



Institute of Actuaries of Australia

The role of industry statistics in Australian insurance portfolio management

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Synopsis

The paper examines a number of data collection initiatives that have been undertaken on behalf of the Australian general insurance industry, including those of the former Insurance and Superannuation Commission (ISC), the Insurance Council of Australia (Insurance Council), Insurance Statistics Australia Limited (ISA) and the Australian Prudential Regulation Authority (APRA).

Case studies include collection of personal lines and commercial property data, NSW and Queensland CTP reporting, developments of medical indemnity insurance and lenders' mortgage insurance reporting for statutory, broader industry and individual insurer purposes.

Unsuccessful initiatives reviewed include personal lines premium rate collation, workers' compensation and motor repair costs data collections. The impact of changes to statistical series over time, for instance with the changeover from the ISC to APRA, are also considered.

The paper is intended to help identify how development of future studies could be expedited as needs are identified by industry participants.

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1. Introduction

“In the fields of observation, chance favours only those minds that have been prepared.”

Louis Pasteur (c 1848)

“What gets measured gets managed”; “If you can't measure it you can't manage it”

W. Edwards Deming through Peter Drucker

“Invest in preparedness, not in prediction. Remember that infinite vigilance is just not possible.”

Nassim Nicholas Taleb, *The Black Swan*, 2007

“Insurance: An ingenious modern game of chance in which the player is permitted to enjoy the comfortable conviction that he is beating the man who keeps the table.”

Ambrose Bierce (1842-1914)

Despite the apparent cynicism in the last of the above quotations, this paper aims to identify what Australian insurers have achieved within the constraints of systems, cost and competition, to develop useful statistical information for managing insurance portfolios beyond the information that the insurer holds itself. In most cases, this has involved the collection and consolidation of data from a number of participating insurance companies; sometimes all licensed Australian insurers, at other times from a number of insurers that agree to pool their data either for a one-off or ongoing study of some aspect of the market.

Our paper focuses entirely on the position in Australia. Unlike the United States of America where voluminous amounts of data are published at the level of individual insurers, and the UK where “freedom with publicity” was for many decades the reason for relatively limited regulatory involvement in that market, typically very little data has been published in Australia at class of business level except in aggregate (such as that from APRA, the Insurance Council and ISA).

Consequently, information on market shares of individual insurers has generally only been available from information in published annual reports, mostly of listed insurers, or for particular compulsory classes of business such as NSW compulsory third party motor bodily injury insurance, where such publication has been a pre-condition of participating in the market. While the majority of players are interested (often greatly interested) in knowing their market share at class of business level, concerns by particular insurers (whose identities may change over time) have prevented such publication, despite the general interest of both insurers and other stakeholders in the insurance market.

This paper provides something of a ramble through the insurance statistical countryside and hopefully will provoke some interesting discussion at the Institute’s 16th General Insurance Seminar – either during the timetabled session or potentially over drinks some other time. We would certainly appreciate further feedback to any of us either before or after the Seminar (*particularly* if refreshments are involved).

We have included a summary in the attachment that outlines sources of data about the insurance industry in Australia at present. Some of these are publicly available, others available only to subscribers or contributors. If you are aware of any significant report that has been published in the last few years that is based on Australian insurance data and that is missing, please contact us on 02 8252 3347 and, with the good grace of the Institute, we will update the attachment with any information we receive before the end of the calendar year and post a revised copy of the paper on their website.

The authors would like to thank all those who have (wittingly or unwittingly) contributed to our knowledge of the Australian insurance industry over the years, and our particular thanks to David Whittle for his helpful peer review comments – the opinions expressed are, of course, ours. We look forward to the continuing development of insurance industry statistics which will make a useful contribution to the business performance of individual industry participants as well as to the Australian community’s understanding of the essential role that the industry plays in helping to stabilise both the lives of individual families, employees and communities who are affected by events beyond their own financial capacity to cope.

While some of us may like to think that we are islands and can get along on our own, the impact of the global financial crisis on individual wealth let alone the emergence of longer-term developments such as climate change (imagined or real), we suspect that collective/community support is going to make a resurgence in coming years as times get tougher, and insurance will provide an important contribution to our capacity to work through the issues that will emerge.

2. Why and how do we collect insurance data?

Primary sources

Insurers necessarily collect considerable amounts of data as a natural part of the insurance process. Data is necessary for managing insurance business, paying claims, financial reporting and risk management. Much of this data is collected at the level of individual policies and claims referable to particular policyholders and incidents. In order to make it intelligible for any management purpose, it is generally necessary to aggregate it in some form, and often to compare it with information from similar sources (such as that from other insurance products or other insurers). There are a variety of different end users for such data within a general insurer – sales and marketing, claims management, underwriting, accounting, claims management and (particularly in the last thirty years or so in Australia) actuarial.

