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Part 1: Transforming controls under long-duration targeted improvements

From an actuarial and finance perspective

Financial controls are an essential part of the financial reporting process, and big changes are coming to the insurance industry on January 1, 2023, when the long-awaited Financial Accounting Standards Board (FASB) Accounting Standards Update (ASU) No. 2018-12, Financial Services—Insurance (Topic 944): Targeted Improvements to the Accounting for Long-Duration Contracts, will go into effect. ASU 2018-12 will change the foundations of accounting for many long-duration insurance products. The new standard focuses on long duration targeted improvements (LDTI) and removes elements of the matching principle from existing long-duration insurance accounting standards to simplify the creation of actuarial balances and integrate deficiency analysis into the benefit reserves determined by actuarial specialists.

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These changes will require a fundamental rewriting of accounting policies, development of new actuarial methods, and redesign of the processes supporting the changes. As such, controls will require a full refresh and modernization to accommodate these vast and core changes. Many companies are planning fundamental process upgrades across the actuarial and accounting operations as part of the LDTI implementation. Unlike the original Sarbanes-Oxley or Model Audit Rule retrofitting of controls, this is an opportunity to design controls that are fully integrated into a procedure. Not only is integration paramount, but it is likely also a strategic expectation for such a monumental accounting update.

Modernization of controls should be considered under a thoughtful and analytical approach with three key areas of focus:



Assess readiness of current controls environment

Across the industry, insurance companies have varying levels of control maturity. An undisciplined approach to modernization will compromise control quality and, as a result, companies should assess the readiness of the current control environment today to avoid large potential errors or corrections after the go-live date. Companies should use the implementation of LDTI as an opportunity to review internal controls across their organizational structure to benchmark the control approach used around the criteria established in *Internal Control—Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (the "COSO Framework"), which covers the following five main components that are supported by 17 related accounting principles.¹

- Control environment
- Risk assessment

- Control activities
- Information and communication
- Monitoring activities

To ensure the company maintains or creates an effective system of controls, all 17 principles are integrated into a plan to optimize control functions and operations. In the following paragraphs, we explore five key pitfalls that companies need to identify, understand, and ultimately avoid during the LDTI process modernization. If all such issues are identified prior to go-live, these pitfalls will evolve into opportunities.

Below, these key pitfalls are aligned with the five areas of focus that can compromise control environment readiness. While it's not the universe of pitfalls, these examples will be used to illustrate what to check for under control readiness.



Issue 1: Unclear ownership

Many companies do not have dedicated and independent controllership teams to design, execute, and monitor controls. Often there are no clearly defined roles on where responsibilities for controls start and end. This lack of accountability results in consequences throughout the company. This issue can also affect other COSO components. Without a dedicated team to consistently evaluate actuarial processes and risks (including changes and upgrades), the effectiveness of the control environment is undermined, which increases the risk of material misstatement for the company.

How to overcome this issue

An effective solution is for the company to have dedicated and independent control teams that efficiently oversee all aspects of controls. These teams should be fully integrated with process owners and other relevant groups. One immediate LDTI control example is governance. Once various methods, approaches, and policies begin to be explored, there needs to be a clear owner to evaluate and confirm that the methods and approaches are consistent with the revised LDTI guidance. The owner does not need to be (and should not be) an individual, but rather a committee across actuarial, finance, investment, and risk. See further discussion in the section below (refer to "Establish a control environment vision").

Issue 2: Siloed and static understanding of risks

The historical risk identification steps within a process may have been one-and-done. The process risk identification process does not consider the complexity of the company's operations in a continual manner that addresses growth, changes in business objectives, or risk management (reinsurance). Although process risks evolve along with changes in the company's product profile and financial reporting, the risk identification process often remains static. A great example of this is the evolution of approximations and simplifications. Without proper tracking and evaluation, simplifications and approximations often become outdated, and the corresponding controls become irrelevant or fail.

How to overcome this issue

The risks for all material actuarial processes should be assessed from the ground up to identify any gaps that should be addressed. The classic approach to risk evaluation is a detailed documentation of the process flow and a detailed narrative. These are valuable documents, and in order to keep them fresh, new eyes should inspect them annually. Besides Internal Audit, splitting up portions of the process flow to end users or key suppliers is another good way to help refine the risk assessments. This will inform the team if new controls are needed and what existing controls need enhancements. How much more valuable is an IT review of the data load process or financial reporting to evaluate the ledger entry process? These subtle changes add new life to the risk assessment.

