

The data that has to be retrieved to populate regulatory reports is voluminous and it has to be validated and often reformatted. "We have got a lot of data, and we need less," explains a manager. "We have got 12,500 unique assets, which translates into about 55,000 holdings. We are talking in total of about 8,000 bank accounts." To validate the information, spot checks are inadequate. "Data quality management, to ensure that we can trust the data we have in the organisation, has been a huge focus for us in the last three years," says another manager. Even after a report is filed, a degree of uncertainty remains over whether a regulator will approve it.

### Rising concern about the cost of making a regulatory mistake

The value of fines being levied by regulators for breaches of investor protection rules have increased awareness of the cost of even inadvertent mistakes. "There are a lot of things in recent fines we could recognise as having had concerns about in the past, such as getting trades into a net asset value on time," says one manager. Another says "recent fines in the fund management industry have been so significant it would be imprudent not to maintain focus and resources on meeting regulatory obligations." There is widespread awareness that regulators are adopting a more stringent approach to compliance.

### Increasing client expectations

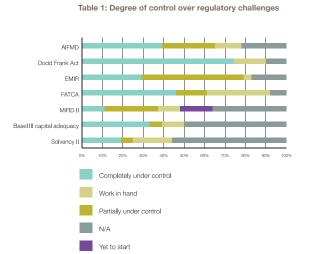
The ability of a manager to meet regulatory reporting requirements is now a standard feature of operational due diligence, and some investors are seeking indemnities from investment managers if errors occur. Simultaneously, investor demands for transparency have increased, and their expectations in terms of presentation, commentary and delivery are rising. "Clients want data they can manipulate or see on tablets," says a manager. "Availability of mobile data is becoming a priority." These expectations are hard to fulfil when compliance is such a clear priority.

### Reduced investment in client-facing developments

Managers believe more resources are going into 'business as usual' as a result of meeting compliance challenges, and as a consequence, fewer are being invested in innovation. As Table 2 shows, managers are balancing the demands of regulators against the daily demands of the business, with new products and client-facing developments (such as more flexible reporting) ranking far behind these twin priorities. "We would love to devote more resources to new business and a smoother client experience, but regulations must be in place when mandated, so in a sense they crowd out other needs," says one manager.

# Investment managers do not believe they derive ancillary benefits as a result of regulatory compliance reporting

Although investment managers appreciate services that reduce the costs and complexity of regulatory reporting, they are not convinced by the claims of vendors and consultants that investment in compliance solutions and processes yields useful additional management information. One manager states that "no operational function is being run differently as a result of fresh management information from regulatory reporting." Another manager says that information currently collected for regulators is usually too out-of-date to be a useful aid to decision-making. "Too much is still batch-processed or end-of-day processed, or trapped in a regional time zone," he says.



Regulation
Lack of STP in major areas
KYC/AML/sanctions screening
FATCA
Corporate Actions
OTC clearing
Trade repository reporting
Collateral management
Reconciliations
Repo
0 10 20 30 40 50 60 70 80 90 100

Table 2: The priorities of investment managers



# 3. The burden of KYC, AML and sanctions screening due diligence

### Managers must check the integrity of investors

Investment managers are required to assess clients and counterparties to ensure they are not laundering money, breaching sanctions or handling investments from corrupt public officials (known as "politically exposed persons"). Since the passage of the PATRIOT Act in 2001, which included specific anti-money laundering (AML) provisions to prevent the financing of international terrorism, regulators have required financial institutions to follow detailed and evolving sets of Know Your Customer (KYC), AML and sanctions screening procedures.

### Investors must also be checked for tax compliance

The Foreign Account Tax Compliance Act (FATCA), introduced by the United States government in 2010, has led to a requirement to check the tax compliance of clients as well. The principle behind FATCA is the sharing of information by national tax authorities, enforced by withholding income from recalcitrant individuals. It is now becoming the international norm. Member States of the Organisation for Economic Co-operation and Development (OECD) have agreed a package of measures labelled Treaty Relief and Compliance Enhancement (TRACE). The package is known colloquially as the "global FATCA."

### Workload is increased by jurisdictional variations in KYC and AML rules

These obligations towards clients are placing investment managers under pressure to perform and document detailed due diligence on investors, under the threat of fines for errors and omissions. They apply in multiple jurisdictions where managers are active, and each national regime has its own variations. As a result, one manager stated that "KYC and AML checks have now become a major obstacle to fund distribution, particularly in high risk markets, such as those in Asia."

#### Investment managers seek comprehensive KYC and AML solutions

"Compliance with customer due diligence obligations such as KYC, AML, FATCA and TRACE has developed into probably one of the greatest challenges for fund managers, promoters, fund service companies, intermediaries, and investors," said one investment manager. Managers are now looking for efficient global solutions, such as "golden sources" of reliable data, the establishment of one or more KYC, AML and sanctions screening utilities, and the issuance of digital "passports" to automate due diligence processes.

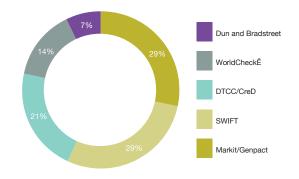
# KYC, AML and sanctions screening data sources and procedures are fragmented and inefficient

Investment managers address investor due diligence by questioning and assessing institutional clients and fund distributors, and by outsourcing the assessment of retail investors to transfer agents. They have to use a variety of data sources, such as those provided by Markit, SWIFT, the Depositary Trust and Clearing Corporation (DTCC) and WorldCheck (see Table 3). Credit rating agencies are used for retail clients.

# Sources of KYC, AML and sanctions screening data are inadequate

Current sources of customer due diligence data are fragmented. In some cases, data is not readily available. Fund distributors, for example, have to be tested for AML, but, unlike banks, tend not to have information to hand. Likewise, tenants in commercial buildings owned by funds have to be vetted, which can pose difficulties in obtaining information at the local level.

Table 3: KYC and AML services used by investment managers



### Due diligence procedures strain relations with clients

Repetition of the due diligence process for the same client (by each and every investment manager, even when an existing client invests in another fund), can strain relations with investors. "It creates a lot of frustration," says one manager. "Clients hate it, because we are making their lives complicated."

