White Paper: Centralized Reference Data Management

Financial institutions are increasingly focusing on consolidating data across silos and making organizational changes to introduce an enterprise-wide data management strategy. It is now recognized that a golden source security master can reduce cost while increasing data quality, driving the need for developing a road-map strategy for successful project implementation. The 'golden copy' security master—a single, centralized, trusted data source for all enterprise-wide consumers of security master data—serves to facilitate enterprise-wide management of security data and acts as a system of record for security data. This golden copy data hub receives security data from various internal sources and external data providers, applies business rules that translate, validate and enrich the data, then publishes the golden data to consuming systems such as trading systems, compliance, accounting, performance measurement, client reporting, portfolio research and so on. An enterprise security master (ESM) will increase user satisfaction and trust in the data, while at the same time reducing data propagation and inconsistencies across the enterprise. The golden copy security master will also provide opportunities to optimize business processes and produce a more efficient security master data workflow throughout the enterprise. For example, the time it takes to manually look up security master data on a Bloomberg terminal can be eliminated with real-time data requests and fulfillment from the data vendor itself. However, implementation of an ESM environment must be accompanied by a data management function. An ESM should not be expected to run on 'autopilot.' There must be a data management function that reviews, researches and scrubs data exceptions that do not pass validation, and provide the necessary alerts and updates to downstream users.

Opportunities

With a number of benefits, financial institutions will be able to realize cost savings with a golden copy security master through:

- Increased data quality
- Central acquisition of data avoiding redundant data costs
- Enhanced operational efficiencies and more timely receipt of refreshed data (ie, refreshed security master file (SMF) data to complement 5:00am start-of-day holdings feeds to trade order management platforms either directly through a hub or indirectly via the accounting environment)
- Reductions in data management issues, exceptions created by manual processes, and operational costs
- Reductions in operational risk
- Ease of system scalability

A single golden copy security master data hub that contains data trusted to be complete and correct will reduce "one-off" data propagation by various users who may not feel the current state security master data meets their analysis or reporting needs.

Business-Side Challenges

But as with most such beneficial projects, there tends to be a few barriers to overcome before this finishing line can be crossed. The biggest business challenge facing many firms is to garner executive sponsorship and build a business case, along with ROI (return on investment) analysis, as it takes some time to realize tangible returns from softer items such as 'increased data quality.' Another key challenge will be the solution's ability to meet the data needs of each constituency. They often have their own unique requirements for security master data. Today's ESM technology allows for the creation of an ESM record with the respective sources and attributes as well as maintaining and publishing specific characteristics or attributes for individual business units. All levels of the enterprise must reach consensus that once implemented, the golden copy security master will become the enterprise system of record for all security data. This means that in future, all data correction must be completed in the hub and pushed out to dependent systems throughout the enterprise. Without centralized control, the operational efficiencies associated with correcting and maintaining data at a single point, will be lost. Also, the ESM must be flexible enough to allow for a trading environment, such as fixed income, to set up its own new security record and to report the new security to the ESM, which in turn will continue to update the respective security record on a daily basis and feed refreshed SMF data to the respective fixed-income trading environment.

Implementation hurdles

In terms of completing the actual project, complex integration needs and implementation options are the top technical challenges for successfully introducing a centralized golden copy security master. Integration needs must address the critical issues of establishing a data management function (if one does not exist), decommissioning legacy system SMFs, and harmonizing data flow to existing systems. Throughout, it is important to take into consideration all requirements while establishing an acceptable method for unique security identification, development of the enterprise composite record for each security type, and one-time conversion to the newly created centralized golden copy security master. Other technical challenges associated with building a golden copy security master revolve around the need to pull together composite security records using many disparate internal and external data sources and data formats, validation of the received data, and timely publication of the golden data. As data inputs are consolidated, it will be important to develop a set of business rules concerning the hierarchy (layers of trust) of data sources and a remediation path for data mismatches and duplicate securities that arise as a result of conversion/migration from current state systems to the new golden copy security master. The ongoing challenge will be to identify and develop an agreed-upon enterprise-spanning set of practices for new security setup, enrichment, exception processing, and data publication.

Overcoming challenges

One approach that has proved to be very effective in successful implementations of the golden copy security master is the adoption of a roadmap strategy that clearly identifies the current state business processes, data flow and workflow, as well as an agreed-upon future state, and a phased approach to achieve that future state. Once the current state business processes, data flow and workflow are identified, the focus should be on the opportunity to optimize business processes and data costs. This optimization can be achieved in a workshop environment where business and technology partners review and agree upon optimized future state business processes as well as a phased approach to achieving the ultimate future state. The roadmap must also address the issue of governance: it is critical to establish commonly agreed-upon governance standards that promote the appropriate oversight of business process control, data flow and workflow of the golden copy security master. Through clear definition of the roadmap, the project team will easily be able to facilitate discussions and build consensus across the business, operations and IT groups concerning data management, governance and ownership. Additionally and importantly, the clearly defined roadmap builds a business case to garner executive sponsorship for the implementation of a golden copy security master.

Integration challenges can be mitigated through clearly defined business requirements that focus on identifying and defining business rules as well as data rules to support business requirements. This type of framework facilitates the definition of enterprise data flows (including identification of data creators and consumers) as well as service-level agreements for data receipt and publication. This approach ensures that all the stakeholders (business as well as technology) can review and validate requirements in an unambiguous fashion for conformance to business processes agreed upon during the roadmap definition process. Also, overcoming implementation challenges such as varying needs for SMF data can be mitigated with a phased approach. For example, a phased approach may mean that the initial phase may only focus on the implementation of simpler instruments such as equity. Further phases may involve more complex instruments such as fixed income and derivatives then on to additional asset classes as necessary. At the end of the day, there is no one 'silver bullet' or 'one size fits all' solution. Every firm is different, and a successful creation of a centralized golden copy security master solution depends on understanding and adapting to the unique requirements and processes within an organization.

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