

MILLIMAN RESEARCH REPORT

Global life insurance / reinsurance actuarial outsourcing survey

An analysis of survey responses

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Introduction

Globally, for several years, insurers and reinsurers have been outsourcing¹ actuarial work to captive units or third-party service providers. Over the past couple of years, we have witnessed renewed interest in actuarial outsourcing, with an increasing number of insurers and reinsurers either setting up new outsourcing units or expanding their existing ones. This trend is especially true for life insurance companies, which are under increasing pressure to reduce costs, especially in the face of demanding regulatory changes, including International Financial Reporting Standard (IFRS) 17, long-duration contracts targeted improvements (LDTI), new risk-based capital regimes in Asia, and other factors.

Given the increasing demand, we conducted a survey to assess the trends in life insurance actuarial outsourcing. We surveyed outsourcing units of life insurers and reinsurers with operations in the Americas (North and South), Europe, and Asia. The outsourcing units described in this paper primarily focus on Asia and Europe.

Objective and methodology

The purpose of this study is to:

1. Identify the current outsourcing and offshoring landscape of life insurance and reinsurance companies.
2. Identify the drivers of growth and success of outsourcing units.
3. Detect emerging trends in this industry and analyse them.
4. Determine challenges faced by outsourcing units.
5. Provide information for companies to recognise opportunities in this area.

Most studies on this subject in the past have focused on 'outsourcing services' in general and have not analysed the patterns of any specific industry. In order to delve more deeply into the dynamics of outsourcing actuarial services, and to analyse more qualitative aspects, we surveyed key personnel working in outsourcing and offshoring units of life insurers and reinsurers around the world.

The survey questions were designed to collect information regarding the operations of various outsourcing units and the challenges and opportunities facing them. We received 21 responses covering the outsourcing units of 17 companies. The effective date of this survey is 30 June 2019.

¹ The term 'outsourcing' used in this report refers to the transfer of services outside of the local office either to a third-party service provider or a captive unit. This also includes what is traditionally referred to as 'offshoring.'

Executive summary

In order to uncover the trends in the life insurance actuarial outsourcing services market, we conducted a survey of outsourcing units of life insurers and reinsurers with global operations. The survey collected responses from outsourcing units across various geographies, covering different dimensions of their outsourcing relationships. While the outcomes of the survey reaffirm some prevailing notions, they also uncover some emerging trends.

Outsourcing units (covering both internal and external outsourcing) are located across the globe; however, there is a significant concentration of them in Asia (especially India, Malaysia and the Philippines), due to the availability of a large number of talented actuaries, ongoing infrastructure improvements and a competitive cost structure. There is, however, a large variation in the business models that these companies use. Some companies have set up large units in one or multiple geographies supporting multiple (actuarial and non-actuarial) functions. Other companies have set up outsourcing units catering to varying functions and lines of business in separate locations. Some other companies have set up small units that only provide actuarial services.

Based on the responses we have received, we understand that at this time most actuarial outsourcing units are either medium sized (i.e., with 50 to 100 actuarial employees) or small (fewer than 25). However, with upcoming regulatory and reporting changes in most markets (IFRS 17, LDTI, risk-based capital regimes), most outsourcing units have expressed plans to grow significantly. In fact, a number of new units have been set up recently to deal with the growing demand for actuarial services.

The results of our survey reveal that having the relevant expertise and communication skills are often viewed as being more important to the success of an outsourcing engagement than cost reduction. The ability of the outsourcing unit to provide value-added services and to demonstrate compliance are seen to contribute to the success of outsourcing relationships.

Outsourcing units are engaged in delivering a variety of services to the life insurance companies, including model construction, testing and execution, shareholder reporting and statutory valuation. While these units expect to continue to deliver such services to their clients, there are some emerging areas where outsourcing units expect to be increasingly involved in the near future: documentation and data management and analysis. The survey also brings out that a few units expect their clients to outsource more strategic functions—pricing, assumption setting, automation, research and development (R&D), etc.—in the course of time, as these units prove the ability to perform such functions while meeting quality standards.

We hope you find the report useful in assessing the trends and growth in this area. We welcome any feedback you may have on our report.

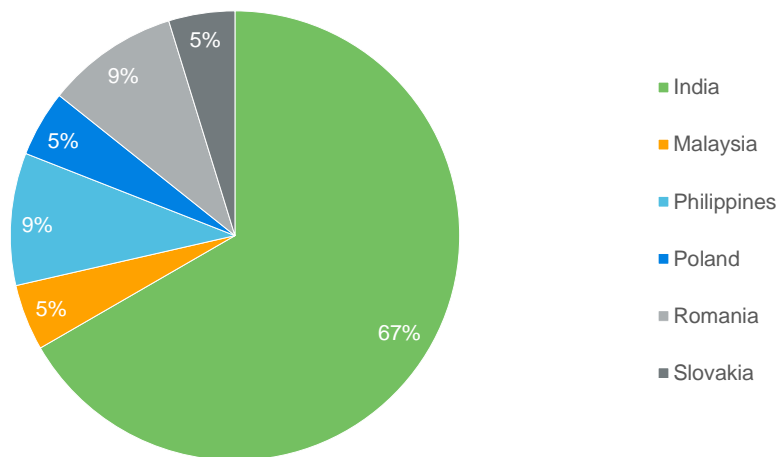
Summary of results

In this section, we provide a summary of the responses received from the survey as well as the key trends emerging from these responses.

A. LOCATION AND TIME SINCE ESTABLISHMENT

Figure 1 shows the survey representation by geography. The distribution is skewed towards India, which is not unexpected given that a large number of actuarial outsourcing units are located there. Abundance of actuarial talent, relative comfort with the English language, steadily improving infrastructure and low costs contribute to India’s dominance in this industry.

FIGURE 1: SURVEY REPRESENTATION BY COUNTRY



We are witnessing new units being set up in other locations in Asia and Eastern Europe as well. Each geographical region offers a distinct combination of factors that make it suitable for the establishment of outsourcing units. Figure 2 summarises some perceived relative advantages, which we have compiled through desktop research, of the main four locations where outsourcing units have been set up in the recent past.