### Significant interest in a 'golden source' of KYC and AML data

As Table 4 shows, a majority of managers are interested in a golden source of KYC, AML and sanctions screening data, especially if the service can match internal standards. "Why we cannot, as an industry, make it easier somehow, through more collaboration and more centralisation of documentation in some form, or sharing of documentation, I do not know," says a manager. "It is incredibly inefficient."

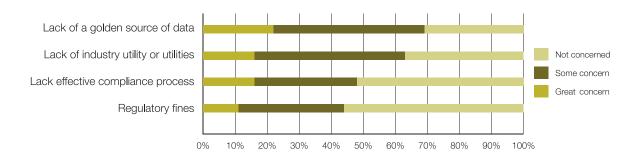
### Support for industry-wide utility solutions to address KYC, AML and sanctions screening

Table 4 shows that a majority of managers favour the replacement of the current network of commercial service providers and data sources by one or more data utilities. "We would favour all firms placing all of their KYC data into a single data repository, to which all firms would have access via a user access protocol," says one manager. "At the moment, KYC is eating a lot of time in manual processing and paper-based workflows."

### Identity "registrars" and "passports" are also considered to be possible solutions

One manager advocates the creation of subscription-based "identity registrars" to collect and store documentation about individual investors, and issue them with numerically coded "identity passports" that can be shared between counterparties. "It would be inefficient and inadvisable for security reasons to pass detailed information about every subject in the directory," he explains. "A unique identifier for each individual subject would be, in effect, a financial identity passport."







### 4. Addressing risks associated with outsourcing

### Outsourcing has increased critical dependency on third party service providers

Investment managers have outsourced critical functions such as custody (the safekeeping of assets), fund accounting (the valuation of shares in a fund) and transfer agency (maintaining the register of shareholders in a fund and processing subscriptions and redemptions). The resulting dependencies have attracted the attention of regulators, particularly in the United Kingdom, prompting investment managers to explore how they can be managed and mitigated.<sup>1</sup>

### The relative risk perception between partial and total outsourcing

The degree of dependency on outsourcing varies according to the range of functions which are outsourced. Every investment manager surveyed outsources custody, and substantial majorities outsource fund accounting and transfer agency, but only a minority outsource middle office functions (see Table 5). This means the degree of operational dependency on third parties varies. An investment management firm which has outsourced fund accounting and transfer agency will lack the resources to calculate NAVs for its funds, and process subscriptions to and redemptions from those funds, if its service providers fail. It needs instead to move its business to new suppliers. This poses significant challenges in terms of business continuity, since a successful transition will depend on the official recovery and resolution regime keeping the failed supplier in business until the transition is complete. Firms which have not outsourced fund accounting and transfer agency do not face this risk yet still have to maintain credible business continuity and disaster recovery plans.

### Transitioning to a new outsourcing service provider is a major undertaking

It is not often that investment managers transition from one outsourcing provider to another, but in the two high profile cases that have occurred, the process took between two and three years to complete. This is not surprising, given that outsourcing hinges on its ability to reduce internal capacity. "We have not got 400 people sitting around just waiting for the day a provider fails," says a manager. "We are predominantly outsourced, precisely so that we do not need to grow our teams here to grow the business, if the outsourced model is set up right."

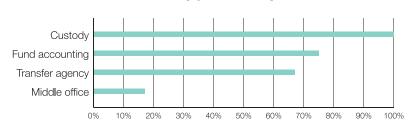


Table 5: Extent of outsourcing by investment managers

<sup>1</sup> In December 2012 the then regulator in the United Kingdom, the Financial Services Authority (FSA), issued one of its "Dear CEO" letters to investment managers expressing concern that managers had outsourced so many back and middle office functions that, if their service provider failed, it would be impossible for them to value, transfer and safe-keep the assets of investors. This attracted a response from the United Kingdom fund management industry trade association, the Investment Management Association (IMA). It published a white paper in May 2013 listing 11 ways in which outsourcing risk could be mitigated. The IMA also led the formation of an Outsourcing Working Group (OWG), made up of major investment management houses and global custodian banks, which published a report in December 2013 arguing that greater oversight and detailed exit planning were sufficient to counter the risk of failure of a service provider.



### The efficiency of outsourcing hinges on the degree of integration

Whether a model increases operational efficiency depends on the degree of integration between the investment manager's and outsourcing service provider's systems. One manager explains specific limitations on efficiency gains. "We have 13 people just to reconcile the two systems every day to make sure that they are in line," he says. "Clearly people could be re-allocated to more productive work if the systems were better integrated."

### In-house technology does not necessarily mitigate risk

Operating a duplicate in-house system is ineffective in increasing the resilience of an investment manager if it does not capture all of the data being processed by the third party service provider, including its communications on behalf of the firm with counterparties. One manager points out that his internal system captures none of the information exchanged between his outsourced service provider and the counterparties to the firm. "We have our own system, which builds up data on its own, without needing anything from the outsourced agent," he says. "However, we do not have any communication with the outside world. All the communication with the outside world is with the [outsourcing provider]." The same manager says his firm does not duplicate transfer agency records for its 250,000 retail investors either, rendering it totally dependent on third party providers.

### Exposure to outsourcing service providers has increased

Exposures to third party service providers have become more concentrated in recent years, as investment managers have cut their outsourcing relationships to reduce cost and complexity. "We have spent a lot of time reducing the number of outsourcing relationships we have over the last few years," says one manager, who now relies on a single bank to calculate nine out of ten of its NAV calculations. This has prompted a major reassessment of the risk.

### Engaging multiple service providers can be inefficient

Though one investment manager has sought to reduce outsourcing risk by duplicating functions at a second service provider, and argues the costs are tolerable because of savings on internal shadowing work<sup>2</sup>, most investment managers believe investors are unwilling to bear the costs of full duplication. "We do not believe in the need for a 'hot' standby arrangement," explained one manager. "Given our margins, the Bridgewater back-up operational plan is not feasible."

### Formal exit plans are being drawn up

To deal with outsourcing risk, managers are now drawing up formal exit plans with their service providers. "Exit plans are helpful as they pull out the key activities required for any exit regardless of the specific trigger event," says a manager. Those that have migrated from one provider to another have, in their own estimation, already proved that their exit plans are robust.

