



WHITE PAPER

REDUCING OPERATIONAL AND COMPLIANCE RISKS IN ASSET SERVICING THROUGH PROCESS DIGITALISATION AND DATA INTEGRATION



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ABSTRACT

Despite the macroeconomic uncertainties, the asset management industry has been enjoying healthy AUM growth for the past few years, with new operational and compliance challenges emerging for asset servicing firms such as fund administrators and custodians.

This paper makes the argument that the root cause of these challenges lies in the fragmentation of data from operational processes that are for the most part disjointed, and to overcome this problem, asset servicing firms must look to put in place a viable system to achieve process and data integration and redirect themselves back to optimising operational efficiency and profitability. Data integration has indeed become a key driver of growth in a context where custodians have recently been pushed to innovate and offer ancillary services and therefore become a stakeholder in a wider ecosystem that needs to collaborate and share information effectively.

1 THE CHANGING LANDSCAPE OF ASSET MANAGEMENT

The asset servicing industry in Asia has been enjoying phenomenal growth for the past few years, and all the data suggests that this growth will continue.

According to the Securities and Futures Commission's (SFC) Asset and Wealth Management Activities Survey, the asset management industry has enjoyed an AUM increase of 20% year on year¹. PWC projects that by 2025, APAC assets under management will outpace all other regions globally and almost double from \$15.1 trillion in 2017 to \$29.6 trillion². This is despite the world facing the unprecedented challenges of COVID restrictions and lockdowns as well as increased geopolitical tensions.

But while asset managers celebrate, asset servicing firms like fund administrators and custodians are discovering that this growth has created new challenges that put them and their clients at increased risk.

Eroding profit margins and the low yields available on traditional products have led to asset managers becoming more innovative in their asset allocation strategies. To help boost yield, they are expanding their holdings globally and increasing the use of complex and illiquid instruments. These activities have made things more complicated for asset servicing firms as they struggle to process and value these assets, and that in turn exposes them to potential operational and compliance risks.

The shift to alternative investments such as private equity, hedge funds and debt has shown steady growth: 11.3%³ per year from 2015 to 2019. Growing expectations for sustainable funds are also impacting the way asset servicers

rethink their offering. However, the challenge of integrating alternative asset classes such as digital assets into their service provision will be even bigger. Asset servicers will need to gain new expertise or partner with fintechs to be able to cover the entire processing life cycle and support the digitisation of traditional assets through tokenisation as well as the creation of new asset types. Custodians will have to revamp their processing using distributed ledger technologies (DLT) to achieve real-time settlement. That would drastically reduce risks and costs as counterparties would be able to access all transactional data on a single, secured platform.

In addition, asset managers are expanding their distribution across borders to open up new markets and create new share classes. In Asia, where there is not a single overarching fund framework, the onus falls on the asset servicing firms to make sure that their clients' distribution activities adhere to global and local regulatory standards for KYC, suitability and tax reporting.

Finally, the velocity of regulatory changes with regards to timeliness, frequency, and content of reporting impacts asset servicing firms as they scramble to update their reporting templates and processes to remain compliant for both their clients and themselves.

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1 Asset and Wealth Management Activities Survey 2020, Securities and Futures Commission

2 Asset & Wealth Management 2025, PWC Asia

3 Navigating through the storm – asset servicers survey Deloitte February 2021

2 OPERATIONAL AND COMPLIANCE RISKS FACED BY ASSET SERVICING FIRMS

With added complexity comes added risk, and asset servicing firms such as fund administrators and custodians must recognise these risks and take a holistic strategic approach to tackling them. Moreover, they must do so without disrupting their profitability or their operational capability.

As a leading technology provider for asset and wealth management, ERI asked many of its asset servicing clients what they see as areas of challenge in their business. The following issues were cited as being the most worrisome.

REGULATORY REPORTING

Regulatory reporting has definitely been identified as the number one concern, and it comes as no surprise that such worry is mainly due to the lack of consistency and integrity of the data managed within the asset servicing firms. This poor data quality can be attributed, at least to a certain degree, to an overreliance on paper-based and manual processing in the asset servicing industry.

