

Reference Data Consumption: A Changing Model

MAY 2017

Prepared for:



TABLE OF CONTENTS

INTRODUCTION	3
METHODOLOGY	3
A QUESTION OF TIMING	4
A QUESTION OF RESPONSIBILITY	7
REGULATION: MOVING THE DIAL?	9
REFERENCE DATA AND THE OPEN API CONCEPT	9
CONCLUSION	11
ABOUT SWIFTREF	12
CONTACT	12
ABOUT AITE GROUP	13
AUTHOR INFORMATION	13
CONTACT	13

LIST OF FIGURES

FIGURE 1: SWIFTREF STATISTICS ON DATA CONSUMPTION TRENDS	4
FIGURE 2: A SIMPLIFIED VIEW OF THE DATA LIFECYCLE	5
FIGURE 3: EXPECTED IT SPEND ON RECONCILIATIONS	6
FIGURE 4: OPENING ACCESS TO DATA	10

INTRODUCTION

Internal and external drivers have pushed financial institutions to alter the way they consume and manage reference data. Regulators, clients, and business units are keen for more rapid and on-demand provision of data in order to meet an assortment of internal and external requirements. The imperative for increased timeliness and accuracy of key data sets has also compelled many firms to focus on data quality measurement and management, though data governance is tricky when dealing with data sets that have no real “owner”.

This white paper, commissioned by SWIFT’s reference data service SWIFTRef, examines the state of data management in the current market in terms of reference data consumption trends, data quality challenges, and external and internal drivers for change.

METHODOLOGY

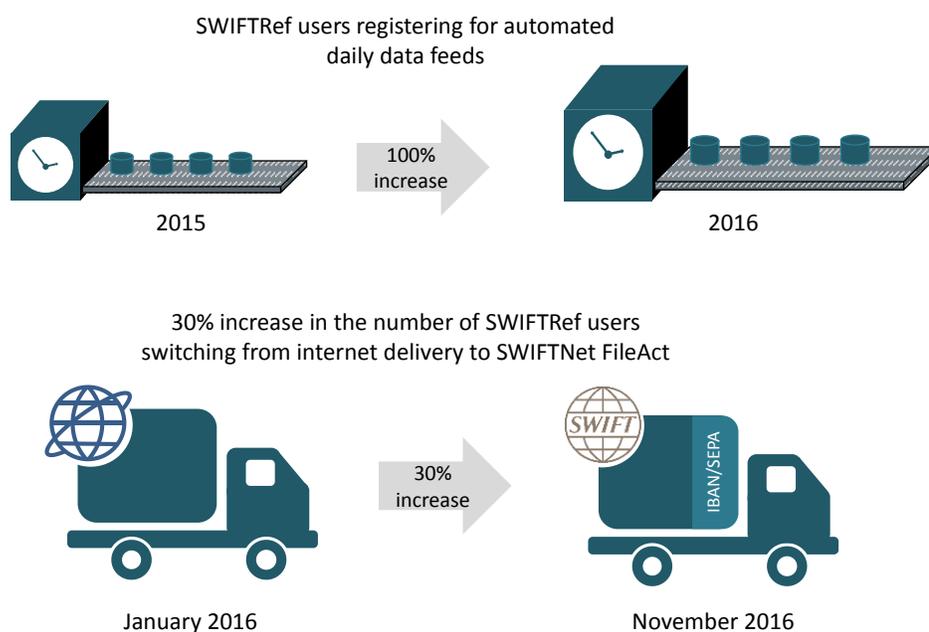
This white paper is based on a closed-door roundtable conducted during the Sibos conference in Geneva, Switzerland in September 2016 and ongoing Aite Group research on data management.

A QUESTION OF TIMING

Much industry discussion over recent years has centered on the issue of reference data timeliness due to initiatives and regulatory developments such as the United Kingdom's Faster Payments and the Single European Payments Area (SEPA) Instant Payments, and the shortening of the settlement cycle in various securities markets across the globe. A roundtable panelist notes that his bank has been compelled to alter the data delivery cycle for its corporate clients from monthly to daily, which has entailed the initiation of several internal infrastructure projects to align with SEPA Instant Payments requirements in the future.

SWIFT indicates that as of November 2016, twice the number of SWIFTRef users have registered for automated daily data feeds, compared to last year (Figure 1). In contrast to batch file delivery, this option increases customer's process efficiency. SWIFT has also observed a 30% increase in the number of SWIFTRef users switching from internet delivery to FileAct over SWIFTNet as a secure data delivery channel. Moreover, one third of the SWIFTRef data delivered over SWIFTNet is composed of International Bank Account Number (IBAN) and SEPA-related files, which highlights the importance of these data sets to clients.

