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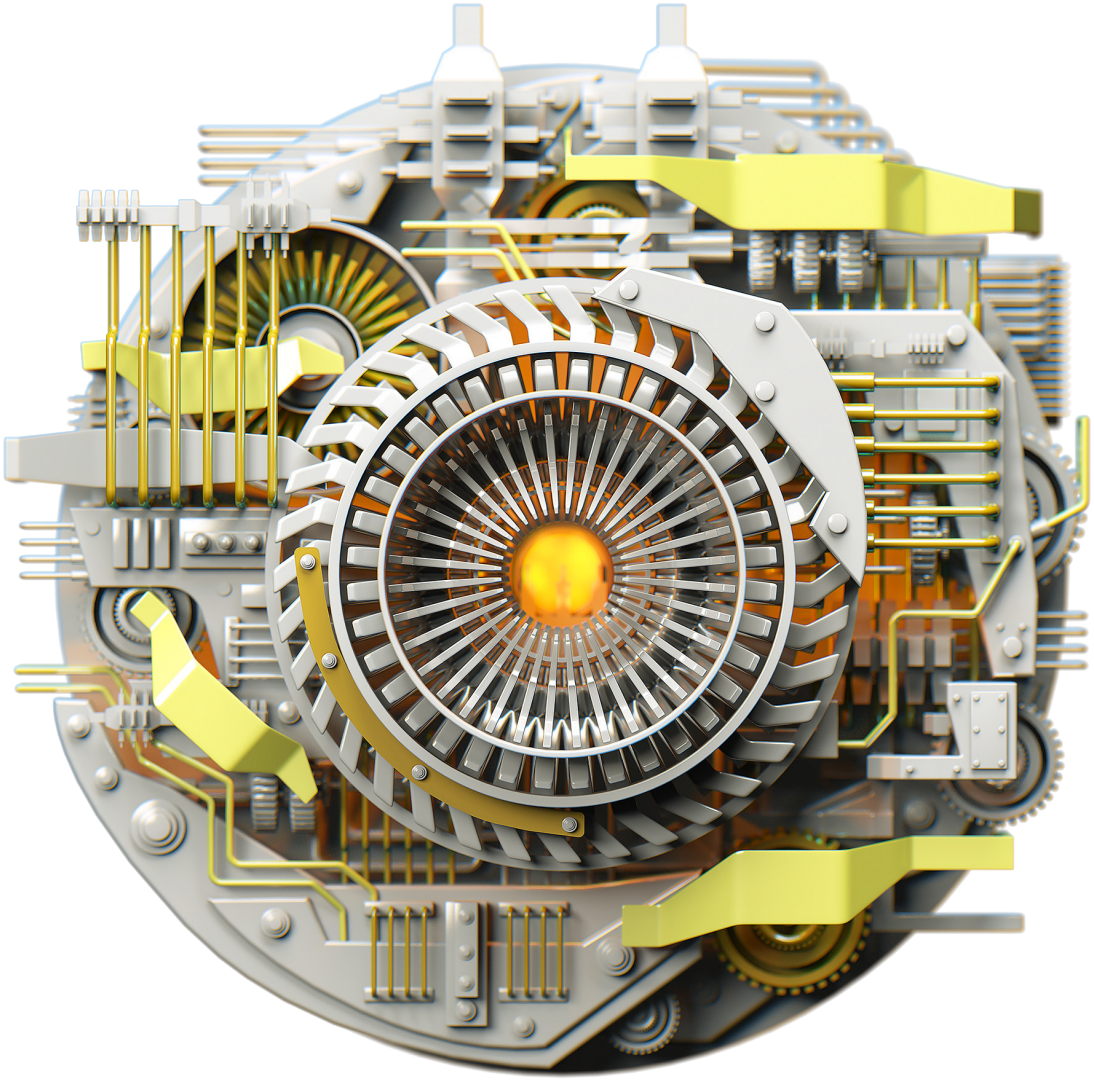


