Role of the Pricing/Reserving Actuary in a Non-Life Company

From a Management Point of View

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November 12, 2015

Aziza Hotel, Puerto Princesa, Palawan

PURPOSE

While it is now public knowledge in the Philippine insurance industry that regulations involving mandatory actuaries' involvement in the non-life business is now in place, specifically in the actuarial certification of non-life reserves my aim today is to present the expectations of management of a non-life insurance company on actuaries in the successful operation of the company beyond statutory requirements. As the Philippine non-life industry is just opening up to the employment of actuarial services I will be using experiences and basis mostly from outside the Philippines.

RESERVING

Prior to my accepting the leadership of the National Reinsurance Corporation of the Philippines (NRCP) early last year, I have been involved with the assessment of the company to exactly know the state of NRCP's financials. One of the top findings of such assessment is that the company, although, highly capitalized, is under reserved. Simply because there is no regulatory requirement or just a minimal guidance for reserving. I am aware then that there were regulatory undertakings already to correct this but even prior to

the official pronouncement, we started to have the assessment of the reserve level set-up, initially done at best estimates. I had to rely on available actuaries on the NRCP staff who were mainly entrenched in the life practice to take a crash studying of how to estimate reserves for the NRCP business, bulk of which are coming from the non-life.

In June 2015, the Philippine Insurance Commission (IC) officially released Circular 2015-31 and 32 which outlines the requirements for the accreditation of a non-life actuary and the valuation standards for liabilities of non-life and professional reinsurance companies in the Philippines, respectively.

With such regulatory requirements, non-life and professional reinsurance companies are definitely in need of the services of actuaries to ensure regulatory compliance. Currently, IC is mandating companies to provide parallel runs based on the valuation standards set on the reserves levels along with other related reports such as Financial Reporting Framework (FRF) and Risk-Based Capital (RBC) under the Regulatory Alignment Project of IC with the aim to raise the standards of the local insurance industry to be at par with its foreign counterparts. In the last presentation of the Technical Working Group (TWG), out of 65 non-life and professional reinsurance companies,

only 35 companies submitted their valuation report and 40 companies their RBC reports. Since the bulk of the work involves a substantial actuarial work, it can possibly be surmised that actuarial services may still not be engaged by companies who have not initially complied with the regulatory requirements.

These regulatory requirements will stay and it is now essential for management of non-life companies and professional reinsurance companies to engage actuarial services for their firms. Actuarial Society of the Philippines (ASP) informed the Philippine Insurers and Reinsurers Association (PIRA) that there less than 20 Fellows and Associates who have met the qualification requirements set by IC on accredited certifying actuaries, at least until 2017 for Associates. There are currently 67 non-life and 1 professional reinsurance companies and with these figures, local produce is not yet enough to fill regulatory needs of the industry.

While management needs actuarial services for its compliance, reserving in non-life companies is only to fulfill compliance

requirements. Management needs to ensure that a healthy and controlled reserving process is in place for a non-life company.

First, with such process in place, management is assured that organized data is made available and its veracity assured. Actuarial discipline is known to place high importance on data validity since results will depend highly on such.

Second, compliance is met. And with compliance, management needs to know the appropriate reserve levels that the company must maintain at best estimate and at a confidence level that will ensure the sustainability of the financial strength of the company. Such exercise needs modelling, and scenario tests that utilizes mathematical and statistical techniques that actuaries employ as part of their expertise. The Actuary should be able to inform and explain to management of such reserve levels and the results of his models and tests.

Third, reserving shows the true claims ratio of the non-life company. In the past, when reserving is not a regulatory requirement, companies who did not set up any form of policy reserves only are looking at reported claims. In insurance, practitioners know that there will always be a lag in claims reporting and those claims not yet

reported are still part of the obligations of the company. Without any form of estimation of such incurred but not reported claims (IBNR) as part of policy reserves, the company is bound to report a lower claims ratio, a higher profit margin and higher level of capital available. Management is not equipped to have any plans and provisions set aside when those unreported claims are eventually reported. And this is dangerous for management as plans may have been underway that do not consider provisions for IBNR. The possibility for the collapse of the company is very real in such scenario.

The employment of actuarial services solves all of the reserving needs of a non-life company. Since insurance is all about promises to be delivered in cases where events happen in the uncertain future, it is the obligation of the management of the non-life company to be able to provide for these promises. Management is highly suggested to employ and rely on actuarial services and expertise to guide them in making decisions on how much of its available resources should be set aside in order to be amply prepared to meet the company's promises on the obligations and risks it decided to take on when the company issued those insurance policies.