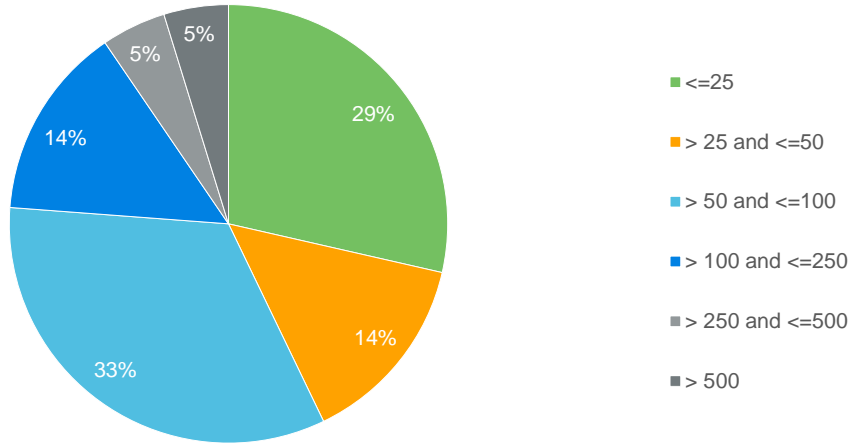
FIGURE 2: ADVANTAGES OF LOCATIONS

India	Malaysia
<ul style="list-style-type: none"> ▪ Lower costs and higher benefits ▪ Access to skilled workforce ▪ Outsourcing friendly government policies ▪ Productivity and customer support 	<ul style="list-style-type: none"> ▪ Strong and diverse language capabilities ▪ Strategic geographical location ▪ Stable business and economic environment ▪ Strong government industry support and initiatives
Philippines	Eastern Europe
<ul style="list-style-type: none"> ▪ Cultural affinity to the West ▪ High English literacy rate ▪ Steady pool of competency at budget-friendly costs ▪ Strong work ethics 	<ul style="list-style-type: none"> ▪ Compatible culture ▪ Highly skilled workforce ▪ Government support and favourable policies ▪ Stable infrastructure and latest technology

One-third of the respondents have been operational for at least 10 years and approximately another one-third have completed five years of operations or more. Anecdotally, we understand that at least four new units have been set up in the Indian subcontinent over the past year or so, four in Malaysia and one in Eastern Europe.

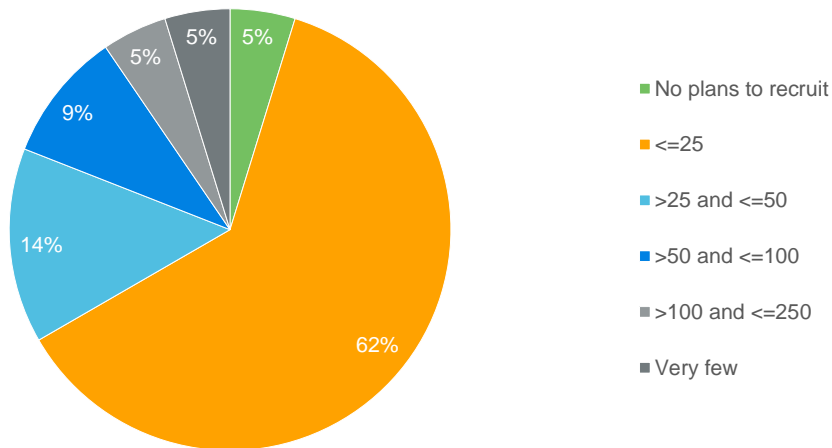
B. HEADCOUNT OF OUTSOURCING UNITS

FIGURE 3: APPROXIMATE ACTUARIAL STAFF HEADCOUNT OF OUR SURVEY RESPONDENTS



The average headcount of actuarial resources in outsourcing units is approximately 50 to 100. Not surprisingly, a strong correlation is seen between the number of employees and the number of years that an outsourcing unit has been in existence. Older units have higher headcounts, whereas some of the newer units have fewer than 25 actuarial resources.

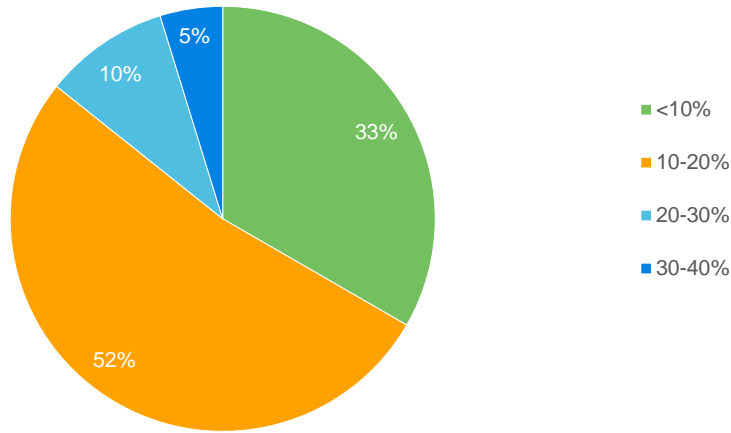
FIGURE 4: APPROXIMATE NUMBER OF NEW ACTUARIAL STAFF MEMBERS TO BE HIRED OVER NEXT THREE YEARS



While we note that 62% of respondents have plans to hire fewer than 25 additional actuarial resources over the next three years, this still represents a significant increase in staff strength. We understand that some of the larger outsourcing units have considerable expansion plans compared to the smaller units. The main drivers for expansion include major changes in the regulatory environment such as compliance with IFRS 17, LDTI in US GAAP and new risk-based capital regimes in Asia.

