Institute of Actuaries of Australia

Latent Claims – What we know about things we don't know about

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Abstract

"Reports that say that something hasn't happened are always interesting to me, because as we know, there are known knowns; there are things we know we know. We also know there are known unknowns; that is to say we know there are some things we do not know. But there are also unknown unknowns -- the ones we don't know we don't know"

Donald Rumsfeld, Feb. 12, 2002,
Department of Defense news briefing [i]

The issue of latent claims is a major concern to both insurers and reinsurers alike. Everyone has heard of asbestos and the long duration (or latency) between exposure to asbestos and the development of an asbestos-related disease. The extreme case is mesothelioma that can take more than 50 years from first exposure to diagnosis. While we know about the issues with asbestos, the question has been raised – What allowance should be made for the existence of latent claims other than asbestos?

As an initiative of the IAAust's Accident Compensation Sub-Committee, a working group was formed to investigate latent claims and the issues surrounding latent claims.

The group has undertaken an initial study of latent claims and, in particular, has looked at:

- The various definitions of latent claims and how these can be interpreted by different groups;
- The terms used to describe latent claims. A glossary of terms to describe latent claims is proposed;
- The historical development of identified and valued latent claims, going further than the commonly discussed asbestos related claims;
- The data needs for being able to accurately monitor latent claims exposure and the potential problems of this data not being collected;
- The currently used methods and potential other methods for reserving and pricing for latent claims in the context of both insurance and reinsurance;
- The current Australian accounting implications and difficulties of setting aside reserves for the issue of latent claims; and
- The results of a survey of actuaries from a number of insurance, reinsurance and consulting companies in relation to their view on the current practices for pricing and reserving for latent claims.

As well as providing an overview of the issues surrounding latent claims, the paper highlights a number of areas for further consideration. In particular:

- The difficulty in defining what a latent claim is which raises the question – is a single definition of latent claims possible?
- The need for consistent approach by actuaries for the allowance of latent claims in both reserving and pricing;
- The need for the approach adopted by actuaries to be accepted for statutory reporting;
- The difficulties faced in monitoring latent claims as well as a proposal for an industry-wide approach to monitoring;
- The potential ramifications if the issue of latent claims is not addressed.

The latent claims working group considers that there is substantial work to be done to understand the nature and potential risks faced by latent claims. The long term nature of latent claims means that the issue is normal sidetracked due to more immediate and pressing needs. The problem is, that if we wait until the "next asbestos" occurs then we'll have missed the boat … sounds a bit like the issue of global warming.

Key words: latency, latent claims, industrial disease, monitoring, reserving, pricing, risk margins, central estimate, accounting, insurance, reinsurance.

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1 Introduction

Insurance claims, particularly for liability classes of insurance, often take several years to materialise. Delays can be caused by a number of reasons however claims with delays in reporting of greater than 5 years (other than for minors) predominantly relate to gradual onset claims or disease-type claims where the disease takes considerable time to become evident.

Despite the delays in the notification of claims, it is necessary to allow for the costs of such claims in reserving and pricing. For some insurance classes, the extent of the allowance will be small or negligible. For others, the allowance could be considerable. Determining the allowance required is, however, typically hampered by a lack of information upon which to base any estimates.

Latent claims are "known unknowns". That is to say, we know if a policy creates an exposure to latent claims, but not whether they will certainly emerge nor the timing, cause or amount if they do. Due to the difficulties associated with this and in obtaining data for a full study on the predictability of latent claim emergence, potential and unknown latent claims are often not considered for reserving or pricing purposes.

The question is – is that good enough? Can we afford to accept the current approach to reserving and pricing simply because we currently have insufficient data? Perhaps on receipt of full data we may conclude that there is little to be done. However, in the circumstance of 'another asbestos', would actuaries look remiss relative to public expectations if they simply put forward that nothing was done due to the fact that the insurer's data systems did not provide enough history to make an accurate assessment?

It was the thought that more should be done to explore this issue and challenge the current thinking that lead to the latent claims working group presenting this paper.

1.1 What are the risks of doing nothing?

The risks of doing nothing will vary considerably across insurers. The risk to insurers writing property classes of business are small and the expense of setting up a detailed monitoring system is probably not warranted. For an insurer underwriting a substantial amount of liability business, the risk could be quite significant.

Although asbestos is a clear example of the risk of latent claims, it is often said that an equivalent scenario could not arise in future. The main argument being that the whole population is far more aware of their rights and that insurers, regulators and governments have learned lessons from the past. While these arguments may be reasonable, they ignore the lead time until the cause of many diseases are identified. They also ignore the fact that the failure to stop the emergence of a latent claim, combined with reduced reinsurance protection as a whole would still leave the Australian Insurance market with a major financial problem. Two questions illustrate this point:

- When was global warning first identified?
- When were mobile phones first linked to brain cancer?

While most people would argue that global warming is a reality, how many years has it taken for this to be accepted? Further, how many years will it take before major actions are taken to address the issue? This is not dissimilar to the number of years it took to ban asbestos products after a causative link between asbestos and disease was established.

The link between mobile phone usage and brain cancer is tenuous. Some "experts" say there is a link and others say there is not. What if there is a link? If a link is established in 20 years time, will insurers be liable for claims dating back to the early 1990's when a link was first touted? What if 0.5% of the population contracted a cancer and were able to claim $200,000 each? Could we really face an industry liability of $25 billion (or about 1 years worth of premium)?

Another "asbestos" might be unlikely, but the nature of the recognition of latent claims and the reluctance to change the use of "convenient" products means that such a phenomenon occurring in the future is possible. A key question for actuaries is whether they feel comfortable that their organisation or client is suitably placed to deal with any latent claims that arise in the future?

1.2 Do we need an industry-wide approach?

The nature of latent claims means that they are likely to appear as a small number of claims each year that drift in over a long period of time. Because of this, there is a high chance that early warning signs are missed. There is no doubt that a number of insurers had asbestos-related claims for many years before the extent of the problem was recognized. In some cases it was problems highlighted by insureds and/or other insurers that led to an internal assessment of potential liabilities. Latent claims can slip under the radar.

It is possible that aggregating all information relating to latent claims could enable the insurance industry to become aware of a particular type of latent claim considerably faster than if it were left to each insurer individually. 20 or 30 claims a year growing to 40 or 60 is far more likely to attract attention than 0 or 1 claims a year growing to 1 or 2.

If data are not aggregated across the industry, then should there at least be a consistent set of claim type codes that are used to describe various types of latent claims? Without a consistent coding regime there is a higher probability of the duration to recognise a latent claim will be longer.

There have been several attempts in the past to get the issue of latent claims into the limelight. Papers such as the IA Latent Claims Working Party (1990) (also – Reserving for Unknown Liabilities, General Insurance Convention, 1999) and Siddharth Parameswaran's 2004 paper presented to the IAAust Accident Compensation Seminar (History Repeating? Can Insurers Face a Similar Problem to Asbestos Again?), have highlighted many of the issues relating to latent claims. Indeed most of the issues raised in this paper have been covered in previous papers. It is interesting to note that previous surveys have indicated that actuaries were sceptical of the handling of latent claims. Even so, it appears that there has been little, if any, progress over the last few years.

The Latent Claims Working Group considers that there is a worthwhile investment to be made and that the collection and analysis of industry data can help set benchmarks for insurers to work from. As a general rule an individual insurer will not have sufficient data to be able to analyse their own latent claims experience until several years after a significant type of latent claim emerges. Asbestos is a classic example of how many years (or decades) it can take individual insurers to recognise that they have considerable exposure.

The latent claims problem is most starkly observed in workers' compensation (in respect of bodily injury claims). Given a majority of workers' compensation in Australia is currently provided by statutory bodies this should largely remove the issue of. If, however, an adequate allowance for latent claims is not made in premiums and reserves then future generations will have to cross-subsidise past generations when the latent claims emerge.

This paper considers the extent of any allowance that latent claims warrant by reviewing the historical latent claims experience and documenting some of the practical responses to latent claims reserving and pricing in Australia. Finally, a number of observations and suggestions about the allowance for latent claims are made.

The focus of the paper is on latent claims connected with personal injury. It does not explicitly consider property-related latent claims such as those (for example) relating to the clean-up of toxic sites. However, many of the comments in this paper may be generally applicable to a wider array of latent claims.

We note that this paper should be seen as an introduction into the handling of latent claims in Australia. It has been prepared by a working group arranged by IAAust's Accident Compensation Sub-Committee to enhance future debate regarding issues such as:

- What level of allowance for latent claims is reasonable?
- Is there an underlying level of latent claims?
- Are there any latent claims that show signs of developing into the "next asbestos"?
- Should allowance be made in the central estimate or in risk margins or both?

The remainder of this paper discusses the issues above, which are set out in the following sections:

- What are latent claims?
- What do we know about latent claims?
- Data requirements for monitoring latent claims
- Current handling of latent claims
- What impact do accounting standards have?
- What next?

2 What are latent claims?

2.1 Introduction

Finding a common description of latent claims and an unambiguous language for describing latent claims has proven difficult. This stems from the variety of those latent claims that have emerged, the legal and insurance complexities and the many different perspectives that different parties have on such claims.

In this section we examine the broader definition of latent claims including the dimensions for latent claim taxonomy. We start with definitions in common use and the common features of those claims typically associated with the label of latent claim.

We have kept our discussion relatively broad. However, we have taken the same view as the UK actuarial profession's Latent Claims Working Party which presented its paper at the GISC convention in 1990, namely "that what matters to the insurer is the long delay and the fact that the claims were not anticipated". Our working definition used in other sections reflects this view.

2.2 Common features

If we bring to mind identified and potential latent claims there are some clear common features, which we discuss below.

2.2.1 Long reporting delays since exposure

A common feature is a relatively long delay between the event, events or exposure that has lead to the claim and the claim being presented. These delays can be extremely long such as the 35-40 years latency of mesothelioma claims; or relatively short such as some silicosis claims. It may therefore be more precise to say that there is the potential for a long delay from the first exposure to a claim.

2.2.2 Admissible claims without underwriting or pricing allowance

Another common feature is that the admissibility or potential for a claim due to the specific cause was not known or clearly identified as a major issue at the underwriting date. Arguably the emphasis here is not whether the cause was identified as a major issue but whether it was explicitly allowed for within the pricing and, importantly, the degree of confidence in any underwriting allowance made. For example at this time mobile phone exposures are seen as a latent claim risk. We would classify claims, if any, from that source as latent because of the lack of reliable data on which to base a premium allowance for the exposure, even if the insurer made a pricing allowance.

Given this feature it may be that claims that are 'latent' to some may not be latent to others, e.g. where an exclusion has been introduced by one insurer and not another.

We also not that some claims that are initially labelled 'latent' may be allowed for in the insurance premium or policy terms in due course. In that respect they are 'latent' more by association with the initial emergence than the characteristics post emergence. Repetitive strain injury claims are an example of such a 'latent' claim that is now perhaps no more than a new claim type. In the case of the shorter delay claims it is the emergence from a 'backlog' when the claim type first becomes compensable that causes the concern. This is particularly the case when changes to social norms or legal change creates a new raft of claims relating to past periods

When we refer in general to latent claims, the rule seems to apply that 'once a latent claim always a latent claim'. Our taxonomy and definition includes a category for those claims that may no longer be thought of as latent but that some people may refer to as latent claims due that initial association.

2.2.3 Gradual Exposure

Another common feature is that the cause of the claim is commonly a gradual or 'often-present' exposure. For example in the case of a claim for pollution to an area, the pollution may have been gradual rather than due to a sudden spill. In the case of industrial deafness the noise attributed to causing the hearing loss may have been present 'off-and-on' for many years of work.

We have added the phrase 'often-present' to also encapsulate mesothelioma whereby epidemiology suggests that a single fibre can cause this cancer. In typical cases there would be exposure over a sustained period, which might have lead to the inhalation of the "fatal-fibre". In practice the specific fibre and or date cannot be identified, as a single exposure is uncommon in industrial related mesothelioma claims.

However, there have been cases reported where a single day's employment or a single day involved in handling asbestos related products appears to have lead to an asbestos related illness. These might still be classified as latent claims due to association even though the background to the specific claim is quite different.