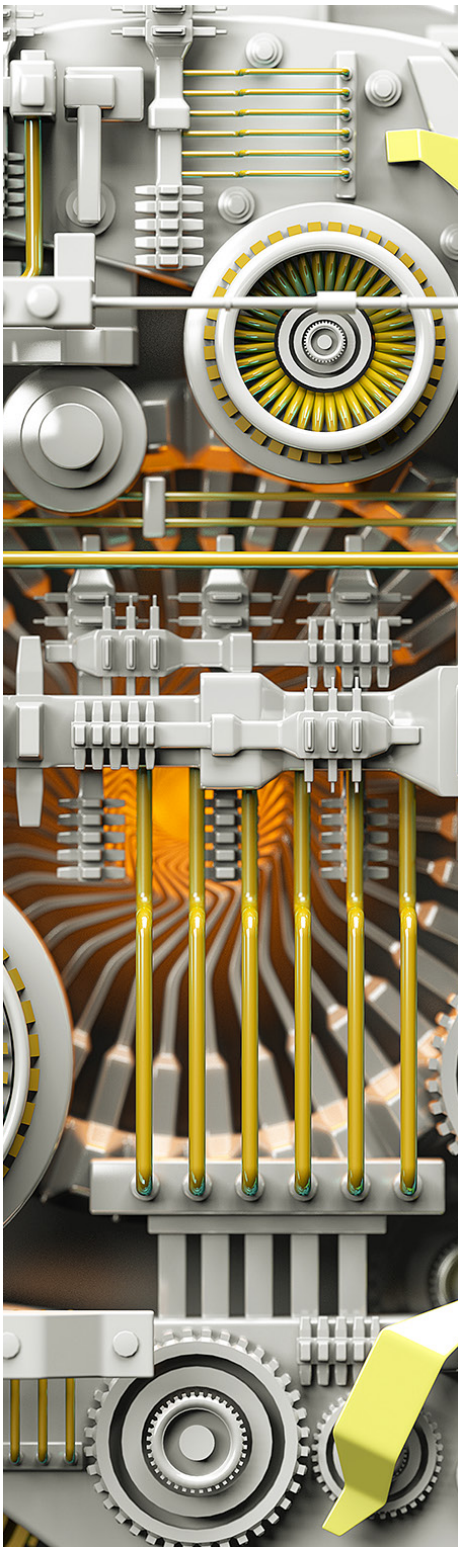
Modernizing reinsurance administration

Introduction

An effective and efficient reinsurance program is often critical to an insurer's success. It is typically one of the most significant financial transactions for an insurer/reinsurer, involving hundreds of billions of dollars annually, and it is a critical strategic element in managing earnings volatility and capital adequacy. Yet despite this significance, respondents to Deloitte Advisory's reinsurance administration survey indicated there has been minimal investment over the last decade in the technology, processes, data quality, and analytics in this area. By focusing on efforts to modernize reinsurance programs, managers may be able to leave behind antiquated programs saddled with manual processes, outdated technology, and insufficient analytics capabilities.

Modernizing reinsurance administration and reporting could yield positive results. Automating the manual processes can significantly reduce operating costs, increase speed of processing, and reduce errors. Implementing automated data integration and technology systems can help executives form and achieve their strategy regarding the nature of the business and agreements that should be ceded (e.g., products, pricing, geographies) to help meet the company's financial objectives. Investment and focus on reinsurance administration may be critical to increase profitability, enhance analytics, strengthen controls, and reduce underbilling (i.e., claims leakage).

In the following pages, you'll find some of the principal findings of Deloitte Advisory's survey, which consider the objectives of reinsurance, relationships with reinsurers, organizational capabilities, technology applications used, top "pain points," and emerging opportunities. In addition, we share with you supplemental perspectives based on Deloitte Advisory's client experiences and discussions with industry executives.



Key findings and observations

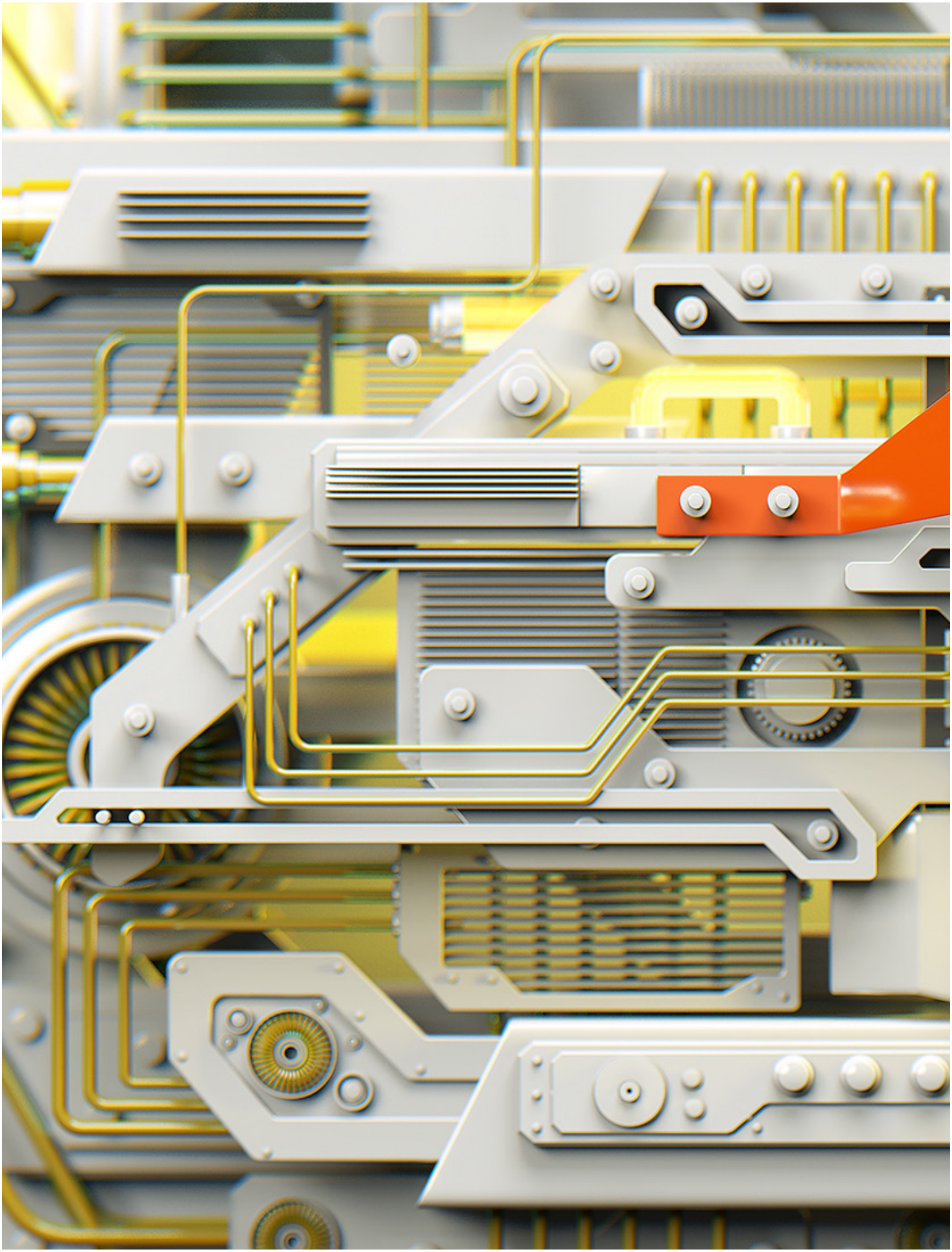
Increasing complexity. Insurers today develop customized reinsurance contracts that are tailored to specific risks and negotiated individually with reinsurers. Nearly 60 percent of surveyed executives said their company's reinsurance contracts have a high level of complexity and they struggle to automate administration of these contracts, resulting in manual processing and review.