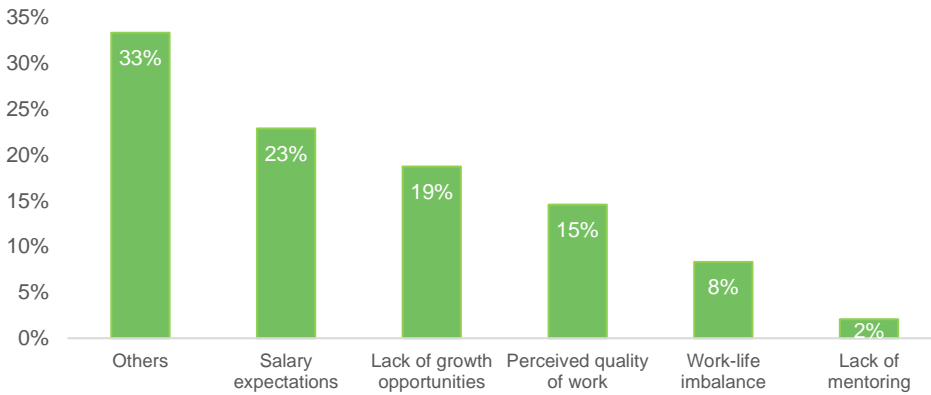
C. EMPLOYEE TURNOVER RATE

FIGURE 5: APPROXIMATE ANNUAL EMPLOYEE TURNOVER RATE IN THE LAST THREE YEARS



We understand that the banking and financial industry has an average global turnover rate of around 18% to 20%, which is one of the highest among all industries. The survey results have confirmed not dissimilar trends in the actuarial outsourcing industry with 52% of the respondents experiencing employee attrition in the range of 10% to 20% per annum. However, 33% of the respondents have experienced less than 10% employee attrition per annum, which is well below the banking and financial industry turnover rate.

FIGURE 6: TOP REASONS FOR EMPLOYEE TURNOVER OF SURVEY RESPONDENTS



Most of our survey respondents believe that salary expectations, the lack of growth opportunities and the perceived quality of work in outsourcing units are the major reasons for employee turnover in their respective units. Other miscellaneous reasons such as conflicting career goals, personal reasons, international transfers, etc., also constitute a significant proportion of the reasons for their employees’ attrition.

Based on our understanding, the following are some employee retention challenges that outsourcing units face:

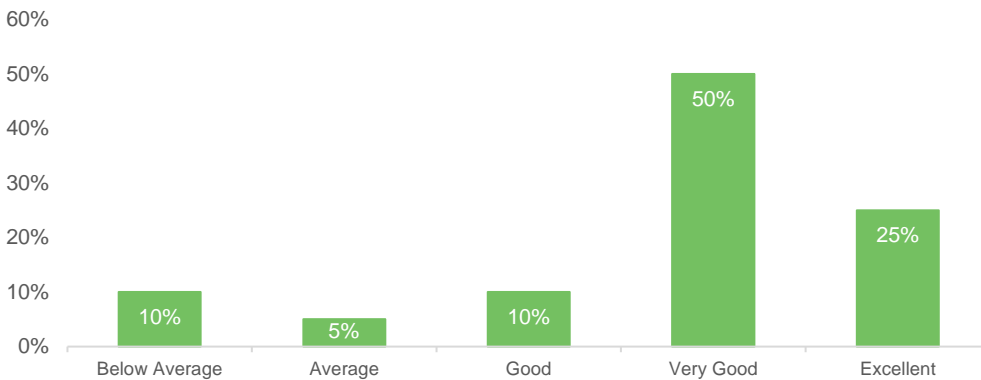
- Cost reduction pressures in outsourcing units (resulting in lower perceived compensation for their employees).
- Standardised operating processes provide little opportunity to apply actuarial judgement and/or management skills.
- Reluctance from insurance companies to outsource direct market-related functions, including pricing, underwriting, business planning and regulatory interaction, results in fewer growth opportunities for employees within outsourcing units.

Anecdotally, we understand that in some countries employees working in outsourcing units have higher compensation levels than employees working in direct insurance companies. We also note a wide discrepancy in the level of salaries offered in different outsourcing units. Employee dissatisfaction with salaries is generally relative to other outsourcing units and to colleagues within the same company rather than in relation to direct insurers.

D. QUALITY OF RESOURCES AND TRAINING

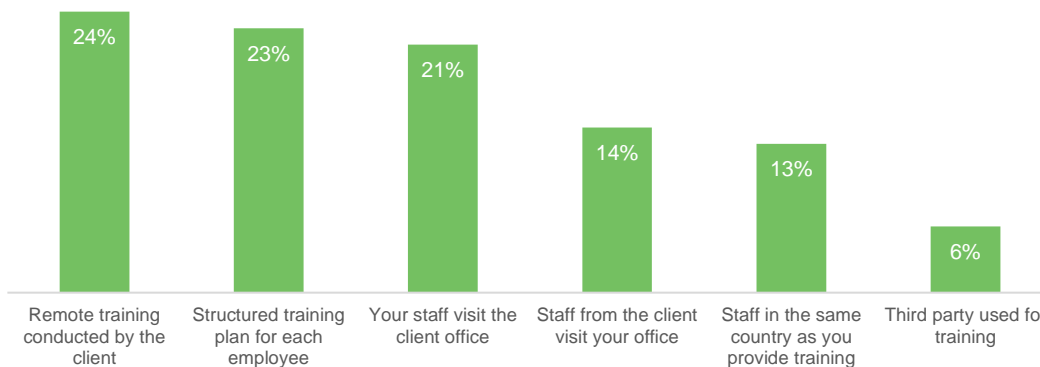
We asked the survey participants to rate their level of satisfaction with the talent available in their respective countries, to which most of the participants responded positively. However, approximately 15% expressed the view that the level of talent available to them locally was not satisfactory. Figure 7 shows the survey results to this question.

FIGURE 7: LEVEL OF SATISFACTION OF SURVEY RESPONDENTS WITH THE LOCAL TALENT AVAILABLE



The survey also queried respondents on the methods used by survey participants to train their employees. Figure 8 shows a summary of responses to this question.

FIGURE 8: PREFERRED METHODS OF ACTUARIAL STAFF TRAINING



Not surprisingly, most outsourcing units prefer to train in-house. The training appears to be a mixture of remote training conducted by on-site employees, structured training plans for each employee and on-site visits. Few units utilise third-party providers for training purposes, most likely due to cost issues.

We asked the participants about the approximate time it takes them to fully transition a new process to their units. The responses confirmed that most of the units could completely understand and execute a new process in less than a year.

