# Table of Contents

EXECUTIVE SUMMARY ............................................................................................ 3

THE HIGH COST OF RELIABILITY AND FINANCIAL CONTROL .......... 4
  THE CRITICAL NATURE OF FINANCIAL REFERENCE DATA .................... 5
  THE CHALLENGE IS ALIGNMENT, NOT JUST SYNCHRONIZATION .............. 5
  REQUIREMENTS FOR MANAGING FINANCIAL REFERENCE DATA ............. 6
  THE IMPORTANCE OF ACCURACY AND CONSISTENCY ................................. 7

THE NEED FOR DATA GOVERNANCE ................................................................. 9
  ENABLING DATA STEWARDSHIP ................................................................. 9
  LEVERAGING TECHNOLOGY TO MANAGE FINANCIAL REFERENCE DATA ... 9
  CREATING A “CENTER OF EXCELLENCE” TO MANAGE FINANCIAL REFERENCE DATA ... 10
  QUANTIFYING THE SUCCESS OF A FINANCIAL DATA MANAGEMENT PROJECT .... 10

DRM: PART OF A BEST-IN-CLASS PRODUCT PORTFOLIO .........................11

CONCLUSION ....................................................................................................... 13
Executive Summary

Enterprises that have complex reporting requirements and financial information spanning multiple disparate systems are often engaged in a difficult and expensive struggle between the need for flexibility to support specialized reporting requirements and the need for financial consistency. Different local or departmental views of financial reference data such as balance sheet structures, entity structures, cost centers and cost center rollups are often misaligned, introducing financial compliance risks and leading to inconsistent financial measures, effort-intensive closing processes, and huge amounts of time spent researching and reconciling disparities. Often the only indicators of this situation are a lack of agreement in financial measures across systems and departments and an onerous financial close process.

Some organizations attempt to solve this challenge by enforcing strict, enterprise-wide standards for financial reference data. This “one size fits all” approach removes complexity, but also removes the ability to understand performance within specific departments and business units. A strict and comprehensive standards approach also fails to support different local or regional legal reporting requirements. For large or complex enterprises, a single, uniform reporting standard is not feasible.

Most organizations recognize the need for departmental views and local legal reporting requirements and therefore attempt to support high-level standards while allowing local customization of financial reference data. Conceptually, this approach can support both the needs of financial consistency as well as the need for departmental and business-unit level flexibility. However, this approach results in multiple interdependent instances of financial reference data within each department or business unit, greatly increasing complexity. Changes to financial reference data, such as adding a new account, reclassifying a set of asset accounts, or moving a set of cost centers to a new business unit, have to be replicated across each instance of the financial reference data. For most companies, this process is highly manual and poorly controlled. Individual business units each attempt to recreate the proper changes within their own instance of the financial reference data. Ultimately, changes are not made with consistency across all instances, resulting in reporting disparities that must be resolved through costly research and reconciliation.

Oracle Data Relationship Management (DRM) provides a change management platform built specifically to support complex financial reference data. With DRM’s robust security and rich hierarchy management features, organizations can easily enforce high-level standards and controls, while seamlessly supporting departmental and business unit flexibility. The solution also provides configurable validations, comprehensive audit logs, change history, rich comparison and analysis capabilities, and the ability to model future “what if” scenarios. With DRM, organizations can achieve both agility and financial reliability through alignment.
Making the Case for Data Relationship Management (DRM)

Achieving Agility through Alignment

The High Cost of Reliability and Financial Control

As companies grow in size or complexity, reliability of information often becomes an elusive goal. Competitive and market pressures drive companies to grow in size, enter new segments and geographies, conduct multi-national operations, and comply with regulations in multiple countries. Global competition and macro-economic cycles place pressure on profitability, forcing companies to track expenses and tune allocations to better understand the drivers of profitability and to make better strategic investments.