2.2.4 Event Date

Often there is no single event date in respect of the initial exposure or cause. Another problem here is that data and information relating to exposure is no longer available due to the passage of time. This is explored later in the paper.

2.3 Common Definitions

There are many simple definitions of latent claims, for example:

- claims that have a "very long lag" between incident and reporting and that were not anticipated as reasonably likely when the policy was entered into.
- Late reported claims
- Extended IBNR – as differentiated from "normal IBNR".

Such descriptions are common in working definitions such as may be used in defining data filters. Brief definitions were explored in a brief survey of actuaries from the larger companies and consultancies and these shared the features described above.

Commonly working definitions include a specific lag (say ten years). Others would have a further stage of refinement, for example excluding claims relating to minors and claims records which note that an accident is the primary cause of the claim.

It is also worth noting that the expressions industrial disease claims, disease claims, occupational disease claims and APH (Asbestos Pollution and Health Hazard) are common shorthand for specific subsets of latent claim.

However, these definitions are not ideal relative to our point of interest, i.e. that what matters to the insurer is the long delay and the fact that the claims were not anticipated. For example, many claims with a delay in excess of five years will be relatively ordinary claims which have been allowed for in the pricing and would not otherwise be associated as a latent claim. A specific example of this would be claims relating to injury to minors, which would not typically be thought of as latent claims given that they are often notified early and are typically allowed for within underwriting and pricing.

Similarly, not all industrial diseases have a long medical latency. For example, silicosis can arise from a short period of high exposure levels and in that case would not have a long latency or necessarily a long reporting delay. In that respect these claims are quite different to our common understanding of latent claims. However, through the association with longer latency silicosis, these claims would still be typically thought as latent claims.

2.4 Taxonomy

From this starting point we have set out a number of key classifications that might allow the development of a clearer taxonomy of latent claims. On preparing this we have noted the very real differences that exist within the claims that we commonly refer to as latent claims.

In preparing these classifications we have considered the following high level characteristics:

- Claim Characteristics
- Exposure Characteristics
- The Legal Environment and Claim Framework
- Underwriting status
- Actuarial and practical aspects.

We examine each of these, and the associated sub-classifications, in turn below. We acknowledge that an alternative perspective might group some items under a different major classification but for ease we have not repeated sub-classifications.

2.4.1 Claim characteristics

Claim characteristics broadly relate to the facets of a claim.

The starting point is the **nature of the claim**. The key sub-groups are:

- Disease, injury or negative impact to an individual, e.g. industrial deafness and skin cancer. We would also place molestation claims and failure to educate (e.g. due to misdiagnosed dyslexia or bullying) under this classification.
- Property damage, e.g. leaky building syndrome and pollution

- Financial loss (other than replacement of income under a disease claim). For example the cost of site clean up.

Within disease and injury there can be very different impacts that will have a material bearing on claim frequency and cost. For example:

- Whether the disease or injury causes illness and or fatality
- In the case of an illness, how long that illness typically lasts
- Whether treatable or not, and the cost and availability of treatment
- Whether there is genuine medical impact – for example there is great debate about the medical impact of Pleural Plaques.

The next aspect is the **trigger point** of the claim. These are also described as trigger of coverage, attachment and attributions points, and describe the claim mechanism that delineates the parties or cover responsible to meet the claim. Where a sudden event occurs such as an accident the date of loss is not normally an issue. The 1990 working party paper noted four sub-groups:

- Exposure – impacting policies in force during the period of exposure
- Manifestation – impacting policies in force when the problem was first discovered
- Injury in fact – where proof of injury is established on a case-by-case basis. This impacts all policies in force when damage in fact is established
- Continuous trigger – impacting all policies from exposure to manifestation.

A paper presented to the AILA National Conference in 2006, notes that these are legal concepts and generally are explored and tested in the US courts. That paper and practical experience also suggests that this is to ensure that plaintiffs have as much access as possible to insurers' deep pockets.

As discussed in Section 5, there can be a lot at stake in defining the trigger point for large latent claim issues. Several prominent and recent legal cases involving mesothelioma appear to have been driven by this fact.

A very clear aspect of the claim description is the typical **latency period**. This expression refers to the period between exposure to the event/ substance that causes the claim and the presentation of the disease or claim cause.

This is quite different to the **reporting delay**. Reporting delay will also depend on the delay from manifestation of the illness or damage and the identification and claiming process.

Between latency and reporting delay we might classify latent claims as short tail (e.g. stress related claims) and long tail (e.g. molestation/abuse claims and mesothelioma).

Reporting delay may also depend on the existing status of the claim. For example, the reporting delay on the 'ground breaking' claims may be much longer than that which emerges after a claim type becomes more established. This reflects the calendar year aspect that a groundbreaking claim has in that it opens the doorway to claims from many years of exposure where the same circumstances present an opportunity to claim. As discussed further below, such claims would typically be incorporated in the underwriting and insurance framework very quickly. The Working Group would consider such "short tail" latent claims as expired latent claims once they have emerged and become a compensable claim. It is also often the case that for short tail claims the manifestation trigger is used.

It is often the case that for short tail claims the manifestation trigger is used and that these are absorbed into normal underwriting as previously discussed.

2.4.2 Exposure characteristics

The agents that have caused latent claims are many and varied. This is also the case for those agents that have been identified as having the potential to generate latent claims.

The first distinction here is whether **the cause** is a substance, an act or an environmental condition.

- By substance we refer to hazardous materials, such as some chemicals, pollutants and food additives. For example silica exposure, asbestos, lead paint
- By Acts or omissions we refer to action or inaction taken by one party that has an adverse impact on another, such as bullying, molestation and failure to educate. Note that these could be single or multiple acts relating to the same or a similar cause. In the case of multiple acts the exposure and therefore trigger characteristics may be more similar to substance or environmental causes.
- By environmental we refer to an aspect of the environment that has caused the claim. Examples include excessive noise in relation to industrial deafness, vibrating machinery in cold conditions in the case of vibration white finger. We would also include radiation (in respect of the potential of claims from mobile phones), UV light (in respect of the potential of claims for skin cancer) and Electromagnetic fields (in respect of potential claims for leukaemia and other cancers) in this category.

Related to the cause is the extent of the causal link. It is clear that in practice many factors determine the causal link, including:

- Scientific evidence
- Medical evidence and epidemiology
- Social norms
- Legal interpretation
- Case Law
- Law and regulation.

It is also worth briefly mentioning the importance of the strength of the causal link through a comparison of two examples:

- Mesothelioma is almost always linked to asbestos exposure. In that case where mesothelioma is present, the ability to claim becomes reasonably clear. Through Australian Courts and past practice it is almost certain therefore that there are grounds for a claim. We would refer to this as a well established causal link

- Compare this to lung cancer. Lung cancer has been linked to many causes including asbestos exposure and also to smoking. To date in Australia lung cancer has been admitted as a claim in the asbestos setting but not in respect of tobacco use in isolation. We would describe this as an unestablished or potential causal-link from an insurance perspective.

A direct impact on the total cost of a latent claim is the interplay between the latency of the claim event (be it disease, injury or property damage) and the length and intensity of exposure of the causal agent. It is worthwhile therefore classifying or describing the latent claim issue in terms of the **length of exposure** and its **status** i.e. whether it has ceased, substantially ceased or continuing.

As an example let's consider the potential for mobile phone use to generate claims: one might say the exposure was short by 1995, medium by 2005 and long by 2015 especially taking into account that this last date is past the stage at which mobile phones came into more common use by children in Australia.

In respect of status we offer the following examples:

- Ceased – asbestos mining in Australia
- Materially ceased – asbestos in Australia except when disturbed
- Substantially ceased – DDT
- Continuing but controlled, typically by occupational health and safety change e.g. industrial deafness in Australia.
- Continuing but unchanged or substantially unchanged – e.g. mobile phones, EMFs and toxic mould.

2.4.3 The Legal Environment and Claims Framework

The key characteristic we want to discuss here relates to those factors that would impact on the propensity to claim. Very clearly these are not independent of the causal link and the strength of that link. Other factors that are important include:

- Whether the link is well known or poorly known
- Whether the claim is established or emerged or whether it would be seen as a landmark case
- The extent to which the legal profession, advocacy groups and support groups support and or encourage claims
- The extent to which legal frameworks are in place to support claims, for example in NSW the Dust Diseases Board and the Dust Disease Tribunal
- Whether the claim is presented as a single case or a form of mass tort or class –action. This has been particularly important within the USA experience
- The extent of any 'social sympathy'. For example compare the impact of contributory negligence when an asbestos sufferer is also a smoker versus the poorly educated dyslexic adult who was undiagnosed as a child when they perhaps should have been. The extent of incapacity or impact also influences the extent of 'socially impact'.

All of these have the potential to impact on whether the affected party will present a claim or not. From a classification perspective these aspects are also part of defining how established or emerged the issue is and the materiality of the issue. An illustration of this is the establishment of the Weathertight Homes Resolution Service in New Zealand to address Leaky Building claims. Appendix C provides further detail.

2.4.4 Underwriting status

The first of these might equally have been our first classification. The current status of the issue is obviously a key characteristic:

- We use the expression **Emerged latent claim** to denote claims that have emerged and have been successfully lodged against the organisation, insurer or reinsurer. We would expect that for most emerged latent claims there has been some underwriting change to address the issue. We would also expect that actuaries would be aware of the claims and, depending on other characteristics would be making separate allowance for these claims.
- We use the expression **Emerging latent claims** to denote claims that have emerged in small numbers, perhaps in specific sources only. These would have the potential to become emerged latent claims, may or may not be valued separately and may or may not have lead to underwriting change.
- **Potential latent claims** are quite simply those potential claims that have been identified but are yet to emerge in any fashion. We have discussed a number of such potential latent claims already, for example mobile phones, electromagnetic fields. Within potential latent claims sit those that have been brought to court but without a ruling in favour of the plaintiff. Examples include tobacco, This will be explored further during the concurrent session at the Seminar to provide an update to list.
- **Closed latent claims** are claims that were once put forward as potential latent claims but for which no substantial emerged or emerging latent claims issue exists. Examples include the potential link between coffee and cancer, repetitive strain injury and arguably electromagnetic fields could also fall in this category. Our concern in defining this classification is that it is human nature to be cautious and it may be safer to define something as potential rather than closed.
- The final classification here is the **Unknown latent claim**, i.e. the theoretical latent claim that may emerge from at present an unidentified source.

Especially for emerged and emerging latent claims it is useful to classify latent claims according to the current underwriting status. Typical status would include:

- Excluded through policy terms or refusing cover
- Priced – i.e. included in cover but reflected or accepted within the price
- Priced but with conditions – e.g. sub-limits or partial exclusions (e.g. pollution covered but not gradual pollution)
- Excluded from claims occurring but priced within claims made; although we note that we have not seen this in practice.
- Pending consideration – e.g. 'on the agenda ' such as EMF or on underwriters guidelines to refer upwards to a higher delegation level or to avoid the industry.

2.5 Practical implications

It is also worth noting that the regular considerations that an actuary might make are also a component of the overall characteristics of any given latent claim. They may not strictly speaking form part of a taxonomy but are a worthwhile continuation of the above discussion.

In no particular order these include:

- The state of claims data
- The state of exposure data
- Claims frequency
- Average claim size
- Overall materiality.

2.6 Taxonomy summary

The table below summarises the taxonomy above.

Table 2.1 – Summary of Taxonomy

Claim Characteristics

Claim Nature
Disease
Injury
Negative impact to individual

With Disease
Illness or fatality
Treatable or not
How long the illness lasts
Medical impact

Within Negative Impact
Property Damage
Financial loss

Trigger point
Exposure (e.g. employment period)
Manifestation
Injury in fact
Continuous trigger

Latency period
Long-tail
Short tail

Reporting delay
Short
Long

Exposure Characteristics

The Cause
Substance
Acts
Environment

Causal Link
Established
Un-established
Also of relevance under casual link
Scientific evidence
Medical evidence and epidemiology
Social Norms
Legal Interpretation
Case law
Law and regulation.