PRICING

Management of a non-life company should ensure that its pricing process involves actuarial expertise. Non-life business usually involves a one-year period of coverage and it seems that this information is made as basis to take pricing of non-life insurance policies as non-complicated task.

Non-life underwriters are the ones who assess the risks of business opportunities that are offered to the company. This is their expertise. Their training makes them possess the expertise to know which risks are acceptable to the company or if not fully acceptable, lay down the conditions on the acceptance. Underwriters usually proceed to assessing the price for the insurance that it suggests to offer the client. There is nothing wrong with such process.

However, management has to ensure that the pricing guide that the underwriters follow should be well maintained and continues to periodically undergo analysis and tests to ensure that the price offered is sufficient and sustainable for both parties – the client and the company. And the pricing guide is where the actuarial expertise is very much needed by the company.

Price definitely directs the company's profitability leading to sustainability to maintain its business and further grow it, subject to its shareholders' objective on capital usage. Further growth means enabling the company to seek more risks that its resources can accommodate. Thus, price levels that the company charges is very important to be at sustainable and profitable levels.

Thus, in order for management to achieve sustainable and profitable prices, management must ensure that its pricing process meets the following:

First, the pricing philosophy should be defined. Ultimately, the company should have a target goal on profit levels that it wants to achieve. Such levels will then determine how the company will set the rates that the company sets to accept. It will then lead to defining the risk appetite of the company and how to allocate its capital resources on the lines of businesses that the company can enter and can focus.

Second, management should ensure that prices are tested. All possible scenarios are set and analyzed against assumptions that is well chosen amidst the company's past experiences and the

company's and market's outlook on the business. Prices set should be tested under all these scenarios and to enable management to understand the possible outcomes and to make guided decisions on such information. These tests would involve choices of appropriate statistical techniques built in choices of appropriate models.

Third, management should ensure that analyses of the prices are done periodically. It is not enough that once the prices are set and that risks are accepted, management sits back and waits for the outcome of the business. Analysis should be a continuous activity within the pricing process of the company. Analysis should involve monitoring actual trends against what has been assumed, further tests and modelling, especially when evolving trends show actual outcomes are not following initial assumptions. Management needs these constant information to be able to make timely guided decisions.

Fourth, management should also be informed about alternative ways to accept risks while maintaining its profit targets. Reinsurance is always a solution to the non-life companies in accepting more risks

while being able to achieve its profit targets as it will not always be the case that available risks will bring in the desired profit targets against the company's capital resources. Further tests should then be employed to see what kind of reinsurance arrangement does the company need, if available reinsurance proposals are well within company prices and if such will really help the company.

When such procedures are well built in the processes of the company, sustainability of the business is achieved and continued existence and growth of the company is assured.

Looking closely at all the requirements that have just been laid out, all aspects of the pricing process of a non-life company defines the expertise that the actuarial profession possesses. Laying out assumptions, setting scenarios, modelling, testing, employing statistical techniques, monitoring trends, analyzing and testing alternative means of achieving profit targets such as reinsurance and giving guided information on results of such activities are the main functions that the management of a non-life company expect from its actuaries.

And in this day and age, such tasks would very much need tools. Whether it be models done in excel spreadsheets - although with a limited capacity once you are dealing with a lot of data and a lot of scenarios - or more sophisticated tools which the company can decide to build on their own or source from a lot of providers in the market, the company needs the expertise of the actuary to decide on which path to take in assessing the needs of the company.

Catastrophe Modelling

The Philippines is very much subjected to catastrophic events such as floods, typhoons, fire and earthquake. In recent years, at least one catastrophic event has been 'plaguing' the local non-life industry almost annually with the likes of Typhoon Ondoy in 2009, Typhoon Pedring and Sendong in 2011, the Habagat in 2012 and 2013, the Bohol earthquake in 2013 and Typhoon Yolanda also in 2013, Typhoon Glenda in 2014 and the recent Typhoon Lando. There have also been large scale fires such as Divisoria Mall fire, And furthermore, if the company is exposed to foreign risks, there were the Thailand floods which took months before it subsided which halted a lot of businesses and Hurricanes in other countries.

Catastrophe is very much a part of the non-life business and can be a major letdown if such an event do happens and that a non-life company did not have the facilities in place to abate the impact of such event.

As we are now seeing the effects of catastrophe in the Philippine market, the management of a non-life company should ensure that catastrophe modeling is very much entrenched in the pricing process.