The demands of specialized legal reporting and deep performance insight come with a price – one that places a high cost on reliable business performance information and financial control. Different divisions (or functions or regions) invest in separate system silos, metrics and measures mean different things to different people, and top management struggles to find integrity and trust in the analyses provided to them across these corporate constituents. Maintaining this coalition of systems – or even migrating them to a single global standard – places a burden on the Finance and IT organizations to develop solutions that facilitate rationalization and maintenance of the enterprise chart of accounts, as well as management/financial reporting structures such as dimensions and hierarchies. The need for different perspectives to support legal reporting and performance insight is at odds with the need for financial consistency and agility.

However, standardization alone cannot be the solution. For example, while IT may wish to ensure control through a common set of dimensions and hierarchies to drive corporate and financial reporting, line of business personnel require different, yet consistent, lenses by which to gain perspective and make informed decisions. Flexibility and agility in business decision-making demand technologies that at once provide IT control while giving business users a common language with which to express their unique business perspectives and gain visibility. From a financial reporting perspective, tax accounting and GAAP/IFRS reporting requirements might necessitate maintaining disparate structures to accomplish legal reporting.

The recent financial meltdown has further highlighted the need for management to comply with regulations such as Sarbanes Oxley 404 and Basel II and to demonstrate effective financial control and risk management or face legal consequences. This puts even greater pressure on multi-national companies to be adaptive, as local regulatory and compliance requirements may differ from corporate ones, forcing the need to maintain separate yet consistent financial reporting structures.

Effective management of dimensions, hierarchies and reporting structures can go a long way in preparing the enterprise to be flexible and agile, yet compliant with internal controls and risk management policies based on sustained investment in a governed financial data management program.
The Critical Nature of Financial Reference Data

The reference data used to support financial reporting, business intelligence, and performance management have distinctive characteristics:

- It is critical in ensuring accurate and consistent financial reporting at multiple levels of an organization.
- It is an integral part of product management and profitability analysis.
- It is used throughout the organization (not just the finance function) and is the foundation for enterprise-wide data governance and data management strategies.
- It is frequently used to support mergers, acquisitions and divestitures.
- It might need to support multiple global accounting standards (such as GAAP and IFRS) and compliance with new and emerging regulatory requirements (such as Sarbanes-Oxley and Basel-II).
- Financial reference data are often structured in complex, deep hierarchies. In many cases alternate hierarchical structures are needed to support differing reporting and regulatory requirements of the business.
- Cross-dimensional mappings between different hierarchies (for example, between a product and an associated general ledger account) are often leveraged to define important inter-relationships or to delineate valid transactions.

What is Financial Reference Data?

Financial reference data are the financial and analytical definitions and their corresponding hierarchical structures that support financial reporting and performance analysis. For example, a balance sheet includes both accounts such as “short term cash” as well as a hierarchy structure, in which “short term cash” rolls up under “assets.” In addition to accounts and account structures, other financial reference data elements and structures include cost centers, legal entities, geographies, sales territories, and many other dimensions.

Managing Overlapping Structures

A primary use-case for Oracle Data Relationship Management is to manage multiple accounting structures to facilitate compliance with multiple national and international accounting standards.

For example, GAAP and IFRS charts of accounts might be consolidated into a single unified chart for management purposes, greatly simplifying maintenance chores and eliminating redundant data entry, while retaining the unique features required for compliance with each standard. From this single unified instance, both IFRS and GAAP perspectives can be logically derived.

The Challenge is Alignment, Not Just Synchronization

It is rare that a set of financial reference data is used in an identical fashion across all the systems and subsidiary companies of a large enterprise. Each business unit and system has its own unique financial perspective, with variations in codes, relationships, and identifiers. As a result, the reference data cannot simply be “synchronized” to be identical across all participating systems.

For example, a financial general ledger application may have a complex, deep chart of accounts, with leaf-level accounts at multiple levels and with different accounting structures for each country in which the enterprise operates. But a data warehouse may require a shallow, fixed-level chart of accounts that is consistent across global operations. A data mart may contain an even smaller subset of the chart of
accounts required to support a particular line of business in a single region. An effective solution for managing financial reference data will ensure that these quite different sets of reference data can be automatically and consistently generated from a single source of truth, with consistent enforcement of data quality rules.

