

PANDEMIC BRIEFING

Life Insurance implications of Coronavirus (COVID-19)

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Objective and Scope

This note is aimed to assist actuaries advising life insurers or reinsurers on the potential implications of the COVID-19 pandemic. The note considers a range of implications relating to pricing, policy liabilities, capital management, valuations, underwriting, and product design.

The note will be expanded and updated as future developments occur and additional data becomes available.

The note has been developed by the Life Insurance Working Group formed as part of the Institute's COVID-19 Working Group.

Whilst reference is made to life insurers throughout the note, most of the considerations are equally relevant to life reinsurers.

Many of these issues are interdependent with the most obvious, and potentially significant, being the potential impact of an economic downturn, and associated rise in unemployment, business failures and financial hardship, on disability income claims experience. The note sets out each of the areas of consideration and the potential implications for life insurers.

The note is structured to set out a summary of potential impacts and considerations in respect of COVID-19 on the financial performance, capital position, management and operations of life insurers. Possible implications for actuaries are identified alongside each issue. In relevant sections, **red text** highlights activities currently being undertaken by the working group to develop further detailed discussion notes for key areas.



Item	Scope & Considerations	Implications for Actuaries & Working Group Actions	Dependencies
Assumptions: Mortality & Morbidity			
Mortality	<p>Significant global data is now available relating to rates of infection, severity of infection (ICU admission) and mortality resulting from COVID-19.</p> <p>This data varies widely by country being impacted by many factors including accuracy of reporting, level of testing (and detection of asymptomatic infections), age standardisation and scope/timing of the response in each country.</p> <p>Globally the Australian response is recognised as one of the most successful in controlling infection rates and mortality. The significant increase in COVID-19 mortality rates above age 65 suggests that the average mortality rate for insured lives would be expected to be significantly less than population rates due to the significantly lower age profile. However some insurers may have some products with exposure skewed to these age groups (e.g. funeral plans, annuities, traditional participating portfolios).</p> <p>With less than 100 deaths in Australia at the date of this note, the overall direct impact on insured life mortality rates may not be material. However the economic impacts and lock-down/social distancing measures may unfortunately result in an increase in suicides.</p> <p>As lock-down restrictions are wound back the potential impact of increases in infection rates should also be considered.</p>	<p>Actuaries should be aware of data relating to the development of COVID-19 in setting mortality assumptions.</p> <p>The working group intends to maintain a summary document outlining key data sources/research:</p> <ul style="list-style-type: none"> • Australia statistics • Range of outcomes globally to inform best/worst case scenarios • Mitigation/containment measures for key countries and effectiveness • Impacts of relaxation of lock-down measures for different countries. <p>This document will be periodically updated as new information becomes available.</p>	<p>Best estimate assumptions</p> <p>Capital risk margins</p> <p>Stress & scenario testing</p> <p>Data</p>
Morbidity Trauma	<p>Trauma experience may be <i>directly</i> affected by COVID-19 through:</p> <ul style="list-style-type: none"> • incidence of ICU claims where this is included as a trauma benefit • co-morbidities - potential increase in claims for other trauma conditions due to complications arising from COVID-19 infection. <p>Increased mortality rates may have some offset to these.</p> <p>Trauma experience may be <i>indirectly</i> affected by COVID-19 through:</p> <ul style="list-style-type: none"> • onset of an insured condition because of inability or other failure to attend medical consultations or to obtain preventative treatment 	<p>Actuaries should consider emerging data on co-morbidities or associated health issues relating to COVID-19.</p> <p>The working group will alert actuaries to any significant</p>	