The company should be able to assess all types of catastrophes that it wishes to be exposed to or it will be exposed to with the kind of risk appetite that it has set. In the Philippines, the top three that should always be considered are earthquake, flood and windstorm (typhoon).

Next, the company should look at available data experience. It actually is hard for a company to just rely on its own experience as catastrophe is not a regular occurrence. Other possible sources are government agencies or tool vendors whose main businesses is to gather all data on catastrophic events and build models around such data.

Once the company has assessed all possible sources of experience, it now analyzes and sets its own assumptions, combining experiences and the company's outlook. Scenario assumptions and assumptions for stress testing should also then be laid out. When all these assumptions are laid out, models can be built – either in-house or with the help of modelling tools available in the market. It is important for management to understand and be involved at a certain level on the choices of the assumptions as such will have a great impact on the results.

The most important part of such process will be the analysis on the results of all the modelling and tests done. Such results will have to be well explained and understood by management to make its decision on exposures to catastrophes, to what extent should the company be exposed and alternative means to soften the impact of such events, like reinsurance.

Because of the work and expertise involved, the actuarial profession is one of, if not, the most appropriate profession to help management of a non-life company have a guided decision on dealing with catastrophe.

While it is not yet explicitly required, regulators have opened the possibility of requiring modeling functions in the non-life industry through recently released circular or required parallel runs. The new Risk-Based Capital framework (RBC2) being studied has already included the assessment of catastrophe risks and a company to effectively report this must utilize some forms of catastrophe modelling. The valuation standards on non-life policy reserves state that after the parallel runs currently underway, non-life companies will be permitted to estimate margins for adverse deviations to achieve at least 75% confidence level using internal models. Non-life management has to ensure that actuarial expertise is utilized to comply with such requirements.

RISK and CAPITAL MANAGEMENT

Management is the guardian of the capital that stakeholders entrusted to them. Stakeholders here are not only the board/stockholders but also the insuring public as they transfer their money for the company to build capital in order for all parties to meet their goals. Since insurance business involves risks, management of the risk and capital should be done simultaneously.

With this in mind, management should have functions and processes within the company that will guide in the setting of risk appetite and capital usage. A well maintained risk and capital management is essential to non-life companies in order to comply with regulatory requirements and to generate value such that the company is able to acquire profitable accounts and to grow its business.

A robust risk and capital management process should be one of the top priorities of a non-life company. Management must establish targets on return on capital and the set of insurance risks that the company can accommodate. Level of available capital resources are constantly monitored and an allocation process is necessary to effectively manage such available capital. A lot of analysis is key to

setting up this process. Because of the high volatility in the occurrence of events leading to claims in the non-life business, it is essential that appropriate models are formulated to test possible scenarios. Assumptions in such possible scenarios should be laid out properly using prudent and balanced judgment. Management needs to be informed of results of all tests to be guided accordingly on risk and capital issues. This is an area which actuarial expertise is very much needed.

CONCLUSION

As the Philippine non-life industry gears up towards being at par with its Asian counterparts, starting with regulatory requirements to ensure the health of the industry, actuarial expertise is beginning to be a necessary ally of management to effectively run the business. Much like in the life insurance industry, Actuaries are needed in the pricing, reserving, risk and capital management and other related areas of a non-life company. Actuaries are acknowledged to have the skills to analyze, formulate models, set appropriate assumptions for all possible scenarios, and make judgment calls relying on experience, emerging trends and outlook on risks. These are one of

the important things that management need to make decisions in the effective operation of a non-life company.

EXECUTIVE SUMMARY

1. **Actuaries are now essential requirements in the compliance of a Philippine non-life insurance company.**

2. **Beyond the statutory requirements, reserving is very important in the successful operation of a non-life insurance company. With more than enough reserves at a reasonable confidence level, management is assured of the financial strength of the company and is able to confidently deliver its obligations to its clients.**

3. **Proper reserving also enables the company to assess its true claims ratio. The knowledge of the true claims ratio of non-life businesses is important to non-life companies in setting the proper pricing.**

4. **Proper price levels ensure that the company is able to maintain its operations, ensure its clients with continued service and ability to pay claims which definitely gives the regulatory body**

assurance of keeping the public safe with funds endorsed to the non-life company for protection.

5. **Pricing and reserving involves a lot of assumption setting, scenario testing and modelling. Such activities involve expertise in mathematics and statistics and it is acknowledged that actuaries are experts in these activities.**

6. **Management is also assured that with the actuaries' expertise, the capital that they have invested in the company is ably managed and used against with the risks that the company decides to undertake.**