Different usages of financial reference data throughout an enterprise may also use quite different coding systems for their data to reflect the technical and business constraints of their systems, processes and locales. Some systems may require general ledger accounts to be identified with a unique eight character number, other systems may require asset accounts to be prefixed with “A-“, and other systems may require an account number padded with zeroes such that it is always 11 characters long. Rather than maintaining these coding structures separately, an effective solution should automatically generate these alternate coding values from pre-defined algorithms. This ensures consistency and accuracy in the coding systems and eliminates much of the need for human intervention and judgment.

**Requirements for Managing Financial Reference Data**

Effective financial data management techniques require consistently aligned financial structures and measures across multiple technology platforms, even if each platform may require a different subset or superset of the core financial reference data to support its own unique requirements. For example, similar financial data structures describing an enterprise’s cost center aggregation can be shared between multiple global instances of transactional and ERP systems, financial applications, and Enterprise Performance Management (EPM) tools. The solution must support the fact that each instance of a financial reference data structure, though tightly coupled to other structures, is itself unique, with variances in identifiers, attribution, and granularity. Business drivers such as sales territory assignment, activity based costing, and local legal reporting requirements all necessitate the ability to support multiple alternate classifications and hierarchies for financial reference data. For instance, sales compensation rules may attribute revenue to a specific sales territory that spans multiple states, provinces, or countries. However, tax accounting will require the ability to recognize revenue by each individual tax entity. The result is a requirement for allocating the same revenue through two alternate allocation hierarchies – one for sales compensation and another for tax reporting. The challenge is that consistency must be enforced — though grouped differently, both the sales and tax perspectives should show the same total revenue. The solution for managing financial reference data must easily support the spawning and maintenance of complex inter-related hierarchies and have the ability to enforce consistency across alternate hierarchy perspectives.

In the realm of financial reference data, individual data structures are rarely independent. Instead, there are often complex inter-relationships. For example, a group of cost centers within a particular business function may be valid for recording expense charges to a specific group of expense accounts. For some organizations, revenues must be booked to an intersection point of account,
business unit, risk type, and customer. These sorts of complex linkages between financial reference data structures are used to define how various business activities (such as a “100 units of product X sold through reseller Y”) are recorded as financial transactions. The financial reference data solution must not only support the ability to manage complex linkages across financial reference data structures, but to also recognize and identify how changes to one structure may impact inter-related structures.

Changes to financial reference data are typically discretionary – changes are deliberately initiated within the organization by financial experts and may require the evaluation and approval of other affected parties. Managing change to financial reference data requires that knowledge workers are empowered to collaborate seamlessly with peers and supervisors and to quickly assess impacts, scenarios and alternatives in order to devise creative financial solutions that simultaneously support both external compliance and internal insight. The solution must provide customizable validations, robust security and authorization, and context-based workflows for review and approval, so that day-to-day maintenance can be delegated to the finance experts (often referred to as data stewards) who understand the necessary changes best and who are the direct beneficiaries of accurate financial information.

The Importance of Accuracy and Consistency

The process of maintaining financial reference data is different from the processes used to maintain other reference data such as customer or product information. It is critical that the financial reference data is 100% accurate and consistent. 99% accuracy is never good enough in this context! Errors or inconsistencies in critical financial hierarchies will lead to inaccurate financial statements that can have serious consequences for any large organization. By contrast, an organization may also desire very accurate customer reference data, but minor errors, duplications, or omissions are unlikely to have a catastrophic impact.

The quality of many types of reference data can be managed and improved with highly automated tools that might identify errors, omissions, and duplications (for example, the automatic de-duplication and address cleansing of a multi-million record customer database). By contrast, critical financial reference data are often carefully manipulated by business experts, who are aware of the major impact upon an enterprise’s financial statements that might be caused by a very minor change to a single item in a chart of accounts. In the financial realm, maintenance is very much a hands-on process.