Asia is about a decade behind the US and Europe in terms of automation of internal processes. To this day, many subscription/redemption orders are still being transmitted by fax. Trade order confirmations from asset managers to

brokers and custodians are transmitted by email or using paper-based print-outs. Corporate actions are processed on multiple spreadsheets that are shared and maintained across different siloed divisions.

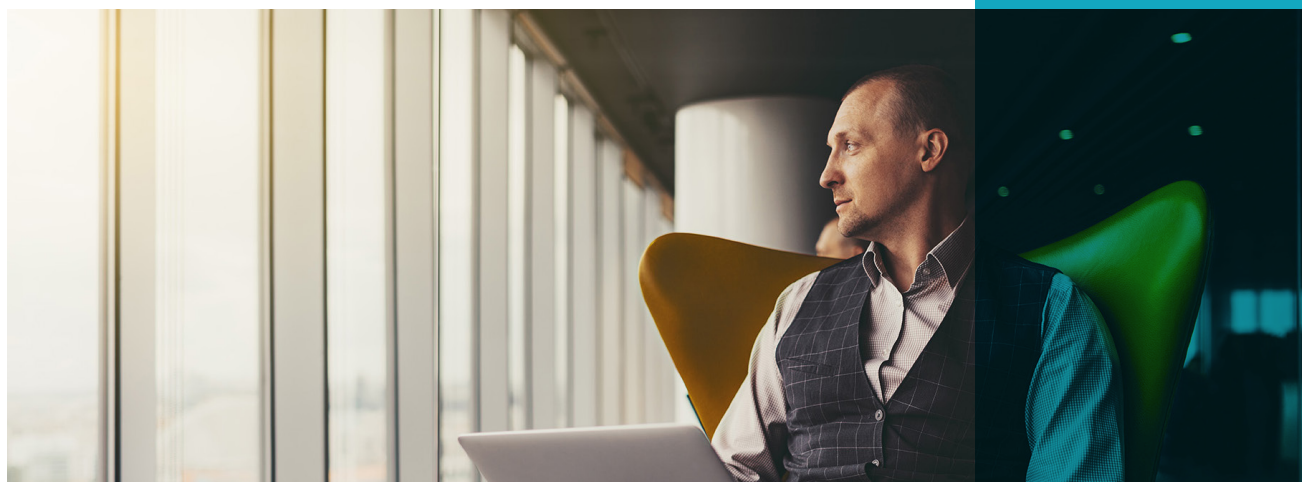
These fragmented manual processes can lead to data being inaccurate, inconsistent, and even incomplete. This makes regulatory reporting more difficult, time-consuming and expensive as extra person-hours and headcounts are spent just to double- or triple-check the accuracy of the reports produced.

COMPLIANCE MONITORING

In 2015, Citco Group, a fund administrator, agreed to pay \$125 million to settle claims from investors that it misled them into investing with Fairfield Greenwich Group, the biggest operator of “feeder funds” for the infamous and now-imprisoned swindler Bernard Madoff.

The case set an important precedent that irrevocably established that asset servicing firms have a fiduciary duty to the end investors to ensure that the assets within a fund are managed in full compliance with the rules and strategies outlined in the fund.

The scope of compliance monitoring for asset servicing firms spans various operational areas, including, but not limited to, monitoring the investment activities of the fund manager, monitoring the sales and redemption of shares and monitoring the cash flow of the funds. All this while having to keep on top of the compliance requirements for its own operations.



Many asset servicing practitioners have highlighted that monitoring these activities has been a struggle owing to not having easy access to consistent and accurate data across the firm. Headcount spending for compliance monitoring has increased dramatically, and these staff are mostly focused on ensuring that the data they are monitoring is accurate and consistent across different metrics.¹ However, most practitioners agree that throwing headcounts at this problem is hardly a sustainable strategy. Especially now, with asset digitisation becoming a new revenue stream, an advanced business ecosystem has emerged resulting in more complex compliance requirements.



ASSET VALUATION AND NAV

The accurate valuation of a fund's assets, along with the timely calculation of net asset value (NAV), is the heart and soul of a fund administrator's business, but it is also an area of great concern.

The risk for valuation and NAV originates in three main areas: order capture, asset allocation, and NAV calculation methodology.

