

# Data Strategy & Management for Capital Markets

## Changing Capital Markets Are Driving Comprehensive Data Initiatives

As capital markets have evolved, the need for valuable market and reference data has become a central focus of many securities firms. The recent explosion of derivatives and structured products has increased the breadth of required security information, and various compliance initiatives have created a requirement for better management of client and counterparty information.

It is no longer possible to maintain an isolated trading platform with direct connections to vendor data sources and feeds. Integral operations within all capital markets firms require each system to have identical reference data. Otherwise, a firm would be overwhelmed with reconciliation activities, elimination of internal arbitrage scenarios, failed trades, and an overall lack of visibility into the true price of a security.

### Accurate and Timely Data

Sourcing data has evolved beyond simply loading a feed from a major data vendor. Each data feed has individual strengths and weaknesses and capital markets firms must aggregate feeds to produce a single coherent view. Merging component attributes into a single data model runs into several issues—vendors make their data available at different times; the feeds themselves have proprietary attribute names and data formats; and proprietary identifiers are often difficult to map to standard identifiers. Additionally, securities firms produce a tremendous amount of in-house data which needs to be aggregated as well.

### Multiple Trading Environments

Security trading has become a complex environment and most capital markets firms have multiple trading systems targeted towards specific products. Managing the data flow into and out of each system so that all systems stay in sync can be a tremendous effort. However, failure to do so can result in potentially different prices for the same security between trading environments.

### Data Consolidation versus Centralization

Managing the myriad data sources within a capital markets firm has always been a difficult endeavor. Many securities firms have begun to understand the importance of centralizing reference and market data ownership within a single firm-wide entity which controls the downstream distribution to consumer systems.

Historically, market and reference data was managed by individual systems, such as trading systems, risk management VaR engines and compliance reporting. Firms first attempted to consolidate reference data by physically centralizing the creation and warehousing of all incoming market data. Unfortunately, this approach often drastically impacted processing time.

The preferred approach is to build a “centralized distribution” center which serves as the management point for all incoming changes. All vendor feeds are processed and aggregated along with security changes from individual upstream systems, such as creation of new securities, updates to static information, mark-to-market pricing, and corporate action changes. This allows front-office trading operations to modify security attributes and price marks in the system of their choice. Changes and updates are then pushed out to consumers, whether they are trading, risk management, compliance or research, thus realizing the potential of distributed processing without the headaches of multiple setup routines.

Capgemini is focused on providing clients with a top-down strategic approach to data management issues ranging from initial project requirements analysis and planning to formulation of a team to provide data quality operations.

#### Reference Data Contents

- Client and Counterparty Hierarchies
- Counterparty Static Data
- Security Reference Identifiers
- Security Hierarchies and Benchmarks
- Security Static and Fundamental Data
- Pricing and Timeseries Data
- Corporate Actions
- Credit Ratings and Curves
- Index Constituents
- Firm-wide Positions and Transactions
- Firm-wide Accounting Data

#### Asset Classes

- Equities and Equity Options/ Futures
- Fixed Income Securities
- Mortgage Backed/ Asset Backed
- Interest Rate Derivatives
- Credit Derivatives
- Structured Products
- Custom Indices and Index Constituents

### Strategy Consulting

Capgemini has industry veterans and subject matter experts focused on the high level analysis and project definition stages of any project. Our strategy consultants assist clients in determining business drivers and translating them into an overall system design, providing data model and asset class expertise, and defining the enterprise architecture required to build effective reference data management systems.