Enhancing data integration and quality. Administering these contracts requires companies to integrate data from multiple sources, products, lines of business, and administration systems. Responding executives gave their companies low ratings on their capabilities in the area of *timely and informative data*, and they most often cited *data quality* (69 percent) as one of their top pain points.

Progressing toward analytics. Enhanced reporting, analytics, and dashboarding capabilities were among the top-reported areas where respondents wished to make the greatest progress, attempting to move from the low end of "advanced" into a "leading" practices position. Approximately 38 percent of respondents saw analytics as one of the top pain points, drawing the connection to the need to first address the impeding data issues and then to improve the analytics capability.

Underinvestment in technology. Executives responded that their companies had only basic capabilities in the area of *usable and sustainable technology solutions* and that major enhancements would be needed. In addition, half of the executives said their company continued to use spreadsheets, which can be labor intensive and prone to error.

Streamlining operations. Companies have the opportunity to improve the effectiveness of administration while reducing costs by automating reinsurance administration processes. Yet, responding executives gave their company low ratings on *standardized and automated processes,* which is a barrier to effective automation. Also, half of the companies reported using significant manual workarounds.



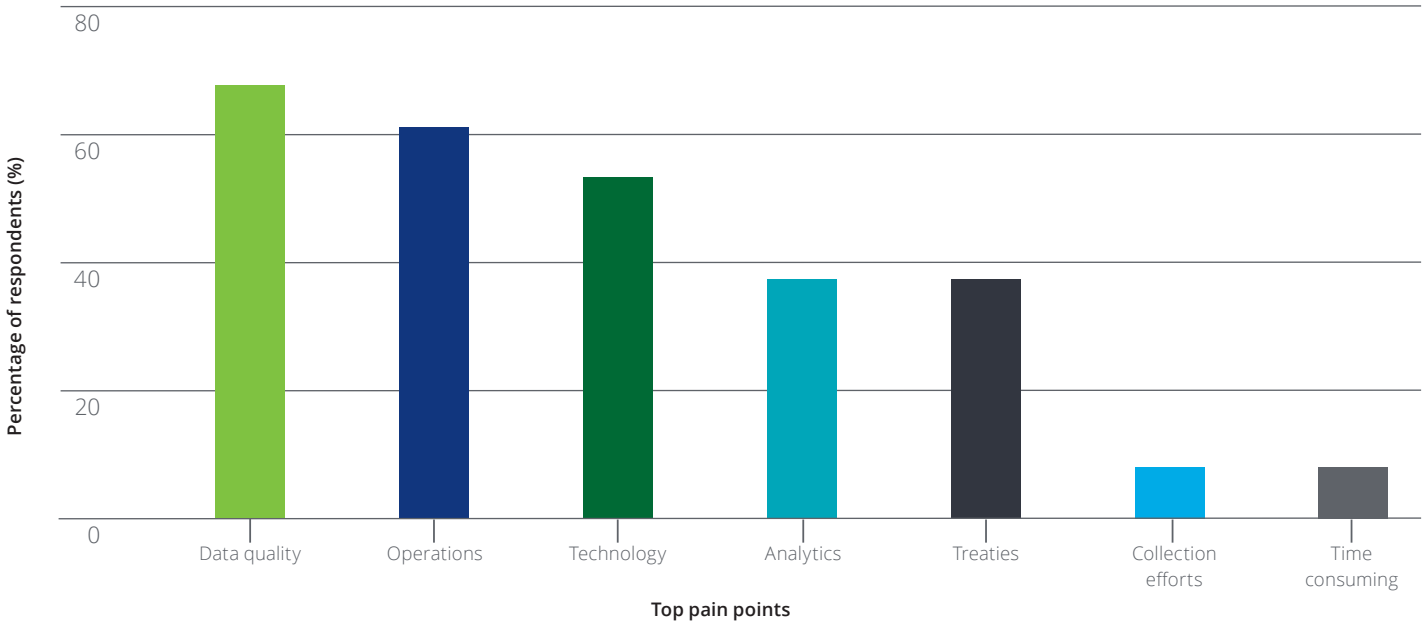
Increasing complexity

The straightforward reinsurance contracts of yesteryear—primarily used for risk transfer purposes—no longer appear to meet the expanded objectives of reinsurance today. While 62 percent of executives responded saying their firms continue to use reinsurance with the objective of risk transfer, 54 percent also cited capacity expansion (i.e., capital management), and another 38 percent cited reducing income variability. To accomplish these goals, underwriters have taken to individually negotiated contracts and the application of complex risk profiles. Reflecting this, 92 percent of surveyed executives said their company's reinsurance contracts have either a medium or high level of complexity, with 60 percent saying the level of complexity is high.

This more sophisticated approach can offer better financial performance and capital management, but it has resulted in reinsurance products that are more difficult to administer. Major companies face the challenge of administering thousands of reinsurance contracts, each with an intricate rule set that must be applied to all written business associated with the contract and may require analysis of policy data over decades. In addition, insurers are interested in reinsurance contracts that only cede specific types of coverage, such as earthquake coverage in geographical areas with a high risk of loss.

