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Modernizing data and analytics capabilities for long-duration contracts success

Data-intensive accounting changes to comply with FASB targeted improvements can provide insurance CFOs, chief actuaries, and CIOs with opportunities to deploy next-generation technologies and gain significant business value.

Last year, the Financial Accounting Standards Board (FASB) released an accounting standards update to improve financial reporting for insurance companies that issue long-duration contracts such as life insurance, disability income, long-term care, and annuities. For many US insurers, this is one of several data-intensive accounting changes they will need to address while also managing forces that are disrupting the industry (see figure 1).

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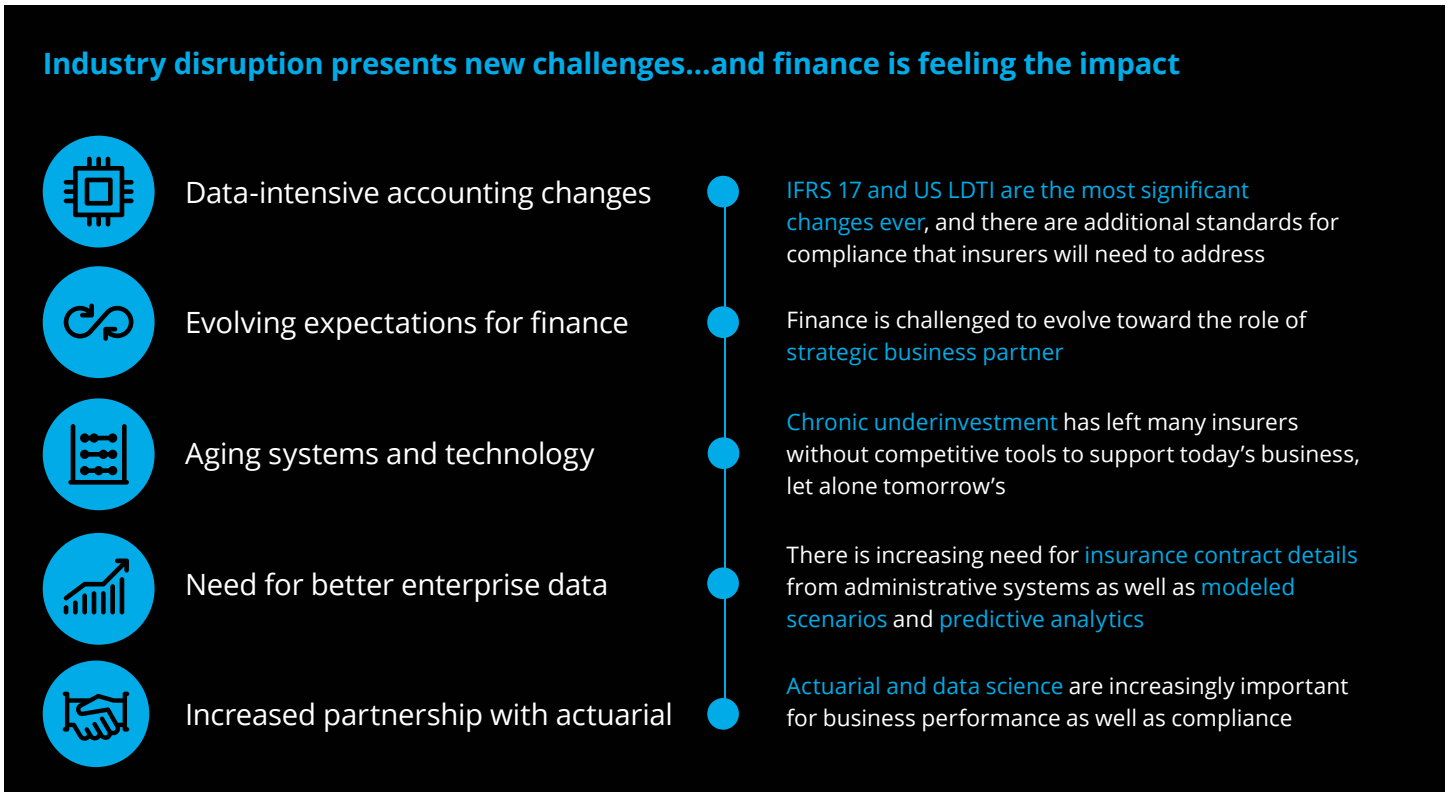
Figure 1. Assumptions



