All Actuaries Summit 2026
25 – 27 May 2026, Melbourne

The failure metric

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Presented to the 2026 Actuaries Institute
(Updated)

The author also gratefully acknowledges the many individuals who contributed their insights, perspectives and reviews of this paper. To encourage candour and ensure the most complete and unfiltered account of events possible, all contributions were provided on an anonymous basis.

1. The 30 second summary

This paper explores lessons from life insurance product failures.

Through ten global case studies, three key conclusions were drawn:

1. Failure in life insurance is slow and cumulative, but with a journey that is predictable. It is typically the result of small decisions compounding, driven by pushing boundaries (stretching guarantees, nudging benefits, assuming behaviours and chasing competitiveness) in an attempt to address a genuine consumer need.
2. Most failures are behavioural, structural and human. Actuaries tend to focus on assumptions and the models, but we will inevitably get these wrong. Whilst there are specific micro lessons to take away from each case study, the failures emerge where misaligned incentives creep in, we forget insurance 101 rules, we ignore distribution realities and we can't foresee future systems or how outcomes will be judged years later.
3. There are no silver bullets, perfect designs or foolproof rules we can put in place that stop failure or will stop us repeating history. But we can learn from other industries more used to failure, and **we can ask sharper, more uncomfortable questions to help decision makers better assess the risks**.

These questions, to be asked whenever product design is being considered, are proposed as follows:

If we had to ask one question…
If volatility is inevitable, how have we incorporated the impact into the design?
What risks do our customers think they have transferred?
How have we set up this product for the successor team/s that will be managing this in the future?
What experiments have we run to test behaviours, both at sale and over the life of the product?
What specific lessons from past product failures are explicitly embedded in the design?
How is this product going to be a no brainer for our customers?
How have we built in positive surprises to the design?
If we assume some information is being hidden from us in our testing, what could it be?
What are all the incremental changes to the product since launch?
If we fast forward to the balance sheet 10 years, where is it sensitive to changes in assumptions?

The goal can never be to eliminate failure which would be unrealistic in a particularly long-term business defined by uncertainty and some structural conflicts. But to change its shape. Smaller. Earlier. More transparent. The kind that teaches quickly, still protects customers, and ultimately strengthens the system. Few industries have the same depth of experience, the same long-term datasets and cashflows, or the same ability to observe how decisions play out over decades. This is an asset and is a source of competitive advantage for insurers if we learn from it.

2. The journey

The pattern is familiar and often not surprising. A product team looks for differentiation. A way to grow. A way to offer more and be more competitive: longer durations, stronger guarantees, broader coverage, new risks. In essence, the risk gates are opened a little wider, loosening underwriting standards to accept risks that competitors will not.

From there, the machinery starts: business cases, workshops, project plans, internal code names, testing - sometimes with "safe" or friendly customer cohorts or by asking the wrong questions ('is this a good idea?'). Actuaries are brought in to price it. Finance costs it. Risk teams ask what can go wrong and how bad it could get. What is equally important is what does *not* happen. There is no malicious intent to sell a trick. No plan to deny value to consumers. No desire to lose money or fail. If anything, there is often a strong, self-reinforcing belief that this might be a great innovation - accompanied by a galvanised, sometimes exhausting energy that tends to correlate with the ambition of the product.

Then something goes wrong.

Rarely is it visible early. Sometimes it only appears at scale. Sometimes it is triggered by a competitor's move, regulatory change, or economic shift that forces a response. Sometimes the reaction to a small observed loss triggers an over-reaction that causes a bigger one. Rarely is there a single cause; failure is usually multifactorial and it compounds. Nearly always, in hindsight, many people 'knew' at the time.

Through squinting eyes, and tilted heads, the first response is often to convince ourselves to wait - perhaps it will self-correct; perhaps the concern is overstated or not material; perhaps a competitor's move will offset it.

This produces delay. It appears irrational with hindsight but there is plenty of economically rational behaviour at the individual level that aggregates into irrational outcomes for the system (short term incentives being a prime example). By the time action is unavoidable, losses are magnified. And life insurance, with its long duration, reserving, capital, accounting and compounding dynamics, amplifies the effect of small changes.

In and amongst this delay, a search for the causes starts. Construction of a narrative that balances defensiveness, politics, irritation and some bargaining. We go back to first principles but very often form opinions before the analysis is complete. Sometimes it comes down to external factors: regulation, legislation, competitors, economic shifts. Sometimes there are unforeseen trends such as changes in consumer expectations or societal shifts that no one could have predicted. There are almost inevitably some elements of behavioural finance and biases - deal fever, moral licensing, optimism, anchoring, sunk cost and hubris. Either way, we generally struggle to attribute the causes with certainty. We forget in this moment that the very nature of 'best estimate' is that it is intended that half the time we could be adversely wrong.

Blame also surfaces. It becomes tempting to point fingers even though it wasn't deliberate, but it happens particularly if operational failures are contributors. In many

cases the parties who built the engine are no longer there to provide context or defend what might have at the time been the most logical step. This takes a toll - emotionally, mentally, and with productivity - because the uncertainty and instability flows through into how the team sees the impact on them personally and for the business.

Finally, we lurch. Reaction rarely takes the form of calm recalibration; it comes in degrees of swing. Retreat is generally the primary reaction. ‘Do not write non-parametric risks’. Avoid lapse exposure, optionality or behavioural uncertainty. ‘No more guarantees’ is the bluntest instrument. Shorten the terms. Strip the product back to something tightly controlled by changing definitions, thresholds and governance. Sometimes exit the market altogether.

The playbook is unoriginal unfortunately. We forget what distinguishes life insurers where the role is to pool and absorb uncertainty that individuals cannot manage alone. But we embrace the comfort and like the discipline that the lurch brings. Retreat reduces volatility but it risks hollowing out our purpose and does enormous damage on the way out.

Slowly, though, we move towards change and acceptance, hardly on a straight line. Resilience, support, new blood and financial stability all change the trajectory of what happens next. Time passes, wounds are licked, people forget and eventually someone comes up with an idea to widen the risk gates.

3. Why this paper?

Life insurance products have a uniquely low tolerance for failure. Unlike many financial products, mistakes cannot easily be corrected later. When products go wrong, the consequences can be severe for consumers and expensive - financially and reputationally - for insurers. The absolute worst-case outcome would be failing to pay valid claims. But there is a just as concerning next tier of harm which this paper explores: premiums rising far beyond expectation, policies becoming unaffordable and lapsing, guarantees becoming uncertain, or customers feeling misled. In a sector built on long-term promises, these short-term outcomes break trust.

This paper attempts to surface lessons from a series of case studies of life insurance product failures observed across different markets, all following a similar journey when you zoom out in time. Despite the long history, the industry often struggles to retain its own lessons. We tend to look at failures in other markets, or from days past, and dismiss them with limited information, telling ourselves superficially ‘that would never happen here’ or ‘this time it’s different.’ Success elsewhere may attract curiosity, but failure is frequently discounted as irrelevant. Within markets, competitive instincts can make the situation worse. A subtle form of schadenfreude can appear when competitors stumble, or a tall poppy tendency to resent those who stand out.

It will be easy to read this paper and conclude that life insurer products fail too often. That would be a mistake as it ignores both the rarity of such failures and the context in which many of these decisions were originally made. Faced with similar conditions, many of us may have made similar choices. And in perspective, the failures explored here represent a minority of the products ever sold. In the vast majority of cases, life insurance has done exactly what it was designed to do - delivering financial support

to families at the most difficult moments of their lives. Ask any family that has been paid. Even viewed cynically, if a product ultimately lost money for insurers, it often meant benefits were more generous for some customers than the price charged.