E. LOCATION OF ALTERNATE OUTSOURCING UNITS

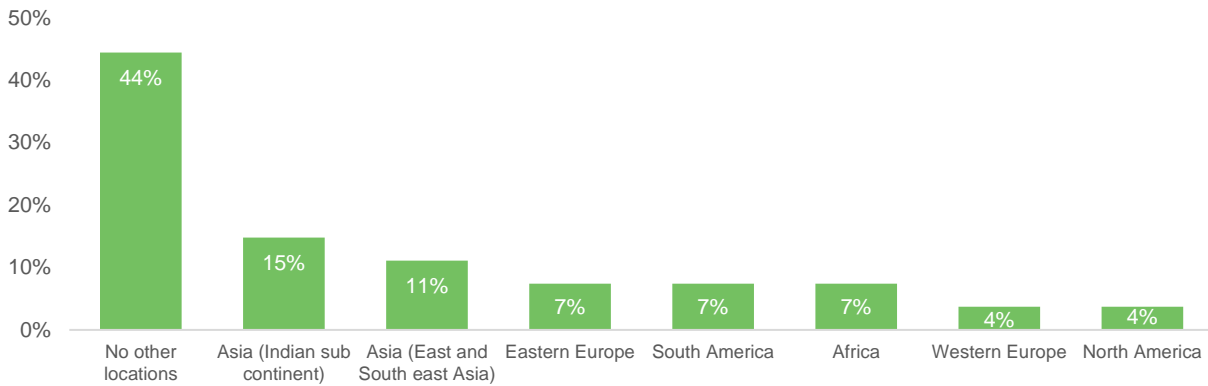
Some insurance or reinsurance companies have outsourced their actuarial work to more than one unit. Work is outsourced to more than one unit in order to take advantage of different time zones, availability of talent and different government policies (for example, tax advantages).

Other reasons for doing so could be:

1. Geographical proximity to local units
2. Business continuity considerations
3. Cultural affinity towards certain regions

Figure 9 illustrates the relative number of alternate outsourcing units of the survey respondents in various regions of the world.

FIGURE 9: ALTERNATE LOCATIONS OF ACTUARIAL OUTSOURCING UNITS OF SURVEY RESPONDENTS

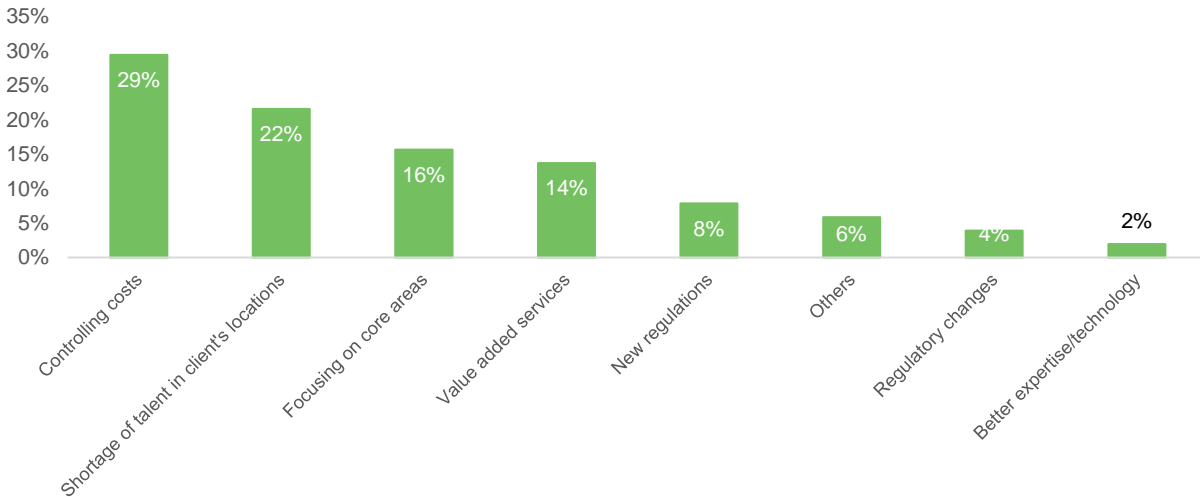


While companies with smaller actuarial departments tend to set up outsourcing units in one geography, larger companies tend to have outsourcing units in multiple locations. Generally, each outsourcing unit will serve one or multiple entities or functions within each company. Some companies have set up outsourcing units in multiple geographies to meet their business continuity requirements.

F. DRIVERS AND CHALLENGES

The survey further enquired about what, according to the outsourcing units, was a client’s motivation for outsourcing work to them. Figure 10 shows the responses received.

FIGURE 10: CLIENTS’ KEY MOTIVATIONS FOR OUTSOURCING WORK TO OUR SURVEY PARTICIPANTS



While, not surprisingly, controlling costs is the primary motive for outsourcing work, the responses indicate that a significant number of respondents believe that shortage of talent in their clients' locations and the clients' need to focus on core activities encourages them to outsource their work. In addition, anecdotally, in light of the recent tightening of immigration policies in Western countries, companies facing resource shortages in local entities are looking to outsource work to other countries rather than import talent into their own countries.

The ability of the outsourcing units to provide resources (both in terms of people and technology) that are capable of adding value rather than simply meeting minimum requirements appears to be a key consideration in outsourcing work. We foresee that the ability to lead process and system transformations and automation will be key focus areas for outsourcing units in the near future. There may be a risk that automation will cannibalise some outsourcing jobs, but it would lead to more system maintenance and governance functions within these outsourcing units.

In terms of cost benefits, while most units have been able to demonstrate significant cost savings (over 25%), many outsourcing units have not demonstrated as much. Figure 11 summarises the responses in relation to our question on the level of costs savings achieved by outsourcing units. The results indicate that cost benefit is not the primary area of focus for some outsourcing units, which is consistent with the outcome of the previous question.