Recognizing the inflection point

The new accounting standards have created an inflection point for the industry. Insurers will need to be much more agile in how they manage, analyze, and report their data at both the most granular level and in aggregate.

This is a significant challenge. Many insurers have designed their business systems to handle transactions, not information, and they now must rapidly evolve from a "transaction state" to an "information state." The data-intensive nature of the FASB targeted improvements standard offers an opportunity for strategic vision and, for some insurers, a leap forward for data and analytics modernization. In particular, insurers can move toward big data modernization and advanced analytics, cloud platforms, and cognitive technologies, such as machine learning, robotics, and other automation tools.

Mobilizing for value

To prepare their organizations to meet the new accounting standards, many insurance leaders are reexamining their operations and technology environments. They are working with their finance and IT teams and their business line partners to prioritize data-driven strategies for integrated financial reporting, risk management, and compliance.

Many insurers affected by the FASB targeted improvements (TI) standard can take a smart compliance approach whereby compliance spending can be leveraged for incremental modernization and business value to improve the overall data and analytics ecosystem (see figure 2).

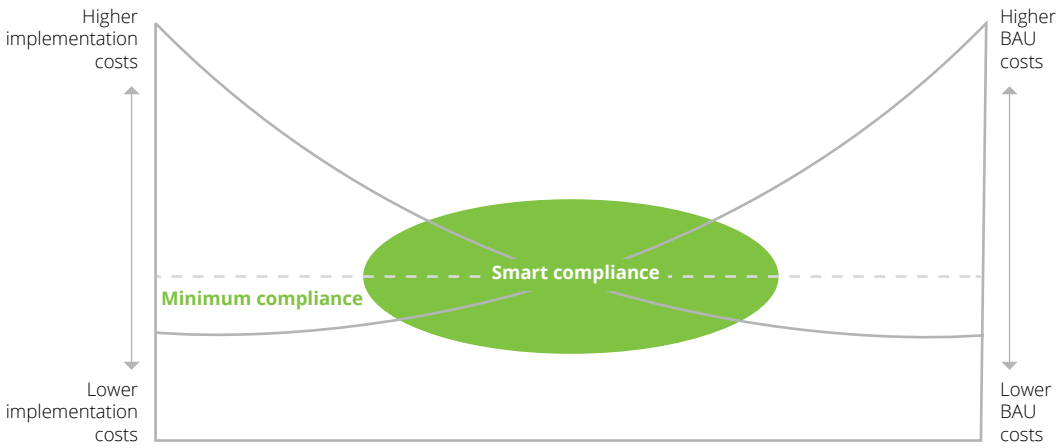
Improvements throughout an insurer's information value chain likely will be necessary and will focus on having better operations data that finance can more swiftly source, store, quality-check, and leverage for advanced analytics and compliance purposes.

Figure 2. Balancing compliance with the opportunity to expand business value

Smart compliance is the optimal balance of minimum compliance, rationalized implementation costs, and sustainable efficiencies for the future

Value enabler choices

- **Data and analytics:** Support for not just compliance, but enhanced enterprise information, analysis, and insight through cloud, big data, and artificial intelligence
- **Accounting hub solution:** Transparency, control, and general ledger simplification
- **Close:** Common, enhanced process to increase efficiency and reduce manual efforts
- **Talent:** IFRS 17 and FASB TI require enhanced (but common) skills
- **Operating model:** Increasing use of shared services as well as intelligent automation



The smart compliance illustration above shows the intersection of choices and cost/benefit trade-offs:

