Marsh

Ausgrid Revenue Proposal 2024-2029

Premium Projections and Insurance Market Update

31 October 2022

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Executive Summary

Introduction

Marsh Pty Ltd has been engaged by Ausgrid to provide a forecast of its cost of managing risk for the forthcoming regulatory period (2024 – 2029). We understand that this report will be provided to the Australian Energy Regulator (AER) as part of Ausgrid's Revenue Proposal.

Our advice and the contents of this report are based on the material provided by Ausgrid, market research and analysis, and relevant insurance industry references.

There are three elements to Ausgrid's cost of managing risk, namely:

- The premium paid for insurances purchased by Ausgrid;
- The expected cost of uninsured risks (i.e. self-insured risks);
- The extent to which Ausgrid's risk exposure is limited by the cost pass through mechanism.

Summary of Ausgrid's program

Ausgrid's insurance program consists of the following insurance classes:

- Property (Industrial Special Risks);
- Liability (including General and Products Liability, Bushfire Liability, Failure to Supply Liability and Professional Indemnity);
- Directors' and Officers' insurance (D&O);
- Cyber Insurance;
- Workers Compensation (Excess of Loss cover);
- Other ancillary lines (including Crime, Contract Works, Motor Vehicle, Mobile Plant & Equipment, Drones, Marine Cargo, Asbestos Removal Liability, Corporate Travel and Statutory Liability insurance).

Ausgrid retains exposure to the following risks:

- Towers and Lines – consistent with industry practice, and reflecting the lack of availability of commercial cover, Ausgrid does not commercially insure transmission towers or lines.
- 'Below deductible' risks – Ausgrid retains exposure to all risks for which commercial cover is held but where claims are less than the deductible.
- Workers' Compensation – Ausgrid, as a self-insured employer, retains exposure to all Workers' compensation risks, but commercial cover is held for losses in excess of $1,500,000.

It is noted that Ausgrid continues to have insurance requirements as a condition of the Distribution Network Lease:

[redacted]

[redacted]

The requirements of the lease (in particular the required [redacted]) add significant cost to the insurance program. This should be reviewed but this report will focus on a lease compliance insurance program.

Apart from the above, Marsh has reviewed Ausgrid's insurance program and considers Ausgrid's approach to risk management to be prudent and to reflect good industry practice.

Assessment

We have prepared our estimates for the forthcoming regulatory period (FY2024 – FY2029) on the basis of:

- Projected growth in Ausgrid's regulated asset values over the regulatory period;
- Continuing hard market conditions resulting in premium increases, coverage reduction, which will increase deductibles and cause capacity contraction, but which we expect to soften throughout the regulatory period;
- The absence of any catastrophic event causing a major claim, which could have a significant impact on Property and Liability polices' claims performance and subsequent renewal pricing;
- An allowance for all current statutory taxes and levies, excluding GST.

Three main implications for Ausgrid from the state of the insurance market and continuing associated pressures on price, capacity, and coverage are:

- Significant increases in the premiums that Ausgrid must pay to continue purchasing Property and Liability coverage;
- Increasing premium cost and the availability of Cyber Insurance in the insurance market;
- Increases in deductibles will increase Ausgrid's expected value of uninsured risks.

Insurance Premium Forecasts

Our forecast of Ausgrid's average annual insurance premium for the next regulatory period is **$24.52m** ($nom) inclusive of all costs, and stamp duty (excluding GST).

Table 1 – Forecast cost of Insurance Premium for various insurance classes.

Year	FY25	FY26	FY27	FY28	FY29	Total	Average
General Liability (Bushfire) & Professional Indemnity Premium	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Directors & Officers Liability Premium	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Industrial Special Risk/Property Premium	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Cyber Premium	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
NSW Workers Compensation (Self Insured) Premium	Self Insured	Self Insured	Self Insured	Self Insured	Self Insured	$ -	$ -
NSW Workers Compensation (Excess of Loss) Premium	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
PLUS ES NSW Workers Compensation Direct (new) Premium	Self Insured	Self Insured	Self Insured	Self Insured	Self Insured	$ -	$ -
PLUS ES Victorian Workers Compensation Direct (new) Premium	Self Insured	Self Insured	Self Insured	Self Insured	Self Insured	$ -	$ -
Victorian Workers Compensation Direct Premium	Self Insured	Self Insured	Self Insured	Self Insured	Self Insured	$ -	$ -
Motor Vehicle Compulsory Third Party (CTP) Premium	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Motor Vehicle (including Claims Handling) Premium	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Crime Premium	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Corporate Travel Premium	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Mobile Plant & Equipment Premium	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Contract Works Material Damage Premium	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Marine Transit Premium	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Asbestos Removal Liability Premium	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Drone Hull & Liability Premium	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Grand Total	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

Note that this forecast allows for the expected increase in Ausgrid's regulated asset base over the regulatory period. These increases become a factor in the **Industrial Special Risks / Property** premium only. Please refer to Tables 5 (Property Premiums) and 18 (Consolidated Premiums) which show the impact to the insurance premium of removing these forecasted increases from the Declared Values for insurance purposes.

Scope of Report

Background and Scope

The scope of our review is to provide a forecast of Ausgrid's insurance premiums payable for the forthcoming 5 year regulatory period (2024 – 2029), with separate estimates for each year. Our estimates include an allowance for the following insurance classes:

- Property;
- Liability (including General and Products Liability, Bushfire Liability, Failure to Supply Liability and Professional Indemnity);
- Financial Risks (including Directors' and Officers' insurance (D&O) and Crime Insurance);
- Other ancillary lines (including Contract Works, Motor Vehicle, Mobile Plant & Equipment, Drones, Workers Compensation (Excess of Loss cover), Marine Cargo, Asbestos Removal, Corporate Travel and Statutory Liability insurance)
- Cyber Insurance.

Ausgrid retains exposure to the following risks:

- Towers and Lines – consistent with industry practice, and reflecting the lack of availability of commercial cover, Ausgrid does not commercially insure transmission towers or lines.
- 'Below deductible' risks – Ausgrid retains exposure to all risks for which commercial cover is held but where claims are less than the deductible.
- Workers' Compensation – Ausgrid, as a self-insured employer, retains exposure to all Workers' compensation risks, but commercial cover is held for losses in excess of $1,500,000.

Approach and Methodology

Where risks are currently insured, we have considered each insurance class separately to derive standalone premium estimates based on the individual circumstances of that insurance class.

In deriving our estimates for each insurance class, we have considered the following factors influencing premium levels:

- Historical changes in insurance cover
- Historical variation in exposure
- Historical claims experience
- Forecasts of exposure
- Expected market outlook
- Other historical market factors (e.g. changes in insurers, changes in insurer profit margins, industry claims experience, etc.) to the extent that historical premium trends are observed which cannot be directly attributable to other factors.

This analysis also relies on assumptions regarding insurance policy deductibles for the entire regulatory period. We have made our best attempt to predict the commercial insurance terms during this future period, however given the volatility in insurance market, there will be a level of uncertainty in these projections.

We have referred to the estimated premiums in this report as 'Insurance Premiums'.

Insurance Market Drivers

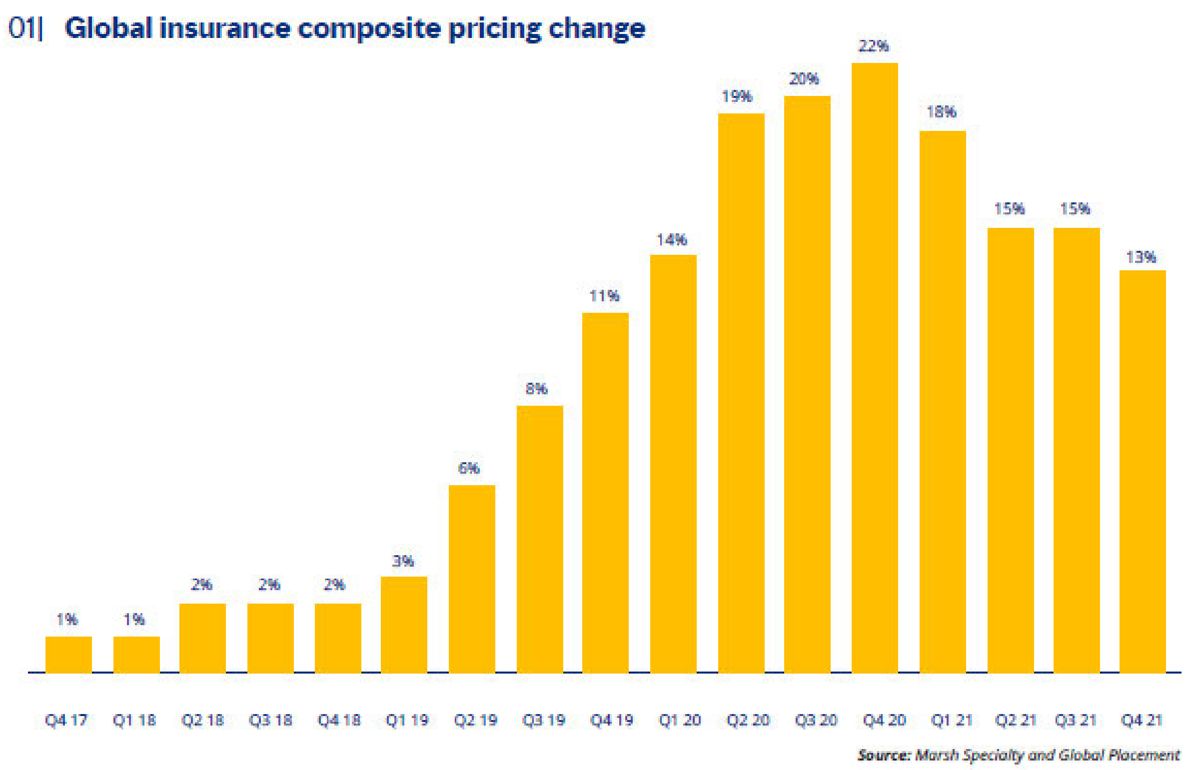
The global general (non-life) insurance industry generates approximately US$2.9 trillion in revenue each year. The market cycle and cost of insurance is influenced by a number of key factors including:

- Size of premium pool
- Claims paid and / or provisioned
- Major loss events
- Cost of reinsurance
- Investment returns and flow of additional funds into the sector from the Insurance-Linked-Securities

The start of 2020 was impacted by major weather and natural disaster events like bushfires, floods, and hailstorms, causing widespread property damage and business interruption losses. Summer bushfires in Australia had a negative effect on insurers' profitability. A recent COVID-19 Australian business interruption insurance test case ruling where the NSW Court of Appeal rejected insurers argument that policies do not cover COVID-19 losses has further added to the stress of the market.

The current market cycle has been subject to 16 consecutive quarters of premium increases as illustrated in the *Marsh Global Insurance Market Index* and as detailed below.