FIGURE 11: APPROXIMATE LEVEL OF COST BENEFITS ACHIEVED BY SURVEY PARTICIPANTS

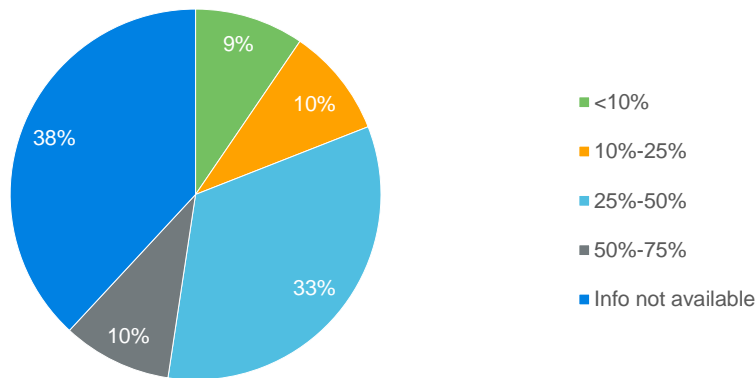
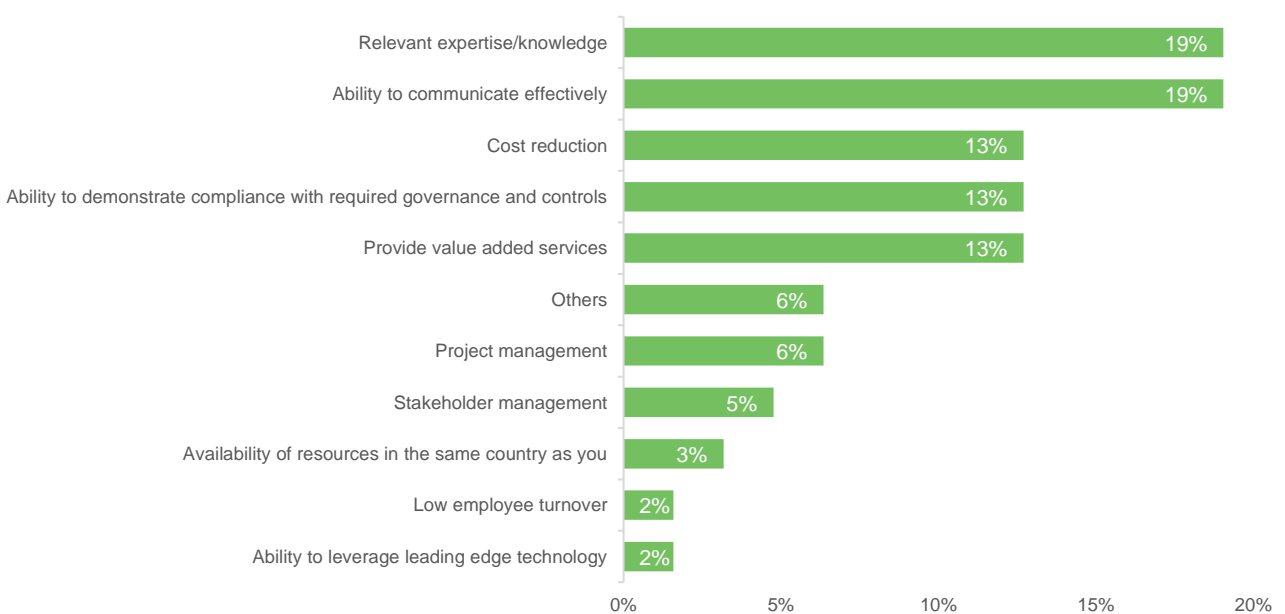


FIGURE 12: TOP FACTORS FOR SUCCESS OF AN ACTUARIAL OUTSOURCING RELATIONSHIP AS PER SURVEY PARTICIPANTS



According to the survey respondents, the key reasons that contribute to a successful outsourcing relationship are as below:

1. Ability to communicate effectively
2. Ability to demonstrate relevant knowledge/expertise
3. Ability to provide value-added services
4. Ability to demonstrate compliance with required governance and controls
5. Ability to demonstrate cost reduction

The top three responses indicate that attracting and retaining the right personnel plays an important role in the success of an outsourcing relationship. Cost reduction appears not to be as important. Another key consideration is the ability to demonstrate compliance with governance and controls. This is most likely because:

- Sarbanes-Oxley (SOX) requirements in the US have placed a burden of compliance on US-based insurance companies.
- General Data Protection Regulation (GDPR) rules in Europe have posed stringent data security requirements.
- Companies are aiming to ensure effective risk mitigation measures in their outsourcing units in order to reduce capital required for covering operation risk.

Conversely, communication issues (which are generally caused by geographical differences) and cultural challenges appear to top the list of challenges faced by on-shore managers and clients. Not surprisingly, a lack of relevant expertise and knowledge also appears as a key challenge. However, a lack of value addition does not appear very high on this list, indicating that most outsourcing units are able to demonstrate value addition. Anecdotally, we understand that successful outsourcing units generally tend to have very strong and effective management teams.