The goal therefore is not to catalogue a series of car crashes, but to bring into the open some of the stories that usually circulate only informally - the kind of product lessons young actuaries hear whispered around the water cooler or when experienced practitioners reflect on earlier cycles. Within these stories are patterns, warnings, and insights that deserve wider visibility. At the same time, we should recognise the courage of the teams who attempted these innovations. The underlying consumer needs were always legitimate, and experimentation is part of progress. As the cliché suggests, if we never fail, we may not be trying hard enough.

The paper also looks beyond the insurance sector for some useful perspectives. Startups, for example, operate in environments where ambiguity and the risk of failure are constant. With limited capital and short runways, they must test ideas quickly, learn from early signals, and pivot when necessary. Life insurers operate under very different conditions - long liabilities, stable cash flows, and assumption-driven profit reporting. Yet that perceived stability can also create complacency. A more useful paradigm might be to think more like startups and ensure that failures occur earlier and on a smaller, more managed scale.

There are no silver bullets. Every story contains nuance and incomplete information, and startups themselves are far from perfect models. But by combining historic product stories with insights from other industries, the goal of the paper is to come up with and reframe the questions we could instead ask when designing new products.

4. The micro lessons

Innovation in life insurance has often been about how far insurers are willing to go in absorbing risk on behalf of customers. The case study failures all tended to emerge when that balance was shifted too far and consumers and insurers were left with unintended consequences, generally only observed way down the line. They all ‘pushed’ some boundaries to try address a genuine consumer need and it’s through these individual case studies we can observe some lessons unique to all of them individually but all contributing to a common pattern.

Figure 1: The case studies

No.	Case study:	Pushed:	To address the consumer need of:
1	US Post Level Term	Premium shape	Affordability and entry friction
2	UK Long term care	Extending ages	Long-term costs for care in old age
3	SA Trauma	Importing a design	Payments not a windfall and/or a lottery
4	Canada Term 100	Long term guarantees	Long-term death benefit protection
5	Australia Consumer	Consumer led design	Simplicity, transparency, ease
6	UK Unemployment	Introducing new perils	Income shock from unemployment
7	Australia Lifetime IP	Extending durations	Income loss in retirement
8	Australia Funeral	Decreasing cover	End-of-life expenses

9	Australia Auto Accept	Increasing cover	Underinsurance
10	Tontines	Passing back the risk	Lifetime income

Following are three of the ten case studies, and the remainder are at the end in the Appendix. The three were selected because they are most applicable to several on-sale product challenges today in Australia: premium reviewability, new disability structures and post-retirement products.

a. Case Study 1: Change premium shape

In several markets, insurers have frequently experimented with alternative premium shapes to the traditional level premiums which stayed flat over the life of the policy.

The consumer problem was affordability and entry friction. Using the US post level term products as our case study, many customers were unwilling or unable to commit to higher level premiums over a long horizon. But they equally didn't like the age premium steps that generated significant increases year to year. Hence the move to a hybrid design which offered level premiums for a term (e.g. 10 years) and conversion optionality to continue post the level term into an age based stepped structure thereafter.

From the insurer's perspective, the statutory reserving requirements and ability to cater for future profits would play a significant role in why the stepped design was incorporated alongside the consumer need for continuation of cover. Pre 2000, the statutory reserving approach in the US was on a disconnected economic basis (for example, an assumption of no lapses post conversion even where economically providers may have assumed 100% would lapse at conversion). Then the regulations caught up, prices jumped and life insurers adapted by 'borrowing' from the post conversion period, incorporating profits from the post level term, which would allow more competitive premiums to be written inside the initial term. To put in context, life insurers might price for a 2% IRR in term but once you built in the post level term period, land on an IRR of 10%.

The story here centred around these embedded sharp discontinuities - step-changes or 'cliffs' that relied heavily on behavioural assumptions. Premiums often increased by multiples (e.g. 800%) of the level rate once the initial guarantee expired, particularly as policyholders aged or health deteriorated. This creates strong anti-selective lapse effects (the 'unhealthier' policyholders remained). There was no data on conversion rates, nor the subsequent mortality experience which turned out to be demonstrably worse than expected due to actual lapses being lower than projected. The level of the jump promised could also be set higher than competitors, without any change to the conversion assumption, thereby allowing further benefit to be taken upfront. Other market forces like life settlements would further compound the problem of who remained.

As the first batch of Post Level Term 10 ran its term, a reserve strengthening became necessary given the conversion experience. The same reserving increase had to then be prudently applied to the longer-term versions even though actual experience had not yet emerged. In an effort to increase the conversion rates, some providers began

to offer significant premium reductions at the cliff, below the technical rates, or grade the increases instead of applying at a single point, trying to find that optimal intersection of lapse rates, premium volume and anti-selective effects. Customer premium rates projections would also start displaying a worse than expected premium rate series post the initial term, with the life insurers having the option to charge less than the rates communicated if behaviours emerged in line with expectations.

What went wrong or proved challenging?

In the first order: getting behavioural assumptions wrong.

Although sold as term products and guaranteed, they underestimated how consumers would react to an 8-times price increase at the end of their terms - most policyholders left and only the poorer cohorts (2%-5%) remained, but at significantly higher than expected mortality.

But regulatory control, always lagging, contributed to the problem due to statutory reserving not keeping pace with market developments. And then an unintended loophole allowed reserving credit upfront for offering the age steps in premium post the term period, despite lapse rate assumptions at the point of conversion being significantly over-optimistic. Even after the regulations caught up, to be competitive, life insurers were accelerating profits from the future to provide discounts today (a choice). All the while maintaining an optimism bias that consumers would behave in line with those assumptions at future decision points.

The experience with tweaking premium shapes highlights that affordability today cannot come at the expense of viability tomorrow. Premium jumps (and arguably all stepped patterns) may improve early sales and short-term metrics, but they create reputational and economic risk in later policy years. Even under a stable line like mortality, realising that some customers would receive a 100% plus increase should have been enough cause for limiting exposure. From the customers point of view, the model did not align with wanting to hold a long-term life insurance policy.

A memory from the past

Thus, the Amicable, one of the first mutual societies, established in 1706, allowed membership to anyone between the ages of twelve and forty-five, with the annual subscription fixed at the same rate, regardless of age…The early one-year term assurance … also made premium rates constant irrespective of age, although the short duration of each policy - usually annual policies payable by a single premium and renewable each year - did help reduce the risk… Not until 1783 did the Royal Exchange begin to insure lives on a fully graded scale of premiums, and not until 1809 did the London Assurance base its premium rates on the age of the insured at entry.

Excerpt from Moral Hazard and the Assessment of Insurance Risk in Eighteenth-and Early-Nineteenth-Century Britain, R Pearson.

b. Case Study 2: Extend age

Alongside the rise of retirement planning products in the UK, Immediate Long-Term Care (LTC) policies emerged in the late 1990s and early 2000s as a seemingly logical solution for older individuals seeking to pre-fund care costs. They promised income or

care funding starting almost immediately after purchase, typically in exchange for a single premium or a short-term premium series.

The consumer problem was the risk of needing to fund long-term costs for care in old age without depleting personal assets. Insurance premiums would secure a guaranteed benefit if care was required, but there was a reviewability clause embedded into the contract for those who hadn't claimed. For insurers, the appeal was that premiums were large, contracts short-to-medium term, and exposure appeared manageable under assumptions of limited claim duration and controlled care costs.

However, the reality was more complex. These LTC policies combined longevity, morbidity, and inflation risks. And while premiums were collected upfront, claims began almost immediately, often within the first months or years. Policies were also sold to older cohorts - frequently in their 70s and 80s - where health status was more uncertain, and underwriting could not fully eliminate adverse selection.