Compounding the complexity issue is the fact that reinsurance administration at many insurers has not kept pace with the increasing sophistication of today's contracts. Many companies need to catch up from years of underinvestment in technology systems and data, which has resulted in manual processes and data silos that make administration and analysis difficult. When asked to name the top three pain points within their reinsurance group, the areas cited most often by respondents were *data quality* (69 percent), *operations* (62 percent), and *technology* (54 percent) (figure 1). To remain competitive, insurance companies should consider significant improvements to their data management, technology systems, and operational processes to help ensure administration is both capable of administering the reinsurance program and aligned with the organization's strategic objectives for reinsurance.

Figure 1. Top pain points for reinsurance groups



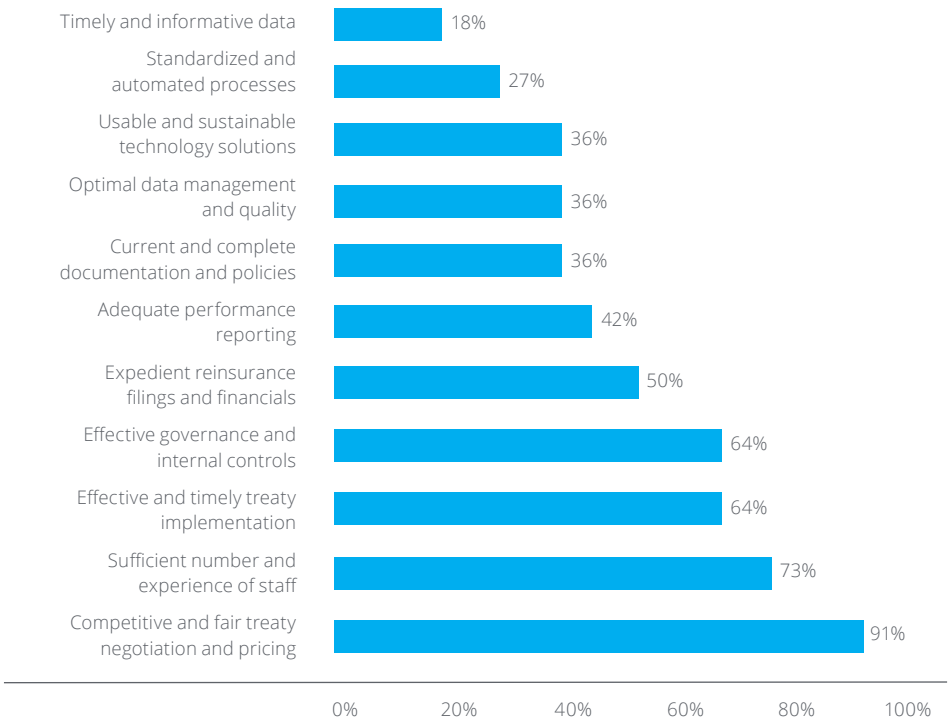
Percentages total to more than 100%, as respondents could make multiple selections.

Source: Reinsurance administration survey, Deloitte Advisory, 2016–2017.

Enhancing data quality and integration

The foundation of effective administration includes ready access to robust data from across the organization (i.e., data that are accurate, complete, consistent, and sufficiently granular). High-quality data are recommended to understand profitability, determine the optimal deployment of reinsurance, and price contracts appropriately. Despite the data's importance, access remains a challenge at most insurance companies. When asked about their current capabilities, responding executives gave their company some of the lowest ratings in the areas of *timely and informative data* and *optimal data management and quality* (figure 2).

Figure 2. Current reinsurance capabilities



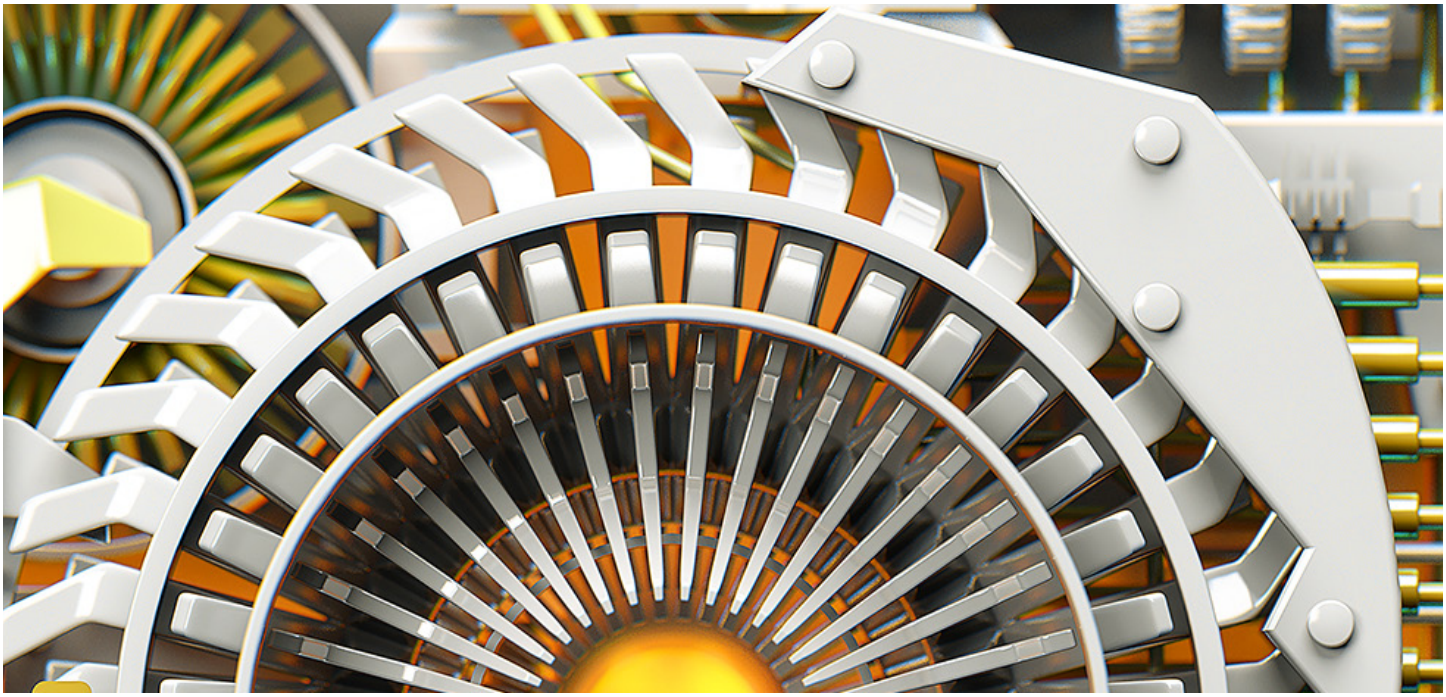
Percentage of respondents describing their organization as having "advanced" or "leading" capabilities in each area.