Business rules enforce the accuracy of financial reference data changes. Some business rules are straightforward (for example, leaf-level and summary cost centers in a hierarchy must not share the same parent summary cost center) but other rules may be much more complex, involving cross-dimensional mappings and validations. The solution for managing financial reference data must provide an easily configured framework for enforcing the specific financial accounting and reporting rules that are unique to every enterprise.

Detailed logging and auditing of all changes to the financial reference data are usually required both as a source of internal control and to ensure compliance with new and emerging legislation (such as Sarbanes-Oxley). Prior versions of the financial hierarchies need to be retained to allow restatement of financial results in the context of earlier reporting structures, to allow changes to be tracked between different reporting periods, and to facilitate period-over-prior-period analysis.
Complex workflows may need to be enforced to ensure appropriate approval of changes to critical members of financial reporting structures. Such workflow processes may require multiple levels of approval and conditional logic to route approvals depending upon the nature of the reference data change request. As organizations are adopting Business Process Execution Language (BPEL) as a standard for workflow definition, the solution should include BPEL support.
The Need for Data Governance

Data governance has been implemented in many organizations to improve data quality by implementing quality control processes that assign rights and responsibilities for the stewardship of data resources. These techniques can be the foundation for the effective management of financial reference data.

Enabling Data Stewardship

Data governance processes can be enhanced by software tools that provide for collaborative management of shared data assets through assignment of responsibility for data maintenance to data stewards. Data stewards enrich the data management process by adding both their business knowledge and their understanding of how the data are leveraged across the enterprise in different systems. A data steward may have expert knowledge of an entire set of related financial reference data or just a subset of a hierarchical structure that is related to their area of responsibility.

Leveraging Technology to Manage Financial Reference Data

Software tools such as Oracle Data Relationship Management can allow data stewards to be assigned specific responsibilities for the maintenance of an entire hierarchical data structure or for specific vertical branches or horizontal slices of a hierarchy:

- Detailed audit logs of all changes to the financial data are maintained and a granular security model can be used to allow a wide range of access rights for multiple users to edit or view the hierarchies.
- Automated business rules are enforced to validate data quality.
- Many attribute values for members of financial and analytical hierarchies can be calculated automatically from pre-defined formulae, enhancing data quality and simplifying maintenance.
- A versioning model allows the set of hierarchies used for each reporting period to be archived and available for future comparative analysis. Copies of an entire set of the hierarchies can be quickly copied and updated to support “what if” analyses (for example, to support the analysis of a proposed acquisition, to ensure that the charts of accounts can be consolidated).
- Configuration of Oracle Data Relationship Management is almost always performed by the business experts (usually, members of the finance function), freeing information technology professionals from the need to understand and maintain financial reference data structures. Instead, the IT experts can focus upon true technology issues, such as the design and orchestration of complex interfaces between systems.
- Integration with workflow tools (based upon BPEL) can allow the design of appropriate review and approval processes to support the data governance model.

What is Data Governance?

WhatIs.com refers to Data Governance as “… the overall management of the availability, usability, integrity, and security of the data employed in an enterprise. A sound data governance program includes a governing body or council, a defined set of procedures, and a plan to execute those procedures.”
Creating a “Center of Excellence” to Manage Financial Reference Data

Many organizations that have successfully implemented a financial data management solution as part of a data governance initiative have subsequently created a “Center of Excellence” (COE) for data management. A primary goal of the COE is to leverage the organizational and technical skills that have been built around an initial data management implementation in an expanded scope across the enterprise.

The COE allows the best practices learned from an initial data management implementation to be shared consistently across multiple new subject areas and allows existing software tools to be extended and reconfigured consistently for broader use. In many cases, complex interfaces between systems can be re-used (with minimal modifications), greatly reducing the time to deploy subsequent financial data management solutions. This is especially important for financial services, where the data management policies and controls need to be pervasive across all business functions.