### The BCP and DR plans of service providers are being assessed

Managers recognise they are dependent to some extent on the efficacy of the business continuity planning (BCP) and disaster recovery (DR) plans of their service providers. "We have a good grasp of the way [our outsourcing provider] manages their business continuity and disaster recovery risks because we conducted a full request for proposal (RFP) before appointing them, and have a formal process to keep updated on the supplier's business continuity and disaster recovery framework," says a manager.

#### The investment record of an outsourcing provider is seen as important

Investment managers are confident they can understand, monitor, manage and mitigate the risks created by outsourcing, but they also check that providers have a broad base of customers and invest in their platform. One manager moved its middle office outsourcing to another bank because it was the only middle office client of the provider, increasing its risk if the bank withdrew from the business or under-invested in it.

### There is an implicit reliance on bank resolution and recovery regimes

All investment managers surveyed operate on the underlying assumption that official bank resolution regimes will ensure a failed provider continues to deliver a service until a solvent alternative is arranged. "The firm has taken into consideration the fact that if either of the global custodians with which it works fails, the entire market will likely be experiencing such severe problems that an exit strategy would need to be considered in the light of the specific circumstances at that time," says a manager.

<sup>2</sup> In 2013, the \$120 billion manager Bridgewater Associates appointed Northern Trust to shadow the back and middle office and fund administration services provided to the firm by BNY Mellon.



### Some investment managers are looking at re-insourcing outsourced functions

To rectify the lack of internal knowledge and capacity, some investment managers are exploring whether to in-source some outsourced functions. An early target is transfer agency, where one manager surveyed is already planning to in-source, and others are considering it. "Technological change means that in-sourcing transfer agency is now a viable proposition, since registers can be stored in the Cloud and subscriptions, redemptions and switches recorded automatically," stated one manager surveyed.

### Rising interest in the provision of a back-up utility service

An ambitious solution to outsourcing risk is the establishment of an industry-wide utility to temporarily replace the services provided by a failed outsourcing provider. The utility would capture and store the data flows between investment managers, transfer agents, fund accountants and custodians. To achieve this at an affordable price, as the Outsourcing Working Group report indicated, data must be exchanged in standardised formats.<sup>3</sup> "Whether you have got a warm standby provider that you give a data dump to every week, or whether we have all our messaging in standardised formats, I do not know," says a manager. "But it would be wrong to just totally dismiss it. It could assist us as part of a bigger solution."

<sup>3</sup> One of the work streams of the Outsourcing Working Group (see Footnote 1) considered standardisation – the others were exit planning and oversight – but concluded more work, including a cost/benefit analysis, was required to warrant further investigation. See page 18 of Outsourcing Working Group: An industry response to the FSA's Dear CEO Letter on Outsourcing, 9 December 2013.

### 5. The inefficiency of corporate actions

### Corporate actions remain the least efficient aspect of post-trade services

The process of clearing and settling transactions in the capital markets, especially in the major asset classes of equities and fixed income, has seen major improvements in operational efficiency. The same cannot be said of corporate actions. Efforts to make corporate actions processing more efficient, in terms of issuing clear notifications to investment managers and executing their instructions as late as possible, have yet to succeed.

### A variety of factors have undermined efficiency in corporate actions processing

At the time of publishing this paper, there is a lack of direct regulatory pressure for improvements in corporate actions. The range of parties involved – issuers, data vendors, stock exchanges, stock registrars and investors, as well as sub-custodians and global custodians – also makes it hard to build a consensus for reform. Corporate actions, other than straightforward dividend or interest payments, are also intrinsically complicated. This is partly because they reflect the laws applying in the domicile of the issuer, and partly because issuers and their corporate finance advisers can create complex options that are hard to standardise into corporate actions message templates.

### Corporate actions are a data processing challenge that can be overcome

Although corporate actions are complicated, the principal difficulty is not insurmountable. It can be resolved by reducing variations in the data processed by custodian banks. This is an issue the banks have an interest in addressing, because these inefficiencies also increase their operating costs, and expose them to potential additional costs of reimbursement for losses of value incurred as a result of missed or incorrect corporate actions instructions. As Table 6 shows, investment managers believe custodians could do more to improve the levels of automation in corporate actions processing.

### Need for consistent terms for corporate actions at the point of issue

Investment managers point to problems as a result of the lack of use by market participants of established message standards and market practices in the description of corporate actions such as rights issues, scrip dividends, class actions, and merger and acquisition offers, and the variations in the ranking and presentation of options by custodians and data vendors that notify them. As a result, there are persistent inconsistencies between issuers, stock exchanges, custodian banks and data vendors. One manager says he has to use a third party system to re-process corporate actions information received from custodians, because so many different formats are used.

# Lack of adherence to existing corporate actions message standards is problematic

Investment managers say that corporate action message standards are now well-documented, and problems arise in interpreting and processing notifications and instructions because custodians and data vendors fail to adhere to them. This is partly because the agreed standards are considered to be inherently flexible, but even in areas open to interpretation, well-documented market practices exist to help custodian banks and

Table 6: Perceptions of whether custodians could do more to help automate corporate actions

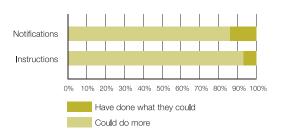
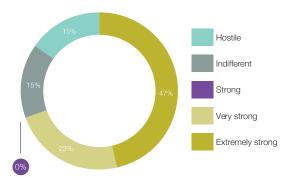


Table 7: Support for standardisation of corporate actions message types





data vendors populate fields correctly. As Table 7 shows, more than two out of three investment managers strongly support the case for greater use of the established standards.

### There is limited automation of corporate action notifications and instructions

Lack of adherence to standardised message templates for corporate actions has the predictable consequence of inhibiting automation. One manager retains an in-house team of 20 people to process corporate actions, who can receive conflicting data about the same event from as many as 30 custodian banks. "All corporate actions processing is handled by our outsourced providers," said one investment manager. "They will send corporate action decision requests to our portfolio managers, and chase for a response in line with the custodian deadlines. The process between our suppliers and the front office is manual." This explains the unequivocal support, evident in Table 8, for standardised messages using verified data from a single utility.