	<ul style="list-style-type: none"> • delayed diagnosis of an insured condition because of inability or other failure to attend medical consultations • there is some evidence that financial stress and unemployment can lead to an increase in heart attacks • an increased willingness to claim, owing to adverse personal financial circumstances. <p>As noted above, given low infection rates in Australia and the age profile of insured lives for trauma, the direct impact on incidence rates may not be material. However, the indirect impact will reflect the extent of lock-down and the flow-on impact on the economy.</p>	<p>data it becomes aware of through the pandemic resource centre.</p>	
Morbidity – Income Protection	<p>Income protection (IP) claims experience may be <i>directly</i> affected by COVID-19 through short-term claims resulting from COVID-19 infections and complications.</p> <p>IP claims experience may be <i>indirectly</i> affected by COVID-19 through:</p> <ul style="list-style-type: none"> • the impact of economic conditions and unemployment on individual propensity to claim and to stay on claim • the loss of opportunities to work part-time during rehabilitation, increasing the cost of partial claims and extending the length of many claims • the prevalence of stress and mental health issues, leading to increased claims • the inability to work because of self-isolation due to health conditions that would otherwise not prevent work • the impact of lock-down (etc) on the ability to manage claims effectively or deferral of treatment for other conditions. <p>The indirect impact is expected to be the more significant. However, this impact may vary widely and needs to be considered for different client cohorts such as:</p> <ul style="list-style-type: none"> • industry/sector groups • employment status (permanent employee, self-employed/small business owner, contractor) • distribution channel (group/retail/direct) • definition of disability • product type (long term/short term benefits, indemnity/agreed value) 	<p>Actuaries should consider potential direct and indirect impacts of COVID-19 and the resulting implications for potential future claims costs.</p> <p>The working group intends to develop a more detailed discussion document outlining key consideration and existing/ emerging data sources & research and potential implications for morbidity experience. This document will be periodically updated as new information becomes available.</p>	<p>Best estimate assumptions</p> <p>Capital risk margins</p> <p>Stress & scenario testing</p> <p>Data</p> <p>Claims management process</p> <p>Economic assumptions</p>



	<ul style="list-style-type: none"> • rate guarantee period for group insurance. <p>There is some historical data and research relating to the impact of economic downturns and recession on morbidity claims experience. However, the unique nature of the current circumstances means that significant judgment will be required in using this material.</p> <p>In assessing the reliability of available data for estimating potential ranges of outcomes many factors will be relevant, including:</p> <ul style="list-style-type: none"> • consideration of government mitigation actions (Jobkeeper/Jobseeker benefits) • any changes to claims philosophy driven by capacity and reputational considerations, potentially leading to lower decline rates and longer payment periods • specific considerations for certain risk groups. 		
Morbidity – TPD	<p>It seems likely that there will be very little <i>direct</i> impact on TPD claims cost.</p> <p>As for income protection, the <i>indirect</i> impact will largely reflect the economic impacts of COVID-19, in particular the resulting likely increase in stress and mental health related conditions. There is also a suggestion that COVID-19 may lead to long term lung damage. As the emergence of any increase in TPD claims may be expected to take longer than for income protection products the income protection experience may provide a relevant indicator to inform TPD assumptions.</p>	Actuaries should consider potential impacts of COVID-19 and the resulting economic impact of potential future claims costs.	
Other benefits	<p>COVID-19 could also impact:</p> <ul style="list-style-type: none"> • Unemployment benefits where issued by life companies • Premium waiver benefits included in policies that are triggered by unemployment • Other contractual or discretionary hardship provisions • Other income protection ancillary benefits that are paid within the waiting period. 	Actuaries should consider whether changes to assumptions in respect of any material exposures are required.	