- Generally, saving costs on implementation may result in more manual procedures and result in higher business as usual (BAU) costs
- Investing in infrastructure presents higher implementation costs, but may offer efficiencies and lower future costs

In many cases, the expected impacts are significant:

- Operational processes and data sources may need to be modified to feed updated calculation and reporting requirements, such as those for FASB's updated deferred acquisition cost guidance.
- Historical data on legacy systems will be required to demonstrate the transition approach and retrospective calculations related to the new accounting standard.
- Existing actuarial models will need to be adapted to the new regulations. Detailed insurance contract information such as premiums, claims, and reinsurance transactions—as well as policyholder behavior, discounts, and risk factors—will have to be tracked, modeled, and analyzed in cohorts to enable accurate calculations and improved analysis.

Enhanced data aggregation and reporting tools can help companies avoid substantial manual effort when managing greater volumes of data and additional reporting bases. These tools can also effectively reconcile from the lowest level of transaction detail to summary reporting across the actuarial and finance functions. This can produce significant insights about asset and liability management and profitability.

Evolving toward the future

Yesterday's solutions may not adequately support today's need for rigorous data quality and storage standards, as well as analytic and predictive modeling capabilities to support compliance and future growth. Insurance leaders can meet these demands by transforming their organizations in the following areas:

Modern data platforms. Many insurers are already implementing cloud-based big data platforms and associated tools to better integrate actuarial and corporate finance operations, allowing these groups to more effectively share and analyze information for operations, business insight, and compliance. Many insurers may find cloud-based data platforms can scale more easily than existing on-premise databases to handle significantly increased volumes of data, more rigorous analytics and modeling, and even automation tasks.

Cognitive data stewardship. Many insurers require methods for rapidly discovering, remediating, and analyzing unstructured operational data. Machine learning can help to automate and improve the effectiveness of data stewardship activities such as data profiling, mapping, mastering, and ongoing quality management.

Enterprise finance and actuarial systems. Many insurers recognize the new accounting standards as an inflection point to upgrade actuarial or financial applications to next-generation cloud versions. Interest has also dramatically increased in enabling the accounting subledger with automated rules processing to optimize the flow of business event information from operations into financial record-to-report processes.

Business analytics. Many insurers are already using robotic process automation (RPA) and natural language generation (NLG) to enable processing and complex actuarial workflow to generate the additional disclosures and reconciled financial statements required for compliance on tight timetables. Machine learning and artificial intelligence applications can further extend internal performance measures as they are adapted to new external measurements, taking advantage of additional, improved enterprise data.

Machine learning can help to automate and improve the effectiveness of data stewardship activities such as data profiling, mapping, mastering, and ongoing quality management.