# A 'golden source' of corporate actions information appeals to investment managers

As Table 8 also shows, the idea of a single source of accurate and timely corporate actions data is attractive to managers. "We would be interested in buying a 'golden source' of record," says a manager. "There should be an industry utility." At present, managers derive corporate actions data from custodians and data vendors, creating problems of validation, consistency and reconciliation. "30 versions of the truth have to be reduced to one for the portfolio manager to consider, and then his decision has to be converted back into 30 separate sets of instructions," explains a manager.

### Regulation should extend to issuers and their advisers

A majority of managers, as Table 8 shows, agree that a golden source of corporate actions information should be a market utility. "To me, the user-owned, user-governed utility feels like the way forward," says one. "Everybody wants competition but, once you get competition, you get variation in standards." This is why, as Table 9 shows, managers believe almost as strongly that the trusted utility cannot be made to work unless regulators impose a binding set of rules on issuers and their advisers to publish corporate actions in standardised formats that can be automated.

### Deadlines for instructions are seen as workable

Surprisingly, the investment managers surveyed believe the deadlines set by custodian banks for corporate actions instructions to be received – generally ranging from 48 to 72 hours – allow portfolio managers sufficient time to make decisions, not least because the deadline provides ample room for extensions. A manager says that portfolio managers only occasionally "go beyond the official deadline into 'best endeavours' territory." Managers agree that it is managers of hedge fund portfolios that prefer to keep their options open as late as possible.

Table 8: What would do most to cut risk and inefficiency in corporate actions processing?

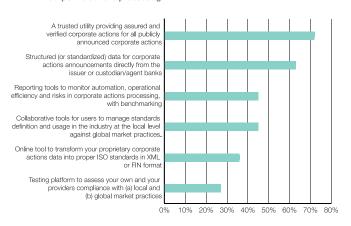
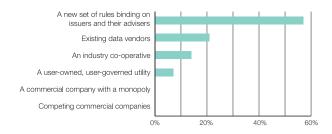


Table 9: Who should own and control a golden source of corporate actions information?



### 6. The growing importance of collateral management

## Collateral management is not a new responsibility for investment managers.

Managers have long used collateral to secure loans of money and securities in the repo and reverse repo markets, the trades they give up to investment banks in currency hedging transactions, and their credit and rates swap exposures to investment banks in bi-lateral swap transactions. According to the 2014 survey by the International Swaps and Derivatives Association (ISDA), 91 percent of cleared and uncleared OTC derivative trades are collateralised, with collateral worth \$3.17 trillion.<sup>1</sup>

### Investment managers are shifting from providers of collateral to consumers as a result of swap clearing

The centralised clearing of OTC derivatives mandated by the Dodd Frank Act and the European Market Infrastructure Regulation (EMIR) is forcing managers to replace bilateral relationships with investment banks by trilateral relationships with clearing brokers and central counterparty clearing houses (CCPs). CCPs mainly require cash or bonds meet initial margin calls, and cash only to meet variation margin calls, and investment managers are not natural holders of cash, so must raise it in the repo markets.

### Investment managers are increasingly aware of the cost as well as the value of collateral

As Table 10 demonstrates, the majority of investment managers surveyed believe collateral optimisation is of growing importance. "Going forward, the EMIR regulations represent a threat in terms of the potential performance drag implications of initial margin, and the costs of implementing clearing, particularly where specific portfolios or funds are low users of OTC derivatives," explained one manager.

# Investment managers face industry-specific tests to optimise collateral management

Investment managers surveyed report two main hurdles when it comes to managing collateral more efficiently. First, each fund has to be treated as a separate legal entity, which complicates the task of optimising the use of assets across the firm. Second, the benefits of netting collateral through CCPs are conferred upon clearing brokers rather than on investment managers themselves.

# Investment managers are already using or will use collateral management services

Table 11 shows that a significant minority of investment managers are either using in-house or third party collateral management services already, or expect to do so. The start of

Table 10: The growing importance of collateral management and optimisation

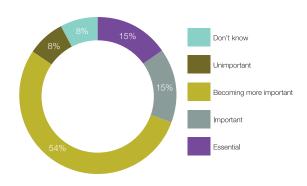
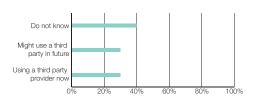


Table 11: Use of third party collateral management and optimisation services



<sup>1</sup> ISDA Margin Survey 2014, April 2014.



clearing of swap transactions in Europe, scheduled to begin for investment managers in 2016, is likely to trigger greater use of these services.

### Portfolio managers are reluctant to put assets into commission as collateral

A number of the investment managers surveyed do not lend securities from their own funds, let alone use them as collateral, even if their institutional clients choose to do so. This reflects a dislike of the risk-reward ratio. "Third party collateral management is a threat to us, as we do not generate a profit from it, and if it goes wrong then we are liable for costs," explains a manager. But resistance stems mainly from an unwillingness to lose control of assets, because that inhibits investment and trading decisions.

# Third party collateral management is seen as expensive

Managers raise price as an obstacle to purchasing collateral management services. One estimates that processing the complexities of a collateral trade costs "50 times" as much as settling an equity trade, because of complicating factors such as sourcing collateral that fits the eligibility criteria of the counterparty. Managing multiple sets of eligibility criteria and the sheer number of intermediaries in a modern collateral chain – counterparties, custodians, clearing brokers, CSDs and CCPs – can make it difficult for a third party collateral manager to add value.

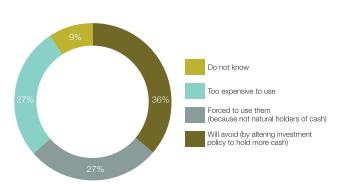
# Collateral transformation services are not gaining momentum

Although investment managers are aware of the concept, it seems the purchase of collateral transformation services (to raise collateral eligible at CCPs) is not a practice which is expected to gain momentum. Mandatory clearing has yet to start in Europe, and managers with experience of the United States have left the task to their clearing brokers. As Table 12 shows, investment managers are likely to remain reluctant users of collateral transformation services, even as clearing makes them necessary.