By the mid-2000s, it became apparent that claims exceeded projections, particularly for high-utilisation older cohorts. Escalating care costs further amplified losses. For those who hadn't claimed, insurers put prices up once policies reached the end of their initial rate guarantee period - for example, after 10 years, one insurer increased premiums by c60%. Many customers couldn't top up a single premium or refused, ultimately leading to compensation guidance from the ombudsman where for some customers their premiums were returned with interest. The magnitude of those increases impacted confidence and ultimately led to insurers withdrawing the product from the market, while still being left with significant balance sheet strain and compensation exposure.

What went wrong or proved challenging?

In the first order: claims and cost assumptions.

Immediate LTC policies assumed that early claims would be modest and short-lived, when in fact claims emerged quickly and persisted. The product also highlighted the risks of not having the data and the uncertainty of trying to price for care cost inflation at older ages. The products also gave an initial false sense of stability: early benign claims experience encouraged confidence and profit recognition.

Below the surface though, the products weren't really reviewable. An initial premium guarantee term was incorporated that technically allowed repricing thereafter, but asking an older (perhaps more vulnerable) cohort to top up a lump sum or lose their cover was not reasonable.

A memory from the past

With consideration to age of the members being twelve to fifty-five.

Amicable Society for a Perpetual Assurance Office (1706) age limits.

c. Case Study 3: Import a design

Along with South Africa's claim to fame with inventing trauma came another product innovation in the late 1990's, with the introduction of severity-based trauma definitions.

The twin problem being solved was that trauma payments could be a windfall and/or a lottery. As an example of windfall, a person who has a mild heart attack and goes back to work a few days later is a very different financial outcome to a person who had a major heart attack and can't work for a long period of time. Yet under the original design, both could have received 100% of the sum insured. And as an example of lottery, different doctors might have different views on what constitutes a heart attack.

What severity-based products introduced in response to the problems were a different percentage of claim being paid depending on the financial impact and a more explicit and objective set of definitions to reduce the lottery effect.

This product was very successful in South Africa when it was launched and credit was given to the innovative design. But these weren't the real drivers for its success. The insurer who introduced the concept was simultaneously benefiting from being a new entrant, had a health insurance business and data at its core, changed the distribution model for advisors, was the first to offer pure risk only as opposed to the predominant model of universal life and lastly, introduced a sophisticated and rich wellness program that encouraged better behaviours and risk selection. The South African culture also encouraged consumers (and advisors) to try new things, sometimes why that market was seen as a good testing ground for new ideas.

The product was then taken to the UK (and later Australia) where the design launched unsuccessfully. Advisors in these markets struggled to articulate to clients why it was better since the nature of the design meant that the traditional providers could point to situations where 100% was paid under their product but only a fraction under the severity-based design. And in a market of one provider offering this product, with more work required to explain the product, what might have seemed like a competitive advantage was a disadvantage. Sales also weren't helped by pricing strategies that had a higher cost for a perceived lower payment (due to the inclusion of so many more conditions being covered) which potentially misunderstood the South African move from universal life (where investment and insurance risks were bundled) to pure risk products.

The story didn't end there because the problem being solved was the right one (linking payouts to financial impact). Years later the UK insurer who picked up the design would partner with the original South African provider and relaunch the product, becoming the 3rd largest new business writer of that product in the advisor channel. In Australia too, a couple of other providers would experiment and introduce aspects of severity-based models (more coverage, small payouts) into trauma and now disability products.

What went wrong or proved challenging?

In the first order: the difficulty convincing advisors to try something unique and new.

In markets like the UK and Australia, complexity hindered consumer and advisor acceptance. Severity-based products turned out to be hard to explain and compare.

Innovation must be balanced with simplicity. A rational product design, even if demonstrated elsewhere, can falter if it's too complicated for consumers to understand or for advisors to confidently recommend.

Digging a bit further, success in one market shows such products can work if positioned well, but the market context, market culture and distribution support are key - success may be due to other factors rather than the product.

A memory from the past

While Australian offices sold a range of life and endowment policies with clear and explicitly stated returns at maturity, American insurers offered tontine products. This type of insurance was little understood by the market that had limited experience of it. The strongly conservative … [Australian] society … saw it as a form of gambling, and condemned it as such. Thus, not only did the Americans have to convince consumers of the probity and accountability of their organization, they had to educate them in the benefits of a new type of product. A key difficulty they faced was in translating their message effectively in a market that already had liberal policy conditions that provided similar but less risky outcomes. In addition, the agency-sales system introduced proved to be very costly, generating increasing expense ratios and making the American product less competitive….The experience of American insurers in Australia in this period highlighted the problems of reaching into markets in which the social and cultural nuances of country were not fully understood and the "tyranny of distance" impacted the ability to manage and control business.

Excerpt from The Pitfalls of Internationalization: The Experience of American Life Insurers in Australia, 1885-1905, M Keneley.

5. More macro

Although there are more case studies to go, and for extra credit you might go to the Appendix now before reading this section, we can start to delve into some of the more macro insights to draw from the stories. And overlay some lessons from the startup world, that is more used to dealing with failure. Admittedly, readers will all have their own interpretations and views, perhaps reaching different conclusions.

Some lessons are:

a. Accept turbulence

The 'failure' process itself is predictable - the realisation, the delay, the search, the blame, the lurch and finally the acceptance. One might conclude, perhaps lazily, that 'cyclicality is just inevitable'. Lessons will be forgotten from the past, and we will tell ourselves stories to convince ourselves that 'this time is different'. It's the thinking underpinning why bubbles form, going back to tulip mania or the GFC. Why 'irrational exuberance' finds its way into a system and how we drift from foundational insurance principles - the 101 stuff behind indemnity, insurable interest, risk selection - but then are surprised when volatility shows up.

The ups and downs are inevitable, but we are selling stability to the consumer. We take that risk away from them because insurers can absorb that volatility where individual consumers cannot. Even knowing we will get it wrong. In addition to expecting it, we should also be putting in place steps to dampen the effect and still deliver confidence, trust and the promised outcomes to our customers.

Life insurance may appear to have a disadvantage of being too long term, quite different to start-ups where the cycle seems far shorter. But the problem isn't that life insurance is long term. The problem is that the industry built long learning cycles on top of long liabilities. Startups plan for turbulence, whereas arguably life insurers plan for stability.

A reframing of our traditional actuarial practice thinking might be needed if we accept that we just can't model the long term. This is technically discomforting. Much of actuarial practice relies on long-term probability theory, on past experience, on modelling - the familiar '1-in-200'. But our models are anchored in history and change is accelerating in a way that the past can't keep up with. In this world, what confidence can we really have in answering 'how bad can this go'? Accepting we can't may lead us down a different path in how we cater for expected instability - the purpose of taking away risk shouldn't change, but it's with brutally honest eyes open.

b. Calling a spade

Beneath all the noise sits a very uncomfortable question: did either of the parties to a failed product, that being the consumer and the insurer, allow themselves to be misled?

What risks did consumers believe they were transferring? Most believed they were buying immutable long-term promises. Many glossed over complexity or fine print in favour of reassurance - we all do it, signing up to contracts all the time, with an affirmative or by virtue of accepting conditions of a service, without understanding the implications. This doesn't absolve us as consumers. A broader bias is also likely to creep in if the assessment of what we thought we were buying or what we thought we expected is only considered years after the actual purchase, or when something has gone wrong.

On the other side of the table, what risks did insurers believe they were absorbing? Was ambiguity allowed because absolute clarity may have made the new product unviable or unaffordable? Despite wanting to make long-term promises and having all the good intentions to deliver, was flexibility retained in some form to protect the broader pool if outcomes turn adverse?

