

DATA MANAGEMENT, A KEY ISSUE FOR BANKS AND FINANCIAL INSTITUTIONS

# How to reduce the risks involved in financial data management

In Asset Management and Private Banking the quality of financial data plays a key role. Many feeds (internal and external) have to be cleansed, integrated and reconciled in heterogeneous referential systems at front-, middle-, and back-office levels.

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The security master file and the client file are the two primary reference data elements in financial institutions. While the client file principally handles information resulting from manual entry, the security master file automatically integrates a quantity of data coming from internal and external providers. The most common data sources consist of security prices, currency rates, ratings, issuers characteristics, funds data (cut-offs, asset allotment, Net Asset Value frequency), sectorial classification, index composition, instrument identifiers (ISIN, SEDOL, CUSIP, national codes) and calendar information (market opening and closing days).

Several providers exist for each type of data feed. Providers for instrument prices include SIX Telekurs, Bloomberg, Thomson Reuters and Interactive Data among others. Providers for ratings include Standard & Poors, Moody's and Fitch and others. Some other providers or data flows may have also to be added for Corporate Actions such as SWIFT. Dealing with such a diversity of data feeds requires both manual and automated control processes in order to ensure the intrinsic quality of data as well as the correct integration of the data before making it available to various applications (trading, portfolio, funds, back-office)..

Data quality in the security master file has a direct impact on risk management on a number of levels. Accuracy of security prices is fundamental for customer portfolio valuation, nostro account valuation, funds net asset value, as well as margin calls for clients exposed to future markets. Company and debt ratings are used to define a risk profile for the client portfolio, as well as estimating the maximum credit amount in Lombard loans (valuation of collateral). While the data for a given security is reasonably static, the first issue in managing the security master file is the quantity and variety of securities on the market. Very few individuals or organisations have the resources to research every security traded in the world, and this is complicated by the fact that new securities are generated every day. Keeping on top of securities presents a real challenge. This is particularly true given that there is no single data source that holds information on every security, meaning that one must typically have multiple data sources for security information.

## How to maintain data consistency with multiple data sources and very specialised applications?

Having multiple data sources for securities leads to a second major issue regarding the maintenance of a Security Master file: the identification of new securities or instruments that come in to the system. New securities frequently contain unclear identifiers, or identifiers that exist in a different



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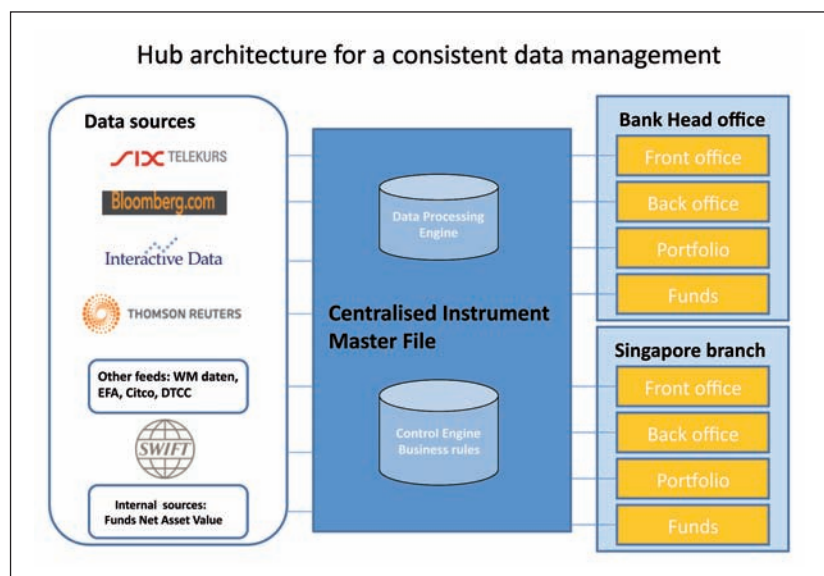
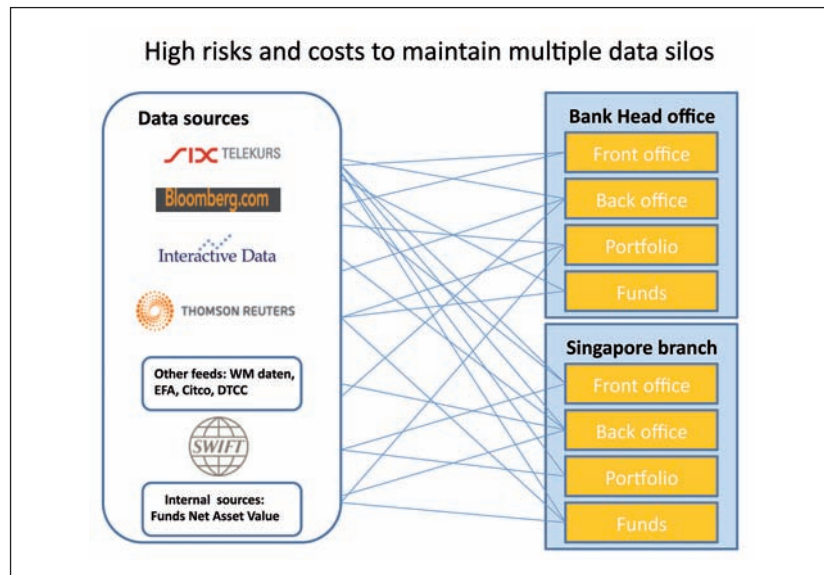
scheme, e.g. ISIN vs CUSIP. Alternatively, they return no information when queried on data sources. Correctly identifying a new security and subsequently retrieving the correct corresponding information can be a complex and time consuming task. This is particularly true in the case of illiquid papers or funds.

