



US investment banking and capital markets data and analytics trends

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Contents

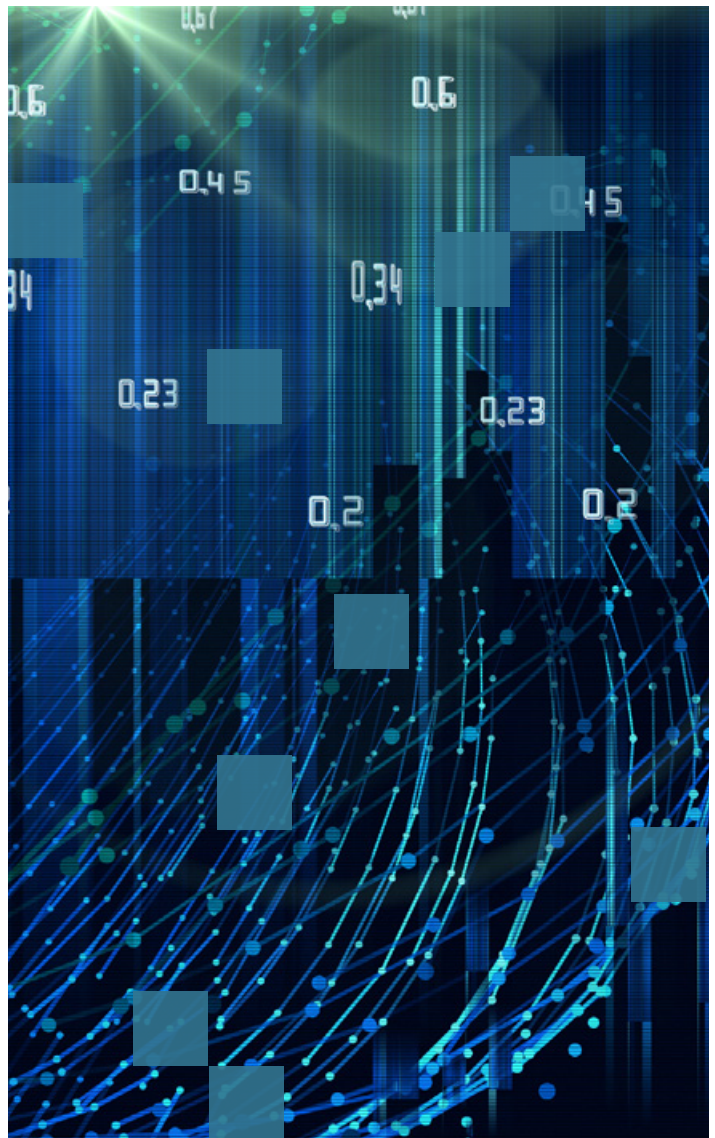
Introduction	3
Top shifts in the global IB&CM data landscape	4
Key pillars of data programs running at major global banks	8
Looking forward	9
Contacts and contributors	10

Introduction

The spectrum of demands from consumers and businesses on investment banking and capital markets (IB&CM) divisions of financial institutions continues to evolve rapidly. Speed and agility, backed by digital capabilities, are capabilities that are crucial for the IB&CM sector to meet demands across M&A, debt equity offerings, and derivative transactions.

While the US IB&CM sector has addressed liquidity, capital, and fundamental business model-related challenges over the past decade, an array of powerful new market forces has come to the fore—pricing pressure, market democratization, increased client sophistication with regard to deal structuring, and nimble treasury operations.

The disruptive nature of these forces, in conjunction with in-flight recalibration of operating models around the globe, has resulted in the immediate need for data modernization and increased reliance on data analytics.