Exposure status
Ceased
Substantially ceased
Continuing - but controlled
Continuing and unchanged

Legal Aspects

Propensity to claim
Low
Medium
High

Legal Status
Established and or stable
As yet unclear

Extent of knowledge about the causal link or potential causal link

Whether advocacay and or support groups exist

Whether formal legal frameworks are inplace to manage claims and promote claims

Whether the claim type has become established or whether it is emerging in the legal sense

Whether the claim would be presented as a single claim or within a mass tort or class action

Legal Costs
Inefficient
Efficient

Underwriting Status

Emerged
i.e. where underwrting has taken into account

Excluded through terms or or by refusing cover

Priced - with conditions

Excluded from claims occuring - covered within claims made

Pending consideration

Emerging
i.e. where small numbers of claims have emerged

Potential
- i.e. where a potential causal link has been noted but few or no claims have yet emerged

Closed
i.e. where an issue was put forward as a potential claims but no claims have emerged or the causal link has been ruled out

2.7 Proposed definition

Essentially our definition is an extension of the working definition of the 1990 Latent Claims Working Party combined with the underwriting status set out above to better delineate this key insurance aspect. Within the reference to insurer below this would also cover self-insurers and other entities involved in a claim.

A latent claim is one where the insurer could not have reliably costed or reasonably anticipated the claim at the date of underwriting. At least for the first claim of a particular type, the latent claim will exhibit a reporting delay of many years between the underwriting of the policy and the emergence of that claim. The delay may be due to the time it takes for the claims cause, for example illness or physical damage to emerge due to its latency or due to the first admission, through the courts or otherwise of the claim. The overall reporting delay will be clearly distinguishable from most claims admitted under the policy.

Within latent claims there are materially different sub-groups from the insurer's perspective. We define these as follows:

- Emerged latent claims: denoting claims that have emerged and which have been successfully lodged against the insurer. Typically the insurer will have responded to the emerged latent claim in some fashion, such as policy exclusions, pricing changes or changes to policy conditions. As discussed above, some emerged latent claims will become excluded or reliably costed, and so we use this expression to cover these claims also..
- Emerging latent claims: denoting claims that have emerged in small numbers, perhaps in specific sources only.
- Potential latent claims: denoting those potential claims that the insurer or insurance industry have identified or discussed but are yet to emerge as admissible claims against the insurer.
- Closed or extinct latent claims: denoting claims which were once discussed as potential latent claims but where the exposure has ceased or is thought to have ceased for example through policy exclusions, the ceased use of the potentially harmful agent or after sufficient passage of time that a material incidence level of claims from the potential source can be ruled out with some confidence
- Unknown latent claims, also referred to as Unknown Unknowns: denoting the claims that may emerge from unknown sources and for which the insurer has an exposure under the policy terms and conditions.

3 What do we know about latent claims?

In order to gain a better understanding of the extent of latent claims, the Working Group requested claims information from a handful of insurers with the aim of being able to aggregate data to gain a broader understanding of the extent of latent claims.

The nature of insurer data is such that the true latency of a claim (i.e. the period from first or significant exposure to diagnosis of the disease, injury or damage) is typically not collected. What is typically collected is the report date and in some cases an assigned or notional accident date (which can range from the date of first exposure, to the diagnosis date to the report date). Thus, in insurer data, latency is typically measured via the apparent reporting delay of the claim i.e. the assigned accident date and the report date. Throughout this section the term latency is used to describe the reporting delay observed by insurers.

In addition, the receipt of data from a small number of insurers means that one must be cautious about drawing conclusions regarding trends in the data as these could relate issues such as the commencement of an insurer or change in the basis of cover and/or benefits rather than an increase in the numbers of latent claims.

In undertaking the analysis we have deliberately avoided asbestos-related claims as we are focusing on latent claims in general. Issues relating to asbestos are well known.

3.1 Information

The Working Group requested a range of information from selected insurers. Data was provided voluntarily with the understanding that details of individual insurer data would not be published. Hence, information contained in this paper is aggregated and de-identified.

A detailed claim specification was provided to insurers and is shown in Appendix B. The key items of information sought were:

- Class of business
- Jurisdiction
- Type of injury/disease
- Date of report
- Exposure period
- Incurred cost information
- Claim status / finalisation date.

Three parties provided data, (two Australian insurers and a state workers compensation authority). To ensure the anonymity of the data we have not named the parties involved. We do, however, acknowledge their assistance.

As noted above, one of the problems with the claims data is that identifying the date of injury for gradual onset or disease-type claims can be problematic. A default response for workers compensation claims tends to be that the injury date is set to be either the report date or the date of last employment (whichever is earlier). This typically distorts the latent claims picture since the original exposure could have been many years earlier.

Thus, simply analysing claims data by delay from assigned "injury date" to report does not provide sufficient information regarding the extent of latent claims. That said, the impact of the default recording of latent claims is that the costs of more recent accident years are considered to be higher than would otherwise be the case. For the purposes of pricing, unless either latent claims are growing strongly or there is strong growth in a liability portfolio, the impact on the insurer should be marginal. Under a strong growth scenario, it is possible that the cost of the current accident year appears to grow well after the portfolio growth has ceased due to the delayed effect of the latent claims being reported. For reserving, an artificial accident date does not change the real IBNR allowance that must be made.

3.2 Analysis

3.2.1 Claim Numbers

The claims data could be split between workers' compensation and public liability. Further, we were able to split most claims into major categories:

- Asbestos-related
- Deafness
- Non-asbestos and non-deafness exposure-based claims
- Accident
- Other (molestation, claims relating to children, etc.).

We have focused on the "non-asbestos and non-deafness exposures" types of claims. Table 3.1 summarises the claim number information provided where the claim latency is greater than 5 years. The selection of 5 years is somewhat arbitrary but aims to ensure that the claims are limited to those with a significant delay to report.

Table 3.1 – Number of Claims with Latency > 5 Years

	Workers' Compensation	Public Liability
Accident	8,758	41
Asbestos	2,783	972
Deafness	9,415	0
Exposure[1]	2,200	111
Other[2]	318	143
Total	23,474	1,267

Note: 1. Exposure-related claims excluding asbestos and deafness
2. Other claims predominantly have "unknown" recorded as their nature of injury

It is not easy to further delineate the cause of the claims grouped under exposure, however some examples include:

- Exposure to dust
- Lead poisoning
- Exposure to radiation
- Silicosis
- Heart disease
- Melanomas
- Pneumoconiosis

- Pesticide exposure causing cancer
- Pollution
- Contamination
- Exposure to toxic fumes.

Other examples commonly quoted include:

- Agent orange
- Contraceptives (e.g. Dalkon Shield)
- Byssinosis (also known as brown lung disease)
- Tenosynovitis (broadly similar to tendonitis)
- Vibration white finger
- Asthma
- Coal dust
- Silicon breast implants
- Benzene exposure
- Thalidomide.

The list of claim types and causes above is not intended to provide a complete list of potential exposures.

The data in Table 3.1 includes considerably more claims for workers' compensation exposures than for public liability exposures. Whilst this is partly a bias from the nature of the data provided, we also expect it to be true of the insurance industry more generally given the requirements for a successful workers compensation verus public liability claim. Issues such as the need to demonstrate causal connection and negligence as well as ultimately being successful in court actions are more difficult to meet for liability claims than for workers' compensation claims where the statutory nature of such claims typically makes these aspects easier to achieve.

While there are a large number of accident type claims with a delay from accident to report of greater than 5 years, we consider that these sorts of claims should not generally be considered as latent claims. A majority of the claims in the data relate to a single scheme, and many of these longer-delay accident claims are affected by the commencement of that scheme. Each accident claim relates to a one-off event rather than being linked by a similar exposure. Thus the delays are more a matter of how the claims – and recurrences - are handled by the injured party and claims manager rather than necessarily taking many years for the injury to become apparent.

Ideally, information relating to the number of policies exposed would be available, allowing some comment regarding the number of latent claims per policy. In the absence of exposure data, it might be possible to utilise premium information. Either way, such information was not available for our review. Provision of some form of exposure information could allow for more insightful analysis and may make further analysis in the future worthwhile.

Table 3.2 summarises the non-asbestos and non-deafness exposure-based claims by latency period.

Table 3.2 –Exposure-based[1] Latency Claims

Latency (years)	Workers' Compensation	Public Liability
6-10	653	95
11-15	677	7
16-20	433	3
21-30	330	5
>30	107	1
Total	2,200	111

Note: 1. Excludes deafness and asbestos-related claims.

As discussed in respect of Table 3.1, table 3.2 clearly shows that a majority of latent claims in our data relate to workers' compensation. The substantial majority being workers' compensation claims is, however, in line with expectations.

The data has similar numbers of claims with latency up to 15 years with a reduction thereafter and a marked drop off after 30 years. At face value, it appears that relatively few claims have a latency period of greater than 30 years (noting that asbestos related claims have been excluded). It may be, however, that the data provided has not reached a steady state and that significant numbers of high latency duration claims are yet to be reported.

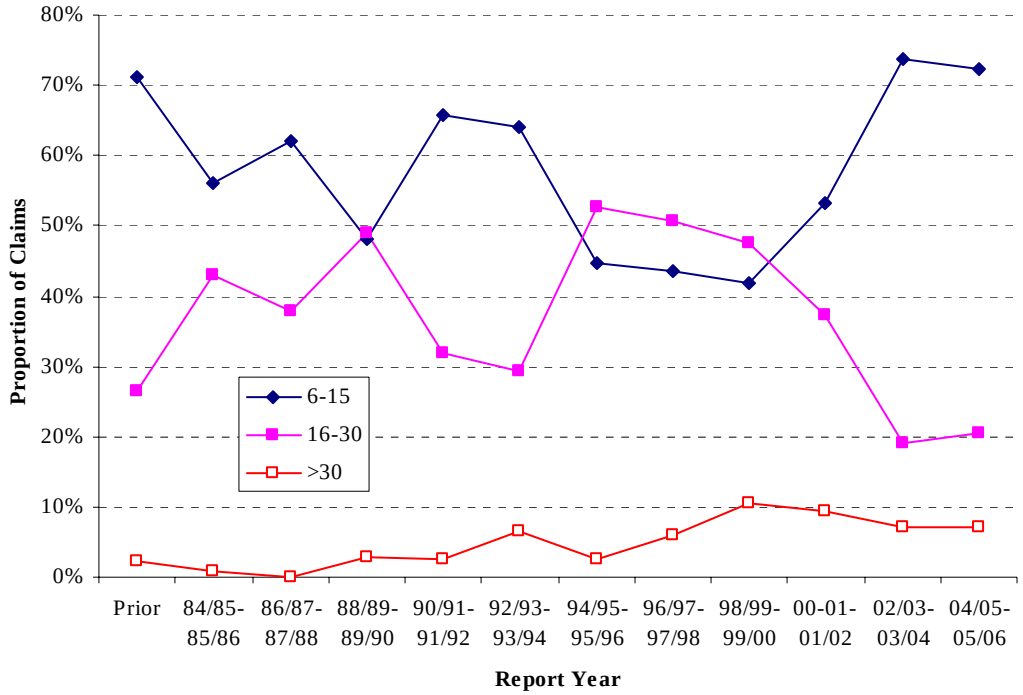
Table 3.3 summarises the latency for workers' compensation exposure claims by period of report and latency:

Table 3.3 – Latency by Report Period for Workers' Compensation Exposure Claims (excl. asbestos and deafness)

Report Period	Latency					
	6-10	11-15	16-20	21-30	>30	Total
Prior	1	179	45	22	6	253
84/85-85/86	0	123	70	24	2	219
86/87-87/88	0	62	35	3	0	100
88/89-89/90	1	49	41	10	3	104
90/91-91/92	64	41	30	21	4	160
92/93-93/94	82	27	26	24	11	170
94/95-95/96	54	34	55	49	5	197
96/97-97/98	46	28	43	43	10	170
98/99-99/00	36	8	14	36	11	105
00-01-01/02	53	37	29	34	16	169
02/03-03/04	183	57	29	33	23	325
04/05-05/06	133	32	16	31	16	228
Total	**653**	**7**	**433**	**330**	**107**	**2,200**

Table 3.3 shows a growth in the average duration of latent claims reported. This is more clearly observed in Figure 3.1 which clearly the growth over time in latent claims with a latency of greater than 30 years, though we note that this could be due to improved data capture rather than real growth.