### Standardisation of collateral management agreements would be advantageous

Managers believe that one reason collateral management is less efficient than securities lending is the lack of a standard document to agree collateral calls and apportion losses, akin to the Global Master Repurchase Agreement (GMRA) used in repo or the (Global Master Securities Lending Agreement (GMSLA) used in securities lending. "The collateral management process needs a better way to exchange data, and validate the amount of collateral to be posted," says a manager. "It needs to change."

Table 12: The value of collateral transformation services





### 7. The scope for greater standardisation

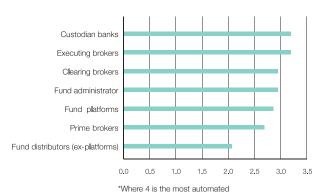
## Investment managers exchange large volumes of data with clients and counterparties

A major investment manager services 80,000 positions and settles 4,000 securities transactions a day with brokers, generating at least three times that number of messages in trade confirmations, cash payments, and settlement instructions. Its fund subscription, redemption, switching and order acknowledgement traffic averages a further 10,000 messages a day.

# Processing large volumes depends on the automated exchange of standardised information

The main constraints on automation are linked to practice rather than technology. Constraints arise as a result of the availability and penetration of message standards in different asset classes, and the willingness and ability of counterparties within those asset classes to employ message standards. There is considerable variety in the degree of automation by counterparty and asset class.

#### Table 13: The most and least automated counterparties\*



# Custodians are the most automated counterparties of investment managers

As Table 13 shows, the levels of automated exchange between investment managers and custodians are high, principally because they use standardised messages. This matters because, in addition to dealing with the custodians to their own funds, investment managers also have to interact with custodians appointed by their institutional clients. It is not unusual for a large investment manager to have contact with over 100 custodian banks.

#### A substantial minority of custodian banks are not yet standardised and automated

Investment managers that deal with multiple custodian banks place a high value on the standardised, automated exchange of information. However, a number of smaller banks in Europe and North America are still not using message standards, forcing investment managers to maintain separate connectivity platforms, or use file transfers, email or fax. "They are the client and it is their custodian bank, so you have to use whatever systems they have," explains one investment manager. "You turn the business down, or you deal with them."

### Brokers exchange data in automated, standardised ways in some roles but not others

Investment managers deal with brokers in three principal guises: executing, clearing and prime. As Table 13 shows, they are at their least automated when acting as a prime broker. "Prime brokers are so far behind the curve," says a manager. "We send [standardised messages] to them, but we do not get them back." Dealings with clearing brokers are still dependent on file transfers, though managers are insisting successfully on formats which facilitate automation. Emerging market executing brokers also tend to have low levels of standardisation and automation. "[They] often process transactions manually, so it requires more effort to execute and settle trades with them," notes a manager.

#### Outsourcing to a global custodian can insulate managers from the impact of inefficiency

A manager who outsources middle and back office services to a global custodian bank does not experience communication inefficiencies directly, but nevertheless incurs indirect costs as a result. "It is never been top of our list because we are one step removed," explains a manager who has outsourced. "The underlying counterparties are often inefficient, but the burden of working around those problems falls on [the global custodian]."

### There is scope for increased standardisation and automation in dealings with transfer agents

As Table 14 shows, investment managers regard their exchanges of information with transfer agents - registration of changes of

ownership of funds, and the processing and settlement of fund subscriptions and redemptions – as relatively inefficient and in need of automation. This reflects limited use of available message standards, and a continuing reliance on file transfers and fax. Even in the United States where a local message standard ostensibly prevails (FundSERV), a manager is dismayed by "how much flexibility there is in the interpretation of the technical standards."

# There is limited pressure for standardisation in transfer agency

Investment managers and transfer agents have historically attached greater importance to accuracy rather than speed. "We prefer to get FTP files from transfer agents," says a manager. "With low volume names, fax is probably better." However, managers agree that a higher level of standardisation would nevertheless facilitate distribution in new markets.

### Multiple order-routing networks hamper standardisation of exchanges with fund distributors

The proliferation of competing order-routing networks linking investment managers and their transfer agents with fund distributors, notably in Europe, has stifled the development of a single message standard in communications between fund distributors and investment managers and their transfer agents. As Table 14 shows, investment managers regard the current combination of networks using proprietary standards and different data templates as inefficient.

### Banks are among the least automated of fund distributors

Banks dominate fund distribution in many countries, but are seen as resistant to standardisation of communication, especially if they are private, regional or local banks. "The problem tends to be a lot of smaller players who perhaps have not got the resources or the inclination," explains a manager. "We, like a lot of other providers, are reviewing all those players. We are looking at options for them. Maybe, ultimately, we as an industry will say, 'You need to deal with us through STP and, if you do not, we are not going to accept faxes.'"

## The degree of automation varies widely between markets

One investment manager estimates that its communications with fund distributors are 100 percent automated in the United States (using FundSERV), where a dominant order-routing network (Fund/SERV) channels the subscriptions and redemptions into the National Securities Clearing Corporation (NSCC) as a settlement agent; 90 percent automated in the United Kingdom; 75 percent automated in Continental Europe; and 50 percent automated in Asia.

Table 14: The largest and smallest obstacles to efficiency in fund distribution\*

\*Where 7 is the biggest obstacle to efficiency.

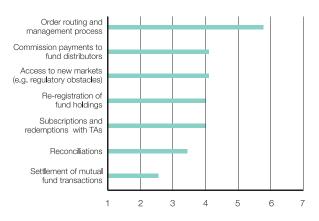
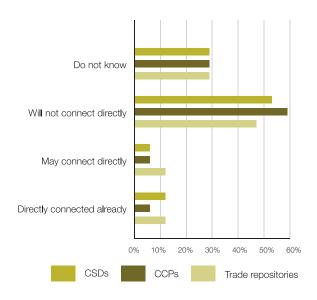


Table 15: Investment manager attitudes towards direct connection to market infrastructures



### Real-time deadlines may drive investment managers to connect directly to market infrastructures

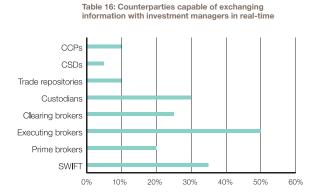
Though investment managers connect directly to trading platforms, they tend to access post-trade infrastructures such as central securities depositories (CSDs), central counterparty clearing houses (CCPs) and trade repositories (TRs) via banks and brokers. As Table 15 shows, direct connections are still unusual for managers, but this may change as settlement and reporting deadlines tighten. "It may be more relevant as we move towards a real-time environment," says one manager. However, as Table 16 shows, real-time interaction with counterparties is currently a rare phenomenon, and extremely rare in the case of financial market infrastructures.