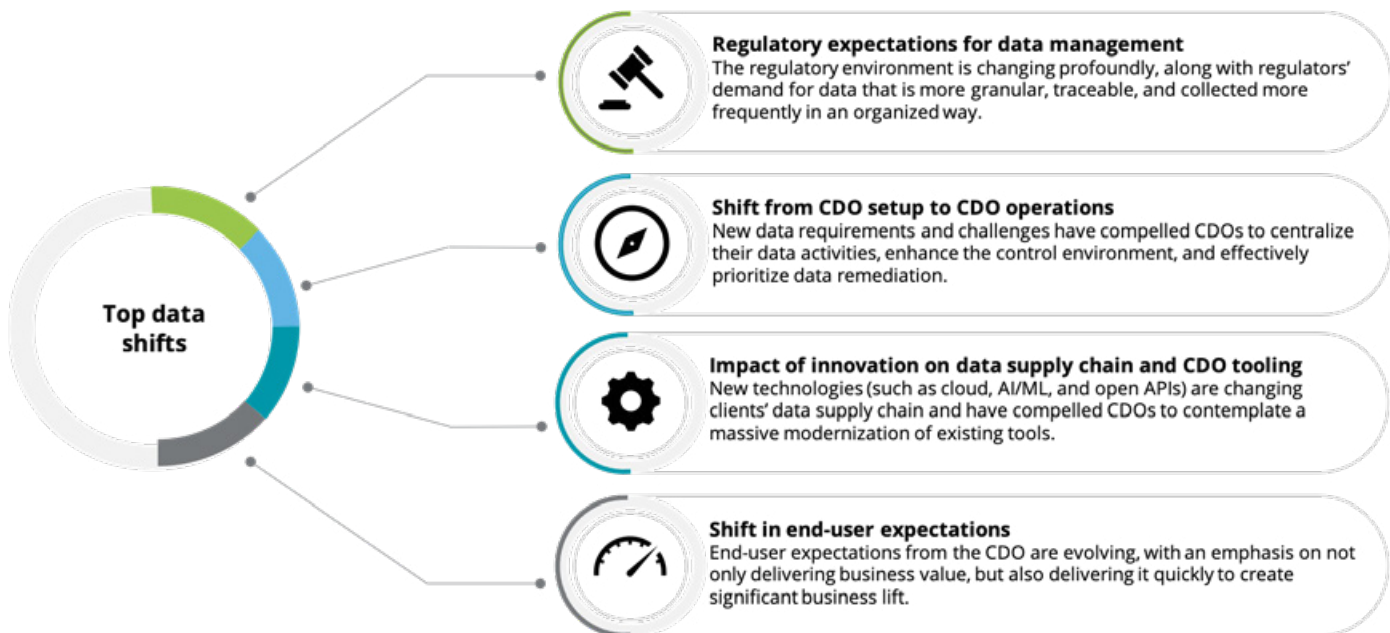


Top shifts in the global IB&CM data landscape

Recent technology advances are providing institutions of all sizes in the sector with a range of options to effectively respond to these market forces. Specifically, the adoption of cloud data technologies, artificial intelligence (AI), and cognitive tools has delivered profound impacts on operations, risk management, and data management initiatives.

Four major data shifts are redefining the data landscape for these institutions: *regulatory recalibration, chief data officer (CDO) maturation, technology modernization, and workforce evolution.*

Top data shifts across IB&CM





Regulatory expectations for data management

The regulatory environment has undergone significant changes with the plateauing of net-new regulations and the corresponding increase in demand for more granular, traceable, and frequently collected data. The sector's response has resulted in the emergence of three themes:

First, increased emphasis on data quality and integrity evidenced through end-to-end transaction testing. This has led to the funding and execution of data quality and control operating models that enable sustainable data quality monitoring.

Second, an emphasis on scalable and agile data discovery capabilities due to an exponential growth in volume of both data and metadata. This has resulted in targeted investments to upgrade legacy data and metadata infrastructure and processes, as well as evaluation of new data management operating models that yield a positive impact on operating ratios.

Finally, evaluation of the new technologies referenced earlier for their "fit for purpose." With the dual goal of simplifying data and technology architectures and the ability to integrate with legacy infrastructure, institutions are leveraging lessons from the past decade (e.g., inherent challenges of data migration, implementation of capital and liquidity programs) to meet regulatory expectations and serve business needs concurrently.