Assumptions: Economic & Other			
Economic – Macro impacts and trends	<p>The macro-economic impacts of COVID-19 may have significant implications for life insurers. Relevant assumptions need to be determined to apply for actuarial projections including for valuations, stress testing and pricing. These economic assumptions may include:</p> <ul style="list-style-type: none"> • Unemployment rates: <ul style="list-style-type: none"> • by sector/industry/occupation groupings • employment type (e.g. casual vs permanent employees) • by income levels and impact of government stimulus payments • consideration of under-employment • Low (or potentially negative) interest rates and yield curves • Impact of liquidity on yields • Low inflation or deflation • GDP growth – severity and duration of impact/speed of recovery. <p>The economic assumptions need to be projected into the future where they may at some point revert to long term assumptions.</p> <p>Estimates of economic assumptions and trends may have implications for many including:</p> <ul style="list-style-type: none"> • Morbidity claims incidence and termination rates • Persistency experience • New business volumes • Investment returns and investment strategy. <p>As there is a strong link between the macro impacts and other assumptions consistency between all the assumptions should be maintained.</p> <p>Existing actuarial models may not fully reflect the potential economic impacts of COVID-19 without further adjustment.</p>	<p>Consideration should be given to derivation of economic assumptions and scenarios and the implications for actuarial projections. The uncertainty in the economic impacts both in severity and recovery period may be illustrated through scenario testing.</p> <p>The working group will develop further detailed discussion notes relating to COVID-19 economic impacts and implication for actuarial assumptions and projections.</p>	Best estimate assumptions Capital risk margins Mortality Morbidity Persistency New business
	Economic – Asset class assumptions	<p>Disruption to investment markets resulting from COVID-19 has been significant including marked increases in market volatility and credit spreads. These economic impacts also have broader implications on asset and commodity markets, and can produce short-</p>	



	<p>term disruptions (for example near term WTI oil futures have been observed to go negative).</p> <p>The current volatility and short term impacts may have implications for economic assumptions, capital calculations and investment strategies. Relevant considerations may include:</p> <ul style="list-style-type: none"> • Adoption of economic assumptions – long term vs short term • Potential rebasing of asset values (in particular for illiquid assets) • Volatility of capital positions due to volatility in economic benchmarks and assumptions • Allowance in capital and target surplus for economic shocks • Identification of issues arising from economic shock (e.g. countercyclical considerations for credit spreads, default risk, counterparty exposures, asset valuations, risk of sovereign downgrade and flow-on impacts) • Implications for participating portfolios and products with investment guarantees or other asymmetric risks. 	<p>conditions and volatility including how assumptions are set from relevant market benchmarks. Investment strategies and management of investment guarantees or bonus declarations may need review.</p> <p>The working group will develop further detailed discussion notes relating to COVID-19 economic impacts and potential implication for actuarial assumptions and projections.</p>	
Persistency	<p>Consideration of impacts on persistency of COVID-19 and the resulting economic impacts:</p> <ul style="list-style-type: none"> • Affordability issues leading to lapses and potential selective lapse impacts. Impacts may vary by benefit/product, channel and demographic groups • Impact of any planned hardship measures, including: <ul style="list-style-type: none"> • those included in current policy terms (e.g. unemployment premium waivers) • additional actions at a company level (e.g. premium holiday or deferral) consideration may be given to community/regulator expectations in respect of hardship responses <ul style="list-style-type: none"> • assessment of optionality in recommencing premiums and cover. • Group insurance – impact of the early release provisions on insurance cover attached to low balance accounts. 	<p>Actuaries should consider adopting assumptions relating to:</p> <ul style="list-style-type: none"> • elevated lapses for a period of time • potential selective lapse impacts • costs of any proposed hardship measures • elevated lapses following any re-pricing of existing portfolios. <p>The working group will develop a discussion note containing considerations for setting Covid-19 persistency assumptions for life insurance products.</p>	<p>Mortality</p> <p>Morbidity</p>