Figure 1 – Global Insurance Composite Pricing Change

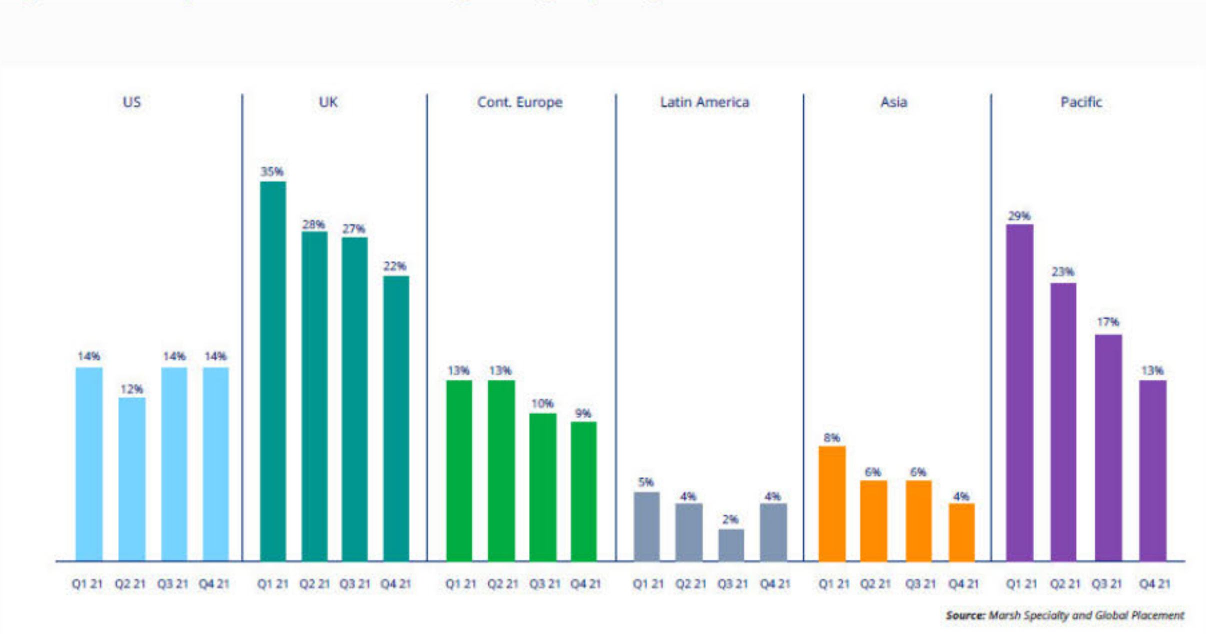


Pricing increases across most regions moderated due to a slower rate of increase in Property and D&O insurance premiums, with the exception of the USA where Property and Financial & Professional lines pricing increased.

Cyber insurance pricing again rose significantly in the quarter — up 96% in the USA and 73% in the UK — due to increased frequency and severity of losses.

Regionally, composite pricing increases for the 2021 year were as follows:

Figure 2 – Composite Insurance Pricing Change by Region



As shown above, the level of premium increases globally are in decline but there remains consistent pressure from insurers to continue premium increases albeit at the slower pace now that pricing is getting closer to "technical rates" whereby insurers believe they can make adequate profit. The claims environment continues to remain challenging due to COVID-19 claims disputes concerning interpretation and application of policy wordings, which has a direct impact on insurer's profitability.

Volatile pricing conditions for excess of loss coverage, scrutiny around sanctions, cyber, and COVID-19 are becoming commonplace. D&O rate increases are showing a downward trend, but continue to remain high.

Cyber insurance pricing is seeing sharp increases of 100% quarter on quarter, the availability of capacity is on a decline, making Cyber liability a challenging space.

Whilst each class of insurance unique in respect of insurer appetite and pricing, we generally expect pricing to continue to increase in the next few years but at a more modest rate than what has been seen in previous years. Most insurers globally are now generating profit from their underwriting activities which will develop more appetite for growth and competition in the market. Please refer to the **Insurance Market Update** on page 26 of this report for more insights.

Alternative Risk Transfer Options

When facing difficult operating conditions and higher rates for commercial insurance, organisations take a hard look at their options. Many conclude that one solution is to retain more risk by increasing their deductibles or self-insured retentions and buying insurance above those levels.

In 2020, Marsh captive clients opted to do exactly that — by increasing the premium volume in existing captives. In addition, many organisations decided to form a new captive entity.

It is important to note that, for the vast majority of captive parents, a captive is an effective way to supplement — rather than replace — their insurance purchasing. Fully self-insuring is often inefficient. Most organisations are best-served by exploring captives as one component of an effective risk financing program that takes into account specific risks and exposures, risk tolerance, risk management strategies, and ESG approach.

By many measures, 2020 was a year of historic growth for captives. Marsh's benchmarking data show increases in the total number of captives, overall net premium volume, certain types of captive vehicles, such as cells, third-party premium volume, parent company regions, and more.

When looked at by captive type, cell captives experienced the most rapid growth in 2020. This type of captive vehicle is alternately known as protected cell companies (PCCs), segregated portfolio companies (SPCs), segregated account companies (SACs), or incorporated cell companies (ICCs). Cells can be easy and quick to set up, which may have helped their steep growth during the pandemic. Also on the rise are holding company captives, special purpose vehicles, and risk retention groups. D&O and cyber were the top two coverages written in cell facilities formed in the first half of 2021.

Still, single-parent captives account for the vast majority of all captives — and represent nearly 75% of all captives managed by Marsh.

Some of Ausgrid's peers have already formed their own captives or are utilising PCC's for property, liability, D&O (typically listed TNSP and DNSP's) and increasing, cyber risks. Globally, cyber has shown continuous growth within captives. The number of captives writing cyber risk grew by 13% between 2019 and 2020, with a 127% increase over the past five years.

For liability programs, other DNSP and TNSP's in Australia are using captives to their competitive advantage by stepping into layers which cannot be filled or where insurer terms are unacceptable.

As illustrated in this report, Ausgrid's insurance costs will continue to rise. The utilisation of a Captive or PCC would assist in moderating these costs subject to Ausgrid's risk bearing capacity and/or appetite being sufficient to take on a reasonable level of risk beyond its current deductibles.

Analysis of Insurance Related Costs

Basis of Estimates

We have prepared our estimates for the forthcoming regulatory period (2024 – 2029) on the basis of:

- Projected growth in Ausgrid's regulated asset values over the regulatory period.
- Continuing hard market conditions resulting in premium increases, coverage reduction, increases in deductible and capacity contraction, which will begin to soften throughout the regulatory period.
- Absence of any catastrophic event causing a major claim, which could have a significant impact on Property and Liability polices claims performance and subsequent renewal pricing.
- Allowance for all reasonably expected statutory taxes and levies, excluding GST.

Three main implications for Ausgrid from the state of the insurance market and continuing associated pressures on price, capacity, and coverage:

- Significant increases in the premiums that Ausgrid must pay to continue purchasing Property and Liability coverages.
- Increases in deductibles will increase Ausgrid's expected value of uninsured risks.
- Increasing premium cost and availability of Cyber Insurance in the insurance market.

Comments on insurance program

Marsh has reviewed Ausgrid's insurance program and considers its approach to risk management to be prudent and to reflect good industry practice. The insurance requirements, including limits, sub-limits, and deductibles, are informed by a range of processes comprising:

- Compliance with insurance specifications contained in the Network lease;
- Annual development and Board approval of Ausgrid's Insurance Renewal Strategy. This Strategy forms a critical component of the insurance program renewal process, supports good governance, and provides a transparent mechanism to review the insurance program's structure and suitability on an annual basis;
- Ausgrid and external generated risk assessments (i.e. loss exposure analysis) and reviews.
- Maximum Foreseeable Loss (MFL) studies: Ausgrid periodically undertakes an analysis of its Bushfire Liability profile to ensure that it is maintaining appropriate level of insurance cover. The most recent analysis (May 2020) shows that the limit current purchased (in compliance with Network Lease) is extremely conservative and represents a return period of 4,684 years (probability that the policy limit will be exceeded is 0.0213%)
- Underwriter engineering reports: Ausgrid participates in regular Risk Engineering Visits arranged by its lead Property Underwriters which involve the inspection of Ausgrid sites to assess risk exposures. This also provides Ausgrid with the opportunity to address any risk recommendations identified as part of those inspections.
- Broker advice, expertise, and market analysis:
  - Including insurance renewal analysis against market updates.
  - Policy (e.g. limits, premium rates, coverage) benchmarking against comparative industry peers.

- Continuous review and monitoring of policy wording.

- Ausgrid claims history and loss ratios:
  - This provides a mechanism to validate coverage and limits, and an opportunity to pursue improvements where coverage gaps or clarifications are required.
  - Also allows Ausgrid to benchmark Loss Ratios (premium v. claims)

As outlined above, Ausgrid, supported by its Brokers, regularly reviews its insurance requirements against the organisational and external environment. Policy limits, sub-limits, deductibles, and uninsured risks are reviewed annually and may change based on factors including risk profile, market capacity, and pricing.

Property

Summary of Insurance Cover

Ausgrid purchases Property insurance to cover its regulated assets consistent with good industry practice. Note that this excludes pole and wire infrastructure as per industry standard due to lack of insurance market appetite to insurer those types of assets. Coverage for business interruption is limited to Additional Increased Costs of Working and Rents. This again is standard for a DNSP.

Ausgrid's current policy limit for Property and Business Interruption is $1,000,000,000 (as required under the Network Lease). Deductibles vary depending on asset which has sustained damage, but range from $200,000 to $10,000,000. There is a threshold of 7 days for the limited business interruption. It is understood these deductible levels have been stable for many years.

While Marsh has not been involved in procuring insurance for Ausgrid, it considers the cost of its Property insurance to be competitive and a suitable starting point from which to forecast future costs.

Marsh has identified that the limit of liability for the current property insurance policy is of an adequate and sustainable level.

Marsh considers Ausgrid's property insurance to be prudent and efficient for its risk exposure.

Basis of Insurance Premium Projection

Insurance Premiums have been calculated by obtaining the regulated portion of the Property base premium for FY2023. The premium is forecast using projected insurance market rate change in conjunction with the change in asset base, to provide an overall commercial Insurance premium per year for the regulatory period.

Increased asset values

Growth in Ausgrid's value of assets to be insured will drive the cost of Property insurance, which is projected to grow as shown in Table 2.

Table 2 – Ausgrid's projected Regulated Asset growth.

Year	FY25	FY26	FY27	FY28	FY29
Regulated Asset Base	$17,362,000,000	$17,777,000,000	$18,290,000,000	$18,732,000,000	$19,107,000,000
Growth %	3.9%	2.4%	2.9%	2.4%	2.0%

Results10

In relation to Ausgrid's Property insurance, Marsh projects that premiums percentage, per dollar insured, will change as shown in Table 3 .

Table 3 – Ausgrid's projected Property Insurance premium rate movement.

Year	FY25	FY26	FY27	FY28	FY29
Industrial Special Risk/Property Rate Movement YoY (%)	2.5%	2.5%	-2.5%	-2.5%	-5.0%

Therefore, allowing for stamp duty and associated fees, Marsh projects that Ausgrid's cost of Property insurance will be as shown in Table 4 .

Table 4 – Ausgrid's projected Property Insurance premium movement.

Year	FY25	FY26	FY27	FY28	FY29
Industrial Special Risk/Property Premium	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

If we look to exclude *Opex Trended Output Growth* (i.e. not factor the increase in Declared Values over the rest period, then the premium should more closely reflect Table 5.

Table 5 – Ausgrid's projected Property Insurance premium movement not factoring projected Regulated Asset growth (i.e. no increases in property declared values)

Year	FY25	FY26	FY27	FY28	FY29
Industrial Special Risk/Property Premium	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

Liability

Summary of Insurance Cover

Ausgrid purchases Liability insurance with an $850,000,000 Limit of Liability. This has reduced from $860,000,000 in previous years to due to the uneconomic terms to source the additional $10,000,000 limit. This policy covers legal liabilities for third party property damage and bodily injury, arising out of Ausgrid's business operations.

Consistent with good industry practice, the policy provides additional coverages specifically designed for power utilities including:

- Financial Loss – Failure to Supply Liability. This protects Ausgrid's legal liability for losses incurred by third parties due a negligent act of Ausgrid which leads to a failure to supply event. This coverage extension does not require property damage to be sustained by the third party. The current program limit is $180,000,000 but this is not supported by all insurers and therefore there are uninsured gaps within the program for this coverage.

- Professional Indemnity. This protects Ausgrid from civil liability claims arising from the provision of professional services to third parties. This coverage is limited to $50,000,000.

- Electromagnetic Field Liability. This protects Ausgrid from legal liability for bodily injury sustained due to electromagnetic fields. The coverage is to the full program limit, but not all insurers provide this extension so there are uninsured gaps within the program for this coverage.

The program is subject to a deductible of $250,000 except for Bushfire Liability where it increases to $10,000,000.