Issue 3: Cumbersome processes

Insurance companies often have a combination of legacy and newer open blocks that result in multiple actuarial modeling and valuation systems and cumbersome manual processes. These processes are covered with a massive number of manual controls, which can put significant strain on process owners to complete and execute the controls at each reporting period.

Although some companies have invested in reducing the number of manual controls and worked to converge models and systems to a common platform, most of them still face many challenges and manage multiple stand-alone processes involving significant human involvement. This additional amount of work puts extra stress on actuarial teams and leaves them choosing between fully and properly performing controls and meeting the company's deadlines. They often prioritize the latter and usually only try to meet minimum control execution requirements.

How to overcome this issue

LDTI provides a golden opportunity for companies to take the time to not only build or enhance the relevant actuarial models, but also automate large, cumbersome processes; clean up many small, postvaluation system procedures; and automate regular model change management procedures, directly reducing the number of risks and necessary controls. In current digital operating environments, automation is expected to take a bigger role in the implementation of LDTI, which is explored further below (refer to "Integrate automation and technology disruption").



Issue 4: Ineffective documentation and communication

Comprehensive process and control documentation are often inadequate or missing. This can have multiple consequences: misinformation around risk identification, inadequate or ineffective controls, and poor issue remediation. The lack of comprehensive documentation can also exacerbate key-person risk. Teams unaware of the exact requirements of the COSO framework can underestimate how critical it is for a process to be properly documented and how it plays a vital role in the broader governance.

Traditionally, various teams within an insurance company (e.g., IT, actuarial, accounting) have not had strong and formal communication setup when it comes to solving specific control issues. Such issues are resolved on an ad hoc basis. However, in recent years, there has been a shift in which companies are recognizing that actuaries and nonactuaries must improve cross-team work, collaboration, and communication in order to provide seamless controls.

How to overcome this issue

The trend in cross-team work, collaboration, and communication will continue to increase, and it will be even more important for the LDTI environment. As previously noted in "Risk assessment," allowing a cross-functional team to review your process narrative and controls will provide deeper insights for both teams. One area of change in LDTI guidance is the disclosures, and this will require a company to demonstrate how it will clearly document and communicate all the results and requirements to stakeholders. Therefore, effective documentation and communication will be critical.

Issue 5: Limited time

Companies have multiple competing priorities. Monitoring controls is usually not regarded as a highly desirable task due to the repetitive nature of controls execution throughout the year. Teams may struggle to find the time to refresh and update controls in a timely fashion, and risk assessment, process, and related documentation is a distant third.

How to overcome this issue

Since LDTI requires a change in most of the actuarial processes, it presents a great opportunity to minimize or remove cumbersome processes by redesigning or integrating automation so that more time can be spent on earnings analysis activities rather than the manual execution of controls. Redesign and automation will also increase the overall accuracy and completeness of the results.



Establish a control environment vision

Prior to rushing to establish the control vision and keeping the key pitfalls discussed previously in mind, companies should at least pose the following basic questions in order to evaluate themselves:

- Do we have a dedicated team that is empowered for the actuarial controllership function and is specific to ensuring that all control aspects are addressed? (Issue 1)
- Do we believe that there are significant areas that will require a substantial investment to stand up critical controls for LDTI based on what we know today? What are the critical gaps that will need to be addressed? (Issues 2 and 4)
- What is our vision for redesigning and leveraging automation? (Issues 3 and 5)
- For our current key processes, how well are we performing under each component of the COSO framework, and what are our most common challenges, if any? Have we identified all key risks, and if not, what is our timeline to do so? (All issues)

Establishing any control vision without addressing these basic questions would introduce overall control risk. In order to ensure that the company control vision is clear and easy to follow, and for its control framework to be effective for LDTI, during the LDTI development phase, a complete end-to-end process risk assessment is critical. Such an assessment will inform where exactly the gaps are for LDTI and where controls are needed. The assessment should also expose potential areas where automation may be applied. Key activities for such a risk assessment would need to take some of the following critical steps, and as much as possible, these could be done with the COSO framework as a guiding principle:

• Performing a robust reconciliation of all balances between the firm's processes to ensure all balances are accounted for and the process inventory is complete

- Defining clear ownership of processes and controls and ensuring the existence of clear independence (Issues 1 and 4)
- Developing risk control matrices that describe risks for each process, by step, as well as related mitigating controls (Issues 1, 2, and 4)
- Updating the simplifications and approximations inventories and assessing if they are complete, effectively governed, and sufficiently controlled (Issues 1, 2, and 4)
- Updating model, assumptions, and data inventories and assessing if they are complete, effectively governed, and sufficiently controlled (Issues 1, 3, and 4)
- Updating control documentation (process flowcharts, process narratives, and other relevant and supporting documentation) (Issue 4)
- Clearly identifying process improvement areas that may be disposed to redesign or automation opportunities and including use of new technologies (Issues 3 and 5)

Note that the company risk profile and product and process complexity will require companies to customize their process risk assessment, but the above steps potentially provide a starting point that can be leveraged.