Figure 3.1 – Latency Distribution of Workers' Compensation Exposure Claims (excluding asbestos)



Based on the data provided, the average latency of workers' compensation exposure-based claims (excl. asbestos and deafness) with a latency of greater than 10 years has increased from 15.4 years to 21.2 years over the 20 years to 2005/06. Thus it would appear that the data provided does not represent a steady state position and the key question is "what does a steady state latent claims distribution look like?".

Different types of latent claims have different characteristics, which lead to different time and cost implications. Thus a steady state picture of latent claims relies on speculation regarding the underlying frequency and magnitude of latent claims of varying duration. Nevertheless, if we assume that the 2005/06 experience is representative of a steady state distribution, then Figure 3.2 sets out a potential underlying latent claims distribution.

Figure 3.2 – Potential Exposure Latent Claims Distribution

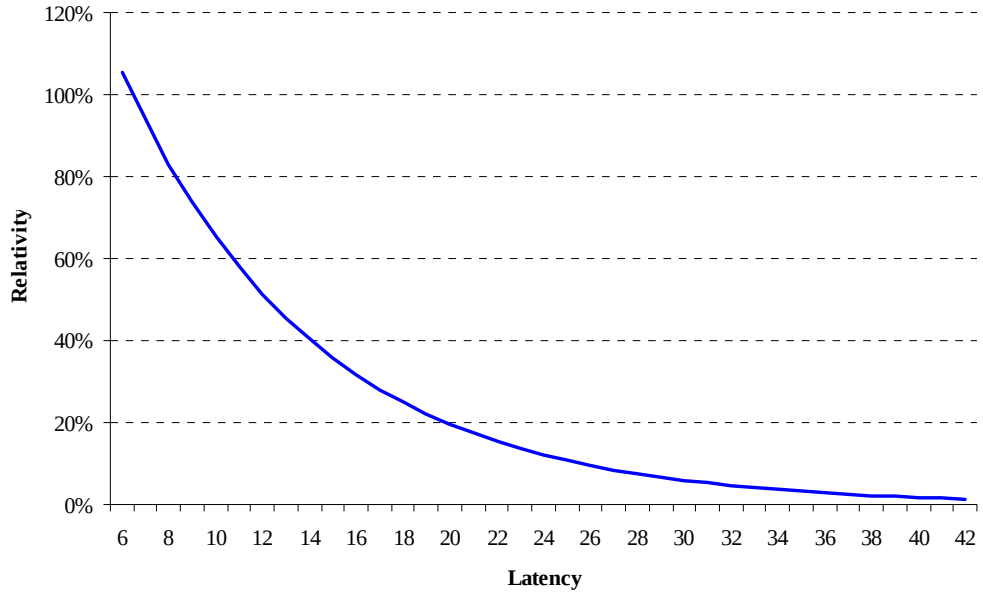


Figure 3.2 implies that, for exposure claims reported after 5 years, 46% are expected to be reported in years 6-10, 25% between years 11-15, 14% between years 15-20, 12% between years 21-30 and 4% after 30 years.

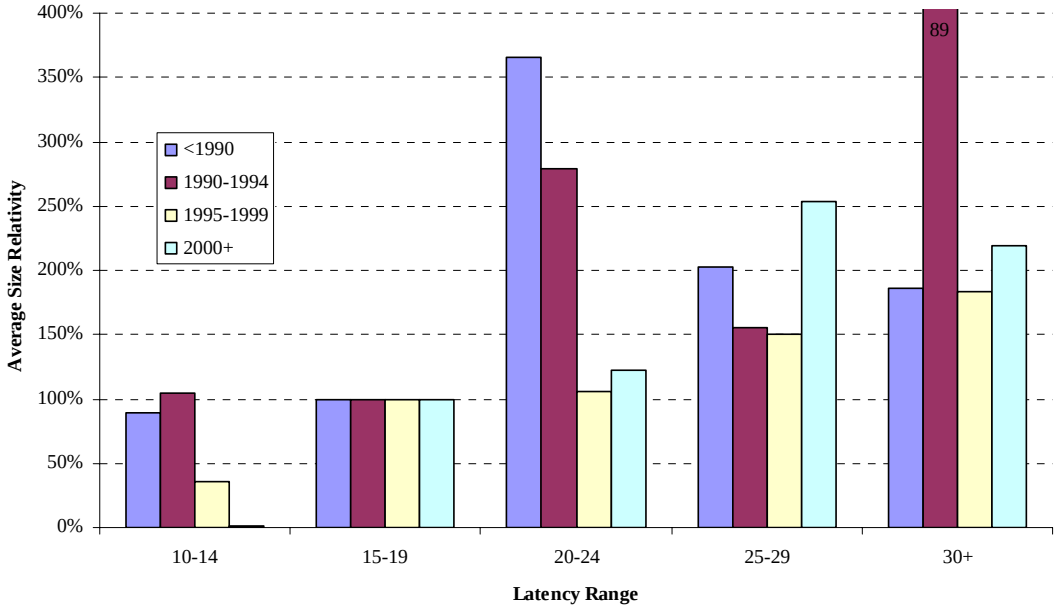
Clearly the figures above are highly speculative, we recognise that this is a very short period and different latent claims have very different latency and expected cost profiles. They do, however, raise questions about the extent of IBNR currently allowed for by insurance companies. If the distribution in Figure 3.2 is appropriate, an accident year that is 10 years old should allow for IBNR claims approximately equal to the number of exposure claims received in the last 5 years. An accident year that is 20 years old should allow for IBNR claims of around 40% of the exposure claims reported in the last 10 years. In a steady state situation, the outstanding claims allowance for accident years 15 years ago and prior should allow for IBNR claims equivalent to around 4 times the number of exposure claims reported in a year for accident years 6 to 14 years old.

3.2.2 Average Claim Size

Given the nature of the data provided, a detailed analysis of the cost of latent claims is problematic. Inflation, lump sum versus annuity style benefits, varying legislation and net versus gross settlements are some of the issues faced when trying to compare the cost of latent claims.

While a detailed analysis was not undertaken due to limitations over the level of information available, a brief review of the average size of exposure claims (excluding asbestos and deafness) indicates that the average claim size increases as the latency period increases. All other things equal, this leads to the conclusion that claims with a longer latency period have a tendency to be more severe than those with shorter latency. Figure 3.3 shows the average incurred workers' compensation costs by latency and for difference bands of report years (each relative to the incurred cost for the 15-19 year period).

Figure 3.3 – Average Incurred Cost Relativities – Workers' Compensation



While the experience in quite volatile, there is a clear trend for higher incurred costs for higher latency periods.

From the limited data available there was not a clear difference in average claim size for different types of claims that could not be accounted for by the impact of differing latency. Considerably more data would be required before an assessment of the average cost of various types of latent claims could be undertaken.

3.2.3 Claim Type

As highlighted above, the claim type descriptors provided with the data are wide ranging. On top of this, the nature of the claims often results in them being coded in a very generic manner. Table 3.3 lists the top 10 claim type descriptions for non-asbestos and non-deafness exposure claims in the data provided although it would appear that the first group is quite possibly deafness under a slightly different description.

Table 3.4 – Latency by Report Period for Workers' Compensation Exposure Claims (excl. asbestos and deafness)

Nature of Claim	Proportion of Claims
Other diseases of ear & mastoid process	32.0%
Other diseases of the respiratory system	9.4%
Other diseases	7.8%
Stress	6.6%
Carpal tunnel syndrome	4.6%
Ischaemic heart disease	4.1%
Synovitis, Tenosynovitis, RSI, tendonitis	3.7%
Non-ischaemic heart disease	3.1%
Silicosis/pneumoconiosis due to silica	2.9%
Poisoning and toxic effects	2.6%
Other	23.2%
Total	**100.0%**

Table 3.4 clearly shows the generic nature of the claim type information captured on insurers systems. Some codes are useful; others fail to provide details of the underlying cause of the claim meaning that monitoring the development of latent claims and addressing any issues is difficult at best. For example, what if most of the "Other diseases" related to a single type of exposure? Without knowing what the cause is there is no means to stop or reduce exposure to the particular substance, to place policy restrictions and/or to change underwriting guidelines.

3.3 Observations

3.3.1 Data Collection

The extent of the allowance required for latent claims clearly depends on the nature of the insurance and the likelihood of latent claims being covered as well as the purpose (i.e. pricing or reserving). There are, however, a number of other considerations, which must be taken into account, implying that an explicit allowance for latent claims could vary substantially even for products that appear to be very similar.

Firstly, the manner in which latent claims are recorded will impact on the level of latent claims allowance required. If the injury date is recorded as the report date where a precise date of injury is not known, then many latent claims will appear as accidents in the most recent injury period. Assuming that the underlying level of latent claims is not changing and that the portfolio has reached a steady state then an explicit allowance for latent claims is not required for pricing purposes under this scenario. It is worth noting, however, that an allowance for latent claims in reserving is still required.

The extent of explicit latent claims allowance will also depend on the nature of benefits paid and the valuation methodology used. For example, if the benefits are likely to be paid as an annuity and are assessed using a method based on continuance rates, then it is possible that the increment of IBNR claims is offset by the decrement within reported claims and that the selected continuance rate reflects the net position. Again, if this is the case then an explicit allowance for latent claims may not be required.

The reality is that it is unlikely that any company within Australia has an ongoing liability book of business that can be claimed to have reached a steady state, further complicated by a changing social and legal environment. Even if they have, it is unlikely that sufficient data is available for claims finalized more than 20 years ago for the various reasons outlined in Section 4.

3.3.2 Data Analysis

The key observations from the analysis of data provided are:

- Workers' compensation claims are likely to dominate by number (and potentially lead with respect to reporting) compared to public liability claims. That said, the potential impact of products liability claims for a well established product could be enormous
- The latency of exposure-related claims is substantially longer than that for accident type claims
- The manner in which claims are handled and the nature of each scheme will impact on the proportion of accident versus exposure-related claims reported more than 5 years after the date of injury
- While organisations appear to have some basis for standardising the recording of the nature of the injury, this does not appear to be the case with the cause of the injury. Knowing what caused the injury is required to ensure that trends in causation can be identified.

3.3.3 Data Limitations and Future Analysis

One of the key limitations to the analysis is the ability to determine what impact the latent claims might have on the insurance industry as a whole. It is clear that each portfolio on its own tends to show small and volatile numbers of claims. Adding a handful of portfolios together produces larger numbers (though still relatively small and volatile). What is not clear is how much of the exposure the data provided represents. Even if an estimate of the exposure of each company was made, the method of recording claims means that the "true" numbers of latent claims are likely to be under-represented.

In addition to this, social attitudes have changed substantially over the last decades such that the propensity to claim has increased and therefore historical data may not fully reflect future claims experience.

The aim of seeking data from a number of insurers was to begin to build up a bigger picture of the extent of latent claims in the historic claims experience. The data received has provided a starting point, however, to produce a more insightful picture of latent claims a more complete and standardised set of data would be required. This would require the cooperation and provision of data by all major insurers of workers' compensation and public liability in order maximise the chance of producing useful information.

Whether or not such an analysis is worthwhile is open to debate. What is the likelihood that companies have an insufficient allowance and are hence under-reserved? Is it likely that an insufficient allowance for latent claims is being made as part of the pricing of long tail lines of business? Given the uncertainty regarding the answers to these questions, the Working Group considers that an industry-wide approach to collecting and reporting latent claims data would be of genuine value to Actuaries and the industry.

4 Data requirements for monitoring latent claims

4.1 The problem

Time is the enemy of data, and unfortunately latent claims and long time delays go hand in hand. Latent claims emerge slowly and typically relate to business written many years ago. Over the "latent claim" time scale everything changes – corporate structure & ownership, company management and staff, computer systems, claims practices, products, underwriting terms & conditions and the type of data collected. Paper files are archived, and eventually destroyed, along with the information held in them. Electronic files are archived, file formats fall out of use and the information becomes inaccessible. The nature, coverage and even the names of products sold twenty years ago drop out of the corporate memory as staff move-on or retire.

4.2 Claims monitoring

As highlighted in Section 3, organisations have a variety of ways of dealing with latent claims when they are reported. There are differences in the way in which injury dates are assigned to claims, the veracity of the nature of injury coding and whether or not dates of exposure are recorded.