Many asset servicers still receive buy/sell order confirmations from their asset managers via unstructured channels like emails and faxes and many still maintain the records of these transactions in spreadsheets. Processes like these are susceptible to human input errors and processing delays, which can ripple downstream to create bigger problems. As an increasing number of additional regulations come into force, such oversight may be seen as a breach of duty of care, especially when reporting cannot be performed rapidly in the event of an issue arising.

In order to generate accurate asset valuations and NAV calculations, each buy/sell record from the fund manager must be accurately recorded on a timely basis. Furthermore, NAV calculation depends heavily on the timestamp of the trade, as each fund has its own designated cut-off that determines whether a trade is priced in or not. Adding to this the fact that many investment strategies now include global assets and structured products, the job of ascertaining an accurate asset valuation and NAV has become very challenging.

Such failure can lead to financial liabilities for the asset servicing firm, the executives of the firm², and its asset management clients. Case in point: in 2014, the FCA fined Invesco Asset Management and Invesco Fund Managers over £18 million for numerous internal control failings, including failure to take reasonable care to ensure that the necessary systems and controls were in place for a sufficient record of trades on a timely basis. Moreover, in 2020, the SEC ordered Northern Trust Hedge Fund Services LLC to pay a fine for regulatory breaches relating to their role in alleged fraud perpetrated by the fund's manager, because when calculating the fund's net asset value (NAV), Northern Trust staff, at the direction of the advisers, inflated the NAV reported to the fund's investors.³

Though the fine itself obviously represents a monetary cost to the firm, it is the potential long-term reputational damage that will have greater ramifications as it will disrupt the firm's ability to attract new partners, new clients, and new talent.

¹ According to "Cost of Compliance 2019" report by Thomson Reuters, 65% of senior executives expect the cost of senior compliance staff will rise.

² As of the writing of this paper, fund administration and custodian is not covered by the Hong Kong Securities and Futures Commission as a regulated activity, hence the SFC does not have the power to reprimand the firm. However, it does have power to reprimand the individual in charge of the firm. Furthermore, in December 2019 the SFC has put forth a proposal to have fund administration and custodian listed as a regulated activity under a Type 13 license.

³ SEC fines fund administrator, 24 September 2020 - <https://www.caymancompass.com/2020/09/24/sec-fines-fund-administrator/>

CORPORATE ACTION PROCESSING

Corporate action processing is one of the most routine operations in asset servicing, but it is also an area of vulnerability.

Although the use of SWIFT MT564 has standardised the notification of corporate actions, the tasks of sorting out the source notifications, processing voluntary events, and handling complex corporate events remain largely manual.

Close to one million corporate actions take place every year worldwide, and their processing can range from payment of a simple cash dividend to managing the effects of a complex rights issuance or takeover. Of those one million, 10-15% are voluntary and time-sensitive, where investors are given a number of options to choose from within a set time frame. Processing these corporate actions manually with inconsistent or inaccurate share ownership registry data can lead to investors not getting timely or accurate notifications or their decisions not being confirmed before expiry.

Regulatory repercussions notwithstanding, failure to handle even a single complex event could potentially mean covering tens of millions in losses to investors. Custodians face the highest risk in this area because they act as the guardian of assets for many investors. Firms have therefore spent a large proportion of their budget on failure prevention.

An estimate based on available data suggests that the fund management industry spends over \$75 million per year in corporate action failure prevention.

As margins have continued to tighten in the core services, global custodians are looking into increasing their range of products by proposing more value-added services. This is why it is even more important that traditional processes covering the core services are fully streamlined and operationally efficient, so as to give asset servicers the full capability to innovate and future-proof their growth.



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3 IT'S ALL ABOUT THE DATA

A careful analysis of the aforementioned challenges leads to the simple realisation that they are just symptoms of a single underlying problem that can be summed up in a single statement: the fragmentation of data due to disjointed operational processes.

Regulatory reporting, asset and NAV valuation, and compliance monitoring all share a common denominator: the need for accurate and consistent data. Custodians and fund administrators consolidate and process large volumes of data, act as aggregators and monetise that data. To do this, they need to have full control and visibility of the value chain.

However, when operations are disjointed and rely heavily on manual, paper-based processes and tools, the accuracy and consistency of the data used across various operational divisions will undoubtedly suffer. Operational staff constantly spend hours digging for data from numerous sources, and then verifying its accuracy and timeliness. Such mundane tasks make up the bulk of the operational overheads.

