

SPOTLIGHT ON...

Insurance Advisory

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John Birkenhead qualified as an actuary 20 years ago and has been an independent strategic insurance consultant since 2003, advising almost 100 clients across a wide range of industries. Here, he talks to *Finance Monthly* about misconceptions about what actuaries really do and why insureds should have an actuary on their side for all insurance-related activity.

It is a common misconception that actuaries only work for pension schemes or for insurance companies. This is compounded by the typical view that actuarial reports are long, unwieldy documents, full of impressive-sounding actuarial jargon (e.g. “chain ladder method”, “Bornheutter Ferguson method”) and can be too theoretical or too technical, giving few practical solutions or advice.

However, the development and implementation of Solvency II, the typical increasing excess levels on commercial insurance policies and the continued increase in the use of captives, has led to a dramatic increase in the volume of clients requesting independent actuarial advice.

Mergers and Acquisitions (M&A)

In many cases the acquisition of a target company (TargetCo) identifies the presence or potential historical exposure to industrial diseases (asbestos, deafness [Noise-Induced Hearing Loss or NIHL], vibration white finger [VWF] and others). Actuaries can value these liabilities, having access to current reporting trends, benchmark valuation approaches and market data. For example, in the UK, asbestos-related claims are not expected to peak until towards the end of this decade. However, this masks the fact that asbestos

exposure for some industries continued until into the 2000s; thus, in these cases, asbestos claims should be forecast until at least 2070. In one case, TargetCo had significantly underestimated its legacy asbestos-related liabilities (by over 400%), leading to a purchase price adjustment to enable the acquisition to proceed.

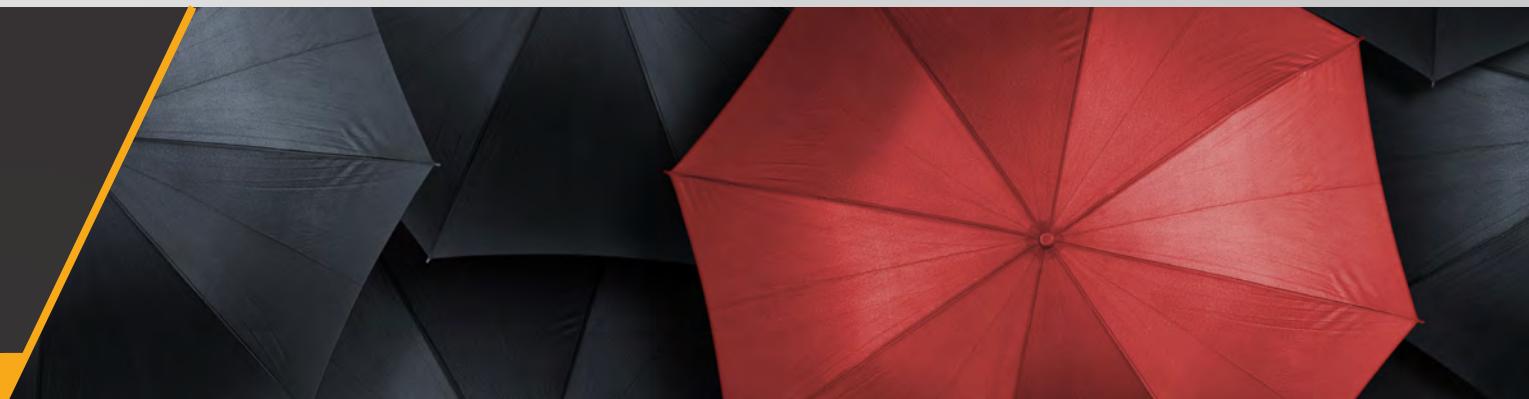
Furthermore, larger TargetCos have offshore captives; acquiring these requires specialist valuation of insurance liabilities and knowledge of the different accounting and solvency treatments in the different domiciles. For example, an offshore captive domiciled in a Solvency II location (e.g. Gibraltar) is required to carry different reserves (“best estimate” + “risk margin”, Gross) than a non-Solvency II compliant jurisdiction (e.g. the Isle of Man, “best estimate” only, Net). Thus the same liabilities can validly be assigned different accounting values as well as validly different treatment of any reinsurance.