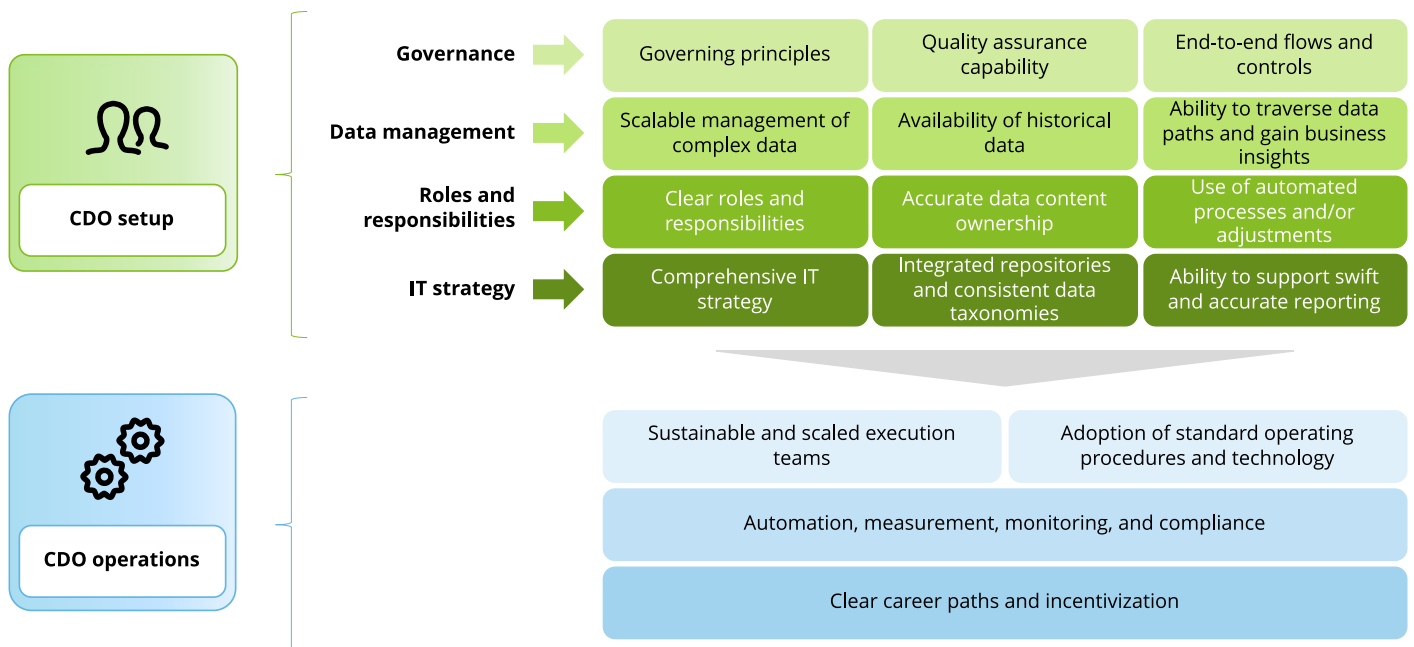
Shift from CDO setup to CDO operations

As regulatory expectations have evolved over the past 10 years, the role of the CDO has matured from "setting up and governing" mode to "governing and delivering data operations." New data requirements and challenges have compelled CDOs to centralize operational data management activities while federating responsibility to enhance data controls. As a result, two distinct shifts have emerged:

First, the CDO's priority has shifted to teams that can deliver sustainable and scaled data operations, and can champion the adoption of standardized operating procedures and technology across the organization (in addition to developing governing principles and establishing interaction models to monitor their adoption).

Secondly, CDOs are formalizing clearer career paths and incentives for their data management professionals, measured by operational performance metrics.