Generally each of these users requires different views of the data. In the past (but still within living memory), this often resulted in multiple collections of data on a particular policy – the sales department would collect some statistics as policies were sold, the claims department other data and so on – and with limitations in both the way the data was collected and the nature of data processing capacity at the time (the latter often driving the former), insurers had limited ability to integrate these various sources. At least one of the authors recalls summarising data from hand-written valuation cards onto large grided sheets of paper that was necessary for life insurance valuations and data collection in general insurance was in many cases even more primitive.

Today the interrogation of extensive databases of individual policy and claim data is taken pretty much for granted in most (although perhaps not all) classes of insurance business, based on integrated databases that bring together all data about a policy or a claim and enable them to be linked together and, in some cases, with data on other policies owned by a particular policyholder or covering a particular risk. Such individual data of course underpins all sources of information (as opposed to anecdote or speculation) about the industry. While the general public may typically see insurance companies as represented by large buildings, neon signs and often cutesy advertising jingles, the most important capital that an insurance company has is the information it controls (and hopefully understands) and the money flows that information can drive: without that, you don't have an effective insurance company for very long.

Practical limitations to data availability

Insurers will, of course, only collect information if it serves some useful business purpose and if it can be reliably measured or estimated. Despite data storage and processing becoming cheaper over the last generation at probably an exponential rate, it still costs money to collect data and then to store and process it, so if you cannot identify a business purpose for the collection, it won't happen.

Unfortunately, this will apply to some data that might be useful at an industry level or perhaps even for greater understanding by an insurer of its own portfolio performance; however, difficulties in standardising or coding the data, or the time it might take to collect as part of the transaction, result in such information not being collected. Historically for instance, catastrophe coding of claims would not have occurred unless there was a direct business purpose – the requirement of the reinsurer to understand the nature of the risk that it was taking on – to drive it.

Most insurers publish some form of annual report. While prepared in accordance with accounting standards, the financial information is not generally broken down to class of business level. Accompanying directors' reports or supplementary information published may highlight particular aspects of the business but are unlikely to provide a consistent series over time, and certainly not in a form that is easily comparable with other insurers.

More data is probably available on listed insurance companies because regulators require that any information disclosed to analysts or selected investors also be made available publicly. Again, however, this is unlikely to be produced in a consistent form or over consistent time periods, making broader analysis of the performance of the industry as a whole (even just of major players) difficult.

Secondary sources

All other sources of data on the insurance industry are essentially secondary, generally resulting from (often compulsory) collection of data by regulatory agencies. Among these initiatives are those such as

- APRA, which collects aggregate data for solvency monitoring and regulation
- Both APRA and the ACCC, which have mandated data collections in response to 'crises' in various sectors, particularly long-tail classes of business
- State regulatory authorities, especially those concerned with workers' compensation, CTP and builders' warranty insurance
- The Australian Bureau of Statistics, which before the advent of ISC (now APRA) collected a range of statistical data from insurers; with the formation of the ISC that role was transferred from ABS. The ABS occasionally collects data in relation to the economic impact of insurance on household and national budgets

3. Why do we need information about insurance industry performance?

As noted above, insurance industry data repositories generally started with collection of data by regulatory agencies, which was primarily intended for regulation and monitoring.

Industry participants themselves need to understand trends and performance within segments of the market. The insurance industry also acknowledges the desirability – even necessity – of an informed market and the increasing demands from the community for transparency and openness, which are as applicable to insurers as to other large institutions.

A variety of organisations attempt to bring data about the industry together in forms that help to answer particular questions about its performance, or to tease out analysis from the data that is available. We have endeavoured to summarise those sources in Appendix A. As mentioned earlier, we would appreciate being advised of any other recent sources, whether publicly available or not.

4. Sources of information about performance of insurance business in Australia

In this section we endeavour to recall some of the major initiatives that have been taken to collect information about the performance of the Australian insurance industry on a regular basis. Any further verification of sources would be welcome – in particular, we recall that a history of the insurance industry’s results by class of business was published following the cessation of data collection by the Insurance Council in 1986, but we have been unable to locate a copy of the publication.

Industry association initiatives

The **Fire Accident and Marine Underwriters Association (FAMUA)**, which traced its origins back to 1867 in a variety of state-based associations, was the forerunner of the Insurance Council of Australia. Prior to the application of the Trade Practices Act to the insurance industry in Australia in 1975, FAMUA was the industry representative group. It controlled much of the pricing of insurance business in Australia through the publication and enforcement of a “tariff” in various insurance classes (based on systems derived from the UK insurance industry) and also collected a range of data from its members in relation to the performance of various classes of insurance business. That data was published and made available to FAMUA members through the tariff and limited loss ratio data was (we understand) published from time to time.