The various market data feeds are usually plugged to very specialised applications (trading, portfolio, funds, back-office, ...). Each application has its own feed integrator, decoding engine, control rules and storage tables. Both the risk and cost of maintaining market data in heterogeneous systems are very high due to the necessity to deal with many technical interfaces ▶

plugged to each banking system, the necessity to reconcile the data between the various systems and the necessity to replicate the information (for example, a security price integrated in the back-office system has to be replicated in the front-office system to be made available for client portfolio valuations).

The centralised back-office model, which serves different geographic entities of the same group (subsidiaries or branches), or which offers security services to other companies, is developing very fast. This model necessitates the control of market data feeds dedicated to each entity along with their local specificities due to particular regulations and tax rules. In order to limit risks and to reduce operational costs as well as market data and IT costs, the centralisation of feeds into a single tool which loads, controls, decodes, stores and dispatches data to all the serviced banking systems (hub architecture) appears as a natural solution. This architecture limits the redundancy of information as the central data repository, and acts as master in a master/slave model with other banking systems. Such a tool must also be able to deal with the business rules and constraints of every slave system, in order to avoid the rejection of data at integration level.

Migrating from a departed architecture to a hub architecture (creation of a centralised instrument master file) involves several steps: analysis of the business rules and requirements of every system in order to deport all controls to the centralised master file level; pre-migration reconciliation of data stocks in the various systems in order to detect and fix any discrepancies before initialising the centralised master file; creation of interfaces to link the centralised master file to the remote systems in order to replace the direct links between the data



feeds and these systems; configuration of Graphical User Interfaces in order to make the consultation and the manual entry in the master file user friendly; definition of priority rules in the case where the same type of information is available on several feeds (i.e. If Bloomberg and Telekurs provide different prices for the same instrument, what price should be broadcasted to the systems linked to the master file?); and finally, consideration of performance issues due the considerable quantity of data processed by a centralised master file.

### Enterprise-wide data management with a centralised master file

Having brought a centralised instrument master file live, one may consider the further step of extending the inputs to

include dynamic data such as corporate action feeds since this requires multiple information sources: SWIFT ISO 15022 from the custodians, on-line newspapers, SIX Telekurs, Bloomberg or Thomson Reuters announcements, faxes, e-mails. Internal front-office information on optional events could also be integrated and processed.

Sterci has developed a suite of products to help banks or financial institutions to better manage their data and reduce their risks. KEYdata allows your organisation to build a centralised master file for financial data management. This master file can select, filter and cleanse data according pre-configured business rules. The master file is automatically updated by the data provider and can distribute a golden copy internally to the various back end systems. Furthermore KEYdata can assist corporate actions processing by providing validated data across multiple sources. Data standard are always evolving and the business logic of

internal applications is not aligned with the international standards as SWIFT. Sterci is providing with STEFORM a nice tool to map external standards with internal data formats without developing costly intrusive interface. With over 15 years of experience in data management projects, Sterci's specialised consultant can help you trace your path in the jungle of data management and build efficient robust systems thereby reducing costs and risks. ■

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