### Levels of standardisation vary by asset class

As Table 17 shows, investment managers regard cash as more efficient than equity as an asset class to process. Fixed income and foreign currency transactions are also regarded as relatively efficient. The high levels of automation in these four asset classes reflects overwhelming usage of standard message types and the presence of well-established infrastructures to link multiple counterparties in cash (RTGSs and ACHs), equity (matching services and CSDs), fixed income (ICSDs) and foreign exchange (CLS).

### Derivatives and money markets in need of higher levels of standardisation

Table 17 also shows that repo and by implication other money market asset classes, such as stock loan and collateral, are targets for further automation. Both exchange-traded and OTC derivatives are also judged to be suffering from a lack of standardisation in communications. Transactions in futures, options and swaps remain dependent on CSV files (i.e. spreadsheets) exchanged by email or file upload, matching engines are used infrequently, and order-routing services cover only some instruments.



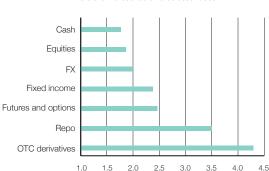


Table 17: The asset classes most in need of automation\*

\*Where 5 is the least automated asset class



### 8. Opportunities to address challenges in fund distribution

### Fund distribution challenges are linked to investment operations but also have distinct characteristics

Investment managers divide post-trade investment operations from the operational support given to fund distribution. This division is somewhat artificial. A change in the settlement of fund transactions or the remuneration of fund distributors, for example, has knock-on effects on investment operations. The operational challenges facing fund distribution are nevertheless distinctive.

### Investment managers face growing complexity in fund types and structures

Within the five broad categories of funds – equity, fixed income, money market, multi-asset and alternative – lies considerable variation. There are more than 78,000 separate mutual funds available round the world, employing a wide variety of vehicles (including UCITS, non-UCITS, OEICs, SICAVs, '40 Act funds, ETFs), share classes (Class A, Class B, Class C, income, accumulation class) and currencies (the biggest mutual fund markets encompass 33 currencies, necessitating the hedging of shares back to a base currency).

### Global distribution requires global operational support

One investment manager says his firm has 700 funds distributed in 23 jurisdictions through 1,620 distributors, ranging from banks and private banks, through IFAs, to fund platforms and corporate treasurers. Each fund requires daily valuation and transfer agency services. The same manager has developed another 400 hedged share classes in its Luxembourg-domiciled fund range alone, because it is simpler to add a share class to accommodate investors in a new market than to launch a separate fund. The top priority of one manager surveyed is the "Globalisation of operational infrastructure to support the international growth of the firm".

#### Distributing funds in new markets is operationally challenging

Three out of four of the mutual funds currently in existence are distributed in Europe or North America, but that proportion is down from four fifths five years ago. In other words, Africa, Asia, Latin America and the Middle East are of increasing importance. Funds distribution in these markets requires an understanding of local laws and regulations, the selection of existing or local transfer agents and fund accountants, building distribution networks in new markets, and selecting the appropriate fund vehicles. "Are we going to use international funds or local funds?" asks one manager. "The answer to that question will have an operational impact."

#### Hedge funds are hard to support with conventional services

Distributors are selling more hedge funds, but they suffer from infrequent liquidity, insistence on signed applications to invest, and the limited use of standards by hedge fund managers. This makes hedge funds hard to support with conventional fund accounting, transfer agency and order-routing services. "It is very difficult to have T-minus settlement, which is what you are looking at with hedge funds with liquidity points months ahead," explains a manager. "How do you put that in your system?"

#### Fund platforms are displacing traditional transfer agencies

Fund platforms are undermining the economics of transfer agents, who collect a fee for processing subscriptions, redemptions and switches, by aggregating multiple orders into single buy and sell messages. "The fact that 70-80 percent of the business comes from platforms is more efficient for us, because they aggregate deals," explains a manager. "That is the problem for transfer agents. The more the platforms grow, the greater the reduction in the functions that transfer agents will ultimately perform. If you take that to its logical conclusion, the question is whether you end up with an industry hub." The most likely candidates to fulfil this role are central securities depositories (CSDs).

### Disaggregating orders from fund platforms is an administrative burden

Investment managers report that, despite their ability to aggregate orders, fund platforms can impose additional manual work on fund managers in terms of calculating commission payments to distributors, because the underlying clients and distributors are difficult to disentangle in omnibus accounts. "You cannot see the assets that clients of distributors hold on the register, which creates the risk of over-paying commission," explains a manager. However, disentangling aggregated orders is relatively simple by comparison with maintaining individual accounts for every investor. Individual or segregated accounts may become more commonplace or replace the use of omnibus accounts in the funds and securities industries, due to the increasing focus on AML, KYC and other risk considerations.



### Centralised settlement via CSDs is expected to replace settlement via transfer agents

Investment managers expect mutual fund order processing to evolve globally on the basis of a model operated by the National Securities Clearing Corporation (NSCC) in the United States, where subscriptions and redemptions are channeled through a single order-routing network (Fund/SERV) into a single settlement process (NSCC). The NSCC service is now extended to Latin America. In Europe, mutual fund trades are already settling in CSDs in France, Germany and the United Kingdom, and the CSD in Hong Kong is building a fund settlement "hub" for the use of transfer agents. "As an investment manager, we would definitely welcome delivery-versus-payment (DvP) in real-time in the mutual fund sector, since it would place mutual fund settlement on the same footing as securities settlement," says a manager.

### Investment managers support the realignment of securities and fund settlement cycles in Europe

European securities markets moved to settlement on T+2 in October 2014, creating a mismatch with funds, which generally settle on T+3. This means subscriptions and redemptions to and from a fund are not aligned with purchases and sales of the underlying assets. As a result, portfolio managers are obliged to incur the cost of borrowing money or hedging the position in the futures markets. This additional cost has created a strong expectation that funds will shift to a T+2 settlement timetable in Europe. That will not happen until fund distributors can accommodate it, and investment managers are confident it will not hamper sales of European funds in time-zones such as Asia and Latin America.