Figure 1: SWIFTRef Statistics on Data Consumption Trends



Source: SWIFT, Aite Group

Instant payments, which are also called immediate or real-time payments, are to be part of the SEPA program to increase the European market's competitiveness and economic growth. The European Payments Council (EPC) is focused on supporting the introduction of instant payments via deployment of next generation technologies and new market practices. The EPC is planning to release a SEPA Instant Credit Transfer scheme in November 2017 as part of this strategic program. Though there is not yet a pan-European scheme, numerous countries have introduced

national instant payment solutions, including Denmark, Poland, Sweden, and the United Kingdom.

The focus on real-time delivery of data has increased the pressure on operations teams to ensure data is readily consumable by downstream systems and that a high level of straight-through processing (STP) is in place. A consulting roundtable panelist indicates that the cost of breaks in the STP chain has become much more visible to financial institutions as a result of this focus on timeliness. The concept of getting data into the right format for downstream usage is simple but the execution is more challenging, panelists agree. Many downstream processes (Figure 2) can be impacted significantly by a change in the regularity of data delivery, especially if these processes are manual or must take place within a large number of systems. In order to load data into any type of data management system, it must first go through an extract, transform, and load (ETL) process.

Figure 2: A Simplified View of the Data Lifecycle



Source: Aite Group

A vendor panelist explains that reference data's old moniker of "static data" is inaccurate in the context of today's markets where clients are keen to see changes such as post-merger impacts on legal entity structure as soon as they happen. Keeping a handle on counterparty and credit risk is predicated on understanding the corporate structure of these entities; hence timeliness of data has increased in visibility post-Lehman and in light of regulatory systemic risk monitoring.

Though speed of data delivery has been prioritized at the regulatory level, not all corporates require real-time updates. A corporate roundtable panelist indicates that a monthly cycle of reference data delivery suits his firm because a significant amount of data "massaging" is required to get it into a fit state for end-system consumption. If data was delivered more regularly, it would result in a bottleneck due to the manual processes required for ETL.

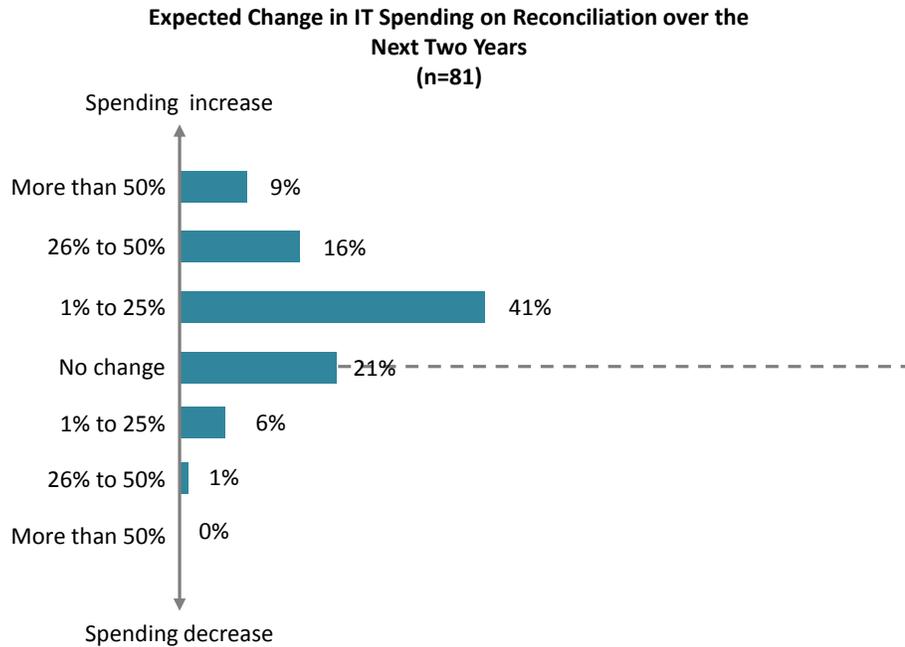
The quality and format of data is therefore an underlying challenge for all market participants. Though many firms wish for data to be delivered on demand and to be updated in real time as changes happen, poor data quality means that there are many practical issues that impede significant progress toward achieving these goals across the industry.