Source: Reinsurance administration survey, Deloitte Advisory, 2016–2017.

Data governance also remains a factor preventing the rapid and accurate aggregation of data across the enterprise. Since many reinsurance contracts cover multiple products or lines of business, the related data would typically be found residing in disparate technology systems. Without a sound governance model in place, data structures and definitions could vary from system to system. With the proper model in place, data could be more easily integrated to allow automated analysis of profit and performance by reinsurer, treaty, product, and policy. However, this has not been achieved at many insurers throughout the industry.

Instead, at many insurers, different technology systems capture data in different formats, so they cannot be easily integrated. In some cases, new data elements—such as ZIP codes—that have been introduced appear in some systems but not in others. Additionally, many systems use different data definitions. For example, data on premiums may record the gross premiums in one system while representing premiums net of commissions in another. Similarly, in one database the policy start date may be the date the contract is signed, while in another it is the implementation date. Over time, it is recommended companies work to implement a common set of data elements to capture and employ consistent data definitions across all their technology systems.

Additionally, to support strategic decisions, companies are seeking to design a data architecture that allows them to integrate data from their disparate technology systems to conduct analyses and support decision making. Companies are investing in data warehouses, where data from disparate sources are integrated using extract, transform, load (ETL) software.



When looking ahead to the areas their companies want to improve over the next one to three years, *data warehousing* and *technology implementations* were tied as the enhancements cited most often by respondents (85 percent). Many companies are also using data lakes, where data from various sources are stored in their original format. Companies should also consider addressing the limitations arising from data granularity, specifically data that have been summarized across policies, reinsurers, or other dimensions. Data may have been summarized at some point to reduce storage costs, while still meeting reporting needs. These decisions of the past—which met the business needs of the time—can cause issues in meeting the business needs of today.

When data have been summarized, they may lack the granularity needed to gain deep insights into business drivers and potential areas for profit improvement. For example, if data are summarized on products across multiple reinsurers, a company loses the ability to analyze how each reinsurer has performed. Similarly, if data are summarized on multiple products associated with contracts with a single reinsurer, a company may be unable to compare the performance of the various contracts. It is possible to implement unwinding techniques that would allow insurers to restore data back to its original state; however, these practices remain time-consuming processes, often completed manually, adding further delays before meaningful analysis can begin.

85%

of surveyed executives cited data warehousing and technology enhancements as the areas their companies are looking to improve over the next one to three years.

Digging deeper

While the survey specifically focused on the administration of ceded reinsurance, our post-survey discussions with respondents reviewed additional facets of their business and operations. For organizations where assumed reinsurance was applicable to their business, the same issues were encountered and, in many cases, magnified. Data and reporting remained one of the primary pain points, as many organizations struggle to analyze their assumed business and have limited visibility into the overall performance of their assumed portfolios. These pain points were particularly prevalent where ceded and assumed reinsurance were administered as separate and distinct operations and stored in separate systems—preventing a holistic view of the overall portfolio performance.

Progressing toward analytics

Analytics can be a powerful tool to gain insights into your business and improve decision making; however, there are many hurdles preventing insurers from achieving this goal. While only 38 percent of respondents noted analytics as a top area they would like to improve, it is likely skewed by the realization that organizations are not ready to implement analytics without addressing other pain points first. This is further reflected in their responses on current- and future-state capabilities, noting that while they generally view themselves on the low end of "advanced" in the area of performance reporting, they wish to achieve a "leading" level through their future advancements. The high response levels for pain points associated with data quality and technology clearly indicate that these issues should be addressed before leading analytics can be reached.

Siloed functions and processes, along with the related technology, cause another barrier to advancing analytics at reinsurers. Taking data from a single system can still provide insights to users; however, breaking down barriers and pulling data points from across the enterprise can develop a more holistic view of the organization. For example, pulling mortality studies into a reinsurance dashboard could allow users to not only view how the reinsurance program has performed, but also how it may perform in the future given the changing assumptions in their models. This could open up insights into where further reinsurance is needed or recapture opportunities may exist. With proper implementation, enhanced reinsurance analytics can help organizations improve negotiations with reinsurers and provide the business insights to preserve and improve margins.