### Investment managers are concerned that CSD settlement will inhibit access to distribution data

Investment managers are concerned that settling mutual fund transactions in CSDs will make it more difficult to obtain accurate and timely distribution data, because this information is presently derived from transfer agents. One manager says his concern on this issue is borne out by experience of the French model of CSD settlement. "It is very difficult for investment managers to live with," says a manager. "We cannot see the distribution network except through the centralising agent [for subscription and redemption orders] and then with limits. We therefore have to work hard to discover who is buying our funds, and whether our marketing campaigns are working. This is expensive and opaque."

### Access to timely distribution data is increasingly important to investment managers

Investment managers are increasingly interested in detailed fund distribution information from transfer agents, order–routing networks, and fund platforms, though they are struggling to integrate data from such disparate sources. The information is useful in determining which distributors are most effective and profitable to the firm, which products are selling well and which badly, and what new funds need to be developed. It is also useful to portfolio managers to position funds to cope with inflows and outflows of capital. "We are moving into serious statistical analysis of the behaviour of the distribution network," says a manager. "It takes a lot of investment in technology, and is difficult to do if you are using a large network of transfer agents in different countries. You have to knit the different sources together."

### Investment managers have a responsibility to ensure that products are sold correctly via distributors

Investment managers are under an obligation to "treat customers fairly" (as the terminology of the United Kingdom regulator, the Financial Conduct Authority (FCA), puts it). This entails ensuring investors always buy funds appropriate to their needs, even if the sale is made by an independent distributor. "Regulators are increasingly asking investment managers to be responsible not only for the manufacturing side of the business but also for the context in which their products are being sold," explains a manager. "We look at our distributors as being our customers. The regulatory view is that distributors are actually agents of the investment manager, and the investment manager therefore has a duty to ensure products are sold correctly, in the sense that suitability and appropriateness tests are met."

### Order-routing networks are considered inefficient

As Table 14 showed, investment managers regard order-routing networks as inefficient because there are too many of them, at least in Europe. Unlike the United States, where a single network (Fund/SERV) dominates the routing of fund subscription and redemption orders from distributors to managers or their transfer agents, European fund orders are carried across a variety of domestic and cross-border networks, each of which operates according to proprietary standards. This means that managers and transfer agents face additional costs of maintaining multiple interfaces, many of which direct orders to proprietary settlement venues. "Competition has expanded the tool sets, and we have seen costs fall in this area for the first time," says a manager. "But a unified, cheaper system would still be best, especially if organised regionally."

#### Inefficiencies are also identified in the registration of purchases and changes of ownership of funds

As Table 14 shows, the registration and re-registration of ownership of shares or units in funds is considered to be among the least efficient aspects of fund distribution. Transfer agents who maintain the registers of owners frequently receive incomplete or



unmatched instructions to transfer stock between accounts, and have to chase investment managers, distributors and investors. Managers would prefer it if both the senders and the recipients of messages about the transfer of shares in funds use a standard template, as proposed by the Findel Transfer Working Group.<sup>1</sup>

### Data sharing can be increasingly standardised

Investment managers share with fund distributors, fund platforms and data vendors sets of dynamic and static data needed to process fund transactions efficiently, including the standard codes that identify the fund, its manager, launch date, valuation timetable, and dividend dates. At present each service provider requests data in a bespoke rather than standard template, requiring investment managers to adapt their dynamic and static data to multiple templates. To remedy this inefficiency, managers favour centralising the data at a single repository in a single agreed format. "There is a role for someone to organise a standard template or create a utility," says a manager.

### The payment of commissions to fund distributors is inefficient

Payments to fund distributors are largely dictated by the transfer agents that record their activities. It is considered to be an inefficient process, because of the number and differences between the legal agreements drawn up between investment managers and distributors, and much of the work is completed by hand. Yet the sums at stake are significant. An initiative to increase automation and reduce the risk of error by creating a standard commercial term sheet, known as the Dematerialised Mutual Fund Sales Agreement (DMFSA), has so far failed to win sufficient support from investment managers and distributors. "This is a very serious source of inefficiency across the global asset management industry," according to one investment manager. "It is a wonder that it has remained neglected for so long."

<sup>1</sup> The members of the Findel Transfer Working Group are attrax S.A, BNP Paribas Investment Partners, Luxembourg, Clearstream Banking S.A., Credit Suisse A.G., Euroclear Bank, Fidelity Investment Managers, Franklin Templeton Investments, RBC, Schroders, SWIFT and Union Bancaire Privee.

# 9. Can these challenges be solved through industry collaboration?

This paper has identified common trends in the operational challenges facing investment managers, which opens the question – are there ways in which the industry can collaborate to find common solutions? Based on the feedback provided, we have identified three main areas where SWIFT could possibly play a role in addressing these industry challenges: standards, messaging, and (potentially) industry-wide solutions to support resiliency and address financial crime compliance.

### A greater need for standardisation

Investment managers identify standardisation as a route to achieving higher rates of automation. The need for increased standardisation was highlighted strongly in the context of OTC derivatives and collateral management. In addition, there seems to be a clear consensus for a centralised solution to address corporate action process inefficiencies and associated operational risks. Should it take the form of a utility? Who would be best placed in the industry to manage it? Managers surveyed recognised that SWIFT is well-placed to create new standards to support the automation of new asset classes, especially where transaction volumes are rising. As Table 18 shows, managers view repo, OTC derivatives and collateral management as the asset classes that fall most clearly into this category. However, there is also strong support for SWIFT to use its knowledge and reach to solve a longstanding source of inefficiency: corporate actions. As Table 7 recorded, more than two out of three managers would welcome greater standardisation of corporate actions message types reinforcing the role SWIFT messages can play in raising the levels of standardisation and automation in corporate actions processing.