From 1975, the **Insurance Council** continued and developed the collection of data previously undertaken by FAMUA for a number of classes of business included commercial fire and property, motor and house business. However, over time participation by insurers reduced, and after a review by the Insurance Information Services working party of the Insurance Council Board, the Board decided in December 1986 to terminate the collection because of high cost relative to member involvement.

The decision was made to continue publication of gross written and net earned premium, together with net incurred claims and net loss ratios by class of business from interested Insurance Council members, and that quarterly “macro statistics” collection continues today. The Insurance Council also publishes a summary of the impact of catastrophe claims¹ based on data it and its affiliated organisations have collected from its members.

Nationally mandated data collections

The early 1970s also saw the introduction for general insurance of national legislation (the Insurance Act 1973) and a regulatory body, the **General Insurance Commissioner**. In 1987, the General Insurance Commissioner became part of the

¹ <http://www.insurancecouncil.com.au/IndustryStatisticsData/CatastropheDisasterStatistics/tabid/1572/Default.aspx>

new **Insurance and Superannuation Commission** which itself was replaced by the **Australian Prudential Regulation Authority (APRA)** in 1998.

The office of the General Insurance Commissioner introduced compulsory collection of data from all insurers principally for solvency monitoring purposes, and publication of selected information at a class of business level nationally and at a state level commenced from 1975. Data on individual insurance companies was published annually but only at the level of the whole licensed entity, not classes of business. For certain classes of long-tail business (workers' compensation, CTP and public and products liability), data was collected by accident year and (in some cases) by state.

There was a major revision to the collections in 1992, particularly with the expansion of the numbers of classes separately identified from about a dozen to 23 and an expansion of the subdivision of various types of expenses. Both of these changes were wound back in the late 1990s, with the number of classes of business collected reduced to 18 with consolidation of various smaller risk groups and because of continuing difficulties of collecting data on a consistent basis across insurers with different business approaches and IT and reporting systems.

There was a complete overhaul of insurance data collection following the creation of APRA and the data collection has continued to develop since 2002. Data on all directly written and reinsurance business for entities licensed by APRA (including Lloyds) is collected although classifications and some data definitions (particularly premiums) have changed over time². Some forms of data (such as the liability runoff tables) have ceased to be collected, subsumed by more extensive requirements for actuarial investigation and reporting such as insurance liability valuation reports and financial condition reports.

Following the collapse of HIH Insurance and the subsequent reduction in liability insurance capacity in the Australian market, Federal and State governments undertook a number of initiatives including tort reform and for several years exempted from the Trade Practices Act a pooled arrangement for insuring smaller not-for-profit organisations undertaken by Allianz, IAG, QBE and Munich Re. APRA was required to establish a system to collect data in respect of professional indemnity, public and products liability business. The **National Claims and Policy Database (NCPD)** was introduced in 2004 and data has been produced by underwriting and accident years for calendar years 2003 to 2006 (most recent report being published on 5 September 2007)³. While detailed data is collected at individual policy and claim data, reporting to date has been at a very high level because of difficulties in resolving concerns about release of data that might be commercially sensitive.

The **Australian Competition and Consumer Commission (ACCC)** has undertaken data collections and analyses for certain sensitive classes of insurance business, including public and products liability and professional indemnity insurance (2003 to 2005) and medical indemnity insurance (2003 to 2008)⁴.

The **Australian Bureau of Statistics** did collect information on General Insurance in Australia until 1982/83 (ABS 5620.0), after which the Insurance and Superannuation

² <http://www.apra.gov.au/Statistics/General-Insurers-Statistics.cfm>

³ <http://www.ncpd.apra.gov.au>

⁴ <http://www.accc.gov.au/content/index.phtml/itemId/655456>

Commission data collection was modified to collect some of that data so that insurers would only need to supply statistical data to one national collection agency.

State mandated data collections

The prudential regulation of all non-government entities that offer general insurance products to the general public is a Federal Government responsibility that is undertaken by APRA. However, some state legislation or regulation also mandates collection of insurance data and, in many cases, publication of selected information to the general public. This is generally done for classes of insurance that are made compulsory under some form of statute and is generally a by-product of licensing particular insurers to write that class of business in the state concerned.

The **NSW Motor Accidents Authority (MAA)** mandated detailed claim data collection for all would-be licensees when the scheme was privatised in 1989. Similarly, the Motor Accident Insurance Act 1994 established the **Queensland Motor Accident Insurance Commission (MAIC)** which also requires the insurers it licenses to submit detailed claims data. The industry data is made available to insurers at the individual claim level for analysis. Summary exposure data is collected by the NSW MAA in relation to aggregate premium and policy count by vehicle classification. Exposure data for Queensland is provided to insurers from the Motor Transport Department which is responsible for premium collection. Reports on aspects of insurer performance are published regularly in both NSW⁵ and Queensland⁶.