FIGURE 13: KEY CHALLENGES THAT CLIENTS FACE IN THEIR INTERACTIONS WITH THE SURVEY RESPONDENTS

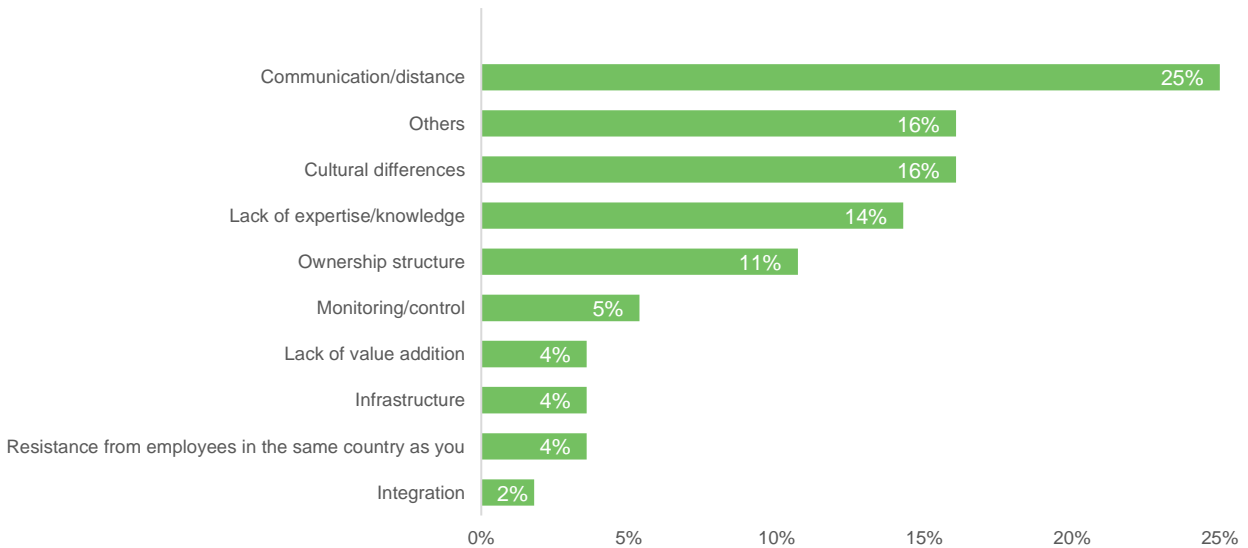
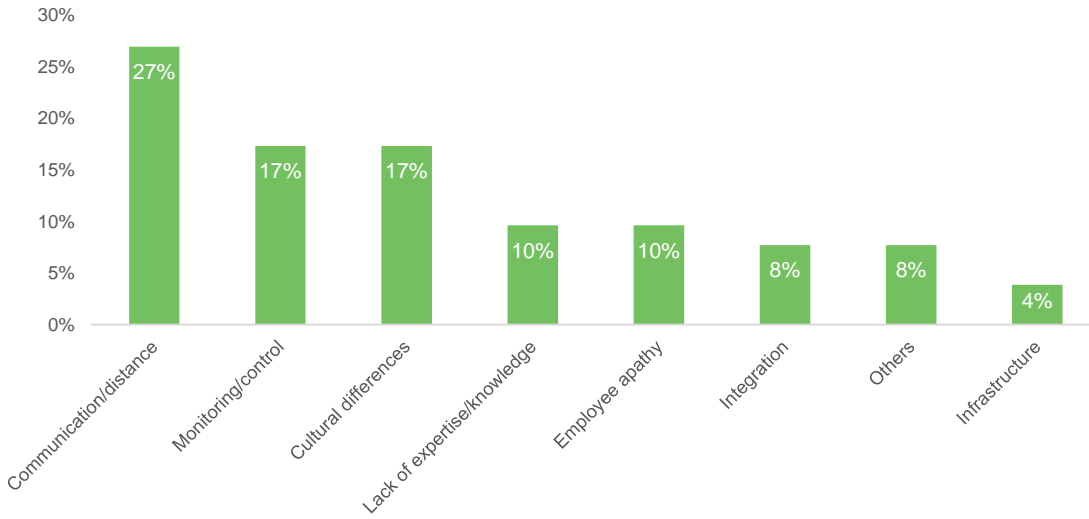


FIGURE 14: KEY CHALLENGES THAT OUR SURVEY RESPONDENTS FACE IN THEIR ENGAGEMENT WITH CLIENTS



Communication, distance and cultural differences are the key challenges that both our respondents and their clients face in their interactions with each other, underscoring the need for greater interaction and integration between outsourcing units and their clients. The recent trend towards protectionism has restricted mobility, exacerbating these challenges. A lack of expertise and knowledge has been identified as a major challenge, highlighting the role that an effective training program plays in the success of an outsourcing relationship. With major infrastructure development in developing countries, the issue of a lack of supportive infrastructure, which would have been a major issue in the past, no longer appears to prevail.

G. INTEGRATION WITH CLIENT

Most of our survey respondents have a positive outlook towards the level of their units' integration with their respective clients. Figure 15 shows our survey results where we asked the participants to rate the level of integration with their clients on a scale of 1 to 10.

FIGURE 15: THE LEVEL OF INTEGRATION OF SURVEY RESPONDENTS WITH THEIR CLIENTS

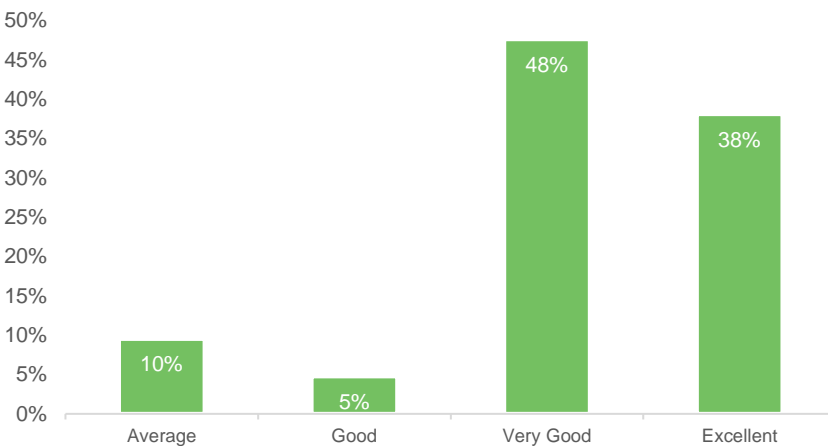
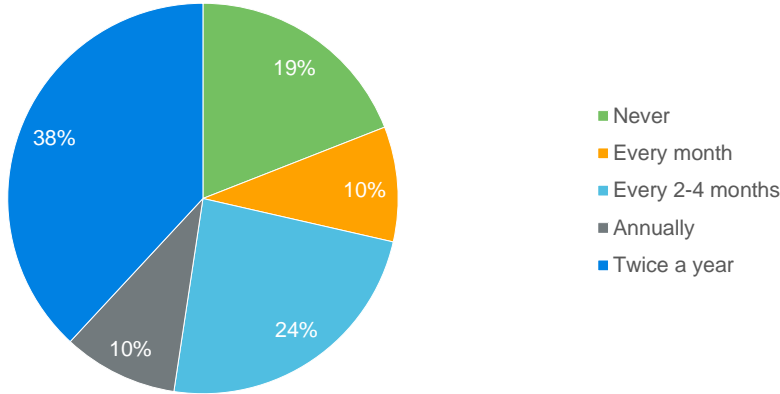


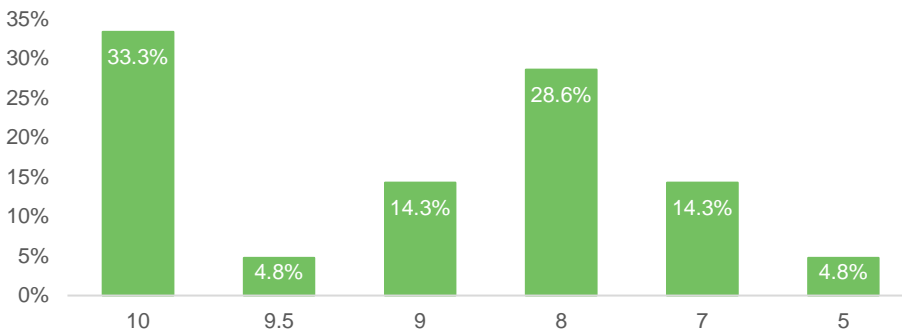
Figure 16 summarises the frequency of visits from clients to our respondents’ outsourcing units. A majority of the outsourcing units have their clients visit them at least two to four times a year. It appears that units that have scored highly on level of integration with their clients have their clients visit them quite often.