Moving beyond point solutions

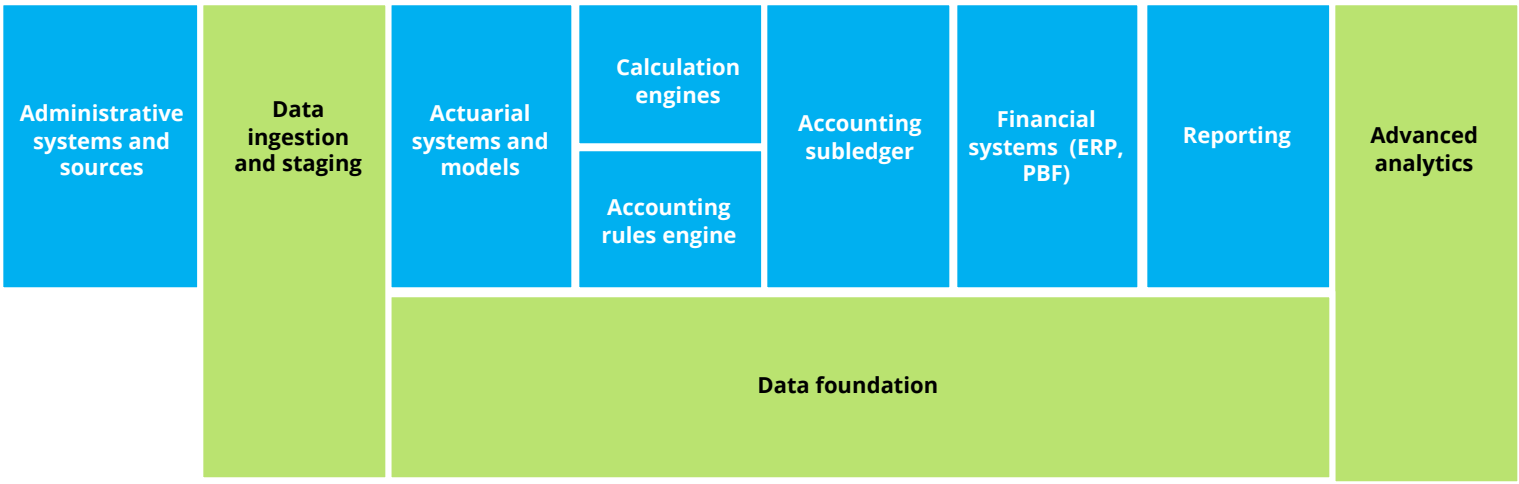
Today, modern data and analytics capabilities are essential even for basic compliance. Many insurers make the mistake of thinking they can buy an off-the-shelf product and achieve compliance when the reality is that a comprehensive, well-engineered, and thoughtfully designed solution is needed.

Across the industry, the single most critical enabling factor for success is data. Many insurers have approached this with unintegrated point solutions in the past.

Going forward, it will be essential to establish a modern data foundation to handle (see figure 3):

- Basic data gathering and movement across finance and actuarial functions, as well as software applications
- Long-term storage of historical data in a common format
- Advanced analytics that are drawn from a consistent, curated data set residing in the data foundation

Figure 3. Establishing a modern data foundation



The urgency and breadth of LDTI requirements is triggering significant interest and investment in modern, cloud-based data platforms to enable insurers' finance and actuarial functions. These systems can affect many processes and have a far-reaching impact on the organization (see figure 4).

Figure 4. Summary of data components and potential impacts

Component	Impacts and early lessons learned
Administrative systems and sources	**Administrative systems** may have embedded accounting functionality that should be managed or transferred to a subledger application **Manual data sources** will require standard intake methods
Data acquisition and transformation	**Data profiling** is needed to assess the content and quality of current data and sourcing mechanisms **Data gap analysis** is needed to assess usability of current feeds for new accounting requirements Insurance contract details will need to be aggregated into **cohorts for analysis**
Data lake/finance data warehouse	**Current data lake** initiatives in progress will need to be aligned **Legacy data warehouses** are cost-takeout and simplification targets **Cloud data platforms** are needed for data acquisition, quality management, storage, analytical processing, and user access
Reporting and analytics	**Current reporting will need to evolve** – an ideal opportunity for analytics modernization through new tools and legacy cost-takeout
Actuarial	**Existing cash flow engines** and actuarial models may require modification **New valuation and projection models** will be required **Traceability** needed across seriatim level detail and cohort analysis
Accounting engines	**Accounting subledgers** will typically be needed to link accounting to insurance contract details **Accounting rules engines** can help simplify disparate legacy functions **New calculations** are required (e.g., CSM, discount) in actuarial or finance
Financials	**Enhanced configuration** or upgrade of current ERPs is required **Intelligent automation** can optimize and accelerate periodic close activities, which will be pressured to absorb more data, additional analysis and reporting, and additional actuarial workflow

As insurers adapt to the updated FASB accounting standards, their data and analytics environments will evolve to meet compliance requirements and provide an opportunity to reap other benefits as well. Insurance CIOs who equip their finance business partners with high-performance data analytics, process automation, and cognitive capabilities to support regulatory compliance can also drive future innovation and smarter decision emaking across the enterprise.

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