Workers' compensation data that is collected in those jurisdictions where insurers are allowed to underwrite the policies (as opposed to being claim or fund managers) – Australian Capital Territory, Northern Territory, Tasmania and Western Australia – differs considerably between jurisdictions. In general, the range of data collected was significantly expanded in the early 1990s following the extension of data requirements in NSW and Victorian for their statutory scheme managers. The collection is generally focused on claims and occupational health and safety issues – as with CTP business, the data disseminated in relation to exposure is generally limited.

Collection of builders' warranty data has proved difficult despite being a requirement of state regulation, due to the generally limited number of market participants. The NSW Home Warranty Insurance Scheme Board within the Office of Fair Trading has been collecting and publishing data since 2006 with some backdating to the last major reform of the scheme in 2002⁷. There is a current initiative to collect similar data in respect of Victorian business by that state's regulator.

Statutory authorities that provide cover for particular types of risk, usually on a compulsory basis in a particular state, generally also publish some information on the performance of the business that they manage. This can sometimes provide comparative data against developments in other jurisdictions but in general is of limited use to insurers if they are not allowed to compete with that authority.

⁵ <http://www.maa.nsw.gov.au/default.aspx?MenuID=94>

⁶ <http://www.maic.qld.gov.au/forms-publications-stats/statistical-info.shtml>

⁷ http://www.fairtrading.nsw.gov.au/Tradespeople/Home_warranty_insurance/Home_Warranty_Insurance_Scheme_Board.html

Other non-government initiatives

Insurance Products Service was a joint venture between an insurer and a consulting firm⁸ to distribute 'typical' insurance premiums for personal lines motor insurance by vehicle make/model, year of manufacture and location of garaging using PC-based software. It operated from 1987 to 1995 and allowed users to compare one combination of rating factors for all participating insurers. Insurers provided summarised premium calculating bases when rating tables changed and the data was supplied only to insurers who supplied data.

While the Insurance Council board decided to close its detailed statistical collection in 1986, the Insurance Information Service working party undertook feasibility studies into a simplified form of data collection for four classes of insurance business the following year. **Insurance Statistics Australia Limited (ISA)** was formed as a result⁹ and in 1988 commenced collection of summarised policy count, premium and claim data for private comprehensive motor, householder, commercial property and public & products liability business. During the following twenty years, various extensions have been made to the specifications including the collection of individual commercial property policy and claims data, and the collection of lenders' mortgage insurance¹⁰ and medical indemnity insurance data¹¹. The liability data collection also ceased¹² in anticipation that the APRA database would provide a more complete dataset and to avoid both the cost of duplication and potential confusion of multiple data sources. The personal lines data collections (motor and house) significantly expanded in terms of market share from 2001 when data from a number of major insurers was contributed for the first time.

ISA data is supplied only to those direct insurers who contribute their own data, while reinsurers and other non-underwriters can also subscribe. Development of data is undertaken by members in consultation with the ISA management team. ISA has not collected information on premiums and claims net of reinsurance because of the wide variety of reinsurance arrangements and capital structures across the industry; similarly, expense data is not collected because of the wide range of approaches by which insurers choose to market and manage their business which has made development of consistent classification systems difficult, and also limited the usefulness of the resulting data.

Various commercial organisations have undertaken analysis of public domain data or have undertaken their own data collections from groups of insurers. A summary of these data sources is set out in Appendix A.

Conclusion

The sources of Australian insurance industry data have changed over time as regulatory and commercial requirements have changed. Unfortunately this means that long-term series are difficult to obtain and can be disrupted by changes in collections or methodology. Even statutory data collections can be difficult to mandate for smaller classes of business or where commercial confidentiality or small numbers of players are involved.

⁸ Sun Alliance Australia and Trowbridge Tillinghast /Trowbridge Consulting

⁹ www.insurancestats.com.au

¹⁰ One off collections in 2000, 2004 and annual collections since 2006

¹¹ Individual policy and claim data collected from January 2003

¹² In 2004

5. How is this data used?

The following section sets out some notes that identify areas where we understand insurers may be using industry data directly themselves or through their associations. We look forward to discussion at the seminar to identify other ways in which the sources of data we have identified – and particularly other datasets – are being used by insurers for business purposes.