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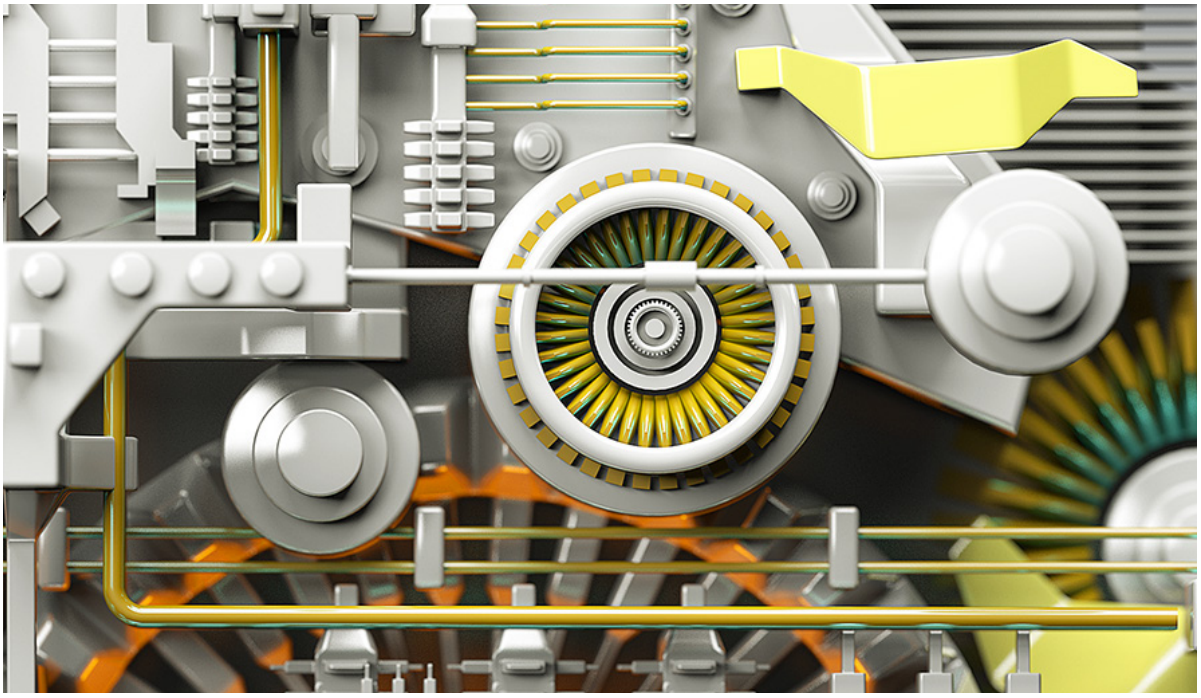
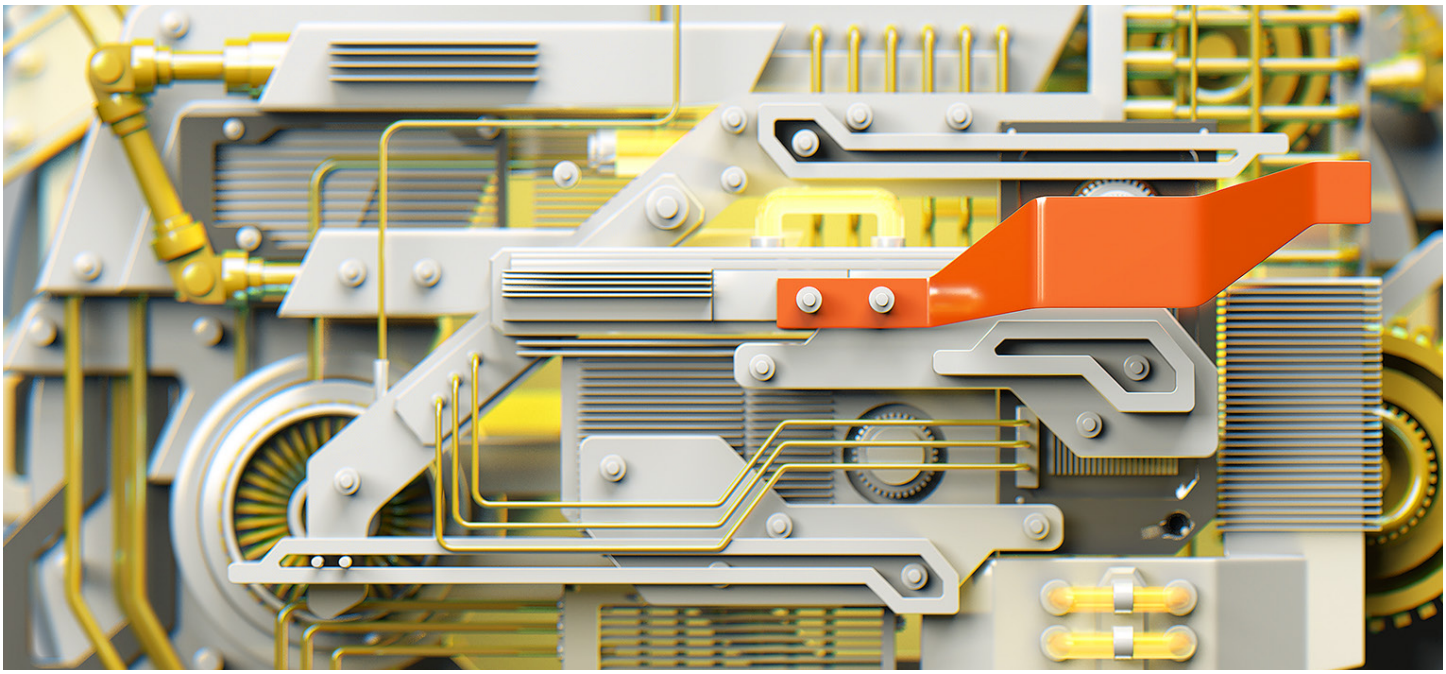




Underinvestment in technology

As companies develop the ability to integrate consistent data across their organization, it is recommended that the data feed into technology systems with the ability to identify the business that should be ceded. Further, these technologies should be able to analyze the cost and performance of the reinsurance contracts to assist in negotiations. This remains a challenge for many insurers.

