

PANDEMIC BRIEFING

COVID-19 Morbidity and Macro-Economic Considerations

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1. Purpose

The purpose of this document is to provide a list of considerations on the issues related to morbidity claims in life insurance products in light of the emerging COVID-19 pandemic. Because of the major impact of economic conditions on the level of morbidity claims, this document includes discussion of macro-economic matters. The document should be read in conjunction with other materials from the Actuaries Institute COVID-19 Working Group.

The term "morbidity" relates to Income Protection (IP), Total and Permanent Disablement (TPD) and Critical Illness (CI) products and benefits. In this document, these products are considered separately or together as appropriate.

The document considers impacts on claims costs under three headers:

- Direct – claims where COVID-19 is the direct cause;
- Indirect (economic) – claims costs arising from the impact of COVID-19 on the economy; and
- Indirect (other) – claims costs arising from the impact of COVID-19 on other factors.

2. Stakeholders

The interests of various stakeholders involved should be taken into consideration. These include:

- policyholders and members of group schemes;
- advisors and other intermediaries;
- trustees(for group insurance);
- shareholders/members;
- general public, including consumer expectations;

- regulators, including APRA, ASIC and ACCC;
- Federal and State governments;
- industry bodies and voluntary code of practice e.g. FSC, Life Insurance Code of Conduct; and
- competitors, whose own reaction to the pandemic will be relevant.

3. General filters

The prognosis for claims should be considered in the context of the nature and needs of the business. It will also be necessary to consider the *timing* of new claims (incidence and emergence).

Using IP as an example, product terms are important, both at a high level (e.g. Agreed Value v Indemnity and short-term v long-term benefits) and at a more detailed level (e.g. precisely what offsets are allowed for).

In general, Group business might behave differently from Individual business. For example, claims philosophy might be agreed with Trustees as part of negotiations over price and product design. Also, Group schemes will likely have some form of profit share mechanism.

Within Individual business, there will be differences such as those between Retail and Direct.

Reinsurers face different issues from the ceding companies.

4. Direct Impact

COVID-19 makes people sick. It is not clear that there is much difference in the infection rate by age – certainly for adults – but the impact is more likely to be severe for older people and those with existing poor health. Those with mild cases generally recover within 2-3 weeks, but more severe cases may last longer and may lead to death.

Importantly, from a morbidity perspective, some of those who recover from severe cases may suffer lasting effects on their health – including permanent lung damage or PTSD from having been in ICU. It is also possible that the virus or its treatment leads to other co-morbidities in the short term, such as heart attack or stroke.

At present (May 2020), indications are that symptomatic infections in the first wave will top out around 10,000 or below. Of these, perhaps 500 to 1,000 will have been hospitalised and maybe 40% to 50% of those will have been treated in ICU.

This has been achieved with "Level 3" control measures, which are starting to be wound back. It seems reasonable to expect either a second wave or a series of ripples, depending on how effective contact tracing and targeted isolation/lock-down measures turn out to be.

Actuaries will need to form their own view of future infection rates and the consequent impact on short-term and long-term morbidity. However, the policy intent seems to be to strike a balance, with a limited appetite for extra deaths but also a limited appetite for economic and social disruption.

a. IP

The direct impact on IP is expected to be low as infection levels should remain low and claimants need to satisfy the relevant IP disability definition for at least 14 days under most policies. There would, however, be some potential claims arising from long-term damage to physical or mental health.

In considering the potential direct impact on an IP portfolio, note that:

- the cost of a claim will be highly dependent on the waiting period;
- ancillary benefits may be payable within the waiting period;
- the insured's occupation will be relevant to claim cost;
- severity of illness may be affected by any underlying health condition of the insured; and
- higher mortality may reduce the cost of IP claims.

b. TPD

The direct impacts on TPD would include:

- claims arising in future from long-term physical or mental health issues among those recovering from severe cases; and
- a potential reduction in claims because some of those with severe co-morbidities die before being able to claim TPD.

c. CI

Those who are treated for COVID-19 in ICU may be eligible to claim, depending on the wording of their policies and the nature of the treatment.

Actuaries should also consider the possibility that COVID-19 or its treatment may directly trigger other claimable conditions such as coma, brain damage, cardiovascular complications and stroke.

Factors that may mitigate the claims impact include:

- a likely high rate of mortality among ICU admissions;
- a shift away from intubation and ventilation in COVID-19 treatment; and
- to the extent that COVID-19 severity is associated with a comorbidity, the possibility that that condition would itself have ultimately led to a claim anyway.

5. Indirect (economic) impact

Quarantine, self-isolation and general lock-down measures remove people from the active workforce and limit economic activity. Even in the absence of such measures, economic activity would be reduced because of general fear of becoming infected.