In addition, there are often considerable computer system administration issues, for example:

- Legacy systems – whether they be from mergers/acquisitions or just old, it is typically difficult to extract historical information for more than 10-20 years
- Size – the size of databases often means that data are truncated to manage system resources
- Relevance – it can be extremely difficult to convince decision-makers of the need to prioritise the retention of information relating to claims that were settled decades ago.

The ideal latent claims monitoring system would enable the analyst to review the claims experience of latent claims with well-defined injury descriptions or groups. Dates and measures of exposure would be captured along with the standard claims information. There would be a link between the claims information and the policy information that would allow the analyst to determine the type of insured that the claim(s) relate to and the ability to determine the exposure of similar types of insureds. The monitoring system would need to be able to draw upon decades of data but could be limited to the types of cover where latent claims might be anticipated – i.e. liability, worker's compensation.

The following information would be collected by the ideal latent claims monitoring system:

1. Claim characteristics
    - Type of claim
        - Nature of claims *according to specified list (eg, disease, injury, property damage, financial loss, etc)*
        - Category of damage *according to specified list* (eg, industrial hearing loss)
        - Damaging agent (eg, industrial noise, chemical X, etc)
        - Description of loss *as free text*
        - Latency designation (eg, emerged, emerging or potential)
    - Timing
        - Date of incident (if specific incident)
        - Period of exposure (start date, end date, period)
        - Date reported to insurer

- Claim amounts (separately for direct and reinsurance)
  - Paid
  - Case estimates
  - Payment history
  - Third party recoveries or cost-sharing
- Legal action
  - Date commenced
  - Stage of legal action
  - Status of legal action
  - Part of class action
  - Prospect of success *qualitative assessment* (eg, low, medium or high)

2. Exposure characteristics
   - Type of cover
     - Class of insurance (liability, worker's compensation, etc)
     - Sub-class of insurance (public liability, product liability, etc)
     - Product name
     - Reference to details of cover
   - Insurer
     - Licensed entity
     - Period that this entity offered cover that may relate to this claim
   - Exposure measures
     - Industry
     - Location
     - Involvement of third parties
   - Details of claimant (date of birth, sex, etc)

In many cases the data item (such as the exposure period, damaging agent, etc) may not be clear-cut. It may be helpful to include primary and secondary (and possibly tertiary) fields for certain data items.

For the reasons set out above, such a system would take at least ten, possibly twenty years to generate sufficient data to be useful. It would be very difficult to gain internal support for such a long-term project. One possible strategy is to link a latent claims system to an existing claims system initiative. A couple of recent examples are:

- APRA claims liability database – APRA requires all Australian insurers to report Liability claims and exposure information on a regular basis in a defined format. With a few extra fields this system may provide a convenient way to access latent claims information for liability business, and this application may outlast the original purpose.
- Asbestos Register – due to the significant impact of asbestos on general insurers, a number of companies maintain an "Asbestos Register" to record details of asbestos claims. It may be possible to expand the collection of claims data to cover other defined latent claims in a similar format. This could cover both Liability and Worker's Compensation lines.
- NOHSC Worker's Compensation databases – NOSI 1 (1994-2000) and NOSI 2 (2001 onwards) provides worker's compensation statistics across national and state schemes. Covers Worker's Compensation only.

Benefits are that these are likely to be "mainframe" independent, and because they are likely to be maintained by specially trained staff, the information is likely to be of a higher and more consistent standard.

4.3 Exposure monitoring

The comments above relate to claims information, which is only part of the picture. The other side to the story relates to the exposure. It is unlikely that any organisation currently has sufficient information to be able to determine the potential exposure to particular types of latent claims should they arise. While premiums and policy commencement and end dates are routinely recorded, details relating to the nature of the risk are often limited, in text fields or not recorded.

4.3.1 What is the exposure?

Consider the **underlying exposure**, defined as the period and amplitude of the exposure to the damaging agent (for example, industrial deafness claimant exposed to excessive industrial noise over a continuous period of 20 years from date X to date Y). This is the exposure measure that would be most appropriate for assessing the "losses" (as opposed to successful claims).

Consider the **claims exposure**, defined as the exposure measure that drives the emergence of claims and relates to the question of which insurance policy period should respond to the claim, for example:[i]

- The policy in force when injured party was exposed to damaging agent
- The policy in force when there is a recognisable injury
- The policy in force when damage actually occurs
- All of the above.

The claims exposure measure would need to be overlaid on the "underlying exposure" to assess exposure to claims.

4.3.2 What exposure information should be collected?

The following information would prove useful:

- Class of insurance – Liability (product v public), Worker's Compensation (including information on scheme rules), etc
- Period of cover
- Conventional measures of exposure – premium, insured's turnover, insured's wage-roll, number of employees, industry, location(s)
- Additional measures of exposure – for example:
    - Exposure to known or suspected (emerging and potential) latent claims – see below
    - Type of business – for example, small business are likely to have minimal latent claim exposure because the typical short lifespan and short term nature of record keeping results in an absence of a document trail to facilitate legal action

4.3.3 Is there exposure to known or suspected latent claims?

The increased focus on latent claims in recent years has generated long lists of potential sources of latent claims (potential latent claims). An additional exposure measure could be an assessment of the level of exposure to potential latent claims (most likely to be qualitative, e.g. low, medium, high).

It would also be helpful to collect general information about the contemporary understanding and views of latent claims at the time of exposure. This may assist the future defence of latent claims.

4.3.4 Practicalities

Over and above the practicalities of obtaining consistent exposure information over decades, the actual collection of non-conventional data becomes problematic. There is significant resistance amongst brokers and insureds to provide information to the underwriter over and above what is seen as "standard" or necessary. This is particularly the case in a soft market where the underwriter will already be under considerable competitive pressure. Reinsurers face an even more difficult task in obtaining exposure data.

4.4 Industry approach

The nature of latent claims means that at first they are likely to appear as a small number of claims each year that drift in over a long period of time. Because of this, there is a high chance that early warning signs are missed. There is no doubt that a number of insurers had asbestos-related claims for many years before the extent of the problem was recognized. In some cases it was problems highlighted by insureds and/or other insurers that led to an internal assessment of potential liabilities. Latent claims can slip under the radar.

It is possible that aggregating all information relating to latent claims could enable the insurance industry to become aware of a particular type of latent claim considerably faster than if it were left to each insurer individually. For example, 20 or 30 claims a year growing to 40 or 60 is far more likely to attract attention than 0 or 1 claims a year growing to 1 or 2.

If data are not aggregated across the industry, then should there at least be a consistent set of claim type codes that are used to describe various types of latent claims? Without a consistent coding regime there is a higher probability of the duration to recognise a latent claim will be longer.

While it may be possible for individual insurers to establish latent claims monitoring systems on a forward-looking basis it is unlikely that individual insurers would have sufficient data to allow meaningful analysis. Furthermore, it would be extremely difficult to set up even a forward-looking exposure monitoring system.

A more realistic approach would be to assess exposure on a whole of economy basis. For example, assess on a whole-of-economy basis the number of businesses operating or number of people employed by industry. This would be a task for an historian / economist with a strong understanding of economic and industry statistics.

An industry approach that sources good quality claims data from individual insurers on a common-defined basis, and combines this with whole-of-economy exposure data is likely to be the most practical way of assessing latent claims costs.

Providing that the data and methodology was open to participating companies (and auditors) then companies could use the base analysis, adjusted for their own business mix and risk profile to draw their own conclusions.

5 Current handling of latent claims

5.1 Introduction

In this section we consider the various ways an insurer can measure and address the impact of emerging, potential and unknown latent claims on profitability and reserves. The two areas of interest are:

- Managing the exposure at the time the business is written (using the following mechanisms):
  - Pricing
  - Contractual and underwriting mechanism
  - Reinsurance arrangements
- Managing the exposure after the business is written

The practices adopted by particular insurers will depend on the circumstances of the insurer in terms of current and past exposures to latent claims, business mix and the attitudes of management and their advisors in regards to the importance of latent claims.

We conclude with results from two separate surveys, one conducted in 2007 by the authors and a survey conducted in 2004 by Siddharth Parameswaran.

5.2 Managing exposure when business written

5.2.1 Pricing options

Insurers have the option of allowing for latent claims implicitly or explicitly. An implicit approach may be as simple as increasing the return on capital or profit margin target. An explicit approach involves adding an explicit loading to the statistical (technical) rate[ii]. Of course, if latent claims are not expected to have a material impact the loading would be zero.

If the actuary believes there is a non-zero cost impact in respect of latent claims then the actuary's statistical rate should incorporate an appropriate loading for latent claims. The extent to which this latent claims loading is applied to the book rate[iii] is subject to the views of the insurer, and subject to a range of business and competitive considerations.

The degree that a latent claims loading is factored into the achieved rate it will be determined by the particular circumstances of individual customers, the competitive market and the extent to which head office controls the application of specific loadings.

If it is decided to add a non-zero loading, the key question is how to determine the amount of the loading. Several approaches are suggested below.

Generic approach

A generic loading would be based on historical data for emerged and emerging latent claims. There are various approaches to calculating such a loading. Examples include:

- Historical latent claims experience – loading is set equal to the ultimate cost of emerged and emerging latent claims divided by premium / exposure for the relevant period.
- Latent claim emergence – estimate the likelihood and severity of latent claim types based on the historical emerged latent claims and divide this by an exposure measure.

This approach is fraught with data and computational difficulties. These include:

- Uncertainty over ultimate claim frequency and cost given the size of the IBNR / IBNER component of existing latent claims (such as asbestos).
- Accurate assessment of historical exposure information given paucity of historical exposure data.
- Changes to policy terms and conditions over time.
- Changes to environmental factors over time including technological developments, societal changes and degree of litigiousness.

Use reinsurer input

In theory it is be possible to obtain a quote for reinsurance arrangements that would protect or partially protect the insurer from the latent claim risk, even if that reinsurance is not purchased. An unlimited stop-loss for a particular exposure period is a prime example. Such a quote could provide the basis for assessing a loading for latent claims, whether or not reinsurance is actually purchased.

It may be very difficult to obtain a genuine quote for such cover. In practice the reinsurer's latent claims data may be little or no better than the insurer and the quote would incorporate a hefty risk margin, different return on capital targets and would depend on the state of the reinsurance cycle.

Price after the fact

Adding an allowance to current premiums for the cost of latent claims that have emerged on earlier underwriting periods is another approach. This is possible, even in a commercial and competitive environment provided that:

- The company meets solvency requirements.
- The issue is sufficiently widespread that there is limited commercial disadvantage from doing so.

However, in this situation there will be genuine advantage to new competitors that do not have the legacy of the emerged latent claim. This was the case with asbestos in the reinsurance sector, which saw many new entities establish themselves to compete against reinsurers with asbestos problems when those problems emerged.

5.2.2 Contractual Options

Contractual options refer to changes to underwriting standards, policy changes, exclusions and also withdrawing and refusing cover. We note that these options share two common difficulties:

- Impact on competitiveness – it may not be possible to introduce stricter underwriting standards, exclusions and/or wording changes too far ahead of the market for competitive reasons. Conversely, it is not desirable to lag too far behind the market.
- Statutory classes – the underwriter does not have this option for compulsory classes such as Workers Compensation because legislation and/or the regulator define terms and conditions.

Specific options are discussed below.

Exclusions

Exclusions may be added for emerging and potential latent claims. The upside is the elimination of exposure for the excluded items; the downside is the impact on competitiveness.

In practice there a cost-benefit assessment is needed for each potential exclusion where the benefit relates to the reduction in exposure and the costs relate to the sheer effort involved in gaining broker and customer support for exclusions. This option does not offer protection from unknown latent claims.

Shift to claims made

Shifting the basis of cover from loss incurred to claims made would shift un-emerged latent claims exposure to future periods. This would substantially reduce pricing uncertainty for latent claims by matching the emergence of latent claims to the premium for the current period. It also improves the ability of insurers to exclude cover for problems after that first period of emergence.

There are significant practical problems with this approach, namely shifting the way in which entire classes of business are structured.