The case studies often highlighted this perception gap - insurers thought one thing, consumers thought another. Or it changed over time or got complicated where intermediaries were involved. But insurers had the higher duty of care, given their relative sophistication advantage and as the designer and issuer of these products. They didn't have to sell them. It was their responsibility to understand exactly what the consumers thought they were buying and their expectations, both at purchase time and more importantly down the line as the environment changed. One example might be to require actuaries to articulate the cost of a guaranteed version of the product, alongside the non-guaranteed version, to force the conversation to happen about who is bearing the risk of the difference, if not the insurer.

There is also an argument, given the sophistication relativity, that life insurers have a duty to protect consumers from themselves. The case studies showed how when life insurers blindly followed the needs of the consumer, this may not have been in the

best interests of those customers - the trade-off sometimes came with a cost and unintended consequences that threatened the viability of the whole product.

Startups are militant at seeking to understand their customers. The runway is short if they get this wrong. They are looking for this feedback loop early so they can pivot and adapt. One ‘complaint’ feels like it could derail everything. Life insurers have come to accept a model where we expect some people to be unhappy. Perhaps if we came at it from the assumption that the consumer will always be right, we would likewise militantly seek out what ‘right’ is and stay on top of how this may change over time.

c. Tether

The case studies highlighted a structural conflict emanating from the misalignment between the team who built the product and the consumer (and perhaps future teams) who bore the risk long after they were gone.

Life insurance is particularly unique in that the CEO approving a product today is, in substance, making decisions for the next CEO - perhaps three or five CEOs ahead. In that sense, life insurance promises and decisions will extend well beyond individual careers. Documenting upfront for future ‘generations’ that some degree of failure is anticipated might change the inevitable conversation and approach when the time comes – a sort of time capsule to ‘open me’ at signs of trouble.

The biggest disconnect remains though how the team of today is tethered or aligned with the outcomes of ‘far away tomorrow’. Startup founders and their team play the game with only upside through capital gain. They also invest their own money. Perhaps new products could require an investment from the product team, through salary sacrifice or foregoing bonuses, but also attach long term upside (even unlimited) to the ‘sale’. This would be different to a share scheme which focuses on the overall company results. This would almost certainly attract a different team to the project and create one that has a stronger connection to long-term outcomes.

d. Experiment

The case studies highlighted how often behavioural assumptions played a role in outcomes. The lurch to avoid taking these risks would undermine the purpose of insurance, but one way optionality is certainly built into the system through the decisions consumers have whether to continue paying premiums or not.

Whilst we can’t accelerate mortality or morbidity experience, we can accelerate learnings about behaviour - lapses, option take-up, anti-selection, responsiveness to premium changes and so on. Startups focus on running experiments to accelerate learnings, whereas life insurers treat behavioural assumptions as inevitably slow to emerge. The key might be allowing the early customers to deliberately extend past the normal edge (obviously with some thresholds). The early pools could instead tolerate higher risk because learning is the objective, instead of seeking the safest possible initial cohorts, delaying insight.

Along with live data, behavioural studies could be constructed that test how consumers or advisors react to change. Or how an edge cohort behaves relative to the target pool.

Or how stakeholders in the system behave, for example treating doctors in an environment of heightened community mental illness. Or even testing internal pricing behaviour in a dislocated market, or where they've won a lot or lost a lot. Essentially, the goal is a fast forward that allows an understanding of how behaviours happen in extreme environments.

e. Build failure capital

The case study research kept coming back to this persistent question: why do we keep forgetting? For institutions that have existed for more than a century, there often appears to be a surprising shortage of corporate memory. In some extreme examples, ideas that had been banned or discredited in one jurisdiction resurfaced decades later in another, as if the original lessons had never been learned.

Life insurers, however, possess something few industries do: failure capital. The long liabilities should correspond with the asset of long memories. When products run for decades, the institution accumulates lived experience across pricing errors, lapse cycles, regulatory shifts, distribution distortions and claims surprises. That accumulated experience - across generations of actuaries, underwriters, product designers and distribution leaders - is under-utilised capital.

Inside every large insurer are individuals who have seen previous cycles: the product that grew too quickly, the commission structure that distorted behaviour, the definition that invited unintended claims drift, the repricing that triggered reputational damage. There are also lessons carried in from other companies - quiet institutional knowledge about what went wrong elsewhere. The question is: who is systematically gathering this? Who is curating and codifying this failure capital before it retires, resigns, or is reorganised out of existence? Corporate memory cannot rely on the 'wise old men' in the corner office; it must be institutionalised to endure.

Startups offer a sharp contrast. They assume failure will occur, and they actively mine it. Decisions are traced back to assumptions. Failure capital is treated as an asset that improves the next iteration. It is portable, shared and embedded into the process. If failure capital were treated with the same discipline as financial capital, product design committees would begin not with optimism about innovation, but with a structured review of historical fragilities. Launch papers would include documented parallels to past breakdowns. Governance forums would track recurring historical patterns.

f. Capture hearts and minds

Sales failing is a clean signal in many industries. If a new phone does not sell, the market has spoken. But life insurance operates under different laws. Customers buy safety and stability; radical novelty can feel like the opposite of the promise. The case studies related to products that just didn't sell typically showed how innovation introduced not just product risk, but psychological risk.

Failure as a measure also depends on whose perspective it comes from - the customer, the shareholders or society. And some failures should be encouraged (for example, something new that failed for whatever reason quickly) whereas others might

be treated with a bit more circumspection and introspection (for example, forgetting the basic principles underlying insurance just to write top line revenue).

Distribution, particularly advisors, sit at the centre of the 'new'. They must explain what is different and defend it years later if outcomes disappoint. Recommending something unfamiliar places their own trust capital on the line. That is why true innovation is so difficult in protection markets: it asks intermediaries to carry reputational exposure for designs that may take decades to prove.

For that reason, structural innovation, maybe even as the first fast follower, may be too heavy a burden for one firm alone - it's a tough path to get a new life insurance idea that is so long tail off the ground. In an ideal world, sandboxes made up of competitors all offering the same design and sharing data and insights without sharing commercial or pricing strategies would be an obvious starting point but would risk running afoul of anti-competition obligations.

Startups dream up demonstrable step changes in benefits that justify new customers taking the risk. There is typically a singular focus on solving one big problem. The aim is a strongly articulated simple solution, a narrow group of customers and a preparedness to lose money on the first few sales to win the long-term game. Hearts and minds need capturing by life insurers through demonstrable better value. Perhaps a willingness to lose some money, deliberately, to build momentum for the early pilot periods. Lastly, startups consider holding back all the features that could be introduced, partly out of cost and speed to market but also to focus on testing what will drive sales, even where broader structural innovation is available.

g. Positive surprise

Customers buy life insurance stability, safety and trust. The case studies showed that damage came from surprises - particularly negative ones such as sharp premium increases - which erode the very foundation of the category.

One way to reframe this could be to redefine what constitutes a surprise. Instead of presenting pricing as implicitly stable and hoping experience aligns, insurers could communicate upfront the realistic range of outcomes. This might be based on the industry's aggregate history of premium movements at similar benefit levels, a best to worst range of possible adjustments over time, or even that company's own past experience with repricing. The consumer regulator may need to play a role in defining the scenarios or perhaps even publishing past price rise experience by life insurer, akin to investment performance. But by setting expectations transparently at the outset, volatility becomes contextualised rather than shocking.

Perhaps projections need to be set prudently and if experience turns out better than expected, insurers can deliver the only surprise that strengthens trust: lower premiums or slower increases than projected. In a product category built on long term confidence, perhaps only positive surprises should be planned.