5.1. Premium rating and reserving

- 5.1.1. NSW and Qld CTP business. The available datasets are extensively used for reserving and setting premium rates. As noted earlier, we expect there would have been considerably greater problems for the management of this class of business in terms of identifying both insurer and industry-wide trends, if this extensive database were not available
- 5.1.2. Underwritten workers' compensation business. The availability of some data on the combined performance of all insurers provides some metrics that can be used to help validate valuation assumptions and identify overall trends in profitability, particularly as these classes of business represent very small parts of most individual insurers' business
- 5.1.3. ISA personal lines reports provide some metrics that can be helpful in validating assumptions, particularly for insurers with smaller market shares

5.2. Portfolio benchmarking

- 5.2.1. This is probably the most common use of ISA personal lines and commercial property reports, enabling consistent comparison of average premium, claim frequency and cost trends within a portfolio against the majority of the industry over time, and by some high-level subdivisions of portfolios
- 5.2.2. APRA half yearly statistics provide some data on the industry as a whole, although the speed of availability, while generally faster than under the ISC, can be problematic for this purpose

5.3. Market share

- 5.3.1. ISA personal lines – timely enough and sufficiently comprehensive that some larger players are happy to use it as a proxy to identify their own market share or its movement, or to supplement survey data

5.4. Understanding relativities between groups of insureds

- 5.4.1. ISA commercial property is collected at a sufficient degree of detail that some analysis by occupational class is possible. The heterogeneity of most commercial insurance portfolios means that that degree of data collection provides each insurer with more information than it would be able to glean from its own portfolio about a range of market sectors which on balance is of greater value than that of the information they must reveal in order to participate. Clearly commercial concerns limit the extent to which more detailed data can be collected for that class of business

5.5. Industry promotion to governments and the community at large

5.5.1. Insurance Council

- 5.5.1.1. macro statistics – the Insurance Council continues to collect from a cross section of its members data by class of business on gross written and net earned premiums and net incurred claims. This data

- helps to demonstrate aspects of the insurance cycle in terms of changing profitability for different classes of business over time
- 5.5.1.2. summarised data from the ISA motor, house and commercial property collections enables the Insurance Council to publish indices of average premiums, claim frequency and claim size, without revealing commercially sensitive information of insurers.

Most industry data collection focuses on exposure and claim information, which tend to be the areas most amenable to statistical analysis and least dependent on insurer structure. While studies of expense rates and reinsurance arrangements have been proposed from time to time, the wide variety of ways in which insurers manage their businesses and their varying capital requirements mean that there has been little demand for collection of such data and it has been further hampered by management reporting structures that are difficult to reconcile between insurers.

6. What interest does the rest of the community have in insurance industry data?

- 6.1. To help in purchase of insurance
 - 6.1.1. With technology development, use of the internet in the insurance industry has increased accessibility of insurance products to the wider community
 - 6.1.2. Viability of insurers
 - 6.1.2.1. Data released by listed insurers and reviews undertaken by share analysts
 - 6.1.2.2. APRA annual reports
 - 6.1.2.3. In many cases, APRA regulation may appear to obviate the need for due diligence by potential policyholders on the insurers themselves
- 6.2. To understand its economic impact (as with any other industry)
 - 6.2.1. employment trends
 - 6.2.2. source of taxation revenue
- 6.3. To understand if the market is competitive
 - 6.3.1. Largely assumed given number of participants
 - 6.3.2. ACCC review of liability, medical indemnity – sectors where the market was perceived by some to have been failing

The major issue here is whose responsibility it is to fulfil these wants – if it is anyone's? Clearly some of the data collected by the industry for other purposes can help to inform decision-making but complete coverage is not going to occur unless there is some pressing need for insurers to address. Crises and issues arise from time to time that require the industry to demonstrate to government that there are policy matters that need addressing (like the public liability crisis earlier this decade). In practice, the lead time for agreeing the data to be collected from sufficient participants and then collecting and processing it in a timeframe so that it can be of any assistance in such discussions is such that the crisis will generally have passed. Policy development then takes place *in vacuo* of what might be relevant industry data. However, since we don't know what we don't know before the Black Swan emerges, this problem may be intractable¹³.

¹³ Nassim Nicholas Taleb, *The Black Swan*, 2007 page 18 et al

7. What makes a successful industry data collection?

Which collections would we typify as successful i.e. useful to a broad cross-section of the industry or community? Obviously this is subjective and probably biased given our backgrounds, but this list is put forward as a basis for discussion.

- 7.1. Compulsory collection combined with clear benefits to insurers and minimal threats to competitive position of individual insurers.** When introduced, general opposition that NSW CTP data collection system was overkill but since it was a licence to play and everyone had to do it, people fell into line. While the apparent extensiveness of the data caused challenges initially for some insurers, because the data systems were established from scratch as it was a new product for most insurers meant that data quality and availability improved fairly rapidly.

Anecdotally, the availability of claim statistics for the full NSW market may have enabled both a rapid reduction in premium rates on the back of falling claim frequencies after competition was allowed in 1991 and also the early recognition that rates had fallen too far before too much financial pain was inflicted on the industry as a whole. Deterioration in the scheme later in the 1990s was demonstrable from a complete dataset in which both the regulator and insurers had confidence, and so government could be convinced that regulatory change was necessary. That occurred in a sufficiently timely fashion that premium rates have moved with reasonable stability over time while still providing a reasonably competitive environment. Data availability has probably assisted the corresponding Queensland market to adapt to developments more rapidly than would otherwise have been the case.