It is widely expected that the economic impact on morbidity claims costs will be far greater than the direct (sickness) impact. This is because of a clear and deliberate objective of avoiding excessive stress on the health system (especially hospitals and ICUs). At the same time, there is a desire to maintain a balance and not cause excessive economic damage.

a. Unemployment

It is generally accepted that reduced economic activity is associated with higher morbidity claims costs in general. Such studies as have been conducted (see the Resources section) tend to use the unemployment rate as a proxy for the state of the economy, finding that an increase in the unemployment rate is associated with an increase in claims costs.

Actuaries will need to form a view on the length and depth of the recession and the length and shape of the subsequent recovery. Experience shows that the unemployment rate generally falls more slowly than it has risen, but this situation really is unique and unprecedented. Certainly, different industries and occupations will be affected differently, if only because of the trajectory taken to reopen Australia. For example, most domestic business will be back to (new) normal well before international travel is widely available beyond a few select countries.

Many jobs that, in the past, would have been filled by permanent employees are now held by casual staff (e.g. café or retail staff) or the self-employed (e.g. delivery riders). Their jobs are insecure and many have already gone; but, in some cases, demand has increased.

Unemployment will be mitigated to some extent by the ability of people in many occupations to work from home – and by the increased demand for the industries and businesses that facilitate that.

Once the Actuary has reviewed available studies, considerations involved in applying the learnings to the insurance portfolio might include:

- how to allow for the impact of fiscal programs such as Jobseeker and Jobkeeper;
- how different it really is this time;
- whether (and how) to take underemployment and changes in the participation rate into account;
- how different occupations and industries are affected, having regard to the nature of employment (e.g. casual, permanent or self-employed);
- how to relate population impacts to the specific portfolio;
- how government regulations such as ASIC 633 for Group insurance (removal of ADL restriction for TPD) will affect the link between unemployment and overall claims cost; and
- what the prognosis might be – will it be an L-, U- or V-shaped recovery and how will that apply to different occupations and industries?

b. IP

Increase in claims incidence:

- “latent” claims, where the claimant already has reasonable grounds to claim but would not have claimed under normal circumstances – e.g. a tiler with bad knees but plenty of work;
- mental health claims likely to increase – caused by stress of current economic situation; and
- additional new claims for other reasons?

Increase in claims cost, either new or existing claims:

- impact of lower interest rates on value of claims;
- no job to go back to (or insecure job) making it harder to close claims;
- loss of opportunity for part-time work increasing the cost of partial claims;
- expected lower termination rates from rehabilitation programs' disruption; and
- less enthusiasm from employers to help to manage employees back to work or even encouragement of employees to stay on claim.

Also consider whether there are reasons to expect lower claims incidence or claims costs, at least for certain occupations or industries, as a result of economic impacts. Are there perhaps offsets to the extent that some claims have been brought forward – e.g. IBNR release has accelerated?

c. TPD

Increase in claims incidence:

- “latent” claims, where the claimant already has reasonable grounds to claim but would not have claimed under normal circumstances;
- mental health claims likely to increase – caused by stress of current economic situation;
- additional new claims for other reasons?

Also consider whether there are reasons to expect lower claims incidence or claims costs, at least for certain occupations or industries, as a result of economic impacts. Are there perhaps offsets to the extent that some claims have been brought forward – e.g. IBNR release has accelerated?

d. CI

Increase in claims incidence:

- are there any “latent” claims, where the claimant already has reasonable grounds to claim but would not have claimed under normal circumstances?
- are there any reasons for further new claims?

Also consider whether there are reasons to expect lower claims incidence or claims costs, at least for certain occupations or industries, as a result of economic impacts – although this seems unlikely. Are there perhaps offsets to the extent that some claims have been brought forward – e.g. IBNR release has accelerated?

6. Indirect (other) impact

Impacts of consumer / ASIC expectations of claims decisions include:

- subjective or “borderline” claims less likely to be declined in the face of community/government pressure; and
- impact from ASIC 633 request on changing TPD definition by removing ADL/ADW definition, which might increase TPD incidence further under COVID-19.

The wording of disability definitions may have an impact. For example, it is highly unlikely that a program such as JobKeeper was considered in framing the offsets for IP claims.

Difficulties in managing claims include:

- increasing claims volume and workload due to COVID-19, further compounded if claims assessors are directly affected by sickness;
- claims teams working from home and the potential impact on efficiency;
- impact on claims assessment process e.g. lack of face to face interaction with claimant and difficulty in sourcing medical evidence;
- difficulty in implementing early intervention and the claims recovery plan due to social distancing, and difficulty in applying rehabilitation and retraining;

Other potential impacts on claims because of lock-down measures (e.g. isolation/distancing, work from home, hand-washing) include:

- musculoskeletal injuries from sustained wrong posture while working from home;
- partially offset by fewer road accident or work injury claims;
- but potentially more domestic accidents and domestic violence;
- mental health impacts;
- less healthy habits (more alcohol, less exercise) in lock-down;
- delay in diagnosis due to strain on medical services, reducing capacity to take preventative action before a claimable event would otherwise have occurred;
- individuals avoiding medical practices and hospitals and thus not seeking preventative treatment and/or not attending regular screening; but
- reduction in other contagious diseases.