The most significant problem with this approach is that claims may emerge many years later and the basis of the relationship between the impacted party and the purchaser of the insurance are most likely to have changed. For example, an employee may have moved on or retired, and it is possible that the party liable for the claim has since ceased to exist. In both examples this may leave the injured or impacted claimant without recourse to insurance. Another consequence is that the new employer may end up having to pay the insurance costs for harm that had no relation to their activities.

In that case such a change may only work in an environment when there is a further safety net for such circumstances.

We note that in 2003, the Association of British Insurers ("The ABI") published its Response of The Association of British Insurers to The Department of Work and Pensions Review of Employers' Liability Insurance. Section 4 of the response sets out the claim " there is a fundamental need for a new way of funding occupational disease claims". The submission also asserts that "it is impossible to predict accurately the future cost of long tail occupational disease claims" and as a result concludes that "this means that the new way of funding occupational diseases has to be, at least in part, a pay-as-you-go system (rather than the present accruals-based system)". The submission proposes a hybrid system. This would include the establishment of a fund for long tail occupational disease claims, met by a levy against all insurers with, among other changes, a claims made system for long tail disease claims.

Time barring

Time barring refers to the exclusion of claims reported after a specified period. By definition, this would substantially reduce the risk from latent claims. However this represents a significant shift in risk from the insurer to the insured and is unlikely to be an attractive option for risk adverse companies and their directors in the current corporate governance climate.

Deductibles, policy limits and reinstatement limits

A large number of medium sized claims represents the most adverse scenario that could be faced by insurers in casualty classes (for example, asbestos) due to a lack of aggregate claims cover or reinstatement limits for individual policies.

Reinsurance treaty type structures could be considered for direct business to manage the impact of latent claims. For example:

- Aggregate limits
- Higher excess limits (with indexation)
- Reinstatement limits.

In order to avoid impacting non-latent claims the wording could be tailored to limiting application to claims with a (say) five year reporting delay.

While not a complete answer, such approaches may help to address latent claims exposure.

5.2.3 Reinsurance approaches

Reinsurance structures may protect direct insurers against latent claims exposures, although to a large extent this simply passes on the problem to the reinsurers. The cost benefit equation is very clear on the cost side – the cost is the reinsurance premium. The benefit side is less clear and depends upon the insurers' view on the emergence of future latent claims. While theoretically attractive the practical availability of these structures is questionable.

Key reinsurance options include:

- Stop loss contract on a year by year basis – the financial impact of any latent claims that emerge will be limited to the retention of the stop loss contracts. The stop loss effectiveness is enhanced if there is no deductible on individual claims once the stop loss attachment point is reached. Effectiveness is less where claims are sporadic and spread out by underwriting year. In that respect an attachment with an additional multi year attachment might assist.
- Run-off for the tail – Theoretically at least it would be possible to 'sell' the tail liabilities and pass on the latent claim exposures to a reinsurer once the bulk of non-latent claims have settled – the opposite of a commutation.
- Late reported claims protection – could be on a stop loss or simple excess-of-loss protection with a lower attachment point. However, at this stage the Working Group are not aware of these types of cover being available.

The insurer will need to carefully consider the possibility of any horizontal exhaustion and the impact of any indexation on reinsurance retentions.

An important item to note is that on a net of reinsurance basis the current Australian market is arguably more significantly exposed to latent claims now than it was before asbestos emerged as a significant latent claim issue. Based on our understanding of the market, the large insurers, which dominate by market share, have increased reinsurance attachment points and reduced the use of excess of loss covers.

5.3 Managing the exposure after the business is written

5.3.1 Introduction

This section considers the approach taken to managing the latent claims exposure after the business is written. This covers both reserving and risk transfer approaches such as reinsurance, commutation and selling the run-off.

5.3.2 Reserving

For reserving purposes, we consider emerged latent claims separately to emerging, potential and unknown latent claims. Section 6 discusses the various professional, legislative and accounting standards that relate to assessment of general insurance reserves. Key concepts to consider include the central estimate and risk margins.

Emerged latent claims

The most significant emerged latent claim type is asbestos. Most insurers reserve for asbestos on a stand-alone basis due to its size and potential financial impact. Other latent claims (for example, molestation) are typically smaller and may be reserved for separately or as part of the overall reserves. Consider short tail and long tail emerged latent claims separately:

Short tail – an example of short tail claims includes subsidence in household claims, which emerged as a substantial latent claim issue in the UK in the mid 1990s. These claims can continue to be valued using standard triangle based methods. The one caution is to consider carefully the calendar year effect of the initial emergence of the claim type – i.e. the developments that related to the initial emergence of the claims which would typically involve longer delay than the final position once the claim is fully emerged.

Long tail – such as asbestos cannot be dealt with using standard actuarial techniques such as standard or modified chain ladders. However, there are various approaches which insurers and actuaries have developed to reserve for these latent claims. The techniques generally employ the following methodology:

- Future claims numbers estimated using exposure analysis based on medical or other latency period
- Average claim size is estimated based on claims settled
- Future claims spread based on a predicted payment/settlement pattern
- Average claim size inflated for by both wage/economic and superimposed factors
- Reserve calculated as claim number multiplied by average claim size and discounted to present value.

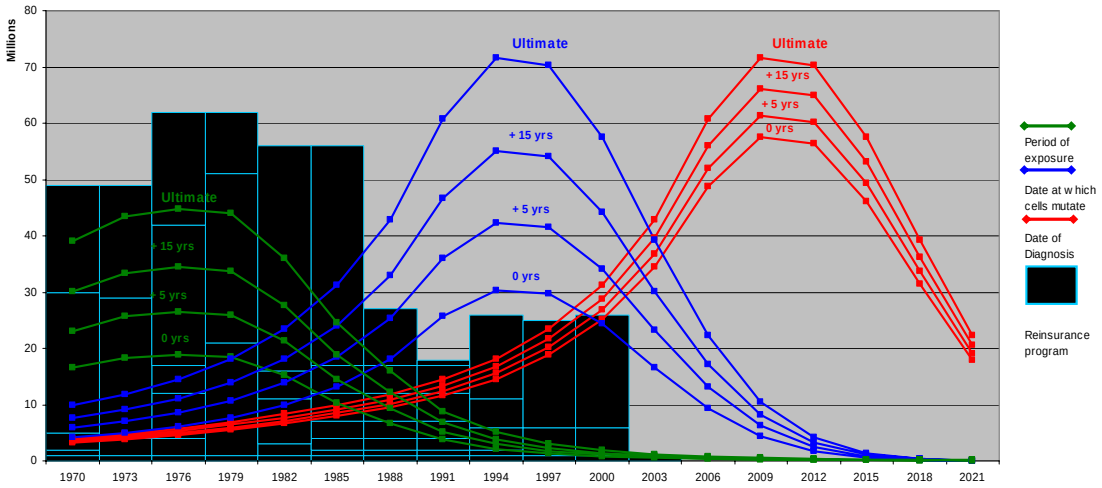
Other techniques (typically used as a reasonableness checks) include:

- Survival ratios
- Market share of total required market reserves, which is published by market analysts.

The trigger point is a key issue. There is much at stake in the trigger point and this has been tested in various asbestos related test cases in the UK. For mesothelioma as an example, should the attachment point of a disease, such as mesothelioma, be the date of ingestion of asbestos, the manifestation of the disease or the date of diagnosis of the disease. In fact, asbestos is a good disease to consider this issue given the latency of the claim and therefore the potential for substantially different insurers to be liable.

This can be illustrated in the following diagram. The black area shows a notional reinsurance program. Each set of coloured lines shows the reported incurred claims position based on allocation under three different allocations. Moving up the lines shows how the reported claims costs grow over time as latent claims emerge. The diagram shows that allocation based on the period of exposure provides the greatest recoveries to insurers and therefore the worst outcome for reinsurers (under the assumed reinsurance arrangements). Clearly a shift to the red line for 'date of diagnosis' as the trigger (the right-most set) would significantly reduce thee reinsurance recoveries available to meet the cost of this notional latent claim

Figure 5.1 – Impact of Alternative Trigger Points



Source: KPMG Actuaries

Emerging, potential and unknown latent claims

By definition, emerging, potential and unknown latent claims lack reliable data. Where a reserve is established, the approach is typically based on the generic approach discussed in the section 5.1. That is, base an assessment on historical latent claims experience for emerged latent claims, adjusted for exposure characteristics of the portfolio being assessed. For example:

- Estimate the emergence of latent claims by year relative to the historical experience of latent claims in terms of frequency by year
- Estimate the average claim size of future latent claims based on historical experience.
- Estimate an exposure period and quantum of exposure
- Calculate a dollar or percentage loading to the reserves

These approaches also suffer from the shortcoming discussed in this section with the key difficulty being the lack of reliable data.

5.3.3 Risk transfer mechanisms

Reserving relates to the measurement and reporting of existing latent claims exposure. Insurers may also seek to modify their existing exposure through various risk transfer mechanisms. For example:

- Reinsurance – the direct insurer could seek to reinsure its run-off exposure. Also refer to section 5.2.3 where reinsurance options for pricing are discussed.

- Commutation – the direct insurer could seek to commute open claims and tail exposures in return for a lump sum payment. This is unlikely to be practical for any but the larger commercial insureds and may not be an available option under compulsory insurances.
- Selling the tail – the direct insurer could seek to "sell the tail" of exposure. In order to be attractive to a purchaser the tail may need to have sufficient outstanding claims to allow the purchaser to generate a margin through more effective claims management and general run-off saving.

5.4 What companies do in practice?

There is no consistent approach to either pricing or reserving for latent claims amongst Australian insurers. While we understand that the majority, if not all insurers, reserve for emerged latent claims such as asbestos, the approach to emerging, potential and unknown latent claims varies considerably. Alternative approaches include:

- Do nothing
- Allow for in the central estimate
- Allow for in the risk margin, either implicitly or through an increase to the Coefficient of Variation used to calculate the risk margin.

The approach to disclosing latent claims allowances in financial statements varies significantly by company. This includes:

- Comments in investors presentations on explicit amounts held for latent claims
- Comments in annual reports.
- General disclosures in notes to account.

5.4.1 Short survey - 2007

The authors undertook an informal survey of a handful of Australian general insurance actuaries in regards to latent claims found the following:

- Action on latent claims – majority felt that insurers were not doing enough to consider the impact of latent claims (though not unanimous).
- Pricing allowance – majority experience was no explicit loading for latent claims in pricing (though not unanimous), although in some cases it was implicit as part of a broader contingency allowance.
- Reserving allowance – for emerged latent claims there was a list of latent claims that were analysed separately while for emerging/potential/unknown latent claims there was a spectrum of different approaches that had been observed.
- Future action – ranged from this issue being seen as a low priority to a strong yes.

5.4.2 Short survey (Siddharth Parameswaran) – 2004

Siddharth Parameswaran produced a latent claims questionnaire in 2004. This survey of 23 actuaries found the following:

- Whilst it was thought that the industry had learnt from the experience of previous latent claims, it was generally felt that a lot more could be done, specifically within pricing compared to reserving. The results showed that fewer than 40% of the actuaries loaded for latent claims within pricing but over 50% of the actuaries loaded for latent claims within reserving. However, it is not clear whether those loadings were for emerged, emerging, potential or unknown latent claims.

- Whilst it is apparent that loading in pricing is not significantly widespread, underwriters generally allow for emerged latent claims within terms and conditions and business selection. However, this can only be achieved in non-statutory classes such as liability and not within statutory classes such as workers' compensation where limitations on coverage are not permitted.
- The survey also confirmed the number of ways that latent claims are allowed for within reserving. This appears to be evenly spread across a number of methods including:
  - Explicit assumptions within the central estimate and therefore the loading can be identified
  - Conservative assumptions implicitly within the central estimate, which therefore can not be identified
  - Loading the prudential margin by increasing the Coefficient of Variation compared to the empirical results observed historically.

6 What impact do accounting and actuarial standards have?

6.1 Introduction

In this section we examine and consider the impact of various regulatory and accounting standards as these relate to the reserving for potential and unknown latent claims in Australia.

We briefly set out the accounting and APRA standards and then discuss the difficulties in dealing with the apparent inconsistencies in these.