Given Ausgrid's metropolitan focused distribution area and excellent claims history (last bushfire loss was $2,300,000 in 1990) insurers should give favourable consideration when underwriting the liability program. However, the bushfire liability insurance market is extremely challenging and insurers are reducing capacity, monitoring accumulations and setting minimum rates regardless of risk profile.

Basis of Premium Projection

The current Ausgrid Combined Liability Program is a complex placement with more than 20 different insurers providing various layers of different size capacity at varying premiums. The complexity of the placement is exacerbated by the fact that discussions have to be undertaken with numerous individual insurers in parallel, with a high degree of confidentiality in place.

Before considering future forecasts for the Ausgrid Liability placement, it is important to explain some fundamental aspects and influencers within the current insurance market:

Not a simple actuarial exercise

Household (or domestic) insurance products are priced by insurers on an actuarial basis. This is more difficult with bushfire risk for network businesses.

The reason an actuarial approach can be taken by household insurers is because there is a high volume of incidents and claims, and a significant amount of data available to the insurance market, to adopt such an approach to pricing. This is not the case with bushfires although insurers are increasing turning to actuaries in an effort to collate global loss data to help build models to assist with pricing adequacy.

Whilst there have been, and continue to be, serious and catastrophic bushfires, and their frequency is increasing, there is an insufficient volume of incidents and occasions on which a network business has been at fault, for the bushfire liability risk insurers of those networks to be able to adopt an accurate actuarial approach to pricing of premiums. Each country or state has different legislations they would impact the defensibility of a claim and different geographical and climate conditions which alter the inherit bushfire risk.

Insurers perception of bushfire liability risk has changed dramatically

There has only recently been an increased recognition of, and focus on, the increased risk, severity and frequency of bushfires in Australia and globally by insurers. Recent losses are leading, and will continue to lead, to significant pressure to recover increased premiums.

The catastrophic bushfires that occurred in Australia during 2019/2020 led to insurers becoming extremely concerned about their bushfire liability exposure. To a far greater extent than in the past, insurers are having to justify – internally within their organisations – the risks proposed to be underwritten. There is an increased focus on due diligence and analysis of profitability of proposed underwritten risks. Regardless of the recent bushfires, but certainly severely accentuated by their occurrence, this has resulted in insurers in the primary layer having no appetite to take on new risk, whilst reducing capacity and to seeking premium increases to recover historical paid losses.

For those underwriters that remain willing to underwrite bushfire liability, their view of your world is that bushfire frequency in Australia continues to increase, which in turn increases the risk they insure. In this environment, insurers that continue to offer capacity are being staunch in their need to receive a minimum dollar amount per quantum of capacity offered, whilst simultaneously looking to reduce capacity they offer. Many of Ausgrid's insurers need to receive a minimum dollar amount per quantum of capacity offered, and that minimum is increasing significantly as historically it has been inadequate.

Underwriter stakeholders are influencing behaviour

Treaty reinsurers are challenging underwriting approaches taken, forcing accountability on direct insurers in way that has not been seen previously in Australia and is more akin to the USA.

In the current environment, underwriters have been required by Lloyds and/or management to assess the level of aggregated risk they have to Bushfire exposure. Specific to your risk, this requirement is driven by the fact that Ausgrid primary layer insurers are also the primary layer insurers for other DNSP's and TNSP's, as well as government and regulatory bodies at Federal, State and Local level and ancillary service providers. Because of their in-depth analysis, each insurer has identified the fact that some insureds have been paying comparatively less to other peer organisations within their portfolio. Consequently insurers are now:

a) Mandating minimum dollar amounts per quantum of capacity offered which are required to take appropriate account of bushfire exposure as well as increased internal costs (particularly the cost of reinsurance which has trended upwards significantly in recent times)
b) Required to determine the level of volatility in their portfolio and demonstrate the portfolio is robust enough to sustain large bushfire losses. Where this has not been demonstrated, management has exited from this sector (there have been 6 examples of this over the course of 2020)

As a result, whereas previously Ausgrid's favourable network location and strong mitigation practices has assisted to secure more favourable premiums that their peers, the benefit of this positive risk differentiation has been heavily diluted in today's market. Strong risk mitigation practices do however remain crucial for the purposes of ensuring that Ausgrid can access maximum available capacity.

In summary, underwriters are now faced with a decision – correct the portfolio and accounts that are under-priced or to which they are overexposed or exit the sector (and possibly lose their jobs). The reality is that for a number of insurers it is easier not to write an account in this market than face the consequences of a large bushfire loss. As noted earlier, many of the insurers need to receive a minimum dollar amount per quantum of capacity offered. Like other businesses, they are experiencing increased internal costs and increased costs of reinsurance. Coupled with the impacts on their businesses of recent bushfires, these costs are pushing up the minimum price per million dollars of cover that they are willing to accept.

The premium is forecast using projected insurance market rate change in conjunction with the change in Ausgrid's (regulated) revenue, to provide an overall commercial Insurance premium per year for the regulatory period.

- It is important to note that the placement/program structure can vary significantly year by year as insurer appetite, capacity and pricing changes. At renewal in 2021 the Ausgrid liability program saw a loss of $57m capacity, of which $47m was replaced (at a higher cost) by other insurers. This trend will likely continue as it is expected that [redacted] of their capacity at renewal in 2022. This could adversely impact overall policy limits available to Ausgrid in the future. Our projections assume capacity will be purchased to the extent it is commercial reasonable to do so.
- The projections below are based on the following assumptions:
  - No major changes to Ausgrid's risk profile
  - No additional significant losses to the liability program,
  - No significant electricity infrastructure related bushfire event in Australia, and
  - No further significant deterioration in the global insurance market.

Revenue Projections

Growth in the amount of Ausgrid's (regulated) revenue also impact future premiums as insurers tend to link revenue to premium increases for this class of business. Ausgrid's revenue is projected to grow as shown in Table 6.

Table 6 – Ausgrid's projected Regulated Revenue growth.

Year	FY25	FY26	FY27	FY28	FY29
Forecast Regulated Revenue	$2,091,000,000	$2,143,000,000	$2,197,000,000	$2,254,000,000	$2,313,000,000
Regulated Growth	5.3%	2.5%	2.5%	2.6%	2.6%

Results

In relation to Ausgrid's Liability insurance Marsh projects that Insurance premiums will grow as shown in Table 7.

Table 7 – Ausgrid's projected Liability Insurance premium changes.

Year	FY25	FY26	FY27	FY28	FY29
General Liability (Bushfire) & Professional Indemnity Rate Movement YoY (%)	6%	7.5%	5%	3%	0%

Therefore, allowing for stamp duty and associated fees, Marsh projects that Ausgrid's cost of Liability insurance will be as shown in Table 8.

Table 8 – Ausgrid's projected Liability Insurance premium movement.

Year	FY25	FY26	FY27	FY28	FY29
General Liability (Bushfire) & Professional Indemnity Premium	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

Please note the premiums in Table 8 **do not** take in account the forecasted projected Regulated Revenue growth. Modest revenue movements as projected would not make an impact on Liability insurance premiums for a business like Ausgrid.

The above premiums have been developed utilising expected market movements over a seven year period from FY23 to FY29. The base premium for which we have applied these movements is the actual FY23 liability premium as advised on 31/10.22. By FY25, there is an expectation that the market would have fully implemented the significant pricing corrections currently being seen and more modest premium increases will likely be applied as there is no suggestion that the risk of bushfire both globally and in Australia will reduce.

We have assumed no change to the current policy limits and therefore assume capacity is available to provide the protection required by Ausgrid.

Directors & Officers Liability (D&O)

Summary of Insurance Cover

Ausgrid purchases D&O insurance with a $150,000,000 limit of liability.

As Ausgrid is not a listed entity, it does not require Side C (Entity Securities Coverage) and therefore buys Side A and Side B coverage which provides protection to directors and officers.

A $150,000 deductible applies to Side B (Company Reimbursement) and $Nil for Side A (Non Indemnifiable Liability of Directors and Officers).

Marsh considers Ausgrid's D&O insurance to be prudent and efficient for its risk exposure.

Basis of Premium Projection

The pace of rate increases slowed significantly by the end of CY21. This is due to improved insurer profitability, new D&O insurer entrants, D&O buyers seeking lower limits, creating further competition for insurers offering increased supply of capacity.

There exists variation in insurer rating dependent on historic pricing, industry segment, insurer portfolio profitability and strategy.

Some risks are still attracting a double digit increase, e.g. heavy exposure to COVD-19.

Results

In relation to Ausgrid's D&O insurance Marsh projects that premiums will grow as shown in Table 9.

Table 9 – Ausgrid's projected D&O Insurance Premium movement.

Year	FY25	FY26	FY27	FY28	FY29
Directors & Officers Liability Rate Movement YoY (%)	2.5%	0%	0%	0%	0%

Therefore, allowing for stamp duty and associated fees, Marsh projects that Ausgrid's cost of D&O insurance will be as shown in Table 10.

Table 10 – Ausgrid's projected Financial Lines Insurance Premium movement.

Year	FY25	FY26	FY27	FY28	FY29
Directors & Officers Liability Premium	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

Cyber

Summary of Insurance Cover

Ausgrid purchases Cyber insurance with a [redacted] limit of liability.

A [redacted] deductible applies and in addition a [redacted]

It should also be noted that there is also a Failure to Supply exclusion.

As a critical infrastructure provider, maintaining cyber insurance is consistent with good industry practice however there is very low insurer appetite for underwriting critical infrastructure so the sustainability of this insurance with any meaningful coverage or at low attachment points will be a challenge going forward.

Cyber Market Overview

Cyber risks remain a top business concern

The number of Australian organisations purchasing cyber insurance grew by 23% in the first half of 2021 compared to 2020.This was driven in part by a greater appreciation of cyber and technology risk.

Insurers and insureds alike are feeling the impact from the increased frequency of **ransomware, cyber extortion, and other external attacks**. The growing ransom demands and the increased costs to remediate business interruption have increased the scrutiny by the insurance market of companies' cyber risks and related mitigation efforts.

The worsening loss ratios have also led to corrective actions, such as limiting capacity and co-insurance requirements, in order to maintain portfolio profitability. This trend is across all industry sectors with professional services, healthcare, manufacturing, public entities, logistics and SME businesses being materially affected.

As infrastructure owners and operators introduce more technology to bolster innovation and increase efficiencies, the vulnerability of critical assets to digital attacks is also increasing. Targeting critical assets is becoming more common as threat actors, particularly nation states, are aware of the widespread chaos and disruption this can cause.

Claims

Compared to the same time last year, the frequency of claims reported to insurers in Australia have **increased by nearly 50%.** Of the cyber claims notified to insurers for the first half of 2021 – ransomware attacks, data breaches (hostile external) and fraud (emails or accounts manipulated) made up majority of the matters. In particular, across all ransomware matters we are seeing, cyber criminals utilising double extortion techniques have become the norm. Further, a large volume of claims were a result of a third party supply chain breach as opposed to our insureds having been targeted by threat actor group directly.

Cyber fraud remains a common category of cybercrime. In particular, business email compromise (BEC) has been one of the most common method relied upon by cyber criminals as a method of gaining access to the insured's corporate networks.

Where matters are a notifiable data breach pursuant to the Privacy Act 1988 (Cth), we have recently seen regulatory bodies such as the Office of the Australian Information Commissioner (OAIC) become more comprehensive in their request for information and wanting to ensure affected individuals are being notified promptly.

Increased scrutiny of controls

By the end of the fourth quarter of 2020, the cyber market had felt the full effects of COVID-19, following a transitioning of work to include more utilisation of technology. Similar trends continued in H1 2021 with continued lockdown forcing many to continue to work from home with some hybrid working models in place. Controls used to allow employees to work from home became a target, not only for bad actors, but also for insurers to review how organisations protect themselves against cyber attacks.