7. Resources

This section contains information about various resources that the Working Group considers to be useful in forming a view on the prognosis for morbidity claims.

a. Research

i. Economic impact on disability experience

The following papers may be useful for estimating the link between unemployment and disability experience.

[Khemka G., Roberts S. & Higgins T., *The Impact of Changes to the Unemployment Rate on Australian Disability Income Insurance Claim Incidence* \(2017\)](#)

MDPI Journal, Risks

The paper finds:

The results of the analysis of Australian DII claim experience and economic conditions over the period 1986–2001 reveal that claim incidence increases with increasing unemployment rates. On average, a 1% increase in the unemployment rate is associated with a 2.3% increase in claims for males and a 5.7% increase in claims for females, though the increase among females appears concentrated in the 15–44 years old age group. This observed counter-cyclical pattern of claim incidence is consistent with findings reported for the United States and for South Africa.

[Berry R. & Collier J., *Morbidity Experience & Economic Environment Correlations* \(2008\)](#)

Actuaries Institute, Financial Services Forum 2008

This is a presentation rather than a formal paper. From the conclusions in relation to the impact of unemployment on TPD:

Higher unemployment and long term unemployment rates appear to significantly increase the prevalence of TPD claims (evidenced by large positive regression parameters) and appear to explain a significant proportion of the variability in the injury rate (evidenced by high R-squares).

There is no description of the relationship in terms of x% claims increase for y% unemployment increase. It is also worth noting that the study covered the period

from December 1991 to December 2005, when the unemployment rate fell from about 10% to about 5%.

[Maestas N., Mullen K.J. & Strand A., *Disability Insurance and the Great Recession* \(2015\)](#)

This paper studied US social security disability insurance claims

For [October 2006–December 2012], we find that SSDI applications increased by 1.3 percent for each percentage point increase in the unemployment rate—significantly different ($p < 0.01$) from the estimated 3.1 percent effect over the entire 1992–2012 period. However, because the increase in the unemployment rate was so much greater in the Great Recession than in previous recessions (5 percentage points in the Great Recession vs. 2 percentage points in the 2001 recession, for example), the estimated overall increase in SSDI applications was still larger during the Great Recession. Specifically, we estimate that the Great Recession increased SSDI applications by 6.7 percent ($= 5 \times 0.0134$) at its peak in October 2009.

[Service D. & Ferris S., *Disability Experience and Economic Correlations* \(2001\)](#)

Actuaries Institute, Biennial Convention 2001. Concurrent 5B

The paper uses insured claims incidence and claim duration data from published reports of the Institute of Actuaries of Australia Disability Committee, as well as disability pension data, covering the period 1974 to 1995. The authors applied a forward stepwise regression process to analyse changes in the experience against 12 economic variables.

The results were:

Disability Data Set	Economic Variables	p value	R ² value	Significance
Incidence	Participation rate Total bankruptcies	0.0024	0.604	HIGH
Claim Duration – 2 weeks	Long-term unemployment Total bankruptcies	0.0015	0.886	VERY HIGH
Claim Duration – 1 month	Long-term unemployment	0.0232	0.545	MODERATE
Govt disability pensions	Consumer confidence Real per capita GDP Total bankruptcies	~ zero	0.951	VERY HIGH

This analysis was quoted in the Berry & Collier presentation.

[Society of Actuaries' Individual Disability Experience Committee, Analysis of Claim Incidence Experience from 2006 to 2014 \(2019\)](#)

[Group Long-Term Disability Experience Committee, Society of Actuaries, 2018 Group Long-Term Disability Experience Study Report \(2018\)](#)

[Hall R.D. \(Society of Actuaries\), Mental Health Trends and COVID-19 \(2020\)](#)

ii. Direct impact of COVID-19 on morbidity

The following papers may be useful for looking at the direct impact of COVID-19 on morbidity.

- [Verity R. et al, Estimates of the severity of coronavirus disease 2019: a model-based analysis \(2020\)](#)
- [Wang T. et al, Comorbidities and multi-organ injuries in the treatment of COVID-19 \(2020\)](#)
- [Arentz M. et al, Characteristics and Outcomes of 21 Critically Ill Patients With COVID-19 in Washington State \(2020\)](#)

b. Economic data

i. ABS/RBA

[ABS launch page for COVID-19](#)

This site contains useful labour force statistics including weekly payroll data by sector

[RBA](#)

The RBA publishes useful information including the monthly Statement of Monetary Policy which provides views on the economic outlook for Australia

ii. Commonwealth Government of Australia

The government has many sites dedicated to its response to COVID-19. The following ones are useful to understand what economic and workforce responses it is putting in place:

[Treasury](#)

[Federal Government](#)

[Australian Tax Office](#)

iii. Selection of freely available economic forecasts and analysis

[Bankwest Curtin Economics Centre](#)

[Deloitte Access Economics](#)

[Westpac Bank](#)

[NAB](#)

iv. International unemployment statistics

[OECD Unemployment Rate](#)

Updated monthly with a lag of one month for most countries

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