Respondents gave low ratings to their company's capabilities in *usable and sustainable technology solutions* (figure 2). Most companies indicated that significant upgrades would be required before their capabilities could be considered "leading" within the industry. Eighty-five percent of executives said their company is looking to improve or enhance its technology implementation over the next one to three years, while 46 percent said they would be investing in predictive analytics. Insurance companies typically have disparate administrative systems that feed into the management of reinsurance. The fragmentation appears to be the result of systems that were developed independently for different products or the result of acquisitions. Forty-six percent of companies said they employ a technology solution that was developed internally. There is also a question of priorities. Many insurers have focused on enhancing the customer experience and placed a lower priority on investing in back-end systems. Respondents indicated that this lack of investment has led to aging technology systems processing transactions they were not necessarily designed to handle. Further, these transactions are often able to be processed only after extensive manual calculations are performed in spreadsheets and manipulated to be processed by the system. This "bandage" approach over the years has made it increasingly difficult for insurers to tackle the technology issue.

As a result, half the companies surveyed reported using spreadsheets in some fashion. Even when only employed for specific analyses, the use of spreadsheets remains inefficient and prone to error. Companies that still employ spreadsheets can benefit from software applications that conduct a secondary check on the calculations to confirm the data have been pulled and processed correctly before the outputs are used in financial reporting and billings.

46%

of surveyed executives said they would be investing in predictive analytics over the next one to three years.

Streamlining operations

When asked to rank their top pain points, 62 percent of surveyed executives cited operations as an area they struggle with the most. This doesn't come as a surprise, as many organizations currently have manual processes/workarounds in place, few new hires dedicated to reinsurance, no clearly documented and streamlined/automated processes, and a reinsurance function that operates in a silo separate from the downstream functions.

Given the complexities associated with reinsurance contracts and the administration of the business, reinsurance has historically been and continues to be an area of significant manual processes and workarounds. Many organizations realize the pitfalls associated with human intervention; however, they have not been able to identify viable solutions to reduce or eliminate the need for manual processes.

Manual processes for reinsurance administration and reporting activities are typically slow, costly, and prone to having data entered incorrectly or misinterpreted. These processes and human intervention can lead to a company inadvertently overbilling or underbilling its reinsurer. For example, one insurer discovered reinsurance accounting irregularities that required it to re-perform multiple years of reinsurance processing to identify variances. The source of the problem proved to be several small manual errors in a spreadsheet, including an incorrect percentage in a formula and the incorrect application of treaty terms. Given the large volume of dollars involved, these errors resulted in a substantial financial impact and required the company to refile several years of financial statements.

In addition to manual processes, another reinsurance operational issue noted by respondents is the combination of undocumented processes and a workforce nearing retirement. Critical knowledge of reinsurance contracts and how to process those contracts remain undocumented and oftentimes reside solely in the memory of the employee or processor. This poses a significant risk to the organization, as important processing information and knowledge could be lost following retirement or attrition. Clearly documenting all reinsurance processes can provide comfort to the organization, knowing the institutional knowledge has been captured within operating manuals/procedures.

It is equally important for organizations to review and assess operational processes to identify additional efficiencies and enhancement opportunities such as automation. Through automation, surveyed executives believed they could obtain greater efficiency and control in their company in recording transactions (62 percent), preparing financial statements (31 percent), preparing documentation (31 percent), and adjusting documentation (23 percent) (figure 3, next page).

Moving toward automated reinsurance systems can enable companies to refocus their resources and allow their professionals to spend less time gathering data and running reports and more time on analyzing data and drawing deeper, more meaningful business insights and performance analytics.

62%

of surveyed executives cited operations as an area they struggle with the most.

