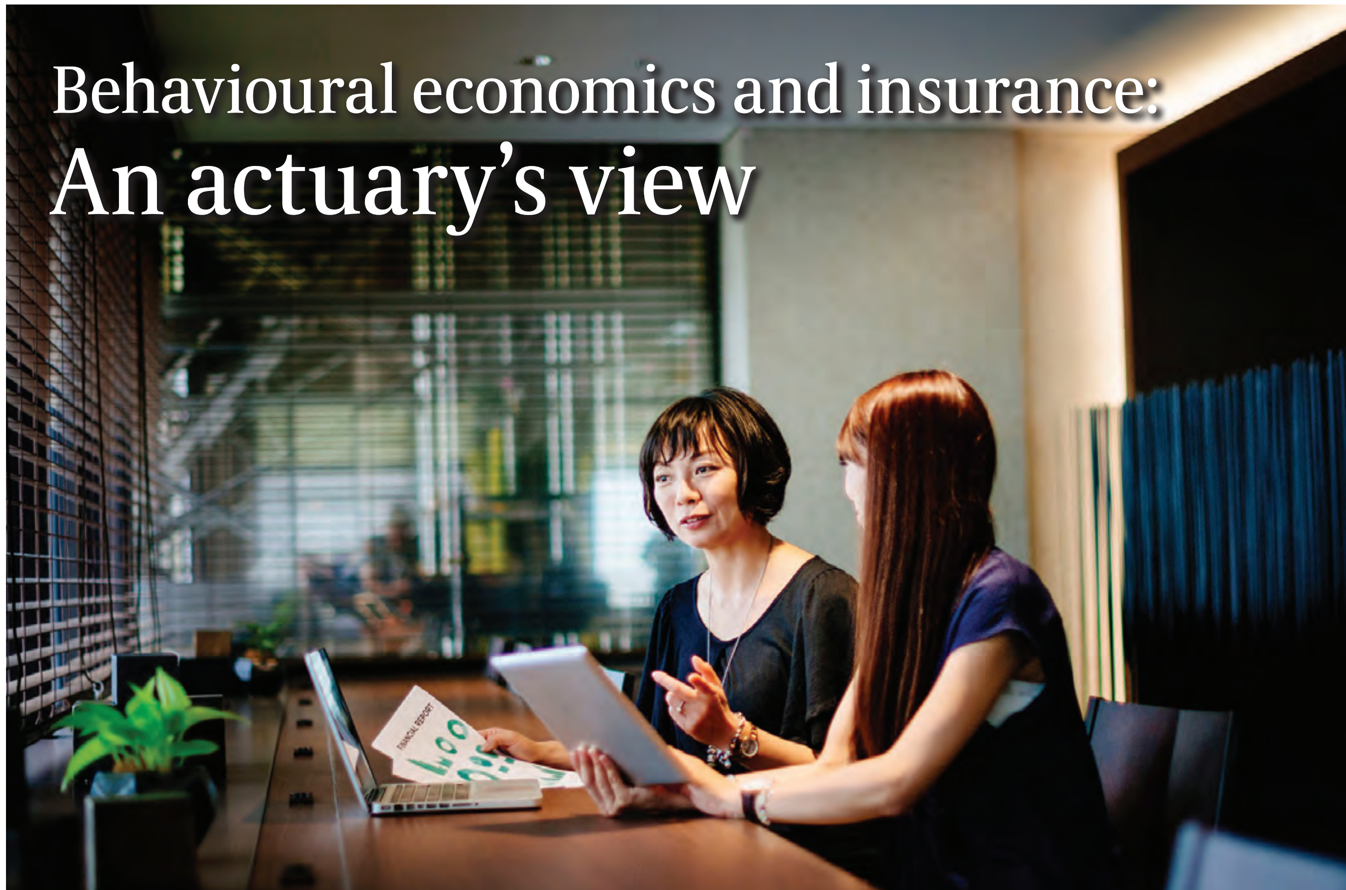
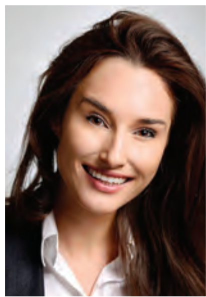
Insights – Actuarial Focus



Behavioural economics and insurance: An actuary’s view

The psychology and drivers of choice are becoming core elements in how life insurers are looking to meet fundamental challenges. The fast-growing field of behavioural economics, which looks at how individual biases affect purchase decisions, is becoming a more significant part of how insurers are developing and selling products. **Ms Jaqui Wassenaar** of **RGA Japan** discusses.



For insurers, understanding the decision processes of consumers buying insurance, and how those processes intersect with how actuaries and underwriters develop, price and market products, is becoming increasingly important.

It is clear that consumer purchase decision processes, not just in insurance but across the board, tend at times to seem less than logical. Final decisions will, more often than not, be based on gut instinct, rules of thumb, and aversion to loss. At times, consumers might even seem to disregard what is in their own best interests.

And this is the fundamental concept behind behavioural economics: that people make financial decisions based more on emotion rather than on rational thought and analysis.

What is it?

Behavioural economics is not really a new school of thought. Classical (pre 20th century) economic theory was oriented more toward human behaviour, and linked economics with psychology. By the late 19th century, however – a time of foment in the field – a group of economic theorists had begun to advocate for economics as a natural science: one that viewed consumer decision-making as based on rational preferences between outcomes.

As this neoclassical school of economics developed, it increasingly emphasised metrics and measurements to explain economic activity and choice. Consumers, it posited, are rational, using logic to make financial decisions and always seeking to maximise their long-term worth. Behaviour and emotion were removed from the mix.

When applied to life insurance, under neoclassical economic theory, one would assume that potential buyers assess the probability of an insured event relative to the cost of the insurance, and then choose the insurance option that might provide the best financial outcome on a probabilistic basis.

This, however, is