Expenses	<p>Consider impact on unit cost assumptions:</p> <ul style="list-style-type: none"> • Acquisition cost overruns due to lower new business • Impact on split between acquisition/maintenance expenses due to changes in persistency and new business volumes • Any long terms cost base impacts due to changed working conditions and infrastructure (e.g. on-shoring of currently off-shore/outsourced functions, changes to technology) which may also impact the split between fixed and variable expenses • Future expense inflation rates. 	<p>Review of unit costs may consider the impact of COVID-19 on business operations and volumes and future expense inflation.</p>	<p>Economic assumptions</p> <p>Business operations</p>
Business Operations			
Underwriting & New Business	<p>COVID-19 may be expected to impact on life insurer's new business and underwriting. Immediate measures may include a review of guidelines or risk categories to reflect the insurers underwriting philosophy in respect of COVID-19 risk. Insurers may consider withdrawal or restriction of some benefits (e.g. unemployment). Considerations may also be required to regulator/government/community expectations and commitment to industry bodies when reviewing underwriting guidelines (e.g. front line medical staff can still apply for life insurance cover during COVID-19).</p> <p>New business volumes may be impacted by two opposing factors:</p> <ul style="list-style-type: none"> • there may be an increase due to risk concerns from uninsured/underinsured lives • there may be a reduction due to economic impacts and social distance/lockdown restrictions. <p>Impacts may be expected to vary by distribution channel (group/retail/direct) and target demographic (age/occupation/industry sector). The average quality of new business written may also be impacted (even without any changes in underwriting practices).</p> <p>Advisers, particularly once restrictions are lifted, may focus on insurance products rather than investment products (as occurred during the GFC). This may lead to higher sales, but to a mix of lives that may be different from that of the existing portfolio.</p>	<p>Insurers should consider and monitor the impacts on new business by channel and by customer segment. Impacts of underwriting philosophy with respect to COVID-19 may be considered.</p> <p>Insurers should assess the suitability of changed underwriting practices from the perspective of "normal risk" lives in each pricing pool. Where appropriate, any lives admitted due to relaxed underwriting practices should be tagged and the impact of the claims experience of these lives on total pool claims experience monitored.</p>	Expenses



Re-pricing existing portfolios	<p>Assumptions around re-pricing of existing business should be considered (e.g. in respect of management actions assumed for capital purposes). Planned re-pricing activity to reflect non-COVID-19 'business-as-usual' portfolio remediation may be delayed due to financial hardship considerations.</p> <p>Re-pricing may be considered in response to potential impacts of COVID-19 either directly through increased claims costs or indirectly through higher lapses or reduced membership of group insurance arrangements.</p> <p>The P&L and capital implications of any re-pricing and the timing of implementation should be considered.</p>	<p>Actuaries should consider implications in pricing advice relating to different products and distribution channels and appropriate allowance for future re-pricing in best estimate reserves or capital reserves.</p>	<p>Persistency</p> <p>Mortality</p> <p>Morbidity</p> <p>Best estimate assumptions</p> <p>Capital risk margins</p>
Claims management process	<p>COVID-19 is expected to lead to increased claims volumes particularly in respect of stress and mental health related conditions. Estimates of the expected claims volumes based on actuarial models may help with business planning and assessment of a life insurer's capacity to manage these claims.</p> <p>Consideration may also be required relating to the possible impacts of higher claims volumes on average claims costs, including:</p> <ul style="list-style-type: none"> • Capacity of claims teams to manage increased volumes of claims may impact on the ongoing management and termination experience of claims in payment • Return to work and rehabilitation strategies may be delayed due to the employer business interruption, other economic impacts and restrictions on face-to-face medical specialist consultations • Consideration may be given to community/regulator/government expectations (e.g. pressure to assess large numbers of complex claims over a short time period may require a different approach to initial assessment) • Clarity and consistency in management of any claims from policies that have a policy pause • There may be other temporary changes to claims processes for example definition of income for indemnity income protection claims where there has 	<p>Consider any need to adjust claims assumptions to reflect operational impacts on the claims management process.</p>	<p>Morbidity</p>