### Better use of established messaging networks

Investment managers are clear that what they value most in a post-trade service provider is network effects: the value of the service stems from the access it offers to as many of their counterparties as possible. "We look at what has community," explains a manager. "In general, that is where we go. It is community and standards that decide which services we use." With over 6,000 securities participants in its global network of over 10,800 connections, SWIFT is ideally positioned to deliver this network effect in the post-trade arena. As Table 19 shows, half the investment managers in the surveyed group that have not outsourced post-trade communications to a global custodian send more than three quarters of their messages via SWIFT. Managers surveyed stated that they would welcome wider use of SWIFT messages in parts of the post-trade environment where they are available. There seems to be especially strong support from investment managers to find an industry standard for mutual fund distribution. Four potential approaches can be identified. First, automation of the inefficient fund registration and re-registration process (which SWIFT has already been working on through its membership of the Findel Transfer Working Group). Second, the capture, storage,

Table 19: Use of SWIFT message formats across networks

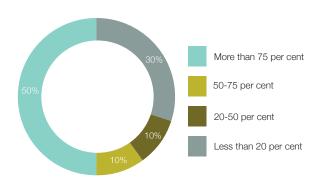
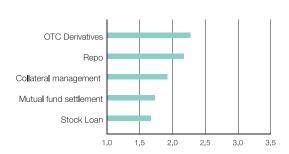


Table 18: New asset classes in need of standardisation \*

\*Where 1 implies no need for further standardisation and 3 an asset class badly in need of further standardisation



standardisation and online distribution of mutual fund static and dynamic data. Third, the development of SWIFT messages to facilitate the settlement of mutual fund transactions in central securities depositories (CSDs). Fourth, SWIFT messaging services could potentially displace proprietary message standards, file transfers, emails and faxes throughout the post-trade area of the investment management industry. SWIFT has already built a strong market position in standardising and automating exchanges of information between investment managers and their transfer agents and fund distributors, Table 20 indicates that three out of four managers believe SWIFT should now build on this franchise.

### Solutions to help manage risk and regulation

One significant area of post-crisis regulation is to ensure counterparties understand their exposures to each other through the issue of Legal Entity Identifiers (LEIs). LEIs are designed to help banks allocate their risk-weighted capital more efficiently, allowing them to do more business with particular investment managers. As Table 21 illustrates, the managers surveyed were generally supportive of LEIs. "We are all a bit more precise about who we are dealing with," says one. SWIFT is an issuer of both LEIs and Bank Identifier Codes (BICs) via its SWIFTRef reference data platform, which a number of investment managers are already using. Another area of growing interest is resiliency solutions, particularly as regulators increase their focus in this area. Investment managers have expressed an interest in the concept of SWIFT's Market Infrastructure Resiliency Service (MIRS), which could potentially be applied to cover the risks of a custodian bank, fund administrator or transfer agent failing. "Having an industry standard that everyone signed up to would make that whole transition much easier and smoother," he says. There was also interest expressed in financial crime compliance solutions to combat KYC, AML and sanctions screening challenges. SWIFT has already developed a number of solutions for its correspondent banking clients such as The KYC registry, providing a central repository to which banks can contribute KYC information to support due diligence processes.

Table 20: Support for SWIFT as the standard in mutual fund distribution

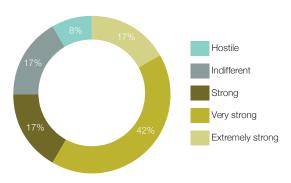
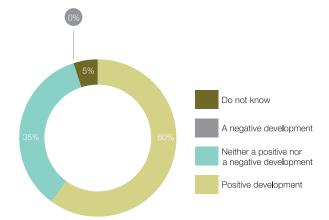


Table 21: The usefulness of LEIs in counterparty risk management





### 10. Conclusion

It is clear that investment managers surveyed in this paper are facing operational challenges and are receptive to pragmatic industry-wide solutions. SWIFT is positioned at the heart of the industry - supporting capital markets since 1987 - and has a two-fold role. We provide the standards, solutions and post-trade processing services that enable securities institutions worldwide to connect and exchange financial information securely and reliably. We also act as the catalyst that brings the financial community together to work collaboratively to shape market practice, define standards and consider solutions to issues of mutual interest. With this in mind, we hope that this paper has fostered some food for thought on common operational challenges facing investment managers, and we look forward to hearing your feedback on how SWIFT can help the industry to continue to evolve.



### **For Investment Managers**

### What is the global market?

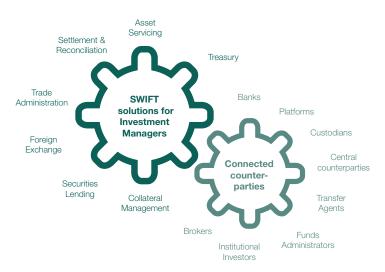
### \$67 trillion

estimated assets under management (AUM) by investment managers worldwide

### 90% of **AUM**

are managed by investment managers connected to SWIFT

### How can SWIFT help Investment Managers?





#### **Reducing Costs**

Cost duplication eliminated by reducing the number of communication channels, technology providers and manual workload



#### **Giving Visibility on Cash and Assets**

Standardisation through one single channel to all counterparties gives more accurate and timely information and eases integration with business applications



### **Providing Security and Resilience**

SWIFT facilitates the establishment of better controls and audit trails through highly secure messaging, and financial crime compliance services

### SWIFT's unique position in financial services

6.000 +

securities users on SWIFT

200+

countries and territories where SWIFT is present

2 billion+

securities messages sent annually

11.5 million

securities messages in one day during the latest record peak

40 years

of successfully serving the global

70% of top 50

investment managers in the Tower Watson rankings are connected to SWIFT

### **Software Offering**

### **Shared Services**

- Financial crime compliance solutions
- Reference data (SWIFTRef)
- Business Intelligence &
- MvStandards
  - Training, Consulting & Support
- analytics

### Legal notices

#### **About SWIFT**

SWIFT is a member-owned cooperative that provides the communications platform, products and services to connect more than 10,800 financial institutions and corporations in more than 200 countries and territories. SWIFT enables its users to exchange automated, standardised financial information securely and reliably, thereby lowering costs, reducing operational risk and eliminating operational inefficiencies. SWIFT also brings the financial community together to work collaboratively to shape market practice, define standards and debate issues of mutual interest.

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