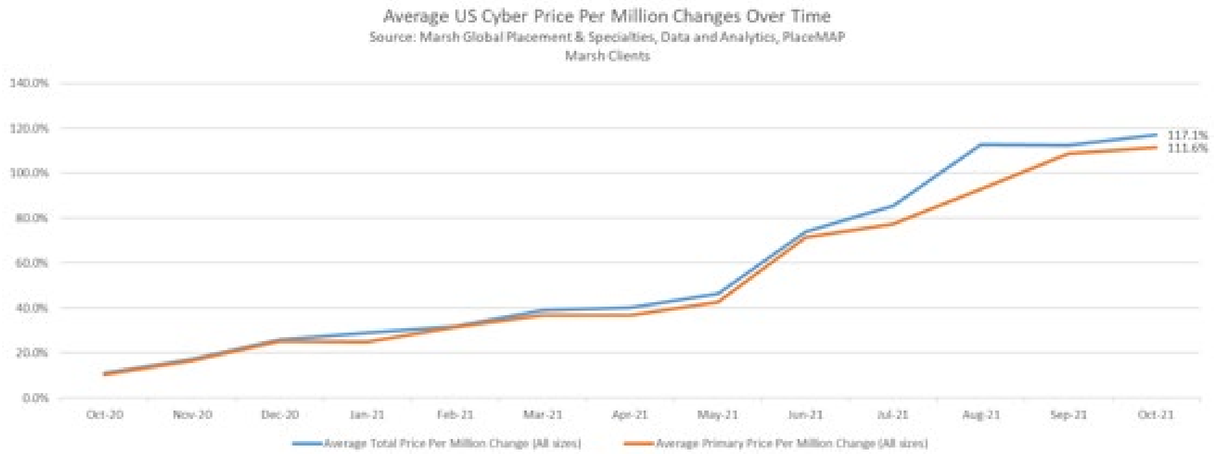
At the same time, ransomware attacks continued to wreak havoc on organisations in Q1 2021. Bad actors were now targeting both Software-as-a-Service (SaaS) and insurance companies. While the SaaS attacks presented the possibility of systemic risk for insurers, the fact that they were being targeted themselves represented a shift in tactics on the part of bad actors. All of these trends point to the need for resilience. Organisations must take it upon themselves to ensure controls are in place. In many ways, underwriters are currently forcing their hand, calling for new minimum requirements for control, before any cyber insurance capacity is offered. Often, organisations will have established many, but not all of the top cybersecurity controls. As a result, they are often subject to requests for higher premiums, higher retentions, and in some rare cases, declinations. Organisations must take a proactive approach with their brokers to understand the insurability of their risk, as it stands today.

Cyber insurance pricing increases

Starting in the first quarter of 2021, nearly all of Marsh clients that bought insurance through the London Market experienced an increase in cyber insurance pricing. An early look at Q3 2021 data shows that every renewal is seeing an increase in premium. Capacity deployment saw a sharp dip, as many insurers halved the amount of capacity they were deploying on programmes.

Starting in Q2 2021, there was a significant decrease in competition, and major reductions in capacity, making more expensive excess layers competitive again. While excess pricing drove the 2020 pricing increases, the entire group saw increases, from primary to the top layers, in large programs.

Retentions also started to see a sharp increase beginning in Q1 2021, with continuing momentum into Q2 2021. Data from Q3 2021 showed **average premium increases of 117%** for programs renewing with the same limits. This was in addition to the **average deductible increases of 65%**. Several changes to a higher retention are being considered to offset some increased pricing, but many insurers are quoting with higher retentions based on controls and to offset attachment points within their portfolio. In some cases, an increase of retention of more than 400% has been applied by insurers, where substantially lower controls are in place, in comparison to their peers. On some occasions, a co-insurance of 20-50% has been put in place, until these controls have been remediated by the organisation.



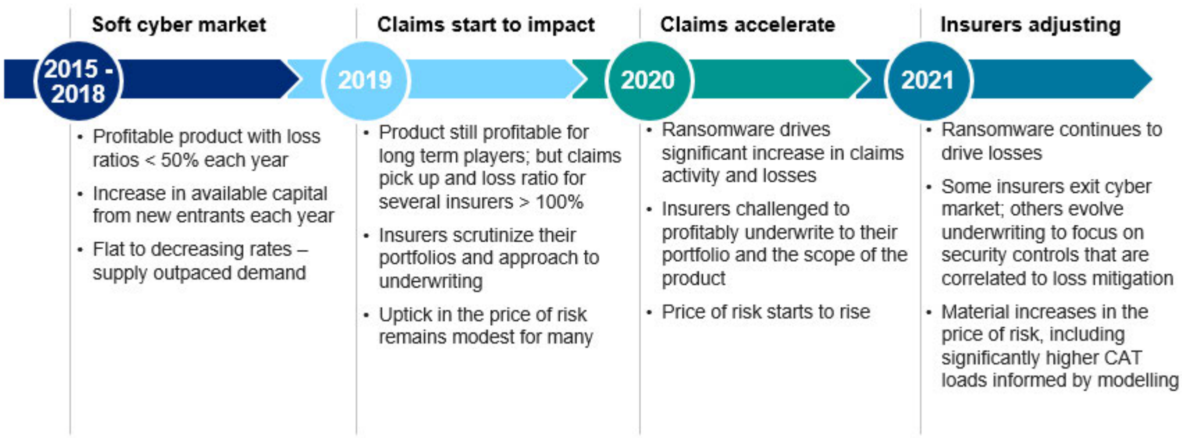
Looking ahead

After a period of sustainable losses and steady growth in premium for cyber insurers, the growth of the underlying ransomware threat has resulted in an unsustainable loss portfolio. Insurers have implemented capacity management strategies and minimum security control requirements as they seek to reduce the dramatic increase in claims and to manage their systemic risk exposure.

Insurers are likely to continue closely scrutinising cybersecurity hygiene and data practices, using their individual loss history to manage exposures to evolving, underlying cyber threats. Particular focus will be on ransomware exposures and mitigation controls, such as multifactor authentication, remote desktop protocols, and backups. These actions aim to ensure that external capital continues to be attracted to the cyber (re)insurance market, as well as assuring the market's long-term sustainability.

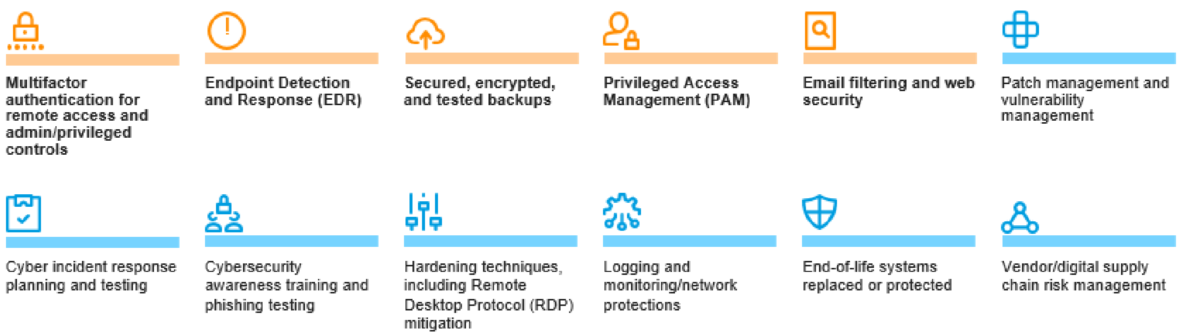
Whilst the cyber insurance market has challenges ahead there remains an opportunity for creativity and innovation for brokers to help clients get the best results in the market today. Demonstrating strong maturity and cyber resilience is the key to help to differentiating your risk before approaching renewals.

The chart below shows the Macro Cyber Trends / Market Dynamics of the past seven years:



Funding Risk Management vs Insurance

Depending on the future availability and cost of procuring cyber insurance for Ausgrid's critical infrastructure, consideration should be given to cost / benefit of retaining the risk (self-insurance) and utilising the funds saved to improve controls to reduce the impact of cyber events. Investment in enhancing the below 12 Key Controls & Best Practices may provide a better outcome than simply transferring the risk.



Basis of Premium Projection

This class of insurance presents the greatest challenge in respect of future premium projections. Like the liability program insurers will continue to reduce capacity and become more selective where they deploy that capacity. Critical infrastructure risks such as Ausgrid (and other DNSP's and TNSP's) will have limited choice of insurers and may find coverage being offered does not adequately transfer the risks whilst premiums continue to rise. It may get to the point whereby it simply becomes uneconomic to continue purchasing this insurance in the commercial market. At that stage self-insurance (which is already being imposed on Ausgrid – especially for Ransomware) will become the most efficient option. In addition to transferring the financial risk of cyber events, one of the key attractions to this class of business is accessing the insurers network of response consultants (including access of digital currency wallets) and data recovery specialists.

However, based on the assumption that coverage and capacity will stabilise and Ausgrid continues to buy this class of insurance throughout the regulatory period, we have forecast the costs below.

Results

The results are based on the assumption that there will be no material change the current policy limits or the current deductibles for the forthcoming regulatory period.

Marsh projects Ausgrid's Cyber insurance premiums will grow as shown in Table 11.

Table 11 – Ausgrid's projected Cyber Insurance premium rate movement.

Year	FY25	FY26	FY27	FY28	FY29
Cyber Rate Movement YoY (%)	30%	25%	15%	10%	5%

Therefore, allowing for stamp duty and associated fees, Marsh projects that Ausgrid's cost of Cyber insurance will be as shown in Table 12.

Table 12 – Ausgrid's projected Cyber Insurance premium movement.

Year	FY25	FY26	FY27	FY28	FY29
Cyber Premium	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

Workers Compensation – NSW Excess of Loss

The only workers compensation coverage placed into the general insurance market is the NSW Excess Workers Compensation. Ausgrid self-insures workers compensation in NSW but with this policy responding to any claim greater than $1,500,000 (indexed) for any event or series of events.

This policy was restructured and moved to a new insurer [redacted] at renewal 2021 at a higher premium and attachment point. The change of insurer was due to the incumbent insurer (Vero) exiting this class of business.

Some observations in respect of this small market segment:

- The market experienced significant challenges in 2021
- We estimated the Excess of Loss Market to be worth only $35m-$40m at the start of 2021. 85% of this is placed with [redacted]
- Late reporting of claims has resulted in many unexpected losses for the market which would not have been factored in pricing risks
- This combined with the small premium pool, portfolio profitability has resulted in Vero exiting this class of insurance in 2021. With the exit:
  - We are experiencing significant rate increases, up to 400%
  - Appetite to write business is diminished
  - Capacity is restricted i.e. retention limits increasing, un-indexed no longer being offered

Even with sizable increases across policies in this class, insurers are still reporting that it is unprofitable and will continue to seek increases in 2022.

However, for Ausgrid, [redacted] has underwritten the risk in 2021 with a premium of [redacted] or effective premium rate of [redacted], we would expect to see the premium stabilise with much more modest increases in the future unless there are deterioration in the historical claims costs or significant increases in the wages.

Results

The results are based on the assumption that there will be no material change of the current deductibles for the forthcoming regulatory period.

Marsh projects Ausgrid's NSW Excess Workers Compensation insurance premiums will grow as shown in Table 13.

Table 13 – Ausgrid's projected NSW Excess Workers Compensation Insurance premium rate movement.

Year	FY25	FY26	FY27	FY28	FY29
Excess of Loss Workers Compensation (NSW) Rate Movement YoY (%)	10%	5%	5%	5%	5%

Therefore, allowing for stamp duty and associated fees, Marsh projects that Ausgrid's cost of NSW Excess Workers Compensation insurance will be as shown in Table 14.

Table 14 – Ausgrid's projected NSW Excess Workers Compensation Insurance premium movement.

Year	FY25	FY26	FY27	FY28	FY29
NSW Workers Compensation (Excess of Loss) Premium	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

Other Classes

As described in the Executive Summary, Ausgrid also procures other classes of insurance including Crime, Contract Works, Motor Vehicle, Mobile Plant & Equipment, Drones, Marine Cargo, Asbestos Removal Liability, Corporate Travel and Statutory Liability insurance.