	been a reduction due to COVID-19 and offset treatment of government stimulus benefits.		
Operations impacts	<p>Companies may experience impacts of COVID-19 on many aspects of their operations including:</p> <ul style="list-style-type: none"> • Call centre volumes relating to policy enquiries • Anticipated increase in claim volumes (particularly disability income) • Heightened operational risk from changed work environment (work from home) and associated technology changes • Potential workforce impacts from COVID-19 infection leading to higher absence rates • Requirement to review outsourcing arrangements, for example where off-shore arrangements have gone off-line requiring activities to be brought back on shore. <p>Some of these items may directly impact assumptions, others may be considered in the setting of risk or capital margins.</p>	Consideration may be given to potential operations impacts and implications for expenses, risk profiles and capital requirements.	Expenses
Reinsurance	<p>Consideration of reinsurance impacts:</p> <ul style="list-style-type: none"> • Coverage under existing arrangements (including pandemic coverage or exclusions) including any mismatch in exclusion clauses between the life insurer and reinsurer • Potential concentration issues if claims increase (e.g. reinsured income protection claims in course of payment reserves) or other capital implications • Potential changes to reinsurance structures (e.g. for new business, renewal of pandemic cover) • Counterparty risk (i.e., downgrade of credit rating for reinsurer) or parent entity • Managing consistency of the pricing for the reinsurance and office premium rates (e.g. repricing, alongside support of premium waivers etc.). 	Consideration may be needed of COVID-19 impacts on reinsurance arrangements.	Capital & Risk Management
Product Design	Life insurers may consider temporary or permanent withdrawal of some products from sale or limitations on particular benefits.	The implications of COVID-19 on product design may be considered.	Mortality Morbidity



	<p>In response to COVID-19, life insurers may temporarily waive or relax the current product design/terms to cater for the evolving situation e.g. waiving pandemic exclusion, "stood down" vs. "redundant" for involuntary unemployment benefit, etc.</p> <p>Life insurers are currently reviewing disability income product designs. The impact of COVID-19 on claims experience and claims management approaches may provide insights to assist this review or influence future changes for other products/benefits.</p>		
Assumptions, Policy Liabilities and Capital & Risk Management			
Best estimate assumptions	<p>There is expected to be need for adjustments to best estimate assumptions to reflect the items identified above where considered material. Any review would need to consider both the severity and the potential time periods over which different assumptions may apply (e.g. the periods over which disability income incidence rates may be elevated or termination rates lower).</p> <p>Given the unprecedented implications of COVID-19 there is necessarily a large degree of uncertainty in key assumptions. Scenario testing to quantify impacts of different assumptions can help illustrate the degree of uncertainty in key assumptions.</p>	<p>Consideration should be given to the need for adjustments to best estimate assumptions for COVID-19.</p> <p><i>The working group will develop a more detailed discussion note on approach companies may adopt for setting best estimate assumptions.</i></p>	
Capital margins and other PCA considerations	<p>COVID-19 may have implications for capital margins and methodology in areas where there is discretion for the Appointed Actuary (including management actions). A survey of intended changes to practice has been circulated to life companies.</p> <p>Consideration of potential areas where current capital standards may be giving unanticipated outcomes or areas where the interaction between regulatory capital and internal target surplus margins may be resulting in capital levels that are not consistent with target levels of sufficiency. An example may be if allowance is made for a 1 in 200 pandemic shock in capital margins in addition to any provision already reflected in best estimate assumptions.</p>	<p>Reviews of risk margins and capital methodologies should consider the impacts of COVID-19.</p> <p><i>The working group will develop a more detailed discussion note on capital risk margin and methodology considerations. This will consider the feedback from the risk margin survey.</i></p>	