It is arguable that there has been limited development in product innovation or services to particular niche markets, and that there is a limited range of rating factors used in pricing. However, it is a standardised cover and a number of insurers have offered related covers (e.g. at-fault driver benefits or discounts associated with purchase of related products) although the range of questions required on the NSW MAA premium checking website suggests that there is a range of factors examined beyond those used in the previous monopoly system. Such an observation might also be made in US jurisdictions where file-and-write or similar systems operate.

The stability of the data specification has probably helped the usefulness of these datasets.

- 7.2. Regulator pressure combined with clear benefits to insurers and minimal competitive threat to competitive position of individual insurers.** A number of medical indemnity insurers (the then-four members of the Medical Indemnity Insurers Association) decided that collection of an expanded dataset based on the APRA NCPD would also help them in their dealings with government and perhaps obviate the need for multiple data collections.

- 7.3. Compulsory national data collection for industry regulator** – The APRA quarterly data collection is compulsory for all licensed insurers and is therefore comprehensive. From the viewpoint of usefulness to insurers, however, it is focused on APRA's own definitions and requirements mainly

around solvency analysis so it is sometimes less comparable with data that insurers generally use themselves e.g. definition of premium liabilities which can differ from the way in which unexpired premium is accounted for by other data preparers and may therefore affect the measures of premium brought to account in analysing industry performance. While additional data could be collected that might be helpful for insurers or others (as may have been envisaged when the ABS stopped collecting certain data on insurers in the 1980s), the decision to limit the amount of data that insurers must prepare is balanced against that issue. There are necessary delays as APRA must wait for data from all insurers before publishing, and there have been changes in definitions over time which sometimes interrupts series.

- 7.4. Voluntary data collection with simple specifications relative to the complexity of the business being analysed.** Without wanting to self-promote, the authors believe the ISA data collections in motor, house and commercial property classes have been successful, now including an estimated 90% of each of private 'comprehensive' motor and house business, and 60% of small and medium enterprise property business. There are limits to the type of data that insurers are prepared to share in such a voluntary environment, with larger insurers wary of releasing data that can be used to identify more micro levels of experience which could assist competitors to target niche areas of markets.

The various broker and consultant surveys with focused tailored questions about which insurers themselves are interested clearly attract a number of insurers to participate in the expectation of learning more about the industry as a whole and aspects of the business of their competitors.

Initiatives that may be regarded as less successful may include –

- 7.5. APRA NCPD** – no champion - a distraction for APRA from its primary purpose and no external pressure (apart from insurers wanting to see some value for money). Partly stymied by ISA medical indemnity data collection (which covers the majority but not all of the six participants in the sector) and impacted by the need to ensure no possibility of competitively sensitive data getting out.
- 7.6. 1995 Insurance Products Service** – hampered by people not wanting/needing to keep their own data up to date (free rider issue), possibly also a lack of ownership issue (insurers saw it as the responsibility of the other insurers and the consultant to make sure the data was up to date, not their own!) and eventually overtaken by technology development.

Among the unsuccessful initiatives we would include –

- 7.7. 1994 ISA workers compensation feasibility study** – helpful in terms of a design basis that assisted ACT and Tasmanian schemes in subsequent design of their data collection.
- 7.8. 2005 Insurance Council data collection** – were there too many actuaries and statisticians on the development committee and with too little account taken of the success or otherwise of previous data collection initiatives? In the end, this asked for too much data relative to what insurers (including the committee members' own colleagues within their firms) would be prepared to

supply, given that the database would be maintained outside the insurer itself and therefore its future use could not necessarily be controlled.

7.9. **2007 ISA motor vehicle repair cost survey** – this was undertaken in the knowledge that changes to the model of motor vehicle repair quotation and management was changing, so it was of clear interest to most insurers. However, collection of data at an individual claim level (even though exposure was not being collected) still posed too much of a commercial threat to one major insurer, and in their absence other major insurers pulled out. While ISA has been moving down the track of collecting individual policy and claim data to enable analysis – particularly in later years as new needs emerge – it may have been more appropriate to have simply collected aggregate data that could not be further analysed in future: the difficulty with that was individual claim data appeared necessary for the information to be reliably normalised across all insurers whose portfolio mixes would be expected to differ considerably, therefore making conclusions drawn from aggregate data subject to considerable uncertainty.

So what do we conclude could be done better? One limitation of the extension of data collections may be that fear of being able to be compared with others by middle (and even top) management has kept some insurers out of various collections. Australian insurers have had a history of not wanting to publicise market shares which is not the case with jurisdictions like UK where “freedom with publicity” has long been the catchcry to support a relatively light regulatory regime or the USA where much data is regularly released to the general public.