Poor data quality and a lack of industry standardization are also reasons why investment in data cleansing and reconciliation are increasing year-over-year. An Aite Group survey of 82 financial institutions¹ conducted in 2015 indicates that two thirds of firms expect to increase their IT

1. See Aite Group's report [Reconciliation Trends in 2016: Regulation and Nervous Recs](#), February 2016.

spending on reconciliation over the next two years, while a quarter believe their spending will increase by more than 25%.

Figure 3: Expected IT Spend on Reconciliations



Source: Aite Group's survey of 82 individuals engaged in reconciliation processes, 2015

A QUESTION OF RESPONSIBILITY

Solving data quality problems is not a simple task. Though firms engage in extensive manual or partially-automated cleansing and reconciliation activities in order to ensure data is of sufficiently high quality, this is unsustainable in an environment where data complexity and volumes are increasing. A European banking panelist notes that poor data quality for items such as IBANs was particularly problematic when his firm was attempting to meet SEPA compliance requirements a couple of years ago. These problems did not stem from technology issues but from a lack of ownership of the data within the data supply chain. Focusing on fostering a culture of data governance within financial institutions is therefore an important first priority for many firms in meeting internal and external requirements.

There are also many downstream challenges for maintaining accurate client data, including IBANs and Business Identifier Codes (BICs). For example, though classification requirements are often dealt with during the onboarding process, at which point clients are segmented into specific categories and tagged with required identifiers, they also necessitate proactive reclassification of client data on an ongoing basis (e.g., change of domicile as the result of an acquisition or change of BIC). If there is no function dedicated to performing this task, then firms may fail to meet client and regulatory requirements, and face resulting financial penalties and reputational damage.

Standing settlement instructions (SSIs), which are agreements between the counterparties to a trade or payment that define key settlement information such as bank, account number, and account name, are particularly challenging. Client and counterparty data are foundational elements for SSI creation and maintenance; hence, a coordinated approach to maintaining both data sets would be logical. One of the challenges in establishing such a link is the physical and cultural distance between the client onboarding function, which tends to sit in or near the front office, and the functional responsibility for SSI data, which tends to sit in the back-office operations area.

The majority of respondents to an Aite Group survey² conducted in 2015 were unable to give any figures regarding the number of settlement failures caused by poor quality SSI data, which further reinforces the idea of a disconnect between client data and SSI data. Firms are aware of the problems caused by the lack of a joined up approach to legal entity data and settlement data but, in order to tackle the issues, will need to implement a wider strategic framework. This would be necessary to coordinate the internal teams charged with dealing with the various related data sets. A technology and data governance overlay could be one way of approaching this challenge, bringing both data sets into alignment with each other. For improved STP and risk transparency, the SSI accounts and legal entities must ultimately be tied through common identifiers, which will enable the automated linkage of SSI data to the corresponding internal legal entity information.

The Legal Entity Identifier (LEI) is another part of the reference data picture. The identifier faces a greater challenge, however, due to its lack of industry adoption overall. The LEI universe is

2. See Aite Group's report [Client Life Cycle Management and KYC: Things Can Only Get Better](#), April 2016.

currently limited to around 450,000 entities and this represents only an estimated 13% of the rated, regulated, and listed universe of entities.

Given that only 25% of entities with a BIC also have an LEI, there is a long way to go before the LEI is the identifier of choice for counterparty and client identification purposes. A regulatory mandate to adopt the identification standard is likely to compel greater adoption, as it has within the derivatives universe already, but industry-level support will be required to ensure LEIs are used for purposes other than reporting.

Though adoption is slow for some of the newer reference data items, the ownership of these various data sets will continue to be important to ensure high levels of data quality in the long-term. In a successful data management environment, data governance responsibility rarely resides with a single individual—the function dictates that all business heads and data owners must take a stake in setting the agenda and in providing a constant feedback loop to ensure that the data required for business is fit for purpose. Accordingly, data governance frameworks and the appointment of data stewards are key components of data management at the grassroots level, and the development of a data management steering committee is a key component at the top level. Fostering this level of business commitment to data governance is a significant challenge and one that is not easily introduced without ongoing C-suite support and a compelling case for investment and attention.

Regulatory-driven requirements could play a part in ensuring data owners on the business side take responsibility for these data sets, suggest panelists. Compliance spending could therefore be targeted at improving data quality for reporting and also at bringing in tools to better monitor data governance. Compelling investment in data management and governance is beneficial, but how far should regulators go toward setting the standards themselves? That is a tricky proposition as regulators are not best placed to set standards—industry participants better understand their own data requirements, after all.