	Insurers may consider the effects specific to their business mix, interactions between insurance and economic drivers, and varying long term and short-term views. Further they may monitor experience more frequently as more data relating to COVID-19 becomes available.		
Target Surplus Policy & ICAAP	<p>An insurer may consider whether its ICAAP and target surplus policy remains appropriate and effective. Part of the purpose of companies ICAAP and target surplus is to manage severe events (e.g. COVID-19). Considerations may include:</p> <ul style="list-style-type: none"> • Review of current capital plans and scenarios for appropriateness • Review of management action triggers and frequency/reliability of monitoring. This may consider if specific additional metrics are required or existing metrics reported more frequently (e.g. cause of claims or frequency of claims reporting) • Review of trigger points and management actions and expected/accepted position relative to target surplus 'hard'/'soft' floors. This may consider if trigger points and the resulting actions remain appropriate. Are all actions (e.g. de-risking, re-pricing, sourcing additional capital) possible and effective in the current environment? • Consideration may be given to allowance for countercyclical offsets (within target surplus or vs PCA) • Review of capital forecasting assumptions and potentially methodology. 	<p>Actuaries may consider whether there is potential to improve the effectiveness of the ICAAP in response to specific risks and impacts of COVID-19.</p> <p>The working group will develop further detailed discussion notes relating to COVID-19 implications for ICAAP and capital management.</p>	
Risk Management Framework	<p>In addition to the ICAAP there may be implications for the broader risk management framework including:</p> <ul style="list-style-type: none"> • Adequacy of monitoring & controls given changes in risks and changes in business operating processes (e.g. remote working or changes to outsource arrangements) • Effectiveness of assumed risk mitigants • New/changed/heightened risks • Focus of available resources on immediate high risk issues, resulting in potential capacity constraints in some areas • Changes in the governance structure, for example additional delegations from the Board to management 	Actuaries may provide input or recommendations in respect of the effectiveness of the risk management framework.	



	<ul style="list-style-type: none"> • Implications if operating outside of risk tolerances. 		
Scenarios/Stress Testing	<p>Given impacts of COVID-19 that have already emerged and the significant uncertainty relating to the future developments and the ultimate path to recovery stress and scenario testing may require review. This may consider:</p> <ul style="list-style-type: none"> • Do the current scenarios still reflect an appropriate range of stresses given the current environment and potential future developments? • Are interdependencies between factors appropriately reflected (e.g. economic impacts & claims rates, persistency & selective lapses)? • Are stressed assumptions consistent with any changes already adopted for best estimate assumptions • Are management actions assumed in current scenarios still applicable and, if so, as effective as assumed? 	<p>Actuaries may consider whether current stress and scenario tests appropriately reflect current risks. Actuaries may assist companies to develop scenarios relevant to the COVID-19 as required.</p>	
FCR	<p>Financial Condition Reports for 2020, and beyond, should document the significant issues facing each company in respect of COVID-19 along with the consideration of these issues by the Boards and management of life companies.</p>	<p>Actuaries may refer to this note as a checklist for items to be covered in the FCR. Noting that not all items are relevant to all companies and there may be company specific issues not included on this list.</p>	
Data	<p>The unique scenario presented by COVID-19, the associated government response and resulting economic impacts means that the value of historic data and experience as a basis for current assumptions may be limited. There is still significant uncertainty relating to both the course of the COVID-19 infection rates and the ongoing economic impacts.</p> <p>In order to inform assumptions both internal and external data should be considered, examples include:</p> <ul style="list-style-type: none"> • Internal Data <ul style="list-style-type: none"> • Is the frequency of reporting sufficient to identify and track developing trends 	<p>Actuaries may consider data available to them within their own companies and at an industry level to identify impacts and trends and inform assumptions. Data collection and reporting should be reviewed.</p> <p>The working group will develop internal data checklists and identify potentially relevant external data sources to identify</p>	



	<ul style="list-style-type: none">• Is additional data collected in claims and administration systems that is not included in reporting (e.g. grouping claims by cause in regular claims dashboards, occupation details in administration systems)• Should additional data be collected and reported when new claims are admitted (e.g. current employment status, income reduction due to COVID-19 and eligibility for stimulus benefits). This data may be recorded within claims systems or separately if not possible.• External Data<ul style="list-style-type: none">• Population statistics relating to mental health conditions including consultation rates• Financial hardship information• Early release take-up rates for individual superannuation funds.	trends. It will also explore with life insurers the possibility of collating aggregate data on key indicators at an industry level (e.g. trends in claims incidence, proportion of claims relating to mental health conditions)	
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DISCLAIMER

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