Once companies have completed these activities, they should have a clear understanding of the controls they will need, where those controls need to be housed, and the areas that will benefit from automation. A combination of these items will tremendously help companies in establishing a clearer control environment vision and help drive the LDTI control implementation strategy.

The level of effort required for LDTI actuarial controls

The table below provides a few examples of the level of effort that may result under each of the LDTI categories. Note that the actual effort will be based on the company's risk profile and product and process complexity. Model governance, risk assessment, and model change management are some overarching activities that will span most of the below LDTI categories. For example, under "Data and storage," there will be a tremendous amount of model, data, input, and output governance and the associated risk assessment.

LDTI category	Description	Impact on business	Implications of controls
Data and storage	LDTI will increase the volume and frequency of data processing. Data will come in a variety of formats from different sources that each provide different levels of granularity. Historical seriatim data outputs will need to be saved and stored appropriately as part of LDTI.	Significant changes to data requirements will strain IT resources and reduce the time they have available for projects. The business data controls will also have to be enhanced or built to accommodate new data requirements. Storing data at the proper granular level will be a critical decision in designing storage for reporting and data mining.	New data requirements will expose new risk points that require additional controls. Building and adding controls to address these new risks will require a high level of effort. Effort: High
Assumptions and experience studies	Cash flow assumptions will be updated to current estimates based on experience at each reporting date and impacts due to changing assumptions will flow through operating income. The discount rate for interim and annual periods will be updated, and any changes in liabilities attributable to changes in the discount rate will flow through other comprehensive income.	New assumption corridor tools will need to be created, along with methods to distinguish noise from actual trends. Assumptions and experience studies will be based on data from different sources with varying levels of granularity. The experience study process must be refreshed as a result of these changes, and controls will need to be put in place to account for this process refresh.	Controls that ensure the accuracy and completeness of data used for assumptions and experience studies will need to be tightly governed. Assumptions require judgement; therefore, the completeness and accuracy of the data is critical. Additionally, proper approvals must be put in place to effectively control the development of assumptions. Effort: High
Valuation and modeling	 Changes will be introduced related to: Measuring liabilities for future policy benefits on traditional and limited-pay contracts Measuring market risk benefits Amortizing deferred acquisition costs 	These changes will require modifications to actuarial and accounting policies, assumptions, and methodologies. Valuation systems and models will need to be appropriately updated or replaced to support the new modeling requirements.	Data inputs, accounting policies, and assumptions that go into the valuation model will all require new controls to ensure the model is updated correctly. Effort: High

LDTI category	Description	Impact on business	Implications of controls
Booking process and general ledger	Once LDTI results are generated, there will need to be an efficient and accurate process to input these entries into the booking and general ledger with the appropriate controls.	Unless general ledger formats and line entries do not change significantly, the process of booking actuarial balances to the general ledger should be like the pre-LDTI process, but new entries will be required.	Controls will vary depending on the manual processes set up to transfer actuarial outputs to the accounting department for booking. Effort: Medium
Internal and external reporting	New reporting complexities will require integrating processes and systems across the actuarial and finance departments. A significant number of additional disclosures will need to be provided as part of the interim and annual financial statement close processes. Non-GAAP measures will require new definitions and additional insights.	As discussed in the challenges section above (Issue 1), companies will likely spend some effort addressing process ownership issues, segregation of duties, and efficient sign-off and approval processes. The new reporting requirements provide new layers of data to mine for solutions and insight.	There will be a significant amount of new controls and data to support the disclosure requirement for LDTI. It will be important for companies to recognize any existing controls that rely on deep understanding of mechanics and trends that would satisfy the new disclosure requirements and enhance any current controls that might still be applicable for LDTI. Effort: High
Comparative financial statements	Before ASU No. 2018-12 is fully effective for disclosure in year- end 2022 financial statements, comparative financial statements will need to be produced.	Controls should be redesigned and enhanced based on the initial production run to produce the comparative financial statements. If any controls are missing, they must be added.	Underlying controls, including all end-to-end process controls, must show they support the comparative financial statements. Effort: High

In summary, there is a medium-to-high amount of effort per task that companies will need to make in order to get their entire LDTI process implemented, tested, and operational. Addressing multiple complex and high-effort tasks at the same time is a daunting project, even with proper resources. This effort is best completed with an eye for risk as governance and documentation are created. The natural questions when considering controls during these early stages are 1) What risk has my process created? 2) Where should controls be placed? and, 3) How will the controls work?