To solve this problem, asset servicing firms must shift their focus to streamlining how the data travels across the divisional chains and how they can maintain its accuracy and consistency, not only throughout the internal process cycle but also when communicating with external stakeholders, such as partners and other service providers who are part of the ecosystem. This requires shifting the traditional operating model to digital, thereby becoming less reliant on manual processes and paper-based tools so as to achieve true process integration in a timely manner.



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WHAT IS PROCESS INTEGRATION?

Process integration means taking a holistic approach that strategically emphasises the unity of the process and considers the interactions between different unit operations from the outset, rather than optimising them separately. The key word here is “interaction”, as the different stakeholders making up the value chain of asset servicing are very much dependent on one another.

A typical fund administration workflow consists of several steps, from order subscription to the calculation of the NAV. These activities are performed by several departments and external partners, which means that one single error could jeopardise a transaction’s processing in its entirety. Even one minor error or misstep in these interactions between the various divisions at any point in the process can have a ripple effect on the entire portfolio valuation, NAV and fee calculation, accounting and reporting process.

Yet many asset servicing firms are still very siloed in their operational setup, with each division processing data optimised only for its narrow scope of responsibilities, while neglecting how its processes will impact the data quality for other areas of the chain. Adding to this the fact that data is stored and shared in an unstructured manner, such as in Excel files attached to emails, and very soon you will have a messy data trail with multiple copies stored in individual inboxes.

The ultimate goal of any process integration exercise should therefore be to achieve a process design that facilitates straight-through processing, where the firm would have consistent information that can then be streamlined across multiple touchpoints through to transaction settlement.

To achieve this end, there are two guiding principles:



MAINTAINING A SINGLE SOURCE OF TRUTH

From a technical perspective, a single source of truth, or SSOT, is the practice of structuring information and associated data such that all the data of the firm is stored and edited in only one place. From a business value perspective, an SSOT ensures that everyone in an organisation speaks the same language and bases all business decisions on the same data.

In the world of asset servicing, where every step of the process involves the capturing and editing of data, having an SSOT structure would dramatically minimise risks and cost, but it has proven to be a challenge to achieve as custodians and asset servicers rely on several poorly integrated IT systems to handle the transaction lifecycle.

Transactional information that is captured and stored within a single database platform will allow all stakeholders across the firm to have instant access to a complete, consistent view of the transaction data. Delays and misinformation can be greatly reduced and will improve the timeliness of delivery of any regulatory reporting, as well as strengthening the level of confidence in compliance monitoring.

Data capture is also key in order to be able to customise the offering for individual clients, responding to their needs at each step of the customer journey and enabling them to make well-informed decisions.

FACILITATE REAL-TIME DATA UPDATES

To achieve data consistency through process integration, besides having an SSOT infrastructure, another key principle is to make sure that the integration design facilitates real-time data transfer and updates.

Today, asset servicers need real-time visibility to perform many critical activities, such as generating timely reports for the intraday NAV of an ETF. Having real-time transfer

capabilities built into process integration will allow for instantaneous data availability, which in turn will result in reduced divisional dependency and speedy decision-making.

Any process integration exercise should therefore strive to achieve real-time data flow across all operational touch points.



4 A CASE FOR A FULLY INTEGRATED SOLUTION

Having the proper technology infrastructure is key to a successful process integration exercise. Throughout this paper, we have highlighted that many asset servicing firms are operating in a siloed environment. This often impacts how they implement their technology systems.

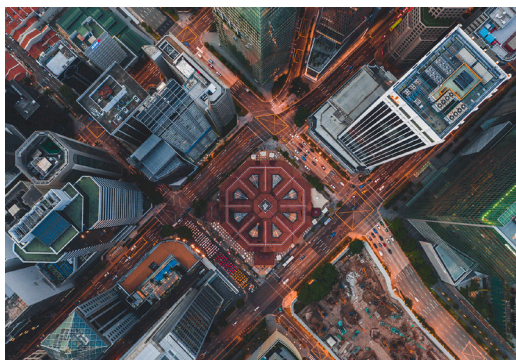
In a siloed technology environment, integration is achieved using various application programming interface (APIs) that sit between systems, relaying data from one to another. One critical task for these APIs is to act as a data translator between two systems, similar to a translator for two people speaking different languages. Without this translation, data transfer cannot be performed.