Please see below Table 15 where we forecast the insurance premium rate movement for each class:

Table 15 – Ausgrid's projected "Other Classes" insurance premium rate movement

Year	FY25	FY26	FY27	FY28	FY29
Motor CTP Rate Movement YoY (%)	5%	5%	5%	5%	5%
Motor Vehicle Rate Movement YoY (%)	5%	2.5%	2.5%	2.5%	2.5%
Crime Rate Movement YoY (%)	10%	5%	0%	0%	0%
Corporate Travel Rate Movement YoY (%)	2.5%	2.5%	2.5%	2.5%	2.5%
Mobile Plant & Equipment Rate Movement YoY (%)	5%	5%	5%	5%	5%
Contract Works Material Damage Rate Movement YoY (%)	5%	5%	5%	5%	5%
Marine Transit Rate Movement YoY (%)	5%	5%	5%	5%	5%
Asbestos Removal Liability Rate Movement YoY (%)	5%	5%	5%	5%	5%
Drone Hull & Liability Rate Movement YoY (%)	30%	25%	20%	15%	10%

Therefore, allowing for stamp duty and associated fees, Marsh projects that Ausgrid's cost of "Other Classes" insurance will be as shown in Table 16.

Table 16 – Ausgrid's projected "Other Classes" insurance premium movement.

Year	FY25	FY26	FY27	FY28	FY29
Motor Vehicle CTP Premium	[redacted]				
Motor Vehicle (including Claims Handling) Premium					
Crime Premium					
Corporate Travel Premium					
Mobile Plant & Equipment Premium					
Contract Works Premium					
Marine Transit Premium					
Asbestos Removal Liability Premium					
Drone Hull & Liability Premium					
Grand Total					

Consolidated Premium Table FY23 to FY29

Table 17 – Forecast Annual Insurance Premiums for various insurance classes from FY23 to FY29 which factors projected regulated asset growth (i.e. increases in declared values for property insurance purposes)

Year	FY23 Actuals	FY24	FY25	FY26	FY27	FY28	FY29	Total	Average
General Liability (Bushfire) & Professional Indemnity Premium	[redacted]								
Directors & Officers Liability Premium	[redacted]								
Industrial Special Risk/Property Premium	[redacted]								
Cyber Premium	[redacted]								
NSW Workers Compensation (Self Insured) Premium	Self Insured	Self Insured	Self Insured	Self Insured	Self Insured	Self Insured	Self Insured	$ -	$ -
NSW Workers Compensation (Excess of Loss) Premium	[redacted]								
PLUS ES NSW Workers Compensation Direct (new) Premium	Self Insured	Self Insured	Self Insured	Self Insured	Self Insured	Self Insured	Self Insured	$ -	$ -
PLUS ES Victorian Workers Compensation Direct (new) Premium	Self Insured	Self Insured	Self Insured	Self Insured	Self Insured	Self Insured	Self Insured	$ -	$ -
Victorian Workers Compensation Direct Premium	Self Insured	Self Insured	Self Insured	Self Insured	Self Insured	Self Insured	Self Insured	$ -	$ -
Motor Vehicle Compulsory Third Party (CTP) Premium	[redacted]								
Motor Vehicle (including Claims Handling) Premium	[redacted]								
Crime Premium	[redacted]								
Corporate Travel Premium	[redacted]								
Mobile Plant & Equipment Premium	[redacted]								
Contract Works Material Damage Premium	[redacted]								
Marine Transit Premium	[redacted]								
Asbestos Removal Liability Premium	[redacted]								
Drone Hull & Liability Premium	[redacted]								
Grand Total	[redacted]								

Table 18 – Forecast Annual Insurance Premiums for various insurance classes from FY23 to FY29 which Ignores projected regulated asset growth (i.e. no increases in declared values for property insurance purposes)

Year	FY23 Actuals	FY24	FY25	FY26	FY27	FY28	FY29	Total	Average
General Liability (Bushfire) & Professional Indemnity Premium	[redacted]								
Directors & Officers Liability Premium	[redacted]								
Industrial Special Risk/Property Premium	[redacted]								
Cyber Premium	[redacted]								
NSW Workers Compensation (Self Insured) Premium	Self Insured	Self Insured	Self Insured	Self Insured	Self Insured	Self Insured	Self Insured	$ -	$ -
NSW Workers Compensation (Excess of Loss) Premium	[redacted]								
PLUS ES NSW Workers Compensation Direct (new) Premium	Self Insured	Self Insured	Self Insured	Self Insured	Self Insured	Self Insured	Self Insured	$ -	$ -
PLUS ES Victorian Workers Compensation Direct (new) Premium	Self Insured	Self Insured	Self Insured	Self Insured	Self Insured	Self Insured	Self Insured	$ -	$ -
Victorian Workers Compensation Direct Premium	Self Insured	Self Insured	Self Insured	Self Insured	Self Insured	Self Insured	Self Insured	$ -	$ -
Motor Vehicle Compulsory Third Party (CTP) Premium	[redacted]								
Motor Vehicle (including Claims Handling) Premium	[redacted]								
Crime Premium	[redacted]								
Corporate Travel Premium	[redacted]								
Mobile Plant & Equipment Premium	[redacted]								
Contract Works Material Damage Premium	[redacted]								
Marine Transit Premium	[redacted]								
Asbestos Removal Liability Premium	[redacted]								
Drone Hull & Liability Premium	[redacted]								
Grand Total	[redacted]								

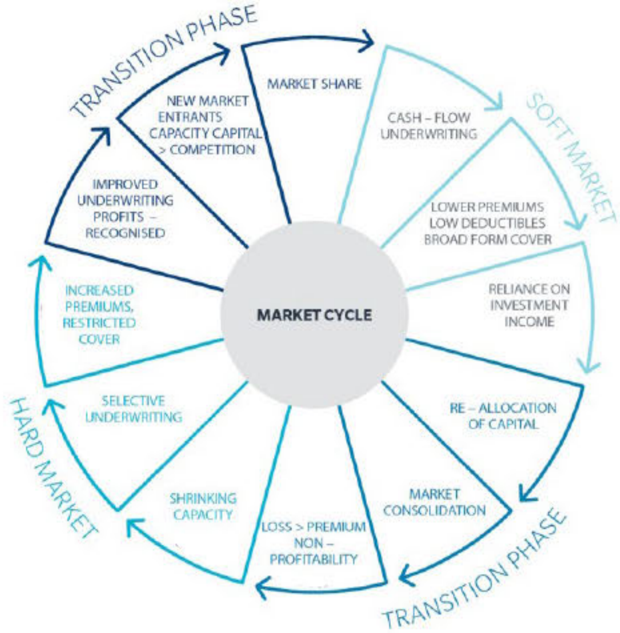
Table 19 – Forecast Annual Premium / Rate % Movement Year on Year from FY23 to FY29

Year	FY23 Actuals	FY24	FY25	FY26	FY27	FY28	FY29
General Liability (Bushfire) & Professional Indemnity	28%	10.0%	6.0%	7.5%	5.0%	3.0%	0%
Directors & Officers Liability	-10%	5%	2.5%	0%	0%	0%	0%
Industrial Special Risk/Property	14%	5.0%	2.5%	2.5%	-2.5%	-2.5%	-5.0%
Cyber	101%	50%	30%	25%	15%	10%	5%
NSW Workers Compensation Self-insured	Self Insured	Self Insured	Self Insured	Self Insured	Self Insured	Self Insured	Self Insured
Excess of Loss Workers Compensation (NSW)	86%	10%	10%	5%	5%	5%	5%
PLUS ES NSW Workers Compensation Direct (new)	Self Insured	Self Insured	Self Insured	Self Insured	Self Insured	Self Insured	Self Insured
PLUS ES Victorian Workers Compensation Direct (new)	Self Insured	Self Insured	Self Insured	Self Insured	Self Insured	Self Insured	Self Insured
Victorian Workers Compensation Direct	Self Insured	Self Insured	Self Insured	Self Insured	Self Insured	Self Insured	Self Insured
Motor Vehicle Compulsory Third Party (CTP)	-7%	5%	5%	5%	5%	5%	5%
Motor Vehicle	7%	5%	5%	2.5%	2.5%	2.5%	2.5%
Crime Rate Movement YoY (%)	20%	20%	10%	5%	0%	0%	0%
Corporate Travel	14%	5%	2.5%	2.5%	2.5%	2.5%	2.5%
Mobile Plant & Equipment	3%	5%	5%	5%	5%	5%	5%
Contract Works Material Damage	5%	5%	5%	5%	5%	5%	5%
Marine Transit	4%	5%	5%	5%	5%	5%	5%
Asbestos Removal Liability	0%	5%	5%	5%	5%	5%	5%
Drone Hull & Liability	114%	40%	30%	25%	20%	15%	10%

Insurance Market Update

Insurance Market Overview

We are currently in the "Hard Market" section of the insurance market cycle (as illustrated) as increasing premiums and selective underwriting and shrinking capacity is being witnessed on most accounts. However, given the Half Year 2021 insurer results (see page 30) it would appear that we could be moving into the "Transition Phase" where pricing on most lines of business has been corrected to a point whereby sustainable profits can be achieved and rating increases will moderate in future years eventually flattening out and potentially reducing as insurers begin competing for market share again. However, there is more underwriting discipline and management oversight embedded so pricing adequacy will be closely monitored. The persistent occurrences of large NAT CAT events in Australia creates considerable volatility and makes profitable underwriting very challenging for both insurers and reinsurers



It is not only the cost implications of premium increases. Insurers are also cutting back on coverage enhancements and generous sub limits that were offered during the soft market phase as they fought to maintain market share in a very competitive environment.

The alignment to technical underwriting models, which are used to justify pricing, terms and capacity, have weighed heavily on property insurers. This has led to limited competition in the market. Overlaid in this process is referral underwriting, where underwriters who were previously empowered to make their own decisions now must refer to their respective head office committees. This process places less emphasis on insurers' prior history and relationships with buyers, in favour of an approach that is rooted in technical adequacy and profitability for underwriters.

Notable coverage trends occurring in the current Hard Market include:

- Scrutiny by insurers in policy coverage with particular attention to removal and limitation of cover for infectious diseases, civil authority intervention coverages, construction coverages and cyber. The property insurance industry has provided at least some level of coverage for fire, explosion and machinery breakdown which results from a "computer virus" however, due to the rise in frequency and severity of such events, the industry has looked to remove coverage for any loss or damage that occurs from a malicious cyber act.
- Business interruption extensions, including non-damage triggers for customers and suppliers and public utilities (gas, electricity, and water) exposures are being more rigorously tested for validity and geographical scope.
- Natural catastrophe limits are also being reviewed/reduced and imposed for bushfire, wind, flood and hail, along with aggregated limits.
- Declared material damage values are a subject of focus, as insurers seek validation of accuracy and how current they are. In some cases, if valuations are more than three years old, insurers are applying underinsurance clauses (coinsurance/ average) as a penalty to insureds where the percentage of under-declaration is deducted from the loss. This imposition is only removed once insurers are able to sight recent valuations.

The overall presentation of risk is imperative, particularly when it comes to reviewing engineering reports. The positive attributes of a risk can clearly help underwriters differentiate and articulate clients' continued focus on risk management.

In respect of capacity, whilst most insurers' individual capacity has shrunk, there remains sufficient market capacity for most risks utilising a larger panel of insurers. However, obtaining that extra capacity to complete placements often sees the program being "split rated" as those insurers previously left off the program due to higher pricing requirements now needed.

The charts below show illustrate the financial challenges faced by the Australian insurance market. Whilst rating agencies such as Standard and Poor's and AM Best have (generally) not lowered the Insurer Financial Strength ratings of Australian insurers as they remain well capitalised, their financial results for 2020 remain poor. We do not have the 2021 results (they are typically released in March).