In one case, a captive’s balance sheet in a non-Solvency II jurisdiction showed nil liabilities; an independent actuarial review showed over £10 million (€13.7 million) of gross liabilities (which the captive manager had never quantified) covered by the same amount of reinsurance (hence why the gross liabilities had never been quantified). When

transferring this to a Solvency II jurisdiction, both £10 million (€13.7 million) values (gross liabilities and reinsurance assets) must be shown, as well as be included in the solvency margin calculation, which increases the solvency margin required in the new jurisdiction, even though the underlying liabilities and assets are the same.

Thus a fair transfer from one to the other may not necessarily be at the values shown in TargetCo’s captive balance sheet, especially if TargetCo’s own valuation isn’t realistic in the first place (e.g. asbestos reserves 400% too low) or non-existent, and transfer to the new domicile may have increased solvency requirements. Following acquisition, the acquiring company may keep the acquired captive as a stand-alone entity, merge with its existing captive or close all captives; all of these will have solvency implications (especially for Solvency II domiciles).

Alternatively, different risk financing for the enlarged group may be more optimal, for example, utilising exemptions under the UK’s Road Traffic Act (RTA) and buying cheaper catastrophe motor cover rather than an off-the-shelf statutory motor product. Similar insurance optimisation for employer’s liability leads to much cheaper catastrophe cover rather than off-



the-shelf products, while still complying with the UK's Employer's Liability Compulsory Insurance Act [ELCI] and hence still obtaining a valid EL Insurance Certificate.

Solvency II

Solvency II is a new regulatory capital requirement for EU insurers, similar to Basle II/Basle III for banks, coming into full force from 2016. Effects have already been seen with insurers' M&A activity (e.g. consolidation of European operations into a single location). A common misconception is that since Solvency II only applies to insurers, it does not affect insureds at all. This is a dangerous misconception.

Insurers are now concerned about their EMLs (expected maximum losses, also known as RDSs, realistic disaster scenarios); if these are not included in your insurance renewal submission, the premium will be higher than it would otherwise have been (or, in a recent case, the risk will be declined, after many years of stress-free renewals). In the Solvency I days, an insurer's capital requirements were directly related to premiums and reserves; thus under-pricing or under-reserving perversely led to lower capital requirements. Under Solvency II, insurers' capital requirements (which are extremely complex) are defined broadly to be sufficient to withstand a 1-in-200 year event (99.5% probability of being

the premium. Furthermore, under Solvency II actuaries jointly sign off policy premiums and terms together with the underwriter (the so-called "actuarial function" under Solvency II). Thus actuaries are deeply embedded in setting insurance premiums, so it can pay for insureds to have an actuary on their side

By understanding how to present risks under Solvency II, what insurers actually do with the your insurance renewal data and how insurers develop the premium (e.g. the solvency capital required for your policy wordings and EMLs, fair ROCs and assumed loss ratios and expense ratios), actuaries can help insureds write effective renewal submissions and effectively challenge premiums. In a recent case, I assisted a client to understand why their current insurer was now declining renewal (despite no claims to date); the current broker was unable to place an identical replacement policy. With actuarial assistance to redesign the renewal presentation (to make it "Solvency II friendly") and provision of information to the insurer on likely EMLs, satisfactory replacement cover was easily obtainable. Essentially, the renewal presentation was now written by an actuary for an actuary (the insurer's actuary).

**“Solvency II transforms insurers' views of risk.
Actuaries are deeply embedded in setting insurance premiums for insurers – insureds need to have an actuary on their side to level the playing field”**

Solvency II's fundamental principle is that insurers should have sufficient capital (solvency margin) for what could happen over the policy term, rather than what has actually happened in the past (e.g. the past loss ratios/claim ratios). Thus the oft-quoted reasoning "I'm a good risk (because I've had few claims in the past)" is meaningless under Solvency II, especially for catastrophe (or high excess/deductible) covers, for which few (or no) claims would be expected anyway.

able to pay claims in all circumstances), broadly irrespective of actual premiums charged and reserves held. Thus, it is the possibility of what could happen over the policy term (according to the exact policy wordings and EMLs for that insured), rather than what has actually happened in the past, which drives the required solvency margin. The insurer then has to earn sufficient Return on Capital (ROC) on this amount to compensate its shareholders, which increases