The key issue relates to the difficulty of meeting two potentially conflicting requirements. On the one hand the actuary needs to establish an estimate reflecting the mean of possible outcomes, and on the other hand, from an accounting perspective to present a reliable estimate.

We also discuss the management and risk issues that this issue may create.

6.2 Standards

There are five key standards that appear to impact on the reserving for latent claims:

- Professional Standard 300: Actuarial Reports and Advice on General Insurance Liabilities
- AASB 4: Insurance Contracts
- AASB 1023: General Insurance Contracts (Current AGAAP)
- AASB 1023: General Insurance Contracts (Australian – International Financial Reporting Standard)
- Prudential Standard GPS 310: Audit and Actuarial Reporting and Valuation.

6.2.1 PS 300

This is the core standard that actuaries have to comply with for reserving in general insurance. Clearly its preparation is not wholly isolated from the regulatory and accounting framework but it is separate. PS 300 is also compulsory.

PS 300 requires that actuaries calculate the central estimate and this is defined in PS 300 as follows:

"A central estimate of the liabilities is the expected value of the liabilities. In other words, if all the possible values of the liabilities are expressed as a statistical distribution, the central estimate is the mean of that distribution."

This implies that latent claims must be allowed for within the context of the reserving under PS300 if it is assumed that there is a non-zero probability of claims arising in future.

It is a professional responsibility to comply with the standard and we would also argue that, as a profession, it is our responsibility to improve areas of analysis that fall short of the standard's aims.

6.2.2 AASB 4: Insurance Contracts

This covers the financial reporting of insurance contracts and disclosure. In particular, it has the objective of helping users of financial reports understand the amount, timing and uncertainty of future cash flows from insurance contracts. Latent claim exposures certainly contribute a degree of uncertainty surrounding the amount and timing of the cash flow. Therefore, this standard may imply the requirement to disclose the treatment that is made for latent claims, even if this is in a very generic format.

We have identified a number of financial disclosures that mention latent claims. These are often associated with portfolios with known asbestos exposures and it is difficult to be clear on the extent of allowance made, if any, for latent claims that are yet to emerge.

6.2.3 AASB 1023: General Insurance Contracts (Current AGAAP)

This covers the financial reporting of general insurance contracts. Within this standard, paragraph 5.2.6 of AASB 1023 requires that the outstanding claims reserve includes an amount for claims that have been "Incurred but not reported" – (IBNR). In determining the amount of any provision for IBNR, paragraph 5.2.7 provides guidance on how this could be achieved. It also specifically refers to the fact that "The recognition as expense and liabilities of the components of the ultimate cost of settling claims also depends on whether they can be measured reliably".

This infers that without the ability to do this, an amount should not be recognised. In taking the step of establishing a provision for yet to emerge latent claims the challenge exists to present a robust framework, based on clear data and logic sufficient to satisfy this test from an accounting perspective.

6.2.4 AASB 1023: General Insurance Contracts (Australian – International Financial Reporting Standard)

This standard came is effect for financial statements applicable from 30 June 2007. Paragraph 5.1 of the revised standard says that the outstanding claims liability shall be measured at the "central estimate of the present value of expected future payments for claims incurred with an additional risk margin to allow for inherent uncertainty in the central estimate". The detail within this goes on to say "If all the possible values of the outstanding claims liability are expressed as a statistical distribution, the central estimate is the mean of that distribution."

Therefore, at least theoretically, the actuary should consider the potential impact of latent claims that are yet to emerge.

Further, paragraph 5.1.7 goes on to say "Risk margins are determined on a basis that reflects the insurer's business. Regard is had to the robustness of the valuation models, the reliability and volume of available data, past experience of the insurer and the industry and the characteristics of the classes of business written."

This implies that where there is uncertainty surrounding the ability of valuation techniques to reliably determine the central estimate, then the risk margin should take account of this uncertainty.

Whilst, within the standard there are no references to the measurability or reliability of information used to determine the outstanding claims liability, the AASB framework principles still apply and these refer to the fact that liabilities must be valued at "the amount at which the settlement will take place can be measured reliably".

Similarly to AGAAP, A-IFRS implies that if the reserve for latent claims cannot be reliably estimated, then this should not be recognised within the financial statement of a company.

6.2.5 Prudential Standard GPS 310: Audit and Actuarial Reporting and Valuation

This standard, applicable to APRA regulated entities, notes that the central estimate is intended to reflect the mean value in the range of possible values for the outcome based on the experience and circumstances of the insurer.

In that respect GPS 310 and AASB1023 appear to be in accord. However, it could perhaps be argued that in order to add some allowance for latent claims within the central estimate, the insurer must have some evidence of latent claims within their experience or clear circumstances leading to exposure in order to add some loading for future latent claims.

GPS 310 also notes that judgment may be required when assessing the volatility of assumptions and reasonableness of the assumptions if there is limited credibility within the data. The use of judgment enables the actuary to adopt assumptions not necessarily supported by historical data, that is, allowing for latent claims not yet identified.

However, it should be also noted that GPS310 does require that:

"The Approved Actuary must, at least annually, reassess the appropriateness of the assumptions and valuation methods used to determine the insurance liabilities of the insurer. Where a change in assumptions or method is made, the effects of that change on the value of the insurance liabilities must emerge in the current calculation period and must not be spread over future calculation periods. The effects must be disclosed in the LVR."

6.3 Management issues

6.3.1 The mean versus a reliable estimate

As noted above, the key issue is the apparent conflict in the need to provide the mean of a distribution that includes the potential for latent claims that are yet to emerge as well as the need for those estimates to be measured reliably.

If we accept that un-emerged latent claims have a non-zero probability of emerging and a non-zero size when they do emerge then clearly that would impact the mean of the distribution and therefore the central estimate required by GPS310 and AASB1023

The difficulty emerges when one seeks to reliably measure the probability of emergence and likely claim size.

It is possible to outline a theoretical approach to latent claims that are yet to emerge. For example, based upon the period between those latent claims that have emerged, the apparent ultimate cost to date and some 'share of market' calculation. However, as seen in the analysis above and highlighted in the breadth of the taxonomy, it is difficult to set the parameters of such a model with any great confidence.

We also note that there is a tendency to focus on one side of the debate – namely the starting hypothesis that the exposure is non-zero and also that it is material. The other hypothesis, that there is an exposure and that it is not material is perhaps more difficult to debate.

Although this may offer some comfort to some we note that from a contractual perspective little has changed to materially mitigate the impact of 'another asbestos' should this emerge. For example, there are few, if any, time barring clauses on direct insurance contracts – certainly none that we are aware of within workers compensation. Combined with a general increase in reinsurance attachment points, were another asbestos to emerge the impact to the Australian insurance market could arguably be far more significant.

6.3.2 Creating focus

This impasse creates a material management issue, namely that there is genuine difficulty in generating a focus on latent claim exposures when they have no impact on financial results – be this at an entity or market level.

It is often said that what gets measured gets managed. At present there is little incentive to manage latent claim exposures whether through policy terms, reinsurance or other means because there is not an immediate adverse financial impact for not doing so.

The Working Group considers that one of the main drivers for the development of an acceptable framework for an allowance for un-emerged latent claims is to ensure that there is a genuine focus on managing these exposures more carefully. Creating a financial impact from writing policies that have the potential to generate latent claims will almost certainly create this focus.

6.3.3 Consistency in pricing and reserving

Another management issue is maintaining consistency between pricing and reserving. The addition of an allowance for un-emerged latent claims in pricing is not uncommon in Australia. The current position creates the issue that if a reserve cannot be established then the pricing allowance will flow immediately to profit upon the earning of the premium.

Others however would note that profit loading is in general terms available to meet un-emerged latent claims and it is the regulatory capital that supports these unknown exposures.

6.3.4 Professional aspects

Another very important management issue is the balance between professional obligations, such as public interest, and risk.

Input from our brief survey suggests that opinion is divided on whether actuaries should be purporting to estimate the impact of totally unknown exposures. We hope to explore this issue further at the conference and update this section of our report following discussions.

The IAAust is currently assessing the role for Australian actuaries in Enterprise Risk Management (ERM). At least one author would argue that this is trite if the same institute has a professional standard that states:

"Potential late reported claims from unknown sources of risk do not form part of general insurance claim liabilities. Late reported claims attaching to sources of risk, which are visible in data, even though they were not anticipated at the time of underwriting the insurance contract, are to be considered part of general insurance claim liabilities.".

This would appear to clearly demonstrate that actuaries are unable or unwilling to consider the full range of risks that an enterprise may face.

The IAAust's Code of Professional Conduct goes further to say that "An Actuarial Report must adequately address any uncertainties inherent in the use of assumptions and actuarial methodologies". It also notes: "In circumstances where outcomes are subject to Material uncertainty, the Actuarial Report must convey this uncertainty, its sources and implications, and the steps, if any, taken by the Actuary to quantify or allow for this uncertainty."

Therefore, should actuaries need to make allowance for a full range of risks that an enterprise may face, including latent claims; if not in methodology at least in disclosure and discussion?

An observation made in the survey is whether actuarial science, and specifically the actuarial control cycle can be applied in the case of un-emerged latent claims. If that is the case then a solution could be in the area of contract wordings and cover rather than in reserve estimation. This would then make the Actuary's role qualitative rather than quantitative in relation to latent claims.

6.4 Conclusion

There is a real issue in the apparent inconsistency between the need for a mean and also a reliably measured element of that mean, if any, relating to un-emerged latent claims.

At this stage there appears to be a range of views on the materiality of this issue, however, in the absence of an understanding of the potential financial impact of latent claims exposures, it is difficult to get management to focus on the apparent need to learn lessons from the past and consider mitigants to un-emerged latent claim exposures.

The Working Group believes that it is worthwhile to explore these issues further and welcome input on this aspect of our topic at the conference.

7 What next?

7.1 What are the risks of doing nothing?

The risks of doing nothing will vary considerably across insurers. The risk to insurers writing property classes of business are small and the expense of setting up a detailed monitoring system is probably not warranted. For an insurer underwriting a substantial amount of liability business, the risk could be quite significant.

Although asbestos is a clear example of the risk of latent claims, it is often said that an equivalent scenario could not arise in future. The main argument being that the whole population is far more aware of their rights and that insurers, regulators and governments have learned lessons from the past. While these arguments may be reasonable, they ignore the lead time until the cause of many diseases are identified. They also ignore the fact that the failure to stop the emergence of a latent claim, combined with reduced reinsurance protection as a whole would still leave the Australian Insurance market with a major financial problem. The two questions set out in our introduction illustrate this point:

- When was global warning first identified?
- When were mobile phones first linked to brain cancer?

Another "asbestos" might be unlikely, but the nature of the recognition of latent claims and the reluctance to change the use of "convenient" products means that such a phenomenon occurring in the future is possible. A key question for actuaries is whether they feel comfortable that their organisation or client is suitably placed to deal with any latent claims that arise in the future.

7.2 Summary of key points

Sections 1 to 6 of this paper have considered a range of issues relating to latent claims:

- Definitions
- Taxonomy
- data analysis
- monitoring systems
- current practice
- accounting implications and
- actuarial approaches.

The purpose of the paper has been to draw together the range of issues to consider in relation to latent claims with the aim of providing a basis for future discussion and development of the actuary's role in assessing latent claims risk.

In regards to latent claims, we have identified that actuaries have three core areas of interest:

- Reserving – being able to recommend claims reserves that meet actuarial and prudential standards. This is of particular concern for actuaries given the professional and statutory role that actuaries have in recommending claim reserves.
- Pricing – being able recommend an appropriate allowance for latent claims in pricing. While actuarial input is often important for pricing, most insurers (underwriters) decide on price and contract terms based on a wide variety of information, after allowing for competitive considerations.

- Reporting and management - The actuary will need to have a view on the uncertainty in reserving, adequacy of pricing, contract terms and underwriting approach for the Financial Condition Report. In many cases the actuary will be able to provide valuable input to management decisions in addition to the FCR.

We have set out some particular difficulties associated with measuring latent claims. These include:

- Conflicting approach to reserving for latent claims between actuarial, statutory (APRA) and accounting standards, potentially leading to confusion for actuaries, accountants and users of financial statements.
- Lack of reliable data particularly in relation to emerging and potential latent claims, and particularly on an individual company basis.
- Uncertainty around the likelihood and quantum of emerging and potential latent claims that relate to current and past exposures.