8. Matters for further discussion

Commercial confidentiality concerns in relation to smaller insurers are often cited when APRA endeavours to publish data at class of business level on individual insurers. Might those concerns be addressed by just publishing “league tables” of particular measures such as premium income for the individual top 10 or 15 insurers in each class of business and then ‘all the rest’?

What data or analysis could be cost-effectively pulled together for the benefit of the industry as a whole or particular niches? Have conditions changed sufficiently that data collections previously not practical could (or should) be undertaken today?

Finally, if you are working with an insurer as a manager, technician or consultant, are you getting everything out of the industry data that *is* available, limited though it may be? Could collateral industry data be useful background for aspects of financial condition reports, for instance?

We hope that these and other questions will generate useful discussion to help move both the actuarial profession and the Australian insurance industry forward.

Appendix A Summary of industry data available

The following lists sources of insurance industry data for multiple classes of insurance currently available in Australia. Please contact the authors on 02 8252 3347 if there are any other sources you believe we should include!

Aon Australia

Australasian Risk Management and Total Cost of Insurable Risk Survey

http://www.aon.com.au/general/publications/risk_management_and_tcoir_2007_2008.asp

The Commercial Insurance Broker

http://www.aon.com.au/pdf/general/publications/commercial_insurance_broker/abn_a_mro_aug_2008.pdf

Australian Prudential Regulation Authority

Half Yearly General Insurance Bulletin (class of business level and annual summary of each insurer's major metrics) and *Quarterly General Insurance Performance Statistics* (aggregate performance of the industry)

<http://www.apra.gov.au/Statistics/General-Insurers-Statistics.cfm>

Choice Magazine

Annual survey of home insurance products

<http://www.choice.com.au/viewArticle.aspx?id=105716&catId=100292&tid=100008>

Annual survey of car insurance

<http://www.choice.com.au/viewArticle.aspx?id=101155&catId=100292&tid=100008>

Occasional surveys of customer satisfaction

Deutsche Bank and Finity Consulting

"Pendulum" General Insurance Review

Contact Andrew Cohen on 02 8252 3346

Ernst & Young

EYE on Financial Services – Strategic Insights

[http://int.sitestat.com/ernst-and-](http://int.sitestat.com/ernst-and-young/australia/s?Industry_Banking_EYE_on_FS_Strat_Ins&ns_type=pdf&ns_url=[http://www.ey.com/Global/assets.nsf/Australia/Industry_Banking_EYE_on_FS_Strat_Ins/$file/FS-Strategic-Insights.pdf])

[young/australia/s?Industry_Banking_EYE_on_FS_Strat_Ins&ns_type=pdf&ns_url=\[http://www.ey.com/Global/assets.nsf/Australia/Industry_Banking_EYE_on_FS_Strat_Ins/\\$file/FS-Strategic-Insights.pdf\]](http://www.ey.com/Global/assets.nsf/Australia/Industry_Banking_EYE_on_FS_Strat_Ins/$file/FS-Strategic-Insights.pdf)

Insurance Council of Australia

Insurance trends (summarised data from Insurance Statistics Australia)

<http://www.insurancecouncil.com.au/Portals/24/GI%20Statistics/GI%20Statistics%20-%20Trend%20Series.pdf>

Insurance Statistics Australia Limited

Quarterly comprehensive private motor and householders & homeowners insurance

Half-yearly commercial property insurance

Annual lenders' mortgage insurance and medical indemnity insurance

<http://www.insurancestats.com.au/objectives.html>

JardineLloyd Thompson

Market Conditions (Quarterly)

http://www.jlta.com.au/files/Market_Conditions_03_08.pdf

JP Morgan and Deloitte

General Insurance Survey 2007

http://www.deloitte.com/dtt/press_release/0,1014,sid%253D5527%2526cid%253D56197,00.html

KPMG

General Insurance Survey (“After the deluge” – Australian industry results to December 2007)

<http://kpmg.com.au/Default.aspx?tabid=209&kpmgarticleitemid=969>

PricewaterhouseCoopers

Insurance facts and figures

<http://www.pwc.com/Extweb/onlineforms.nsf/docid/A11D0F8D49DF9742CA25745700042A1E>

Appendix B Use of ISA statistics

The following information is section 3 of the ISA Operations Guidebook¹⁴:

3.1 Personal lines (Motor and Domestic)

1. benchmarking key exposure and claim parameters to the market, both the absolute level of measures such as average premium, average sum insured, claim cost per policy, and whether the trends in a portfolio are similar to or different from those of the market generally. As well as averages, upper and lower quartiles are produced to assist comparison
2. quantifying emerging trends in causes of claims that may drive claim costs in future. As ISA data includes results for all Australian states and territories, you can examine both the experience of markets where you currently underwrite business as well as other jurisdictions that may exhibit trends to which your business may be exposed in future
3. blending ISA industry experience with company's own experience to provide a more credible basis for pricing events or regions that are not well represented in your portfolio e.g. weather claims in regional areas or the costs of major events
4. a more stable indicator of market share than consumer surveys which tend to be volatile because of their reliance on the memories of survey participants
5. increased confidence in measuring your own experience – providing an alternative view from what you see in your regular internal management reports
6. providing industry comparisons for inclusion in actuarial financial condition reports
7. producing a more comprehensive view of the industry's performance for these classes of business and an alternative source of information from anecdote and rumour – rational pricing encouraged by credible industry average premium and average claim cost data, particularly among smaller players or new entrants whose own data is limited. By contrast, APRA data is more delayed in production (6+ months after end of quarter, and producing only gross premium and gross claims at a state level). At the same time, ISA information is not so detailed that a competitor's proprietary approach to pricing individual risks or groups of risks can be determined.

3.2 Commercial property

1. benchmarking key exposure and claim parameters to the market, both the absolute level of measures such as average premium, average asset value insured, claim cost per policy, and whether the trends in a portfolio are similar to or different from those of the market generally. For instance, is your large loss experience consistent with industry experience – an important consideration for reserving as well as pricing for this class

¹⁴ Available at <http://www.insurancestats.com.au/objectives.html> . This document also provides an outline of the reports available to members from ISA

2. quantifying emerging trends in causes of claims that may drive claim costs in future. As ISA data includes results for all industries and Australian states and territories, you can examine both the experience of markets where you currently underwrite business as well as other jurisdictions that may exhibit trends to which your business may be exposed in future
3. blending ISA industry experience with company's own experience to provide a more credible basis for pricing events or regions that are not well represented in your portfolio e.g. large individual losses , major events or particular causes of claim
4. relativities between average premium rates currently being charged by the insurer versus all contributors for different occupations and covers
5. increased confidence in measuring your own experience – providing an alternative view from what you see in your regular internal management reports
6. providing industry comparisons for inclusion in actuarial financial condition reports
7. producing a more comprehensive view of the industry's performance for these classes of business and an alternative source of information from anecdote and rumour – rational pricing encouraged by credible industry average premium and average claim cost data, particularly among smaller players or new entrants whose own data is limited. More comprehensive data that available from APRA publications.

3.3 Medical indemnity

1. benchmarking key exposure and claim parameters to the market, both the absolute level of measures such as average premium, claim cost per policy, and whether the trends in a portfolio are similar to or different from those of the market generally
2. quantifying emerging trends in causes of claims that may drive claim costs in future. As ISA data includes results for all Australian states and territories combined, you can compare your experience to the national experience for different medical specialty groups, which could exhibit trends to which your business may be exposed in future
3. providing a comprehensive source of information for medical indemnity insurers to use as the basis for answering questions from industry stakeholders such as governments, professional colleges and the medical profession more generally e.g. compulsory data submission to the Australian Institute of Health and Welfare
4. providing a single point of data submission for both APRA NCPD requirements and the more comprehensive requirements of MI steering committee members and their stakeholders; obviating the need for some separate data submissions to different agencies
5. increased confidence in measuring your own experience – providing an alternative view from what you see in your regular internal management reports

6. providing industry comparisons for inclusion in financial condition reports
7. encouraging rational pricing through credible industry premium and claim development data producing a more comprehensive view of industry performance. By contrast, APRA NCPD data is limited at present (Level 1 reports do not separately show medical indemnity experience) and the level of coding on the data submitted is less comprehensive than in the ISA database. At the same time, ISA information is not so detailed that a competitor's proprietary approach to pricing individual risks or groups of risks can be determined.

3.4 Lenders' Mortgage Insurance

1. authoritative industry report on trends that can be presented to rating agencies, regulators and others to whom the industry participants wish to present the industry credibly
2. benchmarking key exposure and claim parameters to the market, both the absolute level of measures such as average premium, claim cost per policy, and whether the trends in a portfolio are similar to or different from those of the market generally across policy years or claim years
3. quantifying emerging trends in business factors that may drive claim costs in future. As ISA data includes factors such as state, LVR, source of business, loan purpose, borrower type and loan documentation as well as across policy years, you can examine the impact of different combinations within your own portfolio and across the combined experience of all contributing insurers
4. increased confidence in measuring your own experience – providing an alternative view from what you see in your regular internal management reports
5. providing industry comparisons for inclusion in financial condition reports
6. encouraging rational pricing through credible industry premium and claim development data producing a more comprehensive view of industry performance, while not so detailed that a competitor's proprietary approach to pricing individual risks or groups of risks can be determined.