Integrate automation and technology

Given industry trends, it is increasingly important to leverage innovative technologies as an enabler for LDTI controls. Technological advancements are rapidly transforming the way information is processed and work is completed. New technologies create the opportunity to transfer "machine work" to machines while providing professionals with more time to focus on tasks that require human judgement, evaluation of analysis, and generating insights. This would effectively address issues 3 and 5 discussed above.

Technology tools increase the speed, efficiency, and overall quality of audits while decreasing overall costs. Additionally, technology tools can enhance the traceability of data and increase the reliability of controls and processes, which lead to less chance of a material misstatement in financial reporting and better productivity.

A sample of technology tools to leverage for the LDTI journey include:

- **Robotic process automation (RPA).** RPA systematically advances processes by applying rules-based actions across platforms to complete repetitive tasks. Processes that are highly repeatable and predictable can be automated, reducing the risk of manual error and enabling a redeployment of manual resources.
- Natural language processing (NLP). NLP tools ingest structured and unstructured data (e.g., emails and PDFs) and turns it into output data designed for machines to use. NLP tools can be used to extract information from millions of pages of contracts with varying formats and terms and convert it into a neatly formatted, concise spreadsheet that can be easily analyzed and fed into models. NLP replaces manual data input, saves a significant amount of time, and minimizes human error.
- Enterprise content management (ECM). ECM uses a cloudbased platform to streamline the document authoring process and enables professionals to create and edit reports. ECM platforms automate the production of reports using a "single source of truth," which ensures that changing information in one part of the document can cascade to the rest of the document, as well as to other reports utilizing the same information. The platform also has version control features, leverages workflow tools, and easily connects to external applications.



- Workflow tools. These tools optimize and manage business processes by integrating content and creating seamless collaborations for professionals.
- **Data-wrangling.** This process compiles and maps raw data into a more succinct and usable format for downstream use in reporting and analytics. Data-wrangling solutions can be used to automate data processing (consolidation, formatting, transformation, and duplicate resolution) and data validation (reconciliation and reasonability checks). These solutions result in better data quality, reduced time spent on manually processing data, and reusable rule sets that can expedite the setup of future data applications.

Highlighted above was how cumbersome manual processes (issue 3) are key challenges today, along with ineffective documentation of controls (issue 4) and limited time (issue 5). These issues will be exacerbated as a result of LDTI and can all be addressed by leveraging technologies.

How can technology tools assist with this example financial process flow?



Leveraging automation technologies reduces the amount of time professionals must spend on producing controls.

With the extra time professionals have available due to the automation, they can review discrepancies and design new and deeper analyses of results. It is essential for companies to realize that leveraging innovative technologies is important and should be prioritized appropriately and be part of the control environment vision discussions. As the call for modernization is increasing across the insurance industry, more and more companies are now exploring how they can apply these new technologies to their manual and repeatable processes, which fits very well with the timing of LDTI.

The more companies explore RPA opportunities, the more they will be informed and benefit in the long term. A culture of technological advancement, once set in a positive direction and accepting of automation, will help create a beneficial cycle in which RPA and other automation technologies can be used to make the company more agile, competitive, and strategic in its long-term vision and objectives.

While it may not be possible for some companies to implement all the technologies previously described in their implementation plan timing, companies should put in a level of effort that is commensurate with their risk profile and the financial reporting importance in order to comply smartly with LDTI standards.



Looking forward

LDTI requirements will pose a strain on company resources, but if preparation time is used strategically and efficient techniques and technologies are implemented, a well-designed LDTI process will be of great benefit to your company, providing a competitive edge among your peers. With an opportunity to integrate, rather than overlay, controls, the benefits to modernizing the financial control environment, including robotics, are increased exponentially.

If you have any questions on your LDTI controls activities or need help in jump-starting your assessment of LDTI's impacts on your organization, please contact us.



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