Roundtable panelists agree that data accuracy and standardization could be improved overall across the industry if there was more cooperation and community building around reference data taxonomies and data dictionaries. A data rating system for reference data is an interesting notion in this area, panelists suggest, but it would be challenging to agree the fundamentals across the industry. The concept of crowdsourcing and sharing basic reference data items via an acceptable administrator or gatekeeper, though difficult to achieve, is also a desirable goal for the industry as a whole. It is here that new technologies and data consumption models could potentially play a role. Making the data more open and accessible across a community could allow for greater cooperation in keeping that data clean and fit for purposes—the Wikipedia model of data sharing and ownership.

From the client side, however, the equation is simple. As a corporate panelist explains, the only thing that matters in the end is that the payment happens. Corporates would like the process to be as simple and painless as possible.

REGULATION: MOVING THE DIAL?

Regulation is a driving force for standards adoption, but it can also alter competitive dynamics in the market. The Payments Services Directive (PSD), which became applicable in November 2009, provided the legal foundation for the creation of an EU-wide single market for payments. The target was to make cross-border payments as easy, efficient, and secure as domestic payments and the directive provided the necessary legal platform for SEPA. Market growth and technological improvements in the industry created various regulatory issues which demanded a legislative response. In 2013 the European Commission proposed to revise PSD. The Second Payment Services Directive (PSD2) came into force in January 2016 and must be transposed into national law by the European Union Member States by 13 January 2018. PSD2 aims to modernise the legal framework in line with the evolution of payments technology and the emergence of innovations and new players that operate within areas of legal uncertainty³. It is anticipated that PSD2 will significantly alter the competitive dynamics in the payments arena.

To this end, PSD2 introduces two new types of payment institutions—account information service providers (AISPs) and payment initiation service providers (PISPs) – collectively known as “third party payment service providers”. The directive allows these new regulated entities to get access to payment account data held by account servicing payment service providers (ASPSPs), i.e., banks and other financial institutions that hold consumer accounts. Also, payment service providers that issue card-based payment instruments get access to payment account data to be able to check if there is a sufficient balance on the account. To offer account information services, payment initiation services, or balance-checks for card payments, such providers do not require a contract with the ASPSP.

To facilitate these changes, AISPs are required to offer at least one interface in place, which must be either a dedicated interface (API) or it must allow the use by Payment Service Providers (PSPs) to the same communication interface used by the clients/payment service users (e.g. online banking). According to the final draft regulatory technical standards, the technical specifications of the dedicated interface must be documented and available, at no charge, upon request of an authorised PSP. The documentation must specify a set of routines, protocols, and tools that allow PSP software and applications to interoperate with the bank systems.

An API provides a standardized way for developers to communicate with a service provider. For this purpose, the provider publishes a precise specification that must be adhered to when developers want to access the service. The API describes what functionality is available, the format used to communicate, and the conditions for using the service.

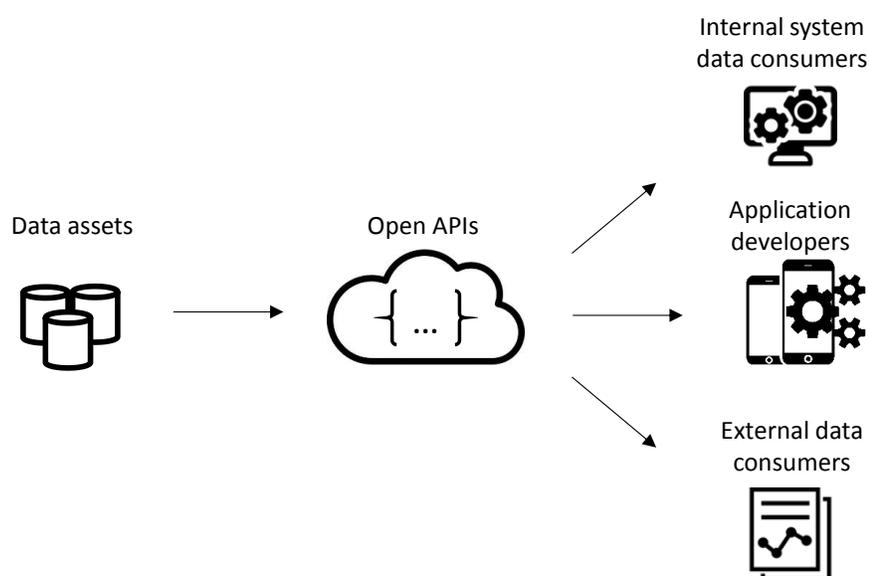
REFERENCE DATA AND THE OPEN API CONCEPT

The popularity of APIs over recent years can be attributed to the fact that they potentially offer secure, controlled, and cost-effective market access to data or technology. Private APIs, housed within the walls of a financial institution, have grown up as part of technology innovation