CDO setup to CDO operations





Impact of innovation on data supply chain and CDO tooling

New technologies are changing IB&CM's data supply chain and have compelled modernization of existing CDO tools. Tools are being implemented to enhance capabilities in areas such as data governance, metadata management, data lineage, data quality, issue management, master and reference data management, data modeling, and reporting of data operations and monitoring. The impact of innovation on the data supply chain and CDO tooling is typified by:

Adoption of cloud data technologies. Adoption of cloud-based technology across the data supply chain and for data operations is emerging. This selection and adoption of vendors and specific technologies are tightly coupled with the overall cloud and digital strategy for the institution.

Transition to hybrid data architecture. Institutions have operationalized CDO capabilities by implementing by a hybrid mix of vendor-based and homegrown tools to achieve scalability and speed tailored to the needs of lines of businesses.

Experimentation with graph-based platforms. Institutions have begun experimenting with semantic knowledge graphs, gradually addressing challenges related to the unavailability of the industry- and sectorwide business ontologies.

Evaluation of artificial intelligence and cognitive technologies. Institutions are in the early stages of leveraging both AI and intelligent automation (IA) designed for improving efficiency of specific capabilities, such as metadata discovery and enrichment.



Shift in end-user expectations

Expectations from end users has evolved from simply having access and availability of user-friendly technology to value-driven adoption of technology. Two types of expectations are being observed across institutions:

End users are consistently seeking tangible benefits to business operations from adoption of data processes and technologies. Ease of access to real-time data with trusted quality on a consistent basis is required. While big data initiatives have been bringing institutions ever closer to real-time access, trust in data quality continues to be a pervasive challenge.

Secondly, end users are seeking a unified interface that serves multiple needs and integrates access to various repositories containing data element lists, data definitions, lineage, data requirements, and system inventories. CDOs' teams at US IB&CM institutions are piloting microservice-based models, such as lineage-as-a-service and data quality-as-a-service, to address this expectation.



Key pillars of data programs running at major global banks

In response to these four shifts, IB&CM institutions have set up scaled, multifunctional, and multiyear data programs. While each institution tailors its program to reflect inherent maturity of data management, four foundational pillars are crucial to effectively address the changes necessitated by disruptive forces:



Governance and accountability

Define an operating model that facilitates program governance and accountability at an enterprise level, with well-defined roles, responsibilities, and interaction models. The model must be supported by tailored policies and standards that enable monitoring of accountability.



Internal controls and reporting enhancements

Establish a sustained and reliable front-to-back control environment with the objective to reduce reporting adjustments, facilitate operational enhancements, and reduce the use of end-user computing applications.



Data and quality management

Develop robust platforms to manage critical data elements, implement data quality rules, expand data tracing, simplify data lineage, and manage and resolve issues.



Business and data architecture

Reduce complexity of architecture while meeting regulatory requirements with granular data. Where applicable, programs also seek to implement straight-through-processing capabilities at the origination and aggregation layers of their data supply chains.

Looking forward

While the disruptors continue to evolve, a tailored and timely response can help IB&CM institutions to capitalize on related opportunities and create competitive advantages. Modernizing and effectively scaling data capabilities can be accelerated with foundational components in place, including:

Suite of data elements for regulatory and financial reporting

A list of critical data elements with predefined linkages to product and line-of-business-specific metadata that are vital for reporting needs (regulatory and statutory), facilitates standardization of data sourcing, and use across lines of business.

Standardized framework for validating data quality

A preconfigured and scalable platform that can test system functionality and quality of data required for regulatory reporting, including rules that cover various asset-class and reporting requirements.

Metadata management platform-as-a-service

A standards-based, integrated enterprise repository platform that supports scaled and speedy data governance and metadata management that caters to end-user expectations.

These accelerators are designed to help you rapidly expand your institution's capabilities and capacity to help you adapt quickly in this fast-changing environment. To effectively respond to the market forces disrupting the industry, organizations should consider the right technologies to implement at their organization in order to align to the new data shifts and elevate data management and modernization.



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