Quantifying the Success of a Financial Data Management Project

Many quantifiable benefits can spring from the successful implementation of a management solution for financial reference data:

- Financial alignment issues are removed from the critical path of the monthly and annual financial close cycles of the enterprise. With dramatically fewer discrepancies to research and reconcile, a key source of delays to closing the books can be eliminated.
- The ‘down time’ during which financial and analytical reference data cannot be updated due to system synchronization issues can be reduced or eliminated. This will increase the flexibility for the design of business processes that are required to model changes to financial reference data.
- Elimination of multiple duplicate parallel maintenance process for financial reference data can free expert resources for other more value-added tasks, such as data quality improvements, data stewardship responsibilities, or financial analysis.
- Decentralization of core financial data maintenance tasks to business users and data stewards can free central administrative personnel for other value-added tasks.
- Substantial reductions in the time required to deploy new or redesigned business intelligence and performance management applications that will leverage the financial reference data.
- Improvement in the speed in which acquisitions can be integrated into the financial reporting structures. The finance team can simplify and collaborate on the analysis and integration of multiple charts of accounts and organizational structures, leading to shorter timescales for closing acquisition deals.
As companies grow and evolve, it becomes essential to manage master data across information silos that result from mergers and acquisitions, departmental initiatives, or legacy system proliferation. Data consistency, integrity, quality and accuracy suffer. And, no one trusts the information and insight that ensues. Oracle’s Hyperion Data Relationship Management (previously known as Hyperion Master Data Management) provides enterprises a solution to build consistency within master data assets despite endless changes within the underlying transactional and analytical systems. Specifically, Hyperion DRM provides the industry’s first data model-agnostic master data management solution built to enable financial and analytical master data management in dynamic, fast-changing business environments.

Oracle Data Relationship Management is part of Oracle’s broad portfolio of purpose-built applications for enterprise information management. This family of products includes the world’s leading set of Master Data Management or MDM applications, an integration infrastructure (Oracle Application Integration Architecture or AIA), and market-leading middleware with the Oracle Fusion Middleware suite.

At a high level, all MDM applications provide capabilities to consolidate information from disparate locations into a common, centralized hub; to cleanse and rationalize this information to ensure its accuracy and completeness; integration capabilities to share this information across the enterprise; and data governance capabilities to ensure that information remains up-to-date and accurate over time.

However, specific master data domains such as customer, product, site/location, and financial reference data each require specific capabilities. In recognition of these specialized requirements,

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<th>What is Master Data Management?</th>
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<td>Master Data Management (MDM) is a discipline targeted at building and ensuring consistency and consensus around critical reference data assets across the extended enterprise. It includes the management of customer data, product data, location/site data, and financial/analytical reference data (such as charts of accounts, organizational structures, and other dimensions used to categorize and analyze an organization’s transactional data).</td>
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1 “Oracle has become an industry-leading provider of MDM solutions in both Global 5000 enterprises and the mid-market. By our accounting, Oracle’s 600+ installations arguably represent the largest customer base of all the MDM vendors” - Aaron Zornes, Chief Research Officer, The MDM Institute Field Report, March 17 2008
Oracle has developed a portfolio of MDM products that includes purpose built applications to manage customer information (Oracle Customer Hub), product information (Oracle Product Hub) and sites/locations (Oracle Site Hub). Oracle Data Relationship Management is also part of this portfolio of MDM applications and is used to manage financial reference data and analytical dimensions.
Conclusion

For many organizations, there is a tension between the critical need for strong control and governance of financial reference data across the enterprise versus the need for localized perspectives and support for local legal reporting requirements. The effective implementation of data governance techniques and tools (such as Oracle Data Relationship Management) can provide that control and governance, while supporting the needs for constrained flexibility and also allowing responsibility for maintenance of financial reference data to be devolved to the appropriate experts within the business. With DRM, organizations can achieve both agility and financial reliability through alignment.