	December 2019	December 2020	Change (annual)
Gross claims expense	$38.1bn	$47.2bn	+23.7%
Underwriting result	$2.3bn	-$78m	
Investment income	$3.4bn	$1.7bn	-48.8%
Net profit after tax	$3.1bn	$35m	-98.9%

Source: Australian Pruden ial and Regulatory Authority, General Insurance Statistics for December 2020

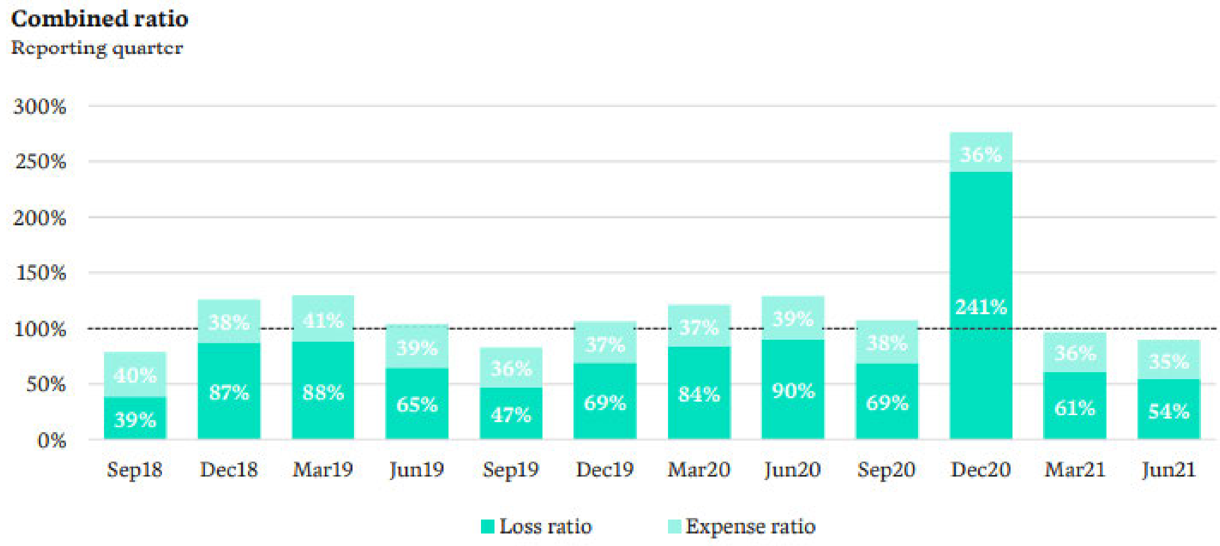
FIGURE 3c
Return on net assets

FIGURE 3d
General insurers' net loss ratios

"Industry profits remained suppressed for a second successive year, with a 3.2 per cent return on net assets tracking significantly below the 10-year average (Figure 3c). The primary driver of this result was significant provisioning for COVID-19 business interruption claims"

Source: Australian Prudential and Regulatory Authority, APRA 2021 Year in Review

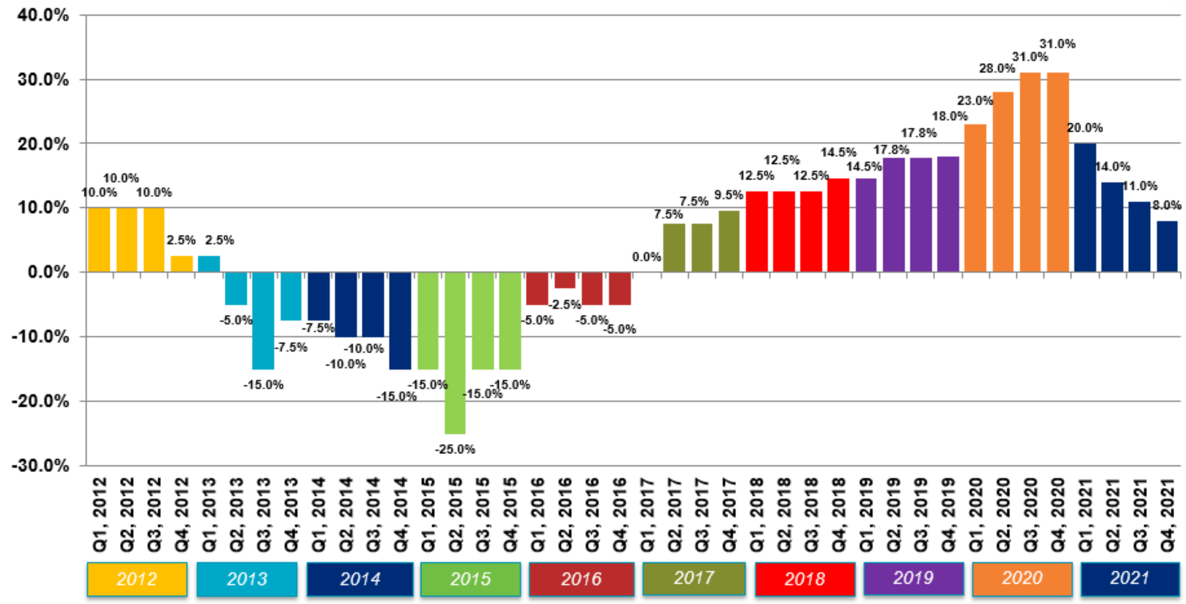
The following chart shows that the Commercial Property market in Australia has been non-profitable in 8 of the 12 quarters in the period September 2018 to June 2021. It illustrates the **Combined Ratio** (claims plus expenses divided by premium) of those insurers regulated by the Australian Prudential and Regulatory Authority.



Source: Taylor Fry RADAR 2021

Whilst the insurer expense ratio (commissions paid to agents / brokers, direct costs and overheads) associated with Commercial Property has reduced marginally over the past couple of years, the portfolio still requires a loss ratio better than 65% to return a profit. However, this analysis does not take into account the investment income earned by insurers from premiums paid. The analysis above is purely their underwriting result.

The below chart illustrates 10 years of **Property** rate movements in the Pacific. The cyclical nature of market is clearly illustrated.



Source: Marsh Pty Ltd

Global Property

Power

The final quarter saw continued slowing of rate rises for straightforward renewals with clean loss records and no NatCat exposures. An increasing number of clients experienced premium increases of less than 10%, and rate reductions were achieved on a few placements. This stabilizing of rate increases was underpinned by:

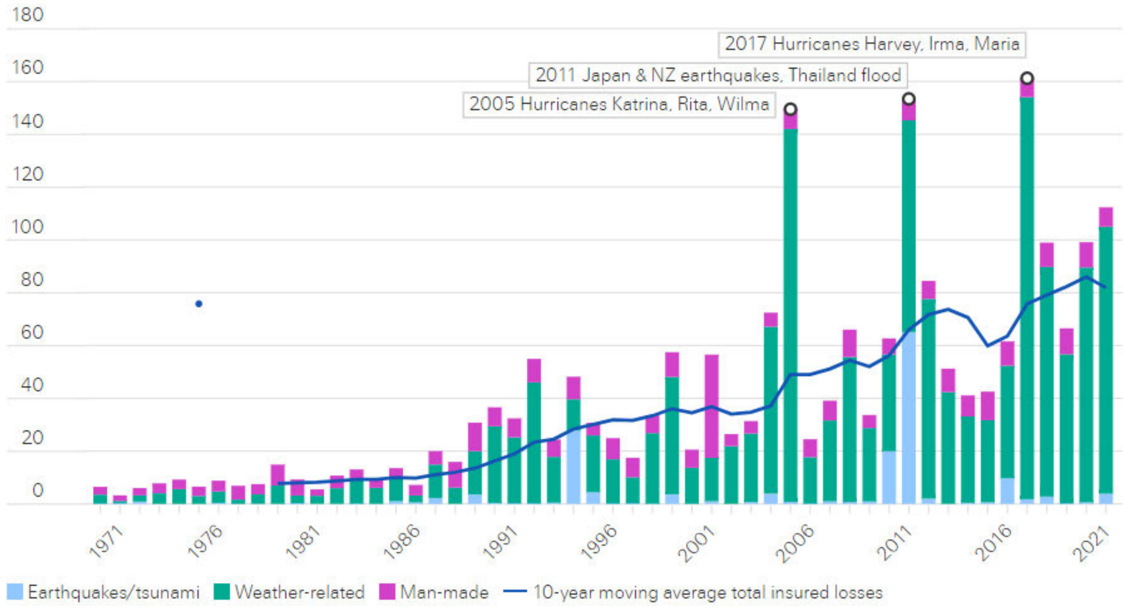
- Engagement of global insurance markets to increase access to capacity and reduce local market control.
- Tightening of terms and conditions by insurers resulting in companies retaining higher levels of risk.
- Emerging managing general agents (MGAs) adding capacity to the market.

This has resulted in the return of over-placement and signing issues (where oversubscription or more than 100% capacity leads to markets being signed to a lower amount than their written line) on some sought after accounts. Additionally, regional insurance markets are re-emerging as hubs, having witnessed a return to profitability of the London market over the past 18 months.

There has not been a change in the rating trend despite the number of large losses hitting the market earlier in the year, and the storms experienced in the US during the third quarter.

Standalone coal placements continued to experience challenges. As an increasing number of insurers have no appetite for such placements, regardless of risk quality or loss history, larger retentions and further rate increases are expected to persist. Insurers, and Lloyd's, are re-aligning underwriting in support of revised ESG policies, further reducing capacity, in some cases earlier than anticipated. With demand for capacity exceeding supply, rates are often considerably higher than expiring policies, and are felt more acutely by companies without an established relationship with the insurer. In our experience, restructuring of programs and a strategic approach using global insurance markets has become commonplace.

Catastrophic losses continue to dominate insurer concerns about pricing sustainability. Please refer to the chart below which shows catastrophe losses over the past 50 years. It illustrates the more frequent and higher value catastrophe losses. 2021 is estimated to be USD112bn, the fourth highest on record.



Source: Swiss Re Institute - 14 December 2021

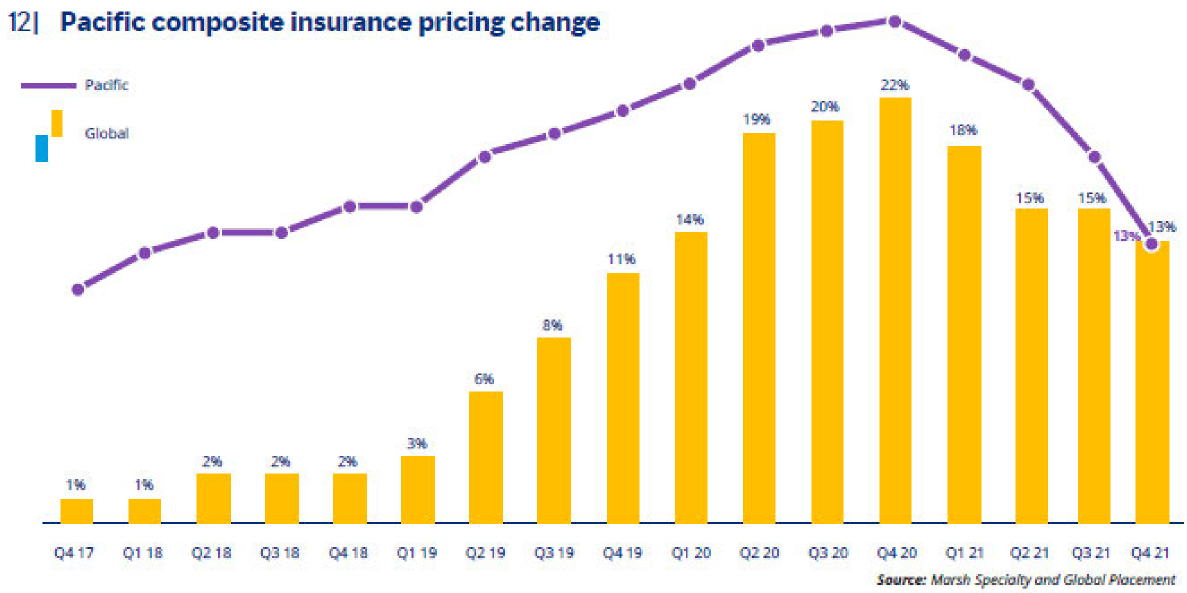
Like insurers domiciled in Australia, the major international insurers have also had challenges with their Combined Ratios. Only a few insurers were able to generate an underwriting profit in 2020 however all had swung to profit based on their half year 2021 results. However these do not allow for unaccounted COVID-19 related business interruption losses.