Here may be a lesson in what startups sometimes do poorly. In pursuit of growth, some overstate traction, smooth over uncertainty, and present investors with a story that is rosier than reality - only for a later correction to damage credibility. Life insurance cannot afford that dynamic with policyholders. The braver posture is not to imply certainty where none exists, but to acknowledge uncertainty with discipline and courage, reinforcing trust rather than undermining it.

h. Look for what's hidden

In startups and innovation theory, the conventional question is often 'is this a good idea?' It's a question that tends to get friendly, non-confrontational answers. But life insurance sits in a different reality. The real test is one layer deeper: what happens when you ask someone to take out their own money, to commit financially? At that moment, the decision stops being about abstract superiority versus competitors and becomes a concrete trade-off against every other way the customer could spend their resources. Understanding product adoption, then, is not about clever features or polished presentations. It is about the actual point of sale decisions and the psychological tension that surrounds them. Startups aim to get an imperfect product to market as quickly as possible to test actual decisions when the credit card is required.

The challenge is compounded by lack of education or sometimes low financial literacy on the part of consumers and human behaviour in testing and feedback. Most customers and intermediaries do not want confrontation; they may give polite, reassuring answers, or simply avoid sharing their true concerns. Some may not even fully understand their own preferences until confronted with a real choice. Yet product teams frequently treat these early tests and surveys as if they are gold standard validation. They may, in reality, be fool's gold.

The other dimension is to explore a counter to the glossy/positive spin from the product and sales team. Debiasing techniques here are helpful tools (pre-mortems, red teams and so on). The leadership team sitting at the kitchen table with the end customers provides an extreme version but there is arguably scope for far more involved team members to understand complaints, listen to call centre queries, visit advisors (both before and long after launch) which all might provide hidden clues that change the trajectory of product outcomes.

i. View cumulatively

Many of the case studies started with a fundamentally sound product, but then through competitive pressure/distribution pressure/loss of corporate memory and so on, the risk profile ratcheted up over time. More generous conditions were added, underwriting became diluted, operational failures crept in or there was a shift in what was considered reasonable from the community expectation side.

Weaknesses compounded each other and controls were being diluted without full appreciation of the collective shift. Each step felt small but collectively over time the product moved a long way from where it started. And the way that each successive team viewed the changes came only through their anchored lens of what they

inherited, without an understanding of a ‘zoomed out’ lens of the product through time. Eventually we ended up with Swiss cheese.

Large insurers benefit from in-force cashflows - legacy series continuing to generate earnings even as newer cohorts evolve. That creates both resilience and, unintentionally, insulation. When drift begins, it rarely presents as an immediate crisis. Margins may compress slowly, experience may deteriorate gradually, but the overall financial picture can remain stable for some time. This allows, and sometimes encourages, a degree of patience. There is room to wait, to see if trends reverse, to avoid overreacting to early signals that may prove temporary. In that environment, confronting uncomfortable truths can be deferred because the system can absorb the delay.

Start-ups operate under a very different constraint set. With little or no legacy cashflow to rely on, they are far more exposed to early signals of misalignment. Drift is not something that can be tolerated; it is something that must be addressed immediately or it threatens survival. The lesson is not that incumbents should abandon their natural advantages, but that they need to counterbalance them. To recognise that the same buffers that provide stability can also mask emerging problems, and to deliberately create conditions where uncomfortable truths are surfaced and acted on earlier than the economics alone might otherwise demand. Actuaries need to present this information to the decision makers, not just the change being proposed but a history of where the product began, the changes along the way (even before that team arrived), and the collective picture of how this contrasts with the proposed new complete view of the product design and risks.

j. Fast forward

We’ve developed a myriad of different ways to test sensitivity to future assumptions. Reverse stress tests, scenario analyses or stochastic models all try to project known or random events to inform decision making. But from time 0. Present values can be misleading because the longer the duration of the product, the more that small variations in the tail with regard to interest rates, lapse assumptions, termination rates or mortality/morbidity experience get discounted at outset.

In the assessment of exposures, should we be fast forwarding the product in time and consider the world 10 or 20 years from now from a balance sheet perspective, and then stress/scenario test from that point? What will future management teams be facing into if the only assumptions are the difference between the more crudely set long term assumptions and a scenario or stress that is fundamentally different? Decisions that may seem conservative in the near term may turn out to be insufficiently protective once the full-time horizon is considered and could lead to different strategies.

Startups focus on survival over the next 12-36 months. Capital is finite, business models are still being proven, and early assumptions are highly uncertain. Looking 20 years out is false precision when the product, distribution, and even target market may evolve materially in the next few years. Long-term projections do exist to be fair, but they are often coarse and secondary to near-term validation. The discipline though of looking at the life insurance product that will be inherited by someone else

10 or 20 years forward is not about prediction though, but about revealing path dependency and forced interrogation of the long tail. The early assumptions, which are more likely to be accurate, are ignored and scenario and stress tests imagine the sensitivities for future owners.

6. So what?

The 10,000-foot sobering question after reading through the case studies is to ask how some of these case studies could happen?

We can look for the answer in the weeds, but it's almost impossible to look at each case study individually and then distil them into one single lesson for the benefit of a soundbite. Each case study has its own nuance and context that even members of the same team who were there at the time have different perspectives on the true story. And their failures are almost always multi-factorial - to pretend otherwise risks oversimplifying our ability to find silver bullets that will guarantee success. But there are some nuggets and at the very least, avoidable lessons to take back into our current suite of products.

Figure 2 - Micro lessons

No.	Case study:	The first order lesson highlighted the impact of:
1	US Post Level Term	Behavioural assumptions
2	UK Long term care	Claims and cost assumptions
3	SA Trauma	Difficulty convincing advisors to try something unique and new
4	Canada Term 100	Ultra long-term guarantees
5	Australia Consumer	Not knowing who the customer is
6	UK Unemployment	Systemic risk and misaligned incentives
7	Australia Lifetime IP	Claimants disincentivised to cease their claim
8	Australia Funeral	Not factoring in changing consumer expectations
9	Australia Auto Accept	Benefit generosity without commensurate risk control
10	Tontines	Opaque risk pooling

We might go up a level to try find the macro insights that hold true. Again, there are no silver bullets but perhaps there is a methodology we can apply. That is, when considering our products, the macro insights might be converted into a single simplified question for decision makers to ask; before, during, and long after the product has been sold. The answers to these questions might be proactively considered as a reference point for future management.

The intention is to encourage us to think about the longer term, whilst acknowledging we will get it wrong. If there is one application of this paper, it proposes to incorporate these questions (or similar ones) into our product, pricing and challenge sessions to force us to take off the rose-tinted glasses.

Figure 3 - If we could ask one question of the product team

Action	If we had to ask one question…
Accept turbulence	If volatility is inevitable, how have we incorporated the impact into the design?
Calling a spade	What risks do our customers think they have transferred?
Tether	How have we set up this product for the successor team/s that will be managing this in the future?
Experiment	What experiments have we run to test behaviours, both at sale and over the life of the product?
Build failure capital	What specific lessons from past product failures are explicitly embedded in the design?
Capture hearts and minds	How is this product going to be a no brainer for our customers?
Positive surprise	How have we built in positive surprises to the design?
Look for what's hidden	If we assume some information is being hidden from us in our testing, what could it be?
View cumulatively	What are all the incremental changes to the product since launch?
Fast forward	If we fast forward to the balance sheet 10 years, where is it sensitive to changes in assumptions?