FIGURE 16: FREQUENCY OF VISITS FROM CLIENTS TO OUR SURVEY RESPONDENTS’ UNITS



A majority of the survey respondents believes that they receive enough support from their clients. Figure 17 demonstrates the comparative rating given by the participants to client support on a scale of 1 to 10.

FIGURE 17: LEVEL OF SUPPORT RECEIVED BY OUR SURVEY RESPONDENTS FROM THEIR CLIENTS



H. NATURE OF WORK

Fifty-three percent of our survey participants confirmed that they work on both core and non-core actuarial functions. Another 33% perform core actuarial functions only while the residual perform non-core actuarial functions only. The responses for this question are shown in Figure 18.

FIGURE 18: NATURE OF ACTUARIAL WORK PERFORMED BY OUR SURVEY RESPONDENTS

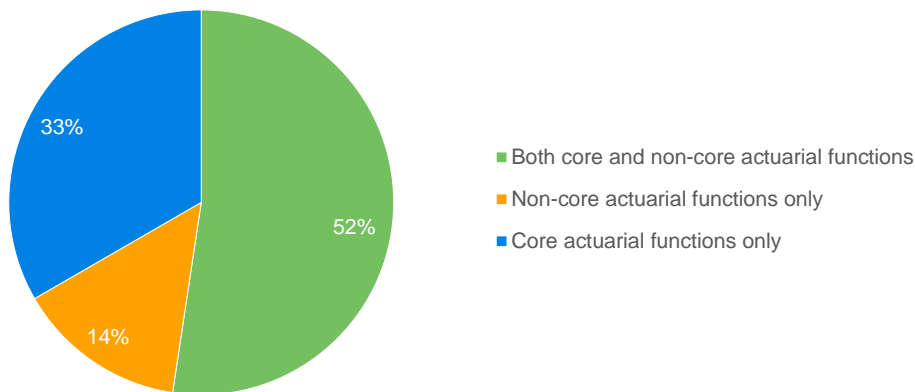
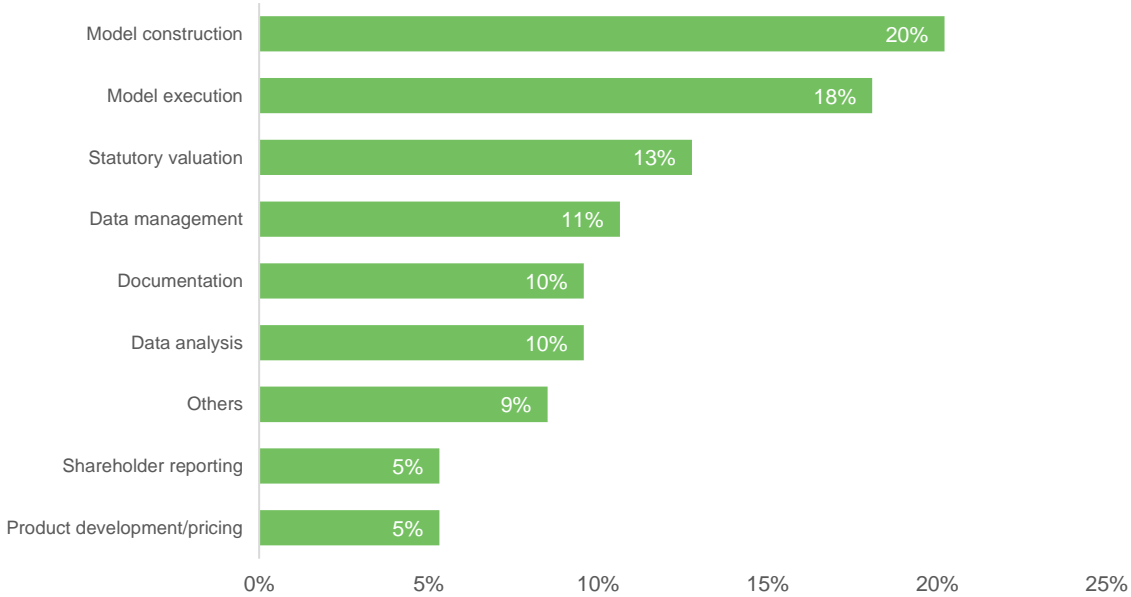


Figure 19 summarises specific actuarial processes that are currently outsourced to the survey participants. While model construction and execution are the usual tasks externalised by life insurance companies, a significant number of units also take on a high proportion of statutory roles (such as statutory valuation) for their clients. With the changing regulatory environment, data management and analysis and documentation have also become important tasks undertaken in an outsourcing relationship.