Risk financing

Insurance is just one means of risk financing. By taking long-term views and having substantial benchmark data, insurers are risk-takers. Most insurance programmes are considerably sub-optimal for insureds as a result of the insured's poor visibility of the frequency and severity of large losses (benchmark data) and a considerably

shorter time horizon than insurers. For example, most private equity (PE) backed companies typically have a medium-term (five-year) exit strategy. Over this time a large claim may or

“Thus, with a suitably provisioned internal self-insurance fund (balance sheet Provision), a suitable annual contribution into the fund, and suitable catastrophe cover (with or without

“Most insurance structures are sub-optimal; with better visibility on the frequency and severity of ‘rare’ claims and data from insurers’ regulatory filings, most insureds can significantly reduce their total cost of risk by using different risk financing structures”

may not occur and the PE owners will generally buy “excessive” amounts of insurance in order to minimise the impact if a large loss should occur. However, this comes at considerable cost (insurance premiums, with considerable profit to insurers). Over a much longer period (10-15 years) such losses are generally predictable; therefore, taking a longer term view, the entity will be better off buying less insurance and accepting that, during that 10-15 year time period, a large loss will almost certainly happen.

Furthermore, published regulatory filings of UK insurers show that, on average, claims are paid 2-3 years after premium receipt (i.e. there is not only a delay from premium receipt to claim notification (e.g. typically 12m for employer’s liability [EL] claims, on average) but also delays from claim notification to final settlement (e.g. typically 24m for EL claims, on average, for claim investigation, negotiation, litigation etc.).

The most complex, litigated claims can settle more than 10 years after premium receipt. By retaining risks in-house, insureds keep the investment income rather than the insurer. Investment income is generally not taken credit for in the premium calculation, thus this investment income is a pure bonus to the insurer and provides a buffer in the event of worse than expected claims.

an offshore captive), most organisations can significantly improve their total cost of risk by buying less insurance. Such balance sheet Provisions are generally tax deductible and I have certified the reasonableness of many such balance sheet Provisions to various tax authorities and auditors. Furthermore, if the risks do not eventually materialise, the reserves (and accumulated investment income) can be released to P&L. With insurance, if you have no claims, premiums will never be refunded in full and the insurer will not refund the investment income they have made.

Even if insurance is the most appropriate route, insureds often request profit share/premium rebate clauses. Such policies come at additional cost, which is rarely explicit. Furthermore, profit shares are usually determined 36 months after policy inception; insurers’ published regulatory filings show that insurers’ reserves peak, on average, at 24-36 months (i.e. the insurer waits this long before releasing profits to their P&L). By determining profit shares at 36 months, the chances of a premium rebate are reduced. Profit shares should be calculated at 60/72 months (too long for most PE-backed ventures) or the premium should be minimised in the first place by having no profit share clause and tight premium negotiation.

Insurance schemes

Insurance schemes are extremely common, for example, a motor retailer offering “free seven-day insurance cover” in order to increase retail car sales, mobile phone insurance (for theft, breakdown etc.), furniture insurance (e.g. accidental damage) and general extended warranty cover, for white goods and electricals, such as washing machines and televisions.

The underlying (fronting) insurer will charge premiums to the retailer (which may or may not be passed on to the customer with additional loadings for sales commission), set reserves for claims and provide management information in respect of the scheme performance, together with having monthly management meetings to agree rate changes etc. In some cases the retailer has an offshore captive to participate in some of the profits arising.

The fundamental principle that actuaries bring is that “loss ratios” (claims ratios) are usually misleading as an estimate of account profitability; they are an estimate based on the (usually substantial) reserves for outstanding claims; better information and published data can show that insurers usually systematically over-reserve such claims (for their own internal balance sheet prudence) which leads to proposed rate increases (and deferment of profit) which are not actually necessary. I have reviewed many insurers’ scheme pricing models and found insurers pushing for rate increases unsupported by sufficient actuarial information. In one example, a claims ratio for policies sold in 200X at the end of 200X of 75% (on which a rate increase of 10% was justified and implemented) had fallen to 65% by the end of 200X+1 (due to claim repudiations and conservative initial reserving). This could have been forecast based on the insurer’s known claims reserving trends (from its published regulatory filings) but which were not shared by the insurer with the retailer (“information asymmetry”). This led to fewer policies being sold, unjustifiably, hitting the retailer’s bottom line. Actuarial support can therefore level the playing field for companies running insurance schemes.