Agency always exists - not in avoiding every mistake, but in facing into challenges when they are still small. But we should consider whether the system breaks due to the conflict of its stewards. For example, what is the practical incentive for:

- an independent board member to take a firm position on shareholder profitability when the more immediate accountabilities relate to governance, regulatory scrutiny, and maintaining credibility for future board roles?
- an external auditor or consultant to materially disagree where it affects their broader client partnership?
- an actuary to push prudence if it affects their short term earnings?
- management to surface an issue that may ultimately cost them their role or their short term plans?

There is some sad reality at play here in that when the right decision threatens remuneration, reputation, or stability, it stops being a purely professional judgement. It becomes a personal trade-off. And that is the flaw. Not that people don't see the problem - but that the system makes it rational not to act early enough. It may still be the best system we have. But we should be clear-eyed about these limits - at the very points where discipline matters most, the incentives to exercise it are at their weakest.

Lastly, in setting out what we could do with this information, and focusing on our own agency, we should look a bit inward to our role as actuaries in these case studies and how and whether we acted as the conscience of the insurer? Where could we have stepped up or spoken up? Did we? Where can we draw lessons as a profession? If our role is to ultimately elevate decision-making and to ensure choices are made with a clear-eyed understanding of consequences, trade-offs, history and uncertainty, where did we fail? What do we change next time?

Certainly, there is change happening globally to improve outcomes, particularly for end customers. In Australia for example, life codes and professional codes of practice have

come a long way but only have value if they are lived and breathed. Financial accountability regimes are new and place obligations on senior management, and board governance and quality has materially lifted from decades ago. These are all meaningful shifts, but they are not a substitute for vigilance or allowing ourselves the belief that there won't be more failure case studies decades from now. Structural challenges will remain, growth objectives and biases will creep in, and institutional memory will fade.

And yet, there is an optimistic way we can choose to read all of this. The very fact that these stories exist, and can be studied, shared and challenged means the industry is not starting from zero. There is a lot we can learn from a crisis. And if we knew or had certainty about the outcome, then it wouldn't be insurance. Few industries have the same depth of experience, the same long-term datasets and cashflows, or the same ability to observe how decisions play out over decades. If we choose to treat that history as an asset rather than an inconvenience, it becomes a source of competitive advantage rather than a catalogue of regret.

The goal, then, is not to eliminate failure. That would be unrealistic in any business defined by uncertainty. But to change its shape. Smaller failures. Earlier failures. More transparent failures. The kind that teaches quickly, still protects customers, and ultimately strengthens the system. That is where life insurers might take some, not all, lessons from startups without abandoning what makes them trusted institutions: combining long-term stewardship with a willingness to test, learn and adapt. If we can do that, then the question shifts. It is no longer 'why did these failures happen?' but 'how quickly can we recognise the next one forming, and what will we do differently this time?'

Appendix - micro lessons (continued)

d. Case Study 4: Ultra long guarantees

Term 100 (or Term to Age 100) life insurance emerged in Canada as a seemingly obvious product innovation: lifetime coverage with guaranteed premiums, no investment component and no surrender values.

The core problem the product attempted to solve for consumers was the need for long-term death benefit protection. By removing surrender values typical under whole of life products, prices could be more competitive. In theory it offered insurers predictable cash flows and limited policyholder optionality. But in practice insurers implicitly took on a different and less well-understood challenge given that the premiums were set decades in advance - extreme mortality, long-term interest rates and long-term lapse risk.

Once issued, Term 100 blocks became effectively run-off businesses stretching half a century or more into the future. As actuarial assumptions were updated, some insurers were forced to strengthen reserves materially, particularly on older vintages written in higher interest rate environments. For several carriers, Term 100 shifted from a stable protection product to a drag on earnings and capital, prompting strategic reassessments, repricing of new business, or withdrawal from the segment altogether.

What went wrong or proved challenging?

In the first order: ultra long guarantees.

The experience of Term 100 products serves as a cautionary tale about large exposures to long-dated guarantees. Insurance is not only about meeting customer needs - it is about ensuring that risks taken today remain manageable decades into the future. In a positive sense though, insurers would bear the cost of the exposure to the benefit of customers.

Looking a layer below, Term 100 assumed a world of stable yields, predictable mortality, and meaningful lapse rates based on data available from products where there was a cash value. Low interest rates and sustained longevity improvements caused the shift, but neither was unique to other mortality products. The higher-than-expected policy persistency was unique though, as lapse experience ultimately shifted below long-term whole of life products in some cases, despite thinking of Term 100 products as more akin to term products. With policyholders able to effectively 're-underwrite' themselves before cancelling, including with better access to medical and diagnostic tools, the anti-selective lapsation effect was not predicted.

A memory from the past

In 1965, aged 90 and with no heirs left, Calment signed a life estate contract on her apartment with civil law notary André-François Raffray, selling the property in exchange for a right of occupancy and a monthly revenue of 2,500 francs (€380) until her death. Raffray died on 25 December 1995, by which time Calment had received more than double the apartment's value from him, and his family had to continue making payments. She commented on the situation by saying, "in life, one sometimes makes bad deals"

Excerpt from Wikipedia, the story of Jean Calment, oldest verified person in history who lived to 122.

e. Case Study 5: Customer led design

Another surprisingly common form of product failure occurs not when a design proves unsustainable, but when a product simply fails to sell at all. Many insurers have had initiatives that were carefully developed, well resourced, and well intentioned, only to launch to negligible uptake before being quietly withdrawn. Although these failures are often short-lived - limiting long-term financial damage - they can still represent substantial sunk development costs and lost strategic opportunity.

The case study examined here began as part of a broader initiative to expand a life insurer's direct to consumer capabilities. The organisation invested heavily in consumer engagement and design thinking, using consultants, whiteboarding, workshops, testing panels, and behavioural research to understand how consumers interacted with insurance. The development process focused almost entirely on consumer needs - simplicity, transparency, clarity and ease of understanding.

And then, far into the development, the insurer's strategy shifted due to concerns raised from advisors that a direct product would undermine the established advisor network, forcing the insurer to pivot this product toward advisor distribution. This shift exposed a second problem. The product, designed for consumers, lacked features advisors considered essential. To make the product viable, the insurer had to redesign it, adding these features and gradually reshaping the original consumer centric concept into something closer to a traditional advisor product. The result was a bad compromise: no longer the simple, consumer-friendly solution originally envisioned, yet still lacking the familiarity and perceived reliability of established offerings.

Pricing also relied on optimistic assumptions to remain slightly lower than comparable products. When launched, advisors were reluctant to recommend it due to reputational risk, preferring established products with proven track records and lower prices. In the end, fewer than ten policies were sold before the initiative was effectively abandoned.

What went wrong or proved challenging?

In the first order: not knowing who the customer was.

The product was designed originally focusing on the consumer as the primary decision maker. It changed to the intermediary playing the decisive role and so the starting position was built on the wrong foundation.

Under the next layer, simplicity is sometimes also in the eye of the beholder. Financial literacy is assumed when for most people, as it turned out advisors included, the product required a re-read to not only understand the mechanics but to also contrast with other existing products in the market. Just because we say a product is simple, doesn't make it so.

This case study also highlights the need for truly compelling offers to shift the dial. Advisors face reputational and commercial risk when recommending unfamiliar

products, and without meaningful advantages - such as significantly lower premiums or materially better features - they or their clients have little reason to take that risk.

A memory from the past

"The first step was to find an insurance company that would develop the 'dread disease' policy and market it. So I took the concept to Zach De Beer, then CEO of the large insurance company Southern Life. Zach thought that it was a good idea and asked me to give him some time to take my suggested policy to his actuaries to establish whether it was feasible. He came back to me a week or two later and said that, although the medical doctors and actuaries of his company believed the proposed policy to have merit, the actuaries were doubtful that its implementation would be possible, as there weren't sufficient statistics on which premiums could correctly be based.