	Swiss Re Corporate Solutions	Allianz	CHUBB	AIG	ZURICH	XL GROUP	FM Global	QBE	HDI	LLOYD'S
Half Year 2021	92.7%	93.9%	85.5%	92.5%	93.9%	94.8%	70.5%	93.3%	95.9%	92.2%
2020	122.6%	117.2%	101%	103.7%	99.8%	101.7%	92.5%	109.5%	104.6%	110.4%
2019	107.8%	112%	90.6%	99.8%	96.4%	96.4%	81%	97.5%	104.9%	102.1%
2018	118%	102%	91%	115%	98%	99%	129%	95.7%	113.7%	104.5%
2017	133%	105%	95%	113%	101%	108%	130%	104.5%	112.6%	114%

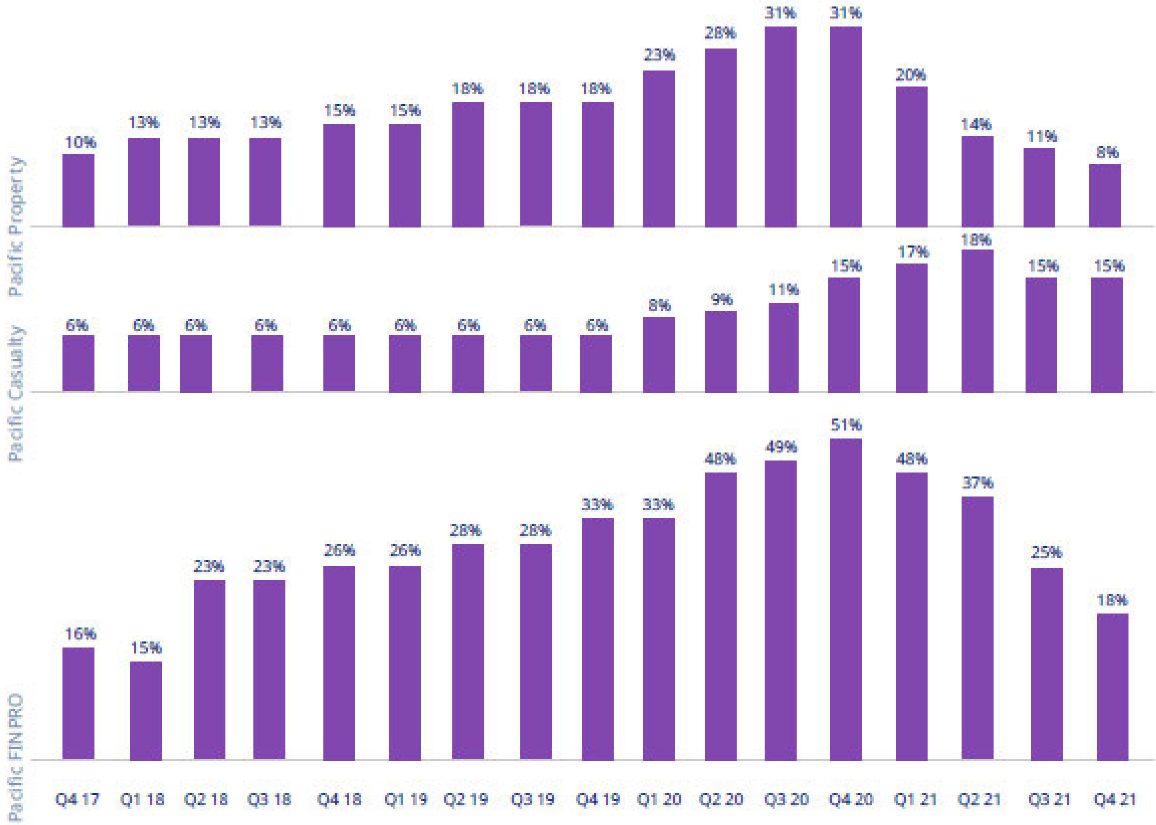
Combined Loss Ratios allow for Insurers expenses

Source: Marsh Pty Ltd

The following charts provides a snapshot of Pacific Pricing, where insurance pricing increased 13%, down from 17% in the prior quarter and the fourth consecutive in which the rate of increase slowed (see Figures 12 and 13). It was the first time since 2016 that composite pricing in the region was not higher than the global average.



13| Pacific composite insurance pricing change — by major coverage line



Source: Marsh Specialty and Global Placement

Property insurance pricing increased 8%. Elements of competition returned to the market for risks seen as high quality and/or loss free. Difficulties remained for high hazard industries, risks in CAT zones, and clients with poor loss records.

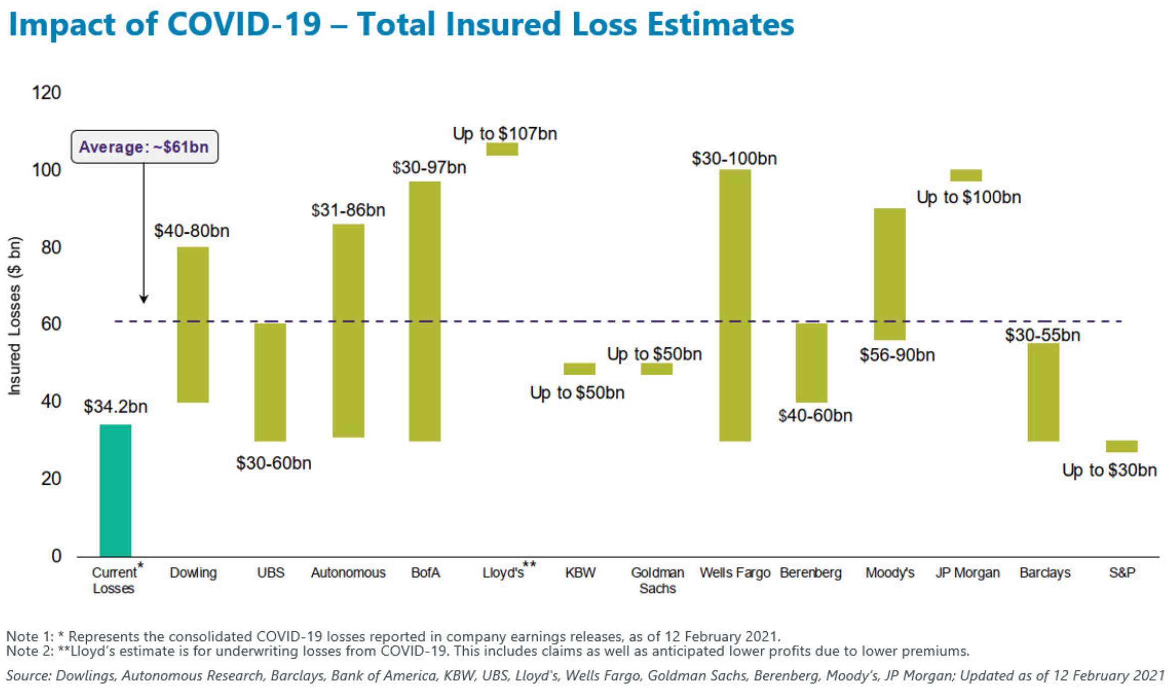
Casualty insurance pricing rose 15%, and remained challenging from a pricing perspective, although with slightly less pressure than the first half of 2021. Insurers' emphasis on reviewing policy wordings continued. Large programs underwent substantial restructuring of layers as underwriters changed appetite for excess layers.

Financial and professional lines pricing rose 18%, down from 25% in the third quarter, but marking 18 consecutive quarters of double-digit increases. The levelling out in pricing of D&O programs continued amid developing competition, particularly for excess layers, which resulted in improved pricing for some large clients. Professional indemnity premiums increased again and capacity tightened.

Cyber premiums increased dramatically, in line with the global trend; capacity shrunk and many programs were unable to purchase historical limits.

COVID-19

The true impact on the industry is still unknown as multiple jurisdictions deal with courts cases between insureds and insurers. Many organisations have to quantify the global insured losses. As you can see, they vary remarkably but the average is $61bn.

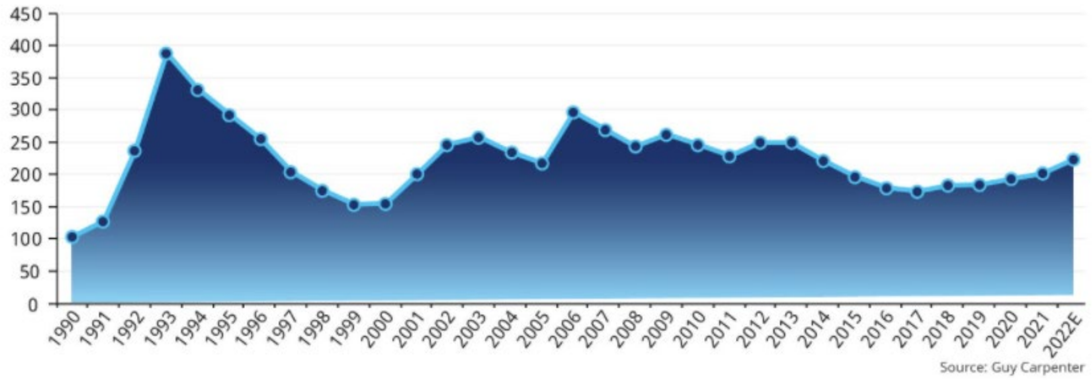


Global Reinsurance

On 1 January 2022, many global reinsurance programs were renewed. COVID-19 related claims, notable natural catastrophe losses and pressure on liability lines fuelled by social inflation and low interest rates all helped spur price increases across the board.

Global risk-adjusted property catastrophe reinsurance rates on-line **rose by an average of 9% (up from 6% in 2021)**, reflecting the biggest year-over-year increase since 2009, according to research by Howden.

The Guy Carpenter Global Property Catastrophe ROL index was **up 10.8 percent year on year**, at January 1 2022. This is up from 4.5% at January 2021. The index is a measure of the change in dollars paid for coverage on a consistent program basis and reflects the pricing impact of a growing (or shrinking) exposure base, evolving methods of measuring risk and changes in buying habits, as well as changes in market conditions. While pricing exhibited a wide range on a risk-adjusted basis, non-loss-impacted business was generally flat to up 7%, with loss-impacted up 10% to over 30%



Liability including Bushfire Liability

Due to significant capacity withdrawal from the sector, there has been a meaningful reduction in bushfire liability capacity, with such capacity offered at a significantly higher cost. The loss capacity is due to a number of factors, including:

- Increased wildfire/bushfire activity local and globally (see Bushfire Claims Examples later in this report), with insurer's unfavourable perceptions of this risk compounded by:
  i. Bushfire activity in Australia during the 2019/20 bushfire season
  ii. The fact that five of California's six largest fire events since 1932 were recorded in August and September of 2020 alone
- Non-fire related casualty losses being experienced locally and globally (particularly in the mining sector)
- Continued consolidation of insurers through merger and acquisition activity
- Increased focus by insurers on overall capital deployment, and
- Closure of Lloyds Syndicates and changes in insurer appetite.