### Custom Development

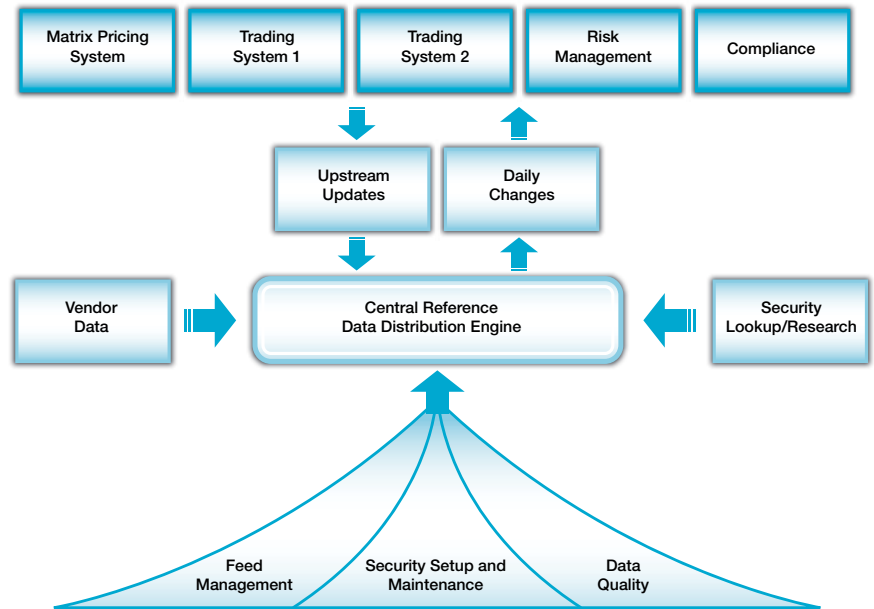
Many components of a reference data system will require custom development, especially for designing custom data loaders, web-based research portals, and proprietary analytic engines. Capgemini brings proven development skills to any existing reference data project or we can deliver a custom-built application which meets your specifications.

### Data Quality and Maintenance

Building a centralized data engine is only the first step in providing quality data to downstream consumers. Capgemini's data quality and maintenance consultants can accurately and cost effectively manage the day-to-day activities for your data warehouse. From data investigation for possible erroneous attributes to management of vendor data feeds when they are late, Capgemini consultants provide a wealth of knowledge to ensure that your data remains clean and on-time.

### Data Warehouse Implementation

Our data warehouse implementation offering helps clients with the overall data centralization process. Projects range from proprietary development of data warehouses, vendor product integration, and enhancements to existing frameworks.



### Workflow Management

Proper workflow management and BPM processes are an integral part of a centralized data warehouse solution. The integration of numerous trading, risk management, compliance, and research systems with the normal daily operation of the data warehouse requires a BPM solution capable of distributing updates and alerting operators to any exceptions. Capgemini BPM specialists have extensive experience connecting data warehouses to upstream and downstream systems.

#### In Practice: Centralized Data for Risk Management A Security Master Case Study

Having outgrown the previous reference risk management data warehouse, a major capital markets firm sought direction on how to fundamentally revise the approach to VaR calculation. Capgemini led a sweeping redesign of the entire system.

#### Results

- Used ETL loaders to manage data acquisition and transformation
- Provided a data dictionary and fully defined security data model
- Provided routines for efficient data quality checks and cleansing activities
- Centralized security data from upstream sources in a single risk management database
- Created analytics to compare similar products and identify upstream data anomalies

### In Practice: Mark-to-Market Workflow A Strategy Consulting Case Study

Challenged to deliver several new trading platforms to the front-office, a major capital markets firm needed help to centralize security pricing and assign mark-to-market pricing ownership. Responsibility was assigned on an asset-class basis to the appropriate desk in real-time to support the growing structured product business. Capgemini worked with Managing Directors to define security marking requirements and timeliness and with technology managers to understand trading system marking capabilities and price consumption.

#### Results

- Created workflow for automated creation of securities lists and assignment to appropriate desks
- Created framework for a real-time centralized pricing engine
- Presented results to steering committee



### About Capgemini and the Collaborative Business Experience

Capgemini, one of the world's foremost providers of consulting, technology and outsourcing services, enables its clients to transform and perform through technologies.

Capgemini provides its clients with insights and capabilities that boost their freedom to achieve superior results through a unique way of working, the Collaborative Business Experience™.

The Group relies on its global delivery model called Rightshore®, which aims to get the right balance of the best talent from multiple locations, working as one team to create and deliver the optimum solution for clients.

Present in 40 countries, Capgemini reported 2010 global revenues of EUR 8.7 billion and employs around 112,000 people worldwide.

Capgemini's Global Financial Services Business Unit brings deep industry experience, innovative service offerings and next generation global delivery to serve the financial services industry.

With a network of 21,000 professionals serving over 900 clients worldwide, Capgemini collaborates with leading banks, insurers and capital market companies to deliver business and IT solutions and thought leadership which create tangible value.

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