Although I was very disappointed by this response, I didn't drop the idea...Then nearly three years later, in March 1983, two brothers, Alexander ('Don') and Bob Rowand, both active in the insurance industry in South Africa, contacted me. Soon, with an actuary from America in tow, Don came to see me …. Don explained that they had just bought a small insurance company called Crusader Life and were keen to develop a niche product..."

Excerpt from Defining Moments, by Dr Marius Barnard, who helped develop the first dread disease product covering only four conditions, in South Africa, launched in August 1983.

f. Case Study 6: New perils

In the UK in the late 1990s and early 2000s, unemployment and income protection style insurance emerged as a product category that appeared, on the surface, to be both socially useful and commercially attractive. Sold as standalone policies or bundled alongside loans, mortgages, credit cards and retail finance, these products promised to step in when a consumer lost their job, fell sick, or suffered an accident - covering loan repayments or providing short-term income relief.

The consumer problem being solved was a short-term income shock from unemployment. Most households had little financial buffer, and a period of unemployment or illness could quickly cascade into missed payments, defaults, or forced asset sales. From an insurer's perspective, the risks appeared diversified, short-tailed, and lapse-supported. Claims were capped in duration, benefits were modest, and policies were often cancellable at short notice.

The early economics of these products were flattered by benign conditions: stable employment, rising credit growth, and strong persistency driven less by consumer engagement and more by inertia. Products were priced assuming relatively low and uncorrelated unemployment risk, modest claim take-up, and administrative frictions that would naturally suppress claims. Distribution was dominated by banks and lenders rather than advisors - accounting for example for a quarter of one of the major bank's profits at one point.

Two structural weaknesses sat beneath this apparent success. The first was mis-selling risk. Products were often sold to consumers who were ineligible to claim (self-employed, contract workers, retirees), who already had cover elsewhere, or who were unaware they had purchased the product at all. The second was systemic risk. Unemployment insurance, unlike mortality or individual morbidity, is highly correlated. When the economy turns, claims do not rise gradually, they surge.

The 2007-2008 financial crisis exposed both these weaknesses simultaneously. As unemployment rose sharply, claim volumes spiked just as scrutiny intensified. At the same time, regulators and courts turned their attention to sales practices. The result was not merely higher claims, but retrospective liability. Insurers and banks were required to refund premiums, pay compensation, and reassess back books of business.

What went wrong or proved challenging?

In the first order: systemic risk and misaligned incentives.

Unemployment insurance was priced and managed as if it were idiosyncratic, when in reality it was macro-driven. Distribution channels were rewarded for volume, not suitability. Commissions were as high as 70%. Loss ratios on some lines were as low as 10%. Underwriting was tied to loans where banks had dropped their risk controls on financial underwriting and so this had a knock-on effect for the unemployment cover. And insurers underestimated the extent to which poor outcomes would be judged not just actuarially, but socially and politically. Ultimately, compensation was estimated at more than 50bn pounds.

The experience highlights a different but equally important lesson about insurance innovation. Products that appear short-term and flexible can still embed long-dated liabilities. Caution is needed about the risks of retrospective judgement. Insurers learned - at significant cost - that risk is not only what can be modelled, but what can be reinterpreted years later.

A further layer deeper shows that short-term, low-claim periods do not guarantee stability; products exposed to macroeconomic or systemic shocks - whether unemployment spikes, floods, or earthquakes - can appear safe until they are not. Had these products been treated and understood more akin to general insurance lines with rare but severe events, rather than as predictable life insurance-style cash flows, insurers might have adopted a more cautious exposure, reserving and capital approach. Celebrating early disproportionate profits from unusually benign experience can be misleading, creating incentives to assume stability that does not exist, including making decisions about the average and ignoring the risk in the tail.

A memory from the past

A few guilds offered members no longer able to work a pension from the age of 50 or 60. In 1654, for example, the Amsterdam shoemakers' guild ruled that from about the age of 60 shoemakers could receive a pension if they were no longer able to carry out their trade due to 'illness, impotence, or such like'.

Excerpt from Brouwer Ancher, Gilden p 107 as set out in The Economic History Review 65, M Van Leeuwen

g. Case Study 7: Extend claims durations

In Australia in the 80s and 90s, a variant of income protection insurance emerged that promised to replace income for life once a policyholder became unable to work due to illness or injury. Unlike conventional income protection, which typically cap benefit

durations at two, five years or to age 65 (or 70), these 'lifetime income replacement' policies offered payments that would continue until death if a claim commenced before age 60.

The consumer problem being solved was long-term income loss in retirement. The objective was offering long-term financial security, a bridge to retirement (preserving savings), peace of mind and protection against cost-of-living increases for households reliant on a primary earner. From the insurer's perspective, the products appeared attractive: premiums would be high, underwriting would be strong to filter out high-risk applicants, and this was sold alongside a mix of other duration income protection policies to diversify exposure.

We can see the pattern by now of overly optimistic assumptions playing their part (lower lapse rates than expected, higher than expected claims inflation, lower than expected investment returns etc). Data couldn't have existed at old age durations so was priced based on return-to-work information using shorter duration income protection products as the starting point.

By the early-2000s, insurers began to experience the full impact. As claims began to accumulate, insurers confronted the reality of concentrated, long-dated exposure where once a policyholder entered benefit status, there was minimal ability to reduce payments, reprice premiums, or encourage exit. The strain on reserves and capital requirements of the products entering loss recognition led to this benefit duration option being removed from the market.

What went wrong or proved challenging?

In the first order: claimants disincentivised to cease their claim.

The product design, pricing assumptions, and long-tailed exposure created structural vulnerability, and there was a misalignment in terms of being incentivised to stay on claim (and to some extent, keeping the policies going prior to claim).

The lifetime income replacement experience highlights the perils of offering indefinite claims guarantees without sufficient long-term data or dynamic pricing flexibility. Products that pay indefinitely transform what appears to be a standard insurance risk into a quasi-annuity exposure, highly sensitive to both morbidity trends, mortality improvements and macroeconomic conditions (for example, inflation eroding the real value of benefits).

Compounding this, although the product was more expensive, it had a strong marketing appeal for higher net worth customers (including driving higher sums assured) and initially experience would prove benign, all the while the tail risk quietly accumulated.

A memory from the past

And where a guild brother is afflicted by a lingering illness, due either to a fall or any other convenience or misfortune, that brother shall be supported from the fund, but if he contracted the lingering illness through an insalubrious way of life, such as drinking to inebriety, engaging with disreputable women or such like, he shall not enjoy the support of the fund..

Excerpt from International Institute of Social History courtesy of Piet Lourens, The Economic History Review 65, M Van Leeuwen

h. Case Study 8: Decrease cover

In Australia in the 90's and 2000's, funeral insurance was sold as whole-of-life cover with fixed sums insured (often $3,000-$15,000) under both a level and more commonly bought age-stepped premium structure. The first year's premiums were sometime 'free' and there was minimal underwriting through immediate issue.

The product aimed to address the consumer need of how to meet modest end-of-life expenses without burdening family members or requiring savings at death. From the insurer's perspective, the risks appeared predictable: mortality was well understood, claims volatility was low, sums insured were low, and policies were lapse-supported.

However, a few structural flaws sat beneath this apparent stability. The first was the risk of economic unfairness embedded in the product design. The premium structure for stepped polices meant that long-standing policyholders could end up with cumulative premiums that exceeded their sum insured, sometimes multiple times over. The small premiums and high associated expenses and distribution costs also resulted in low relative loss ratios, akin to the unemployment products. The policies were also sold through outbound telemarketing, which led to consumer understanding challenges given the age, sometimes vulnerability and financial literacy of the intended customers.