programs, but there is increased industry interest in open APIs, ranging from member-defined to fully-public models. Opening up data and technology platforms to third parties (outside of the institution) is not without its perils—cybersecurity and data privacy are two such considerations—but the concept has gained increased attention for a reason. High profile examples of successful API strategies in the digital marketplace include Salesforce, Amazon, and LinkedIn, where these firms have opened up their platforms to enable third party developers and customers to better access data and add functionality. Now that regulators are pushing the payments industry in the same direction in Europe, it seems that the time for (open) APIs has truly arrived.

A vendor panelist explains that the benefit of open APIs within the context of reference data is that they move the decision around how often data is received from the provider of the data to the consumer; from a push model to a pull model (Figure 4). They provide another way of consuming data than the traditional method of sending flat files on a regularly scheduled or even on a real-time basis.

Figure 4: Opening Access to Data



Source: Aite Group

Many items of reference data could be shared in this manner, agree panelists, though there are restrictions when it comes to certain client-specific items due to national data privacy laws. If payments infrastructure can be opened up via an API strategy, there is no reason why the more commoditized and publically-sourced end of reference data could not follow suit for data distribution purposes. This does not, however, solve the challenge of accountability for this data; hence any such technology program must be supported by an industry-agreed collaborative model for data contribution and governance.

CONCLUSION

- **Timeliness of data is an important consideration in light of the industry focus on risk measurement and management.** The industry focus on real-time delivery of data has increased the pressure on operations teams to ensure data is readily consumable by downstream systems and that a high level of STP is in place.
- **Data governance is a tricky thing to get right and requires a culture of accountability.** Poor data quality and a lack of industry standardization are reasons why investment in data cleanup and reconciliation are increasing year-over-year. These problems often do not solely stem from technology issues but also from a lack of ownership of the data within the data supply chain. Ensuring that key reference data items have business owners internally is a far from simple task and some firms are keen to see an industry-level collaborative model—potentially including data crowdsourcing—for commoditized data sets. Determining which data items are ripe for this approach will, however, not be easy.
- **The open API concept is an interesting model to consider for the future of the more commoditized end of payments reference data.** The benefit of open APIs within the context of reference data is that they move the decision around how often data is received from the provider of the data to the consumer; from a push model to a pull model. By enabling the consumer to access data as and when required, firms can potentially eliminate a number of data distribution processes.

ABOUT SWIFTRF

SWIFTRf is SWIFT's unique reference data utility. Whether you are a financial institution, a corporate, a data or service provider, SWIFTRf offers a single source for all the reference data needed for flawless payments processing, accurate regulatory reporting, counterparty risk analysis and due diligence. If identification and validation of BICs, IBANs, national bank codes, standing settlement instructions, SEPA routing information or other reference data are challenging you on a daily basis, discover how SWIFTRf can help.

With SWIFTRf, you'll benefit from access to:

- Single source, instead of multiple
- Worldwide data, covering all geographies and extensive national payment systems
- High quality data, sourced from and maintained by the official and authorized originators
- Frequently updated data
- A broad choice of delivery channels (online, manual file download, file download automation, file delivery over FileAct, SWIFTRf APIs)
- Around-the-clock product and investigation support

CONTACT

For more information, please contact:

For customers in EMEA

swiftref@swift.com

For customers in APAC

contactmeAPAC@swift.com

For customers in the Americas

swiftref.americas@swift.com

ABOUT AITE GROUP

Aite Group is a global research and advisory firm delivering comprehensive, actionable advice on business, technology, and regulatory issues and their impact on the financial services industry. With expertise in banking, payments, insurance, wealth management, and the capital markets, we guide financial institutions, technology providers, and consulting firms worldwide. We partner with our clients, revealing their blind spots and delivering insights to make their businesses smarter and stronger. Visit us on the [web](#) and connect with us on [Twitter](#) and [LinkedIn](#).

AUTHOR INFORMATION

Virginie O'Shea

voshea@aitegroup.com

CONTACT

For more information on research and consulting services, please contact:

Aite Group Sales

+1.617.338.6050

sales@aitegroup.com

For all press and conference inquiries, please contact:

Aite Group PR

+1.617.398.5048

pr@aitegroup.com

For all other inquiries, please contact:

info@aitegroup.com