7.3 Key recommendations

The key recommendations that flow from this paper and the background work involved are as follows:

- Further work is warranted towards harmonisation of the reserving requirements between actuarial, statutory (APRA) and accounting standards.
- Further work is warranted that considers the extent to which emerging, potential and unknown latent claims (that relate to current and past exposure) are likely to emerge in the future given societal, technological, medical, legal and legislative trends
- An industry-wide approach to collecting and reporting latent claims data would be of genuine value to Actuaries and the industry alike.

APPENDIX A – Bibliography

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APPENDIX B - Accident Compensation Sub-Committee Data Request

THE INSTITUTE OF ACTUARIES OF AUSTRALIA

Accident Compensation Sub-Committee
2005 Latent Claims Study
Data Specification

1) Definition of a qualifying latent claim:

a) Latent claims are here defined as any claims that have a significant delay between initial exposure to the agent of injury and manifestation of the resulting disease. In the Appendix below we have listed the types of claims we would consider as latent claims

b) We suggest that the data is extracted on 2 criteria, based on
   (i) specific latent claim types that you have identified, and
   (ii) as a 'catch-all', where the delay between 'injury' and report date is say more than 5 years.

c) The claim only qualifies for this study if there was any settlement made to the injured claimant. Claims where legal & investigation costs have been expended, but the claim ended up being finalised for no settlement amount should be excluded. Where this information is difficult to identify, it may be useful in excluding claims for less than $5k for instance.

2) Lines of Business

We would ideally like to collect latent claims data from all personal injury lines underwritten by your company, ie. workers' compensation, public liability, products liability, medical malpractice etc.

3) Data Items

We would like as much detailed data as can be reasonably provided to us, ideally at an individual claim level (de-identified of course), but grouped if necessary.

We'd like to collect claims reported since 1995, although happy to receive data prior to that period if no additional work is required.

The following would be the minimum detail that we'd like to collect:

a) Class of business (ie. Workers' Comp, Public Liability, etc)
b) State where the injury was deemed to have occurred
c) Date of report to the company (if grouping is required, then by half years would be preferred, else by financial report years to 30 June)
d) Period when exposed to the agent of injury (we understand this will be approximate, or not available for many claims).
e) Paid to Date, Case Estimate & Incurred Cost of the Claim. No inflation adjusting will be necessary, however where possible, we'd like the following two definitions of costs provided:
   (i) Your company's net contribution to the claim. The value should be gross of reinsurance, but net of third party recoveries & GST recoveries.
   (ii) Where there are several parties (insurers and other defendants) contributing to the settlement, we would like the full claim settlement amount incl 'costs' and all legal expenses. The value should be gross of reinsurance and third party recoveries, but net of GST recoveries.

f) Claim Status (Open, Finalised)
g) Finalised Date where Finalised
h) Disease Type - as detailed as possible, we will group these up consistently across participants
    (i) Industry where the claimant worked (pick the main contributing industry if there were multiple industries)

4) Data Guide Back to Us

Could you please provide back a brief summary containing:

a) Confirmation of the criteria you have used in selecting your qualifying claims (see section 1 above).
b) Explanation of your data fields to the extent these are not self-explanatory

Appendix: Current and Potential Sources of Latent Claims

(we would be interested in participants adding items to this list)

A. Currently Known Sources of Latent Claims

a) Asbestos Related
    (i) Mesothelioma
    (ii) Asbestosis & ARPD
    (iii) Pleural Plaques
    (iv) Lung Cancer
b) Other mineral related diseases
    (i) Silica - Silicosis/Pnuemoconiosis/PMF
    (ii) Aluminium - Aluminosis
c) Other non-defined respiratory conditions
    (i) Industrial asthma/bronchitis (say from diesel fumes, other chemical irritants)
d) Gradual onset deafness, from occupational exposure to loud machinery
e) Molestation, from sexual abuse of children or others to whom a duty of care was owed
f) Skin Cancer
g) Latex - ie. from gloves in hospitals, develop rash in severe cases exposure through the skin can be fatal

B. Potential Sources of Future Latent Claims

a) chemically related -
    (i) farming
    (ii) passive smoking
b) Silica and toxic mould
c) medical & related
    (i) treatment
    (ii) medication
    (iii) genetic manipulation
    (iv) GMOs
d) radiation / electrical:
    (i) mobile phones
    (ii) powerlines
    (iii) CRT monitor radiation.
    (iv) other occupational electrical equipment.

APPENDIX C – Latent Claims Summaries

Appendix C.1 - Silicosis

Claim characteristics

Nature of the claim

Silicosis is a degenerative lung disease marked by inflammation and scarring in forms of nodular lesions in the upper lobes of the lungs. Symptoms of the disease include breathing difficulties, chronic coughing, chest pain, hoarseness, fever and loss of appetite. Silicosis cannot be cured and is potentially fatal, although the symptoms may be treated.

Trigger point

Trigger point of the claim is exposure, that is, policies in force during the period of exposure are impacted.

Latency Period

Silicosis has a latency period of up to seven years from the cessation of exposure to silica dust. An alternative perspective is that it usually takes over twenty years from first exposure for the disease to manifest. However, periods of intense exposure can cause severe illness in a matter of months and such cases would have a very short latency.

Reporting delay

Reporting delay can often occur when claimants are not immediately aware of the disease when it first becomes detectable. Thus, it is advisable for those who work with silica dust to have regular chest X-rays.

Exposure characteristics

Cause

Silicosis is caused by inhaling crystalline silica dust. A strong causal link has been established through scientific and medical evidence.

Exposure can occur through cutting, chipping, drilling or grinding objects containing crystalline silica or through the use of materials that contain crystalline silica for abrasive blasting. In 2002, the National Occupational Health and Safety Commission estimated nearly 294,000 workers potentially exposed to silica in the course of their work.

Length of Exposure and Concentration

These two factors are very important in determining the type of silicosis that manifests. There are three main types of silicosis:

- Chronic/classic silicosis – develops after 15-20 years of low to moderate exposure. This is the most common type of silicosis.
- Accelerated silicosis – developed after 5-10 years of high exposure
- Acute silicosis – develops after 2months to 2 years of extreme exposure.

Exposure Status

Silica dust exposure is currently continuing but controlled. There are health and safety guidelines in place to control exposure to toxic dust and for employees exposed to receive adequate and timely health checks. However, not every employer, especially small companies and non-mining industries, comply with the standards.

The number of new silicosis cases appears to have fallen and now mostly arise from uncontrolled exposures. However, there are also claims that silicosis is now the "new asbestosis" so there is no consensus in this regard.

Legal Environment and Claims Framework

The legal frameworks in place to support silicosis claims are relatively well established as the disease has been known for a long period of time. Claimants may apply for compensation under worker's compensation legislation as well as common law. However, the legislation for each state differs which can cause some confusion. In New South Wales, the Dust Diseases Board has jurisdiction over silicosis claims.

Some limitations include the statute of limitation that exist in some states and the high costs of legal representation.

Underwriter/Insurer's perspective

Silicosis claims are Emerged latent claims. Underwriters have had a significant amount of time to address the issue and actuaries should be aware of the claims.

Worker's compensation policies cannot exclude silicosis claims. However, it is unclear whether claims can also occur under public or product liability policies. For example, it is not clear whether people who live near work sites with high concentration of silica dust can develop silicosis and present valid claims.

Statistics

The Dust Diseases Board typically handles around 20 claims per annum. It currently pays around $5m p.a for approximately 500 beneficiaries and has paid out $60m in the last 15 years.

Statistics from other States have not as yet been identified.

Reference points

For further information the following sites may be of use:
<to be completed>

Appendix C.2 - Leaky Buildings Syndrome

Claim characteristics

Nature of the claim

The "Leaky Building Syndrome" refers to the failure of some buildings to cope with moisture ingress in and through exterior cladding. This emerged as a major problem in New Zealand over the last few years relating to residential buildings constructed in the decade up to 2002.

The problem is associated with defects in the design, approval and applications processes and installation of building materials.

A potential side effect of leaking buildings is the risk to human health, with some moulds that grow on damp timber and other materials having the potential to cause respiratory and skin problems.

The Leaky Building Syndrome can have significant impacts on public liability portfolios for contractors and manufacturers and on the Professional Indemnity business of professionals, inspectors and local Governments involved in design and approvals.

Trigger point

The trigger point of the claim is exposure for contractors and manufactures given that the public liability insurance is on a claims occurring basis and has characteristics of a general liability insurance cover. For professionals and local governments, the claim trigger is professional negligence and this attaches based on claims report date given that the PI cover is provided on a claims made basis.

Latency Period

Claims arising from the Leaky Building Syndrome can have a latency period of up to 10 years or more, but potentially capped due to applicable statutes of limitation of 10 years.

Reporting delay

Reporting delay can often occur during the application process to the Weathertight Homes Resolution Service, which includes gathering paperwork and waiting time for qualified assessors to carry out assessments on the extent of damage to the building.

Exposure characteristics

Cause

Typically, the affected dwellings have been built using methods that cannot withstand the weather conditions in New Zealand. The main factors in leaky buildings include:

- Modern cladding systems, such as the Mediterranean style of building using monolithic cladding systems, being used outside their specifications or has been installed incorrectly.
- Inadequate construction of certain design features that do not allow for deflection or drainage of water e.g. small or no eaves.
- Insufficient details in the Approved Documents, which would otherwise prevent incorrect construction from proceeding.
- The use of untreated kiln-dried framing timber, which is susceptible to rot when moisture penetrates the building envelope.

Period of Exposure and Geographical Concentration

These two factors are very important in determining the extent to which the Leaky Building Syndrome will impact a portfolio. Claims relating to the Leaky Building Syndrome are potentially subject to a 10-year statute of limitation, after which claims may no longer be valid. It appears that a test case would have to be presented for longer latency claims to emerge but they cannot be ruled out.

The major Territorial Authority regions affected to date include:

- Auckland City Council
- North Shore City Council
- Waitakere City Council
- Wellington City Council.

Exposure Status

There has been an increase in the awareness of the Leaky Building Syndrome and the overall importance of weathertightness in building designs in New Zealand since the issue began to emerge. The Department of Building and Housing of New Zealand has been active in broadening this awareness and new building codes and tests have been set up to ensure new dwellings are acceptable. Over time, exposure to the Leaky Building Syndrome is expected to reduce due to rising public awareness of the importance of weathertight construction and implementation of new building standards.

We therefore classify this as an emerged latent claim.

Legal Environment and Claims Framework

In November 2002, as part of the Weathertight Homes Resolution Services Act 2002, the New Zealand government set up the Weathertight Homes Resolution Service ("WHRS"). The WHRS provides the following services to claimants:

- Assessments to determine the extent of water damage.
- Mediation or adjudication services to help homeowners resolve leaky homes disputes.

Disputes are subject to a 10-year statute of limitation and WHRS qualified assessors must approve the extent / cause of damage in order for mediation or adjudication to proceed.
Although to date the WHRS presents the most common avenue for claimants, claims can also arise from normal legal proceedings.

Underwriter/Insurer's perspective

The Leaky Building Syndrome can potentially affect public liability and professional indemnity portfolios. Public liability policies are affected to the extent that product liability is covered. Professional indemnity policies are affected to the extent that the insured is found to be negligent in carrying out their duties.

Although claims are still emerging the issue is well identified. Steps have been taken to improve future design, construction and approval. We have no information on whether exclusions or policy modifications have been implemented by insurers as a result.

Reference points

For further information the following sites may be of use:

- Department of Building and Housing: http://www.weathertightness.govt.nz/
- Report of the Overview Group on the weathertightness of buildings to the Building Industry Authority, 31 August 2002: http://www.isologic.co.nz/Report.pdf
- Weathertight Homes Resolution Services Act 2002: http://www.legislation.govt.nz/browse_vw.asp?content-set=pal_statute

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End Notes

[i] Liability Issues Arising out of Latent Claims, Mark Moyes, ALIA National Conference 2006, page 5.
[ii] The statistical (or technical) rate is the actuary's best estimate of the underlying rate.
[iii] The book rate refers to the standard rate schedule for the product concerned.