We consider each key global market below:

Australian Markets

All markets are reviewing pricing, attachment points, terms and involvement as demonstrated by key markets HDI and AXA XL who significantly reduced their exposure to bushfire liability in recent years whereby:

- HDI reduced their overall capacity offering by circa 30% (up to $35m reduction in capacity offered by this market)
- AXA XL reduced their overall capacity offering by circa 35% (up to $25m reduction in capacity offered by this market)

Allianz Global Corporate and Specialty have ceased writing long tail business entirely in Australia. They were a large capacity provider (up to $100m) on utility risks

Zurich and Vero have ceased writing bushfire Liability and in some cases broader energy risks

AIG Australia is no longer writing bushfire liability. Australian clients can seek to access capacity through AIG Europe only, with an estimated maximum capacity of $30m available per client (total capacity from AIG Aus/Europe in 2019 was $75m+)

Other markets are seeking pricing increases up to 300% reflecting the volatility in this market segment.

London Markets

AIG Australia is no longer writing bushfire liability. Australian clients can seek to access capacity through AIG Europe only, with an estimated maximum capacity of $30m available per client (total capacity from AIG Aus/Europe in 2019 was $75m+)

Generali (a long term insurer in this sector) has decided to withdraw all capacity.

Tokio Marine Kiln is extremely reluctant to offer any capacity and when doing so pricing increases of over 200% are being experienced

Many syndicates have a reduced appetite for new business as they are obtaining increases / growth from existing business written within their quota. Their sentiment is to underwrite existing business profitably, and therefore obtaining new capacity is very challenging

Where capacity is offered, pricing is increasing with some markets being opportunistic.

Bermudan Markets

Capacity remains in Bermuda, however it comes at a punitive cost.

Bermuda insurers also utilise their own policy form (i.e. terms and conditions), which is generally more restrictive than the terms of cover from existing insurers.

Chinese Markets

While Chinese markets are continuing to expand their geographic footprint, particularly for Chinese connected business, capacity is still not being deployed in any significant way for casualty risks for non-Chinese owned businesses.

Summary

In summarising the market conditions, we estimate that **well over $500m in capacity has exited the Bushfire Liability sector since the beginning of 2019.** In today's market, insurers are scrutinising and revising their pricing models, with a much greater focus on adequacy of 'pay-back' period. This is resulting in upward pressure on premium outcomes, and downward pressure on overall policy limit for insureds in the sector.

Bushfire Claims Examples

Bushfire is not a hazard or phenomenon that is unique to Australia. In recent times, major bushfires/wildfires have occurred throughout the world, including in North America (with frequency in California), France, Germany, Greece, Indonesia, Italy, Poland and Russia. The consequences are typically measured in terms of hundreds or thousands of buildings destroyed, number of lives lost, and millions of dollars in property damage and resources spent fighting the fire.

The most recent 2019/20 bushfires in Queensland, New South Wales, Victoria, South Australia, Western Australia and the ACT have captured attention globally, with insurers monitoring the impact and the size and scale of the losses. In addition to utilities related liability losses, estimated insured property losses arising from the 2019/20 bushfire season now stand at $2.32bn.

While there have been a large number of bushfire losses over time in Australia, and there has been increased bushfire activity recently, the largest bushfire events from an insurance perspective (excluding the 2019/20 bushfire events) have included:

- Cudlee Creek and Yorktown fires (SA) in 2019. These fires burnt approximately 25,00 hectares including nearly 100 homes. Overall losses are still to be determined and a class action lawsuit has been issued.
- St Patricks Day Fire (VIC) in 2018, which burnt 400 km2 of land in Victoria's south-west farmland, wildlife reserves and property. Overall losses stand at $22.5m.
- The Black Saturday Fire (VIC) in 2009, which burnt 4,500 km2 of land, killed 173 people and destroyed some 2,000 homes. Overall losses A$1.7bn, insured losses A$1.07bn (in original values).
- The Ash Wednesday Fire (VIC/SA) in 1983, which burnt 5,200 km2, destroyed some 2,400 homes and killed 75 people. Overall losses A$335m, insured losses A$176m (in original values).

- The Tasmanian Black Tuesday Fires (TAS) in 1967, which burnt more than 2,600 km2 , destroyed some 1,400 homes and killed 62 people. Overall losses were A$35m, insured A$14m (in original values).

- The Black Friday Fire (VIC) in 1939, which burnt almost 20,000 km2, destroyed more than 700 homes and resulted in 71 fatalities.

The increase in frequency of bushfire events is contributing to a more selective approach from insurers in relation to where they will provide capacity, how much capacity they will provide, and the cost of that capacity.

Notable bushfire events outside of Australia have included:

- March 2010: Western Russia — Several hundred individual wildfires caused an estimated US$15 billion in damage.

- May 2016: Alberta, Canada — The Fort McMurray Wildfire destroyed at least 2,400 homes and buildings. With estimated losses of around CDN$4 billion, it is the costliest disaster in Canadian history.

- November 2018: Butte County, California, US - The Camp Fire was the deadliest and most destructive in California history. It caused at least 86 fatalities and destroyed 18,804 structures. It was also the world's costliest natural disaster in 2018 and is the most destructive wildfire in history with total damage of US$16.5 billion.

- 2020 US West Coast Wildfires: well over 2 million hectares have burned across California, Oregon, Washington State and neighbouring Idaho. Tens of thousands of people were forced to leave their homes and at least 27 people have died. At this early stage, the cost of these fires is expected to be similar to the 2018 California fires

Whilst catastrophic bushfire events such as those above gain attention globally, frequent 'smaller' bushfires events overseas still generate substantial losses to the insurance market (just as the smaller bushfire events do in Australia).

Insurers participating at primary layers of bushfire liability risks across Australia have been, and continue to be, significantly out of pocket as a result of bushfires over recent years, with insurance pay outs exceeding the premiums they have received by several fold. To quantify this, across the industry over the last decade or so, insurers participating at the lower attachment points on Australia electricity utility accounts have experienced claims incurred costs (i.e. actual and forecast pay outs) in the vicinity of $100 million across the sector versus premiums received of circa $25 million. The difference of approximately $75 million represents a material loss for these insurers which is not sustainable. This factor is a key contributor in the material re-rating of bushfire liability pricing.

Furthermore, the insurance market is at a level that, should another severe bushfire event occur, significant reductions in capacity will occur (on top of the reductions to date) such that limited capacity will be available, with such available capacity coming at a substantially increased cost.

Cyber

The cyber insurance market is experiencing a severe transitional period in 2021, with rates increasing more than 60 %, capacity decreasing, and underwriting scrutiny increasing.

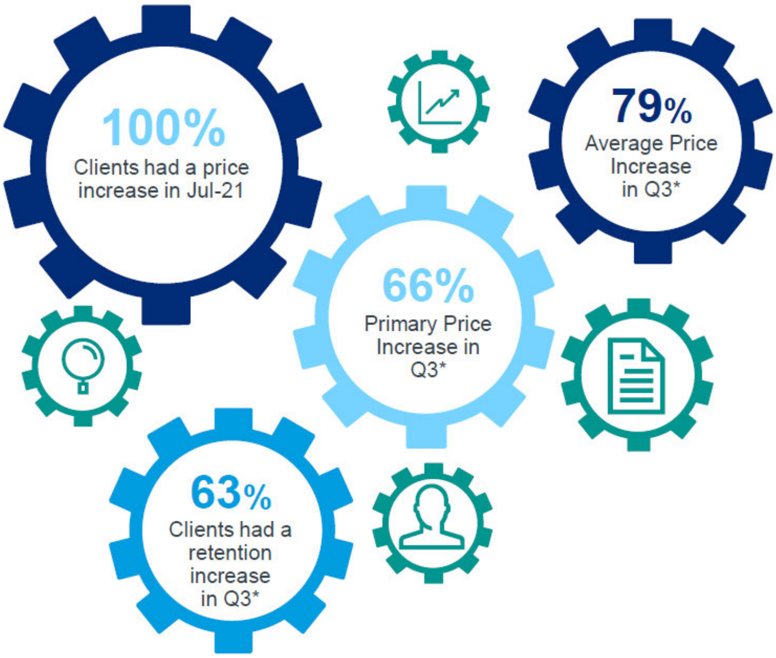
This change is driven in large part by a dramatic increase in both the frequency and severity of ransomware incidents in 2020 onward.

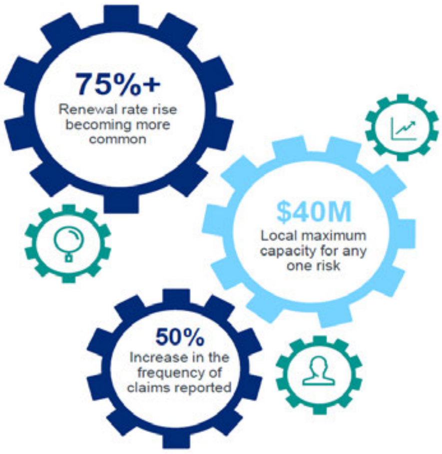
Aggregation risk is a key issue as insurers grapple with the increasing volume and cost of attacks, the increasing number of widespread attacks and the trickle down impacts of cybersecurity incidents in the supply chain.

The worsening loss ratios have also led to corrective actions, such as limiting capacity and co insurance requirements in order to maintain portfolio profitability.

Insurers are actively looking to manage capacity, and apply higher retentions ($ and time) in addition to narrowing coverage.

In Q3 2021, total programme cyber price increased by an average of 79% for all industries within Marsh's UK (retail and wholesale) client base.





Steady increase seen over the last few month, culminating in average price increases of 53%, 73% and 79% through May, June and July renewals.

Pacific Market saw sharp premium increases across the board 100%+ not uncommon across all industry. No consistency in pricing where local capacity reduced significantly and as a result highly reliant on London carriers. Bottleneck of submission in London is impacting the Pacific's ability to access additional capacity for new opportunities.

Differentiation is still possible, and the best way to maximise results in the market is to look carefully at the specific controls that lower the likelihood and impact of ransomware for clients

See the following page for the Marsh Q4 2021 Cyber Market Snapshot:

Cyber Insurance Market Snapshot

Favors Buyer | Neutral | Favors Insurers

Claims	Rates	Capacity & Attachment	Underwriting	Coverage
Overall claims frequency and severity remains high driven by ransomware. Mild improvement in some categories but losses continue. Ransomware, systemic risk & regulations continue to drive concern.	Losses have accelerated pricing pressure even on loss free accounts with good controls. Excess pricing is increasing faster than primary, compounding increases. Expect increases to continue into 2022.	Claims activity and future uncertainty have insurers aggressively managing global capacity & increasing SIRs. Distressed classes & large towers may see capacity challenges.	Full application & responses to ransomware Q's are required; carriers using 3rd parties to externally scan environments. Also expect inquiries on recent supply chain events, biometric info, & operational technology.	Many carriers scaling back ransomware-related coverages, or not offering coverage if poor controls. More scrutiny on contingent business interruption (systemic risk) and regulatory cover (biometric information).
+55% YoY Increase In Loss Ratios, indicating an industrywide underwriting loss for 2020	October 2021 Cyber Premiums: **+117%** Avg increase same limits **+181%** Avg increase all renewals* *All renewals include limits changes.	October 2021 Cyber Renewals: **31%** reduced limits **8%** increased limits **65%** increased SIRs Driven by insureds minimizing increases & less available capacity.	**12** Key Controls & Best Practices are now viewed by carriers as essential	in average BI / CBI waiting periods due to ransomware and supply chain attacks

List of Data Reviewed

Ausgrid provided Marsh with data:

- 2017 Insurance Due Diligence & Estimate Premiums
- 2019 D&O Placement Tower
- 2019 General Liability Tower
- 2020 Policies Summary, Towers
- 2021 Placement Towers
- 2021 Policies Summary
- 2022 Policies Summary, Towers, Historic Premiums
- Various Claims History Reports
- Property Assets Schedules and Various Risk Survey Reports
- Various Proposals and Underwriting Submissions
- Renewal Reports for the 2020-21 and 2021-22 period of insurance (issued by Ausgrid's insurance broker)
- Renewal Premium Calculation Table for 2022-23 (FY23)

Unless otherwise stated, all values in this report are nominal, i.e. values are expressed in the monetary terms associated with each future year.

Values in this report are rounded, and therefore may not total exactly across each category.

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