As scrutiny intensified, the challenges emerged as not ones of technical pricing or profitability or need, but of social licence. A Royal Commission brought direct selling practices, previously acceptable by the insurers' standard, into conflict with changing consumer expectations. Products that were actuarially solvent were judged unacceptable because outcomes could be unfair.

What went wrong or proved challenging?

In the first order: not factoring in changing consumer expectations.

It wasn't assumptions but rather understanding the impacts for vulnerable cohorts, where low engagement, fear of funeral costs and difficulty to cancel needed to be carefully considered. The funeral insurance experience in Australia reinforced that products targeting some customers must be assessed not only on loss ratios for value, but on lifetime value symmetry. More broadly, it demonstrated that long-duration products with small premiums or no guarantees, even if only mortality, are not low-risk simply because sums assured are low. There are overlaps with this aspect of the product and unemployment insurance sold by the banks that was attached to loans.

We could look back and say that the real failure emerged as one of a social test where the true tail risk lies in how fairness is judged years later. Did consumer expectations change or were they not considered? The design wasn't assessing what happened at the tail end of the life of the policy - paying more in premiums than sum insureds, or relying on inertia, the pub test for loss ratios - which all should have been a flag early

on. This highlights the theme of making sure we consider the consumer's experience, all the way to the end.

A memory from the past

The amount paid in claims absorbed only £22,400,000 out of the £54,000,000. It does not look as if the working-classes as a whole have got a very good proposition when they pay £54,000,000 in premiums and only get £22,400,000 back in claims paid…Turning to the latest figures which the Committee had before them on the question of lapses, I find that the new policies taken out in 1929 numbered 10,000,000. Of that number, 6,000,000 were discontinued, 4,750,000 of those policies lapsed altogether, and 1,250,000 had surrender values or free paid-up policies granted. That was in 1929, a year of comparative prosperity. What must it have been in 1931?

Excerpt from UK Parliament debate on industrial life insurance, Sir B Pesto, 1934

i. Case Study 9: Increase cover

One of the more common product features to compete on is benefit levels. Numerous examples persist - in the early 2010s, group insurance in Australia saw Automatic Acceptance Limits (AALs) skyrocket to unprecedented levels of $1.5 million TPD benefits without medical underwriting. Indexation of retail disability benefits, which are sometimes subject to a minimum increase each year of 5%, would alter the level of risk implied at outset of the policy. In a similar vein, income protection decades ago used to offer a maximum 50% replacement ratio which slowly crept up to 75%, then up to 87% to include super contributions.

In all cases, the consumer need being solved was arguably simple: underinsurance was widespread, a permanent disability from a young age might leave the insured without income for long periods so higher levels of cover promised to close that gap. From an insurer's perspective, this was a differentiator - promising scale, reducing individual underwriting costs, signalling risk appetite and enhancing persistency.

Aside from diluting underwriting discipline, morbidity benefits that approached or exceeded net pre-disability earnings created behavioural distortions, weakening return to work incentives and lengthening claim durations beyond pricing assumptions. Lump sums that offered unintended multiples of salary (20 times for example) would change attitudes to trying to claim. What was positioned as comprehensive protection crossed into effective overinsurance - where the sum of cover, offsets and benefits exceeded the genuine economic loss.

What went wrong or proved challenging?

In the first order: benefit generosity without commensurate risk control.

The principle of moral hazard and overinsurance was at play. Rising cover levels and expanded income replacement assumed that the behavioural, morbidity and selection dynamics would remain constant - an assumption that proved optimistic. Higher limits without underwriting added tail risk, and higher replacement ratios undermined return to work triggers and extended claims beyond priced durations. This was exacerbated by reinsurance in some ways, where surplus cover treaties or durations of business sold would distort how insurers and reinsurers each viewed the experience.

The experience highlights that higher benefit levels materially alter risk dynamics and require proportionate underwriting, pricing and reserve frameworks. It is not enough to assume that larger coverage simply scales existing pricing models: coverage limits interact with behaviour, morbidity, and capital requirements in non-linear ways. Actuarial frameworks must incorporate these interactions, particularly related to the whole system (workers compensation, mental health, having combined benefits etc) explicitly rather than treat them as incremental adjustments to base designs.

A memory from the past

As a specific device against moral hazard, most life insurers did incorporate a "suicide clause" into their policies, exempting the company from paying claims on deaths occurring by suicide, judicial execution, and sometimes also dueling, but this offered only a partial solution to the potential problem of insuring lives shortened by the pressures of debt.

Excerpt from Moral Hazard and the Assessment of Insurance Risk in Eighteenth-and Early-Nineteenth-Century Britain, R Pearson

j. Case Study 10: Pass the risk

Life insurance tontines emerged in Europe in the late 17th and 18th centuries as one of the earliest attempts to pool longevity risk. Under a tontine, a group of individuals contributed capital into a common pool. The pool generated income, which was distributed periodically to surviving members. As participants died, their shares were redistributed among the survivors. The last survivor - or last cohort - ultimately received a disproportionately large benefit. In contrast to annuities, there was no guarantee of a fixed payout for life; the reward came from outliving others.

The consumer need was ensuring lifetime income, no different to the need behind annuities, albeit this had a combination of retirement income, lottery-like upside, and a wager on one's own survival. For insurers, the structure was capital efficient: payments naturally declined as participants died, and longevity risk was self-correcting (with the risk effectively being borne by the participants). Tontines were credited with the level of capital that built up within mutuals given that dividends could be deferred for long periods.

But they were poorly standardised. Entry ages varied widely, mortality assumptions were crude, and governance was weak. Participants had little visibility into how pools were managed, how income was calculated, or how deaths were verified. Survivors at advanced ages received extremely high payouts relative to contributions, while earlier deaths produced outcomes that, in hindsight, looked punitive to families.

Tontines also encouraged behaviour that made politicians, regulators and courts deeply uncomfortable: incentives to conceal deaths, disputes over proof of survival, black boxes of policyholder money, fraud and in extreme cases, suspicions of foul play. By the 19th century, public perception had shifted. Tontines began to be viewed less as insurance and more as speculative gambling on death. In the United States, this culminated in the Armstrong Investigation of 1905-1906 and ultimately US insurers were prohibited from issuing new tontine policies, with similar bans or restrictions following elsewhere.

What went wrong or proved challenging?

In the first order: opaque risk pooling.

Tontines assumed that fairness would emerge naturally from pooling, but small differences in survival translated into massive differences in outcomes. Governance failures and weak disclosure turned what was meant to be a self-balancing structure into a reputational and political liability.

The tontine experience illustrates a recurring theme in insurance innovation: removing explicit guarantees does not remove responsibility. Products that rely on collective risk-sharing still require strong governance, transparency, and social legitimacy. Modern attempts to 'rediscover' tontines or pooled longevity products tend to repackage them with stronger disclosures, smoother benefits where there isn't 'one winner' only, and institutional oversight.

Extreme outcomes - elderly survivors receiving very large incomes funded by the deaths of peers - might be mathematically coherent but are publicly unacceptable. Insurance products do not operate in a vacuum; they are judged ex post by courts, regulators, and public opinion. Tontines crossed an implicit social boundary where outcomes, though contractually valid, conflicted with later ideas of fairness and decency.

A memory from the past

"…I know not for certain whether there is so much money, nor do I know if there is more, but I think so. If there is more, it is to be shared among all to whom I have bequeathed money…"

Excerpt from will of Alfred the Great (AD 873-888)