However, using only API-based integration has three main drawbacks. Firstly, transforming data from one format to another can be processing intensive, so it is extremely difficult to transfer data in real time between two systems. Secondly, during the transformation process, it is not uncommon for data to become corrupted, creating errors in the destination system that compromises data consistency and accuracy. Thirdly, maintaining APIs can be extremely costly.

A version upgrade from either the source or destination system can lead to an API needing to be redeveloped from scratch. Thus, for small-scale asset servicing firms, process integration based mainly on APIs can potentially lead to high operating costs and risks.

To achieve true process integration where data remains consistent in real time, the ideal solution is to have a single unified system that is fully integrated across all operations and functions.

A fully integrated unified system is designed to achieve true data STP and should provide complete end-to-end functional support for asset servicing. It can streamline operational processes including subscription/redemption processing, portfolio compliance monitoring, fee and NAV calculation, corporate action processing, and fund accounting.



To achieve true process integration where data remains consistent in real time, the ideal solution is to have a single unified system that is fully integrated across all operations and functions.

Moreover, because a fully-integrated system only requires the use of a single database, it creates a single source of truth, ensuring data consistency across the whole life cycle. This could mean potential savings as well as a reduction in technology risks, as it allows the firm to reduce the use of excess APIs.

In addition, even though all processes are performed in one integrated system, access to data and operational functions can still be securely segregated by properly implementing user access rights. The asset servicing firm can still streamline its entire operation without sacrificing any internal security, further helping to eliminate any human errors.

5 LOOKING FORWARD TO NEW POSSIBILITIES

We are living in an age where technology is advancing exponentially and opening up infinite possibilities. Decades-old problems that have plagued the asset management industry are now being tackled by new ideas and technology, and one of the most talked about technologies in asset management today is blockchain.

Blockchain is a type of distributed ledger technology that introduces a new paradigm for how data is processed, stored, secured and accessed. There are two key principles behind blockchain.

The first principle can be found in the name itself: “block and chain”. On the blockchain, a set of financial transactions are grouped into a block. Each block is assigned a unique identifier generated by an algorithm that links it to the previous block, in effect forming a chain. This means that if someone were to inject an unverified or falsified transaction, it would be rejected as they would not be able to synthesise the correct logical identifier, making data on the blockchain immutable.

The second principle is that these blocks of transactions are stored in a decentralised manner by being distributed across the entire network. This essentially eliminates the problem of a single point of failure for data access, dramatically enhancing data availability.

Blockchain has many applications in asset management, from the digitalisation of fund subscription/redemption to the tokenisation of dividends. Many asset servicing firms around the world such as Northern Trust¹, DTCC², and Luxembourg Stock Exchange³ are already benefiting from blockchain technology. However, while some have successfully mastered the use of this technology, many institutions have yet to gain the know-how and the technical capabilities in-house, or via outsourced services, to be able to fully digitalise their processes.



1 Northern Trust has published a piece called “Blockchain: What you need to know” that outlines their view of Blockchain develop and its potential in asset management.

2 Visit DTCC website for more info: <https://www.dtcc.com/blockchain>.

3 FundSquare (<https://www.fundsquare.net>), a consortium of major players of the fund industry was created in 2010 to analyse the creation of a market utility that would help fund actors mutualise costs and achieve greater efficiency in the fund distribution space.

6 CONCLUSION

Overall, asset servicing firms should feel bullish about their future as their asset management clients continue to expand and explore new opportunities. However, they must also recognise the many challenges and risks ahead so that they can take decisive actions that are both holistic and strategic in order to secure their business growth by adapting their current service offering to their clients' and counterparties' needs in a changing wider ecosystem.

New technology infrastructures like blockchain show enormous promise; while not without challenges, it is only a matter of time before this technology becomes

a key pillar of the asset management industry. Firms that invest today in enhancing their data and operational processing capabilities will enjoy a definitive competitive and technological advantage thanks to a much smoother and faster transition to this new technology infrastructure.

Asset servicing firms would be best advised to take a closer look at how data currently flows across their operational workflows and to engage with experts to explore how process and data integration can help to further improve accuracy levels and services while controlling, if not reducing, costs.