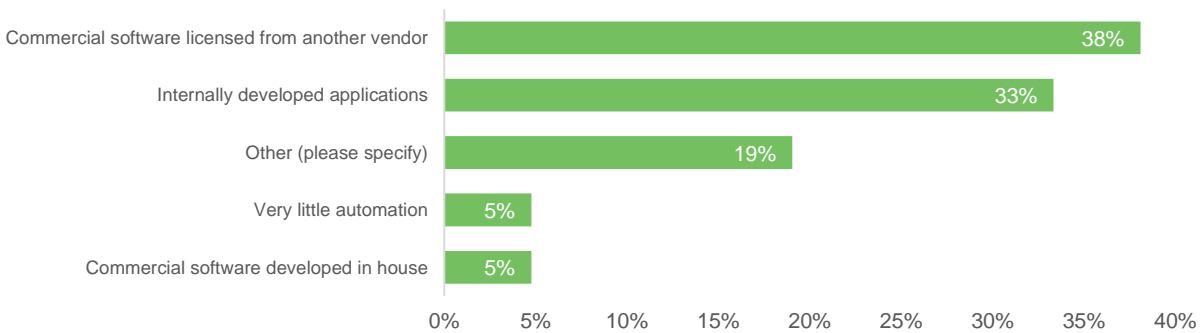
FIGURE 19: ACTUARIAL PROCESSES CURRENTLY OUTSOURCED TO OUR SURVEY RESPONDENTS



I. TECHNOLOGY

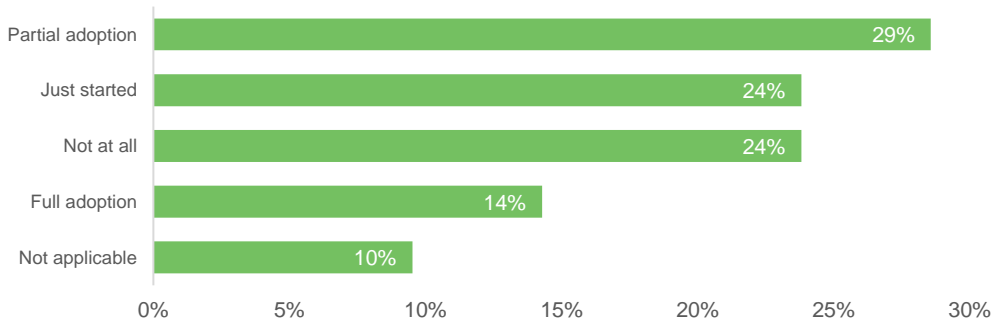
According to the survey responses, 38% of the participants use commercial software licensed from another vendor. A large number (33%) use applications that were developed internally. Figure 20 gives a summary of responses in this respect.

FIGURE 20: TECHNOLOGY USED BY SURVEY PARTICIPANTS TO SUPPORT AUTOMATION OF THE ACTUARIAL PROCESSES



Further, a big proportion of survey participants is in the process of full adoption of cloud technology. While only approximately 14% of respondents have fully adopted and embraced cloud technology at this stage, there is a definite trend towards utilising it in outsourcing units.

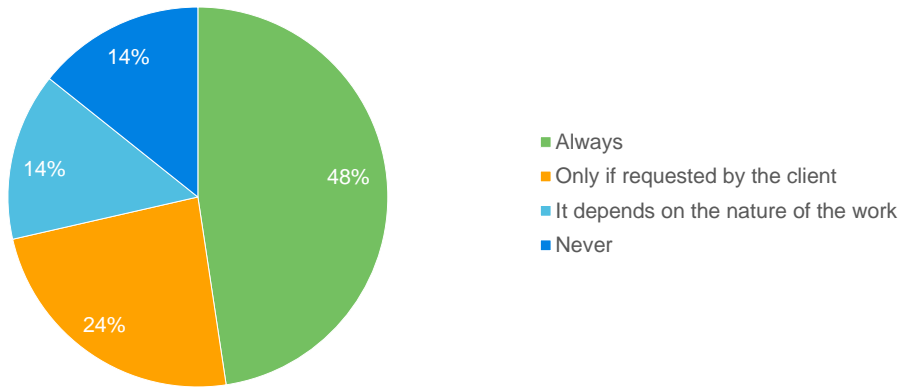
FIGURE 21: LEVEL OF EMBRACEMENT OF CLOUD TECHNOLOGY BY SURVEY PARTICIPANTS



J. GOVERNANCE AND CONTROL PROCEDURES

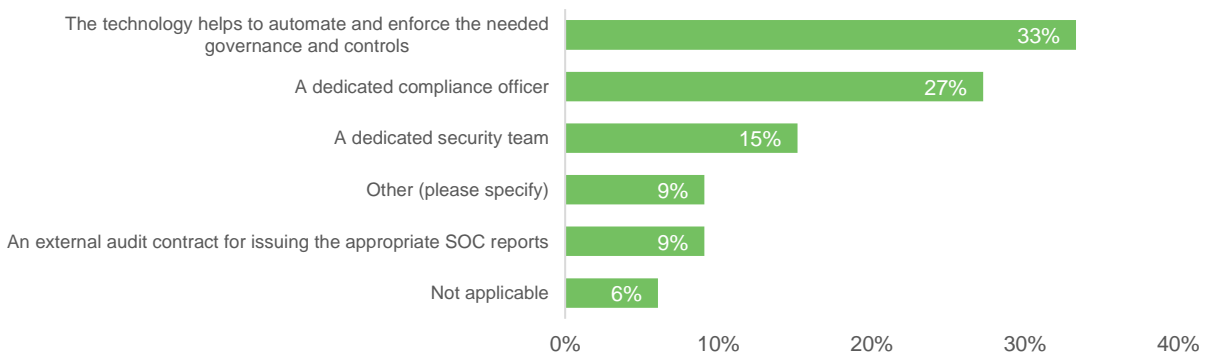
We asked the respondents whether they used service level agreements in relation to the outsourcing arrangement. Almost 50% of the respondents replied in the affirmative. We understand that units that do not sign such contracts only operate within an umbrella contract. Figure 22 shows participant responses for this question.

FIGURE 22: INCLUSION OF SERVICE LEVEL AGREEMENTS (SLAS) BY THE SURVEY PARTICIPANTS FOR EACH JOB



On the question of how outsourcing units demonstrated compliance with governance and control requirements around the outsourced financial reporting and modelling processes, 52% of the participants stated that they utilised technology to automate and enforce the requirement. Another 43% confirmed that they had a dedicated compliance officer to enforce the procedures. Most units have an inbuilt system and therefore did not depend on an external auditor to issue the appropriate System and Organization Controls (SOC) reports. Figure 23 shows these responses.

FIGURE 23: MODE OF DEMONSTRATION OF COMPLIANCE WITH THE GOVERNANCE AND CONTROL REQUIREMENTS BY SURVEY PARTICIPANTS





Milliman is among the world's largest providers of actuarial and related products and services. The firm has consulting practices in life insurance and financial services, property & casualty insurance, healthcare, and employee benefits. Founded in 1947, Milliman is an independent firm with offices in major cities around the globe.

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