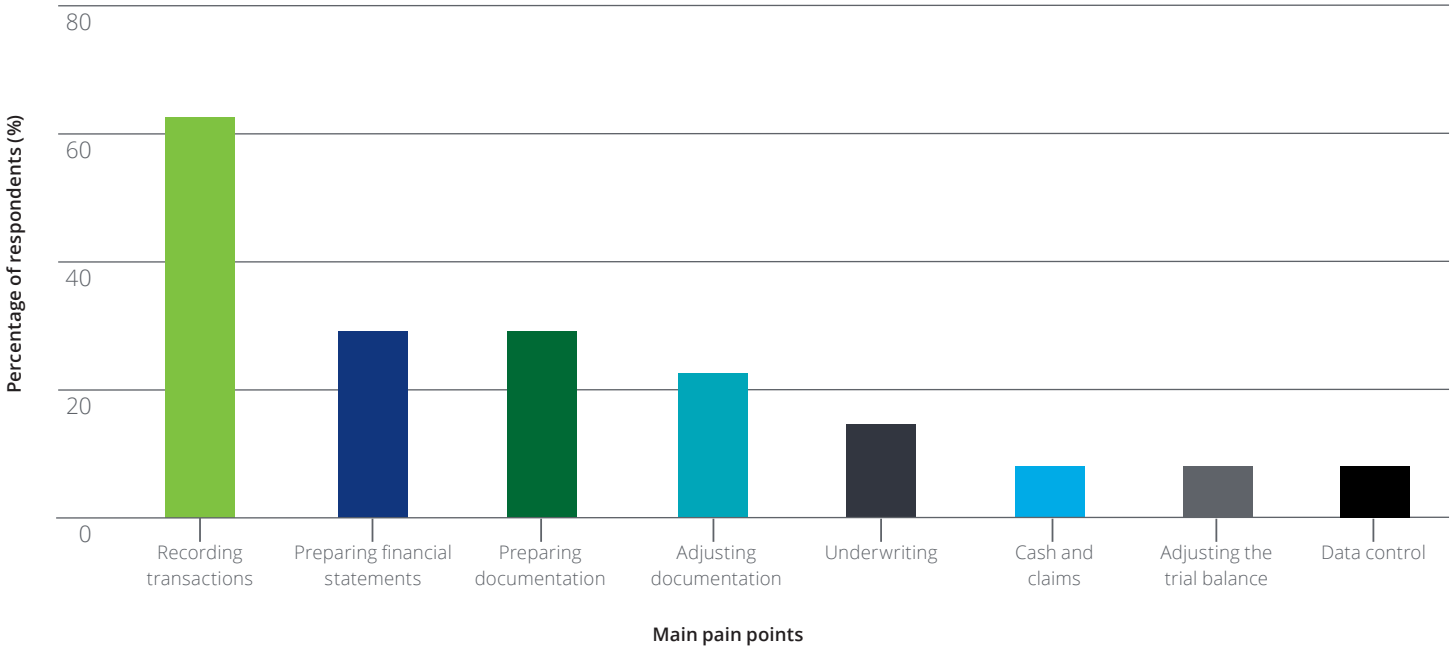
Lastly, an additional pitfall relating to operations is the fact that the majority of reinsurance functions operate within a silo inside the organization. This can lead to substantial delays in processing financial statements and an increase in last-minute requests due to a lack of understanding from downstream functions regarding the data and information they have received.

In order to assist in improving the operational downfalls, organizations can review whether and how to engage third-party vendors in administering labor-intensive activities in managing their reinsurance contracts to reduce costs. A vendor can either manage the process using the insurer's existing systems or operate on the vendor's systems, often using automated processes. Migrating a labor-intensive reinsurance process to a vendor's automated systems may be easier and less expensive than the alternative of replacing a legacy technology system.

Responding companies were divided on the use of vendors, with 42 percent reporting that they outsource elements of their reinsurance administration to a third party, while the remainder manages these activities in house. Companies that employ vendors reported outsourcing a wide variety of services, including accounting, broker services, disability insurance administration, exception processing, foreign entity administration, quality assurance, reinsurance claims recovery, and run-off support.

Insurers are looking toward other future enhancements in the form of alternative capital, blockchain, and robotics as options to further streamline operations and reduce operating costs.

Figure 3. Automation priorities for reinsurance groups



Percentages total to more than 100%, as respondents could make multiple selections.

Source: Reinsurance administration survey, Deloitte Advisory, 2016–2017.

Conclusion

Insurers have come to rely more heavily on reinsurance as they seek to generate revenues and sustain margins in an era of modest economic growth while responding to increased regulatory requirements that companies maintain minimum levels of capital. Once relatively straightforward, reinsurance contracts have expanded in number and become far more intricate to administer.

Reinsurance administration at many companies has not kept pace with the increased sophistication of reinsurance today. Many companies continue to use manual processes, which can be costly and prone to errors—such as failing to submit billings or make payments in a timely fashion. Lacking data in an accessible format, companies often are unable to conduct the performance analyses of individual contracts or individual reinsurers required in arbitration cases and in negotiations. Many companies face challenges in identifying which coverages should be ceded to enhance financial performance and manage capital more efficiently. Simply put, the operational model used by many insurers for reinsurance administration is unsustainable.

The greater prominence that reinsurance plays today in financial strategy makes it essential that insurers modernize their approach in the following areas:

- **People** – Insurers face the challenge of recruiting and developing new talent to replace reinsurance professionals as they retire.
- **Process** – Insurers should consider streamlining manual activities and spreadsheets, leveraging automated solutions and utilities where available.
- **Technology** – Insurers should consider reviewing aging reinsurance systems for upgrade or replacement.
- **Data** – Having an established data strategy can facilitate the ability to conduct insightful analysis, utilizing data warehouses and technology applications that enable data to be integrated and analyzed.

Looking ahead, it is recommended that the capabilities of the reinsurance administration function be taken to an entirely new level. Companies that remain wedded to traditional approaches will likely not only suffer from higher operating costs, but may also find they are at a strategic disadvantage by being unable to leverage this critical tool to manage their capital efficiently.

Methodology

Deloitte Advisory conducted an online survey of senior executives responsible for the ceded reinsurance activities at 13 insurance companies in 2016–17.

A mix of property and casualty ("P&C") companies and life and annuities ("life") companies participated in the survey. Fifty-four percent of the companies reinsured a significant property and casualty/specialty insurance business, 23 percent reinsured a significant life insurance business, and 23 percent reinsured both types.

Thirty-one percent of the companies have gross written premiums above $10 billion, 31 percent have premiums of $1.5 to $10 billion, and 38 percent have premiums of less than $1.5 billion.

Executives were asked whether they would be responding to the survey based on their company's US activities or based on its global reinsurance activities. Sixty-two percent of the executives answered the survey from a US perspective and 38 percent answered from a global perspective.

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