LDTI assumption updates – Challenge and opportunity
Introduction

US GAAP Long Duration Targeted Improvements (LDTI) has significant impacts on an insurer's experience monitoring and assumption setting process. LDTI requires an insurance entity to review the assumptions at least annually and update them more frequently if the actual experiences warrant a change for future assumptions. Although many companies have been regularly updating assumptions for FAS 97 products, LDTI will require similar regular updates for nonparticipating traditional business. Additionally, the expanded disclosures will require that insurers disclose the separate impact of actual experience and the unlocking of assumptions and reconcile the amounts to the income statement.

In this article, we will discuss the current pain points with the experience study and assumption management processes insurers have today, and further analyze how LDTI amplifies these issues. We further discuss how LDTI provides a unique opportunity for insurance companies to revamp antiquated processes and analyses and present a vision of what the future of experience study and assumption management may look like.

Experience study and assumption management pain points

Speed

Historically, the insurance industry's data processes have been cumbersome and labor intensive. Many insurance companies have embarked on efforts to modernize the data processing used in financial reporting. However, experience study processes have largely been untouched. LDTI magnifies the issue of speed. Experience studies require significant amounts of data and, if these processes are not modernized, it will create additional challenges for companies' to demonstrate that they are actively monitoring assumptions given the current time lag between data collection, analysis, and assumption implementation for many insurers. As a result of this time lag, important emerging trends may be missed.

With LDTI's requirement for more frequent experience monitoring and assumption updates, lagged and potentially inconsistent assumption updates will put management's credibility in doubt. While experience updates for nearly all insurers will be in real time, the assumption updates for most are not and currently may be lagged by nine months or more. Such a data lag could lead to an assumption update in the opposite direction of the most recent experience updates.

Analytics

The quality of analytics is closely related to the speed pain point as discussed earlier. Due to the large amount of time spent collecting and cleaning data, the time spent on analytics may suffer which reduces the level of intelligence that could have been uncovered from the data. Additionally, the analytics may not be granular enough and key drivers of the experience may be overlooked. As a result of these challenges, many companies have placed a heavy reliance on judgements and ad-hoc analyses as opposed to incorporating advanced analytics into the experience analysis process.

LDTI amplifies the need for more granular analytics and better insights given the more granular cohort nature of the calculations and impacts on assumption setting. Advanced analytics can help supplement actuarial judgements by providing insights into the most predicative drivers of experience, identify emerging trends, and provide better insights into customer and portfolio behaviours. This information is not only valuable to determine the drivers for the variance between actual experience and assumptions, but also has greater applications across the insurers operations in areas such as product development and pricing.
Storage & Controls

The above challenges around experience and assumption management result in additional pain points in the ability of insurers to set up and maintain effective control environments in these areas. The cumbersome and labor intensive processes seen today are error prone and typically involve high amounts of key person risk. There is also often a lack of traceability in the experience study and the assumption setting process. The decisions made to update or maintain certain assumptions are typically not traceable unless a significant amount of attention and discipline is applied in the documentation and review process. Additionally, control failures often occur between signed-off assumptions and the actual assumptions that ultimately make their way into the valuation models. Lastly, the assumption setting process is not easily repeatable due to the large amount of data, labor intensive efforts and the ad hoc nature of the analytics at many insurers.

LDTI will require companies to keep track of large amounts of data for actual experience and the data will have direct impacts on financial statements. This will necessitate having repeatable and well-controlled experience study and assumption update processes. Investment in better assumption management workflows and storage solutions will not only address historic control issues but also improve the quality of analytics able to be performed. For example, by maintaining historical pricing assumptions and assumption development, firms may be able to better assess product strategies, product profitability, risk profiles, and variances.

An automated experience study and assumption management solution can address the pain points

The future of experience study and assumption management will be automated, timely, and insightful. It will drastically reduce the time and effort needed between starting experience study and finalizing assumptions for the valuation platform. As illustrated in Fig 1, a modern platform can achieve 100x efficiency gain and deliver advanced analytics to inform the assumption settings:
Such modern platforms like PwC’s Experience Study and Assumption Management (ESAM) platform already exist. PwC’s ESAM platform is a leading solution to modernize the end-to-end workflow and assist life and annuity carriers to achieve the combined goals of speed, efficiency, controls, and insight. Key capabilities of ESAM:

**Automation & Control**
Both experience study data and assumption sets are persisted in a centralized data repository. Automated data pipeline is governed by the ESAM control framework to assure the data integrity and the downstream analytics quality.

**Advanced Analytics**
ESAM not only enables business users to interact with the experience study models and assumption sets through an easy-to-use web interface, but also provides an integrated development environment for actuaries, data scientists, and data engineers to collaboratively develop and deploy advanced analytic and machine learning models efficiently.

**Assumption Management**
Assumption development and governance is powered by a workflow engine connecting the assumption approval process to the underlying experience study results. The built-in assumption file generator creates the assumption tables ready for the valuation platforms.

**Visualization**
ESAM is equipped with modern visualization tools empowering business users to explore and gain insights from the data through the interactive dashboards, such as A/E analysis, experience study memo, variable importance, and model benchmarking.

**Conclusion**
LDTI requires a change in the way that insurers manage their experience study and assumption management processes. The demands that LDTI places for more frequent and granular analytics and data storage will require insurers to adopt new technologies and analysis capabilities. We believe an effective experience study and assumption management platform can solve the pain points for speed, analytics, and controls seen in today’s processes and provide opportunities for greater insights into an insurer’s customers and portfolio dynamics. PwC’s ESAM tool is an example of the future state that allows companies to meet LDTI requirements and provides greater insights more efficiently. For more information, please contact our team.
Thank you