Furthermore, for insurance schemes, the “expense ratio” is also usually misleading; the insurer will usually quote this based on their global book of business, not an ABC (activity based costing) approach for that specific scheme. Additionally, the “earnings profiles” (the rate at which profit can be released to P&L) for extended warranty schemes can be overly prudent (for the insurer’s own internal prudence), which also defers the retailer’s profit.

In another example, an insurance broker offered an insurance scheme for contractors’ liability policies (off-the-shelf package policies for building trades). The insurer proposed a 30% across-the-board rate increase due to “poor scheme performance”, which would have substantially reduced the competitiveness of the premiums, substantially reducing the broker’s commission income. My review found unjustified assumptions, poor management information and superficial account analysis full of actuarial jargon; the insurer dropped the rate increase proposal following receipt of my report.

Recent projects

I have carried out balance sheet provisioning (and competitor benchmarking) for disease exposures back to the 1940s, designed and marketed insurance programmes, reviewed broker’s advice concerning programme design and fairness of premiums in preparation for litigation, carried out EML studies, priced changes to new policy terms to give the client early warning about likely cost before submission to insurers, assessed a client’s uninsured liabilities after withdrawal of insurance cover, provided audit support for prior year adjustments (rather than impacting current year earnings) and provided advice to an investment boutique on an insurer’s analysts’ presentations for an insurer they wished to acquire shares in.

A recent desktop review of a Board pack for a captive (written by the broker/captive manager) showed unwarranted descriptions of likely outcomes (“best case loss ratio”, “worst case loss ratio” – simply by taking 0% or 100% of reserves for known outstanding claims), (high) loss ratio forecasts provided by the insurer with

no calculation trail or effective challenge and consequent generic reasoning for increases in premiums (“our forecast loss ratio + expense ratio is more than 100%, therefore a premium increase is required”) which had been accepted by the client on the advice of the broker.

By using independent actuarial assistance, my clients have achieved significantly improved insurance terms (a recent 90% premium saving for one client), more realistic balance sheet provisioning (sometimes lower than the client was originally holding) for self-insured/retained risks, more realistic (and Solvency-II friendly) insurance submissions and policy terms, relevant management information to track and benchmark risks, an early warning (independent financial review of published regulatory filings) of a number of insurers (including forecasting the administration of an insurer several years before it actually occurred) and advice for investors on insurance company valuations for share purchase.

management information or Board pack, or an NED role, a good actuary can quickly see through the technical jargon and effectively challenge the way you view risk.

If you are involved in M&A activity, get an actuary to value TargetCo’s self-insured liabilities (either on balance sheet or in captives) and the accounting treatment thereof.

If you have any self-insured liabilities at all (e.g. due to non-zero policy excesses and/or uninsured liabilities and/or legacy liabilities) an actuary can help you to reserve realistically and develop management information to benchmark claim reporting delays, claim settlement delays, claim settlement costs and claims handlers’ performance.

If you already have an actuarial report which you don’t understand, ask for a second opinion (or just a translation into plain English!). If you have

“Actuarial involvement in (our) M&A activity identified important valuation considerations which would not otherwise have been identified ,”

I have also enabled placement of risks which were thought to be uninsurable, developed more efficient structures for compulsory insurances and given clients’ confidence (using their own data, benchmark data and data from insurers’ published regulatory filings) to become less risk averse.

Actuarial value

First of all, get an actuary on your side for any insurance-related activity e.g. programme design, programme placement, insurer selection and review, broker selection and review, premium negotiation and management of insurance schemes.

Even if it just a quick desktop review of a piece of

a captive, an actuary can review the management information it is providing to you and whether your insurance arrangements are optimally structured.

Finally, the biggest mistake that clients make is that they view insurance in isolation from the rest of the corporate balance sheet; insurable risks are more predictable (and less correlated with other risks) than they think; insurers make considerable returns on capital (and investment income) from this over-estimate of risk, insureds’ consequent risk aversion and information asymmetry.

A good actuary can level the playing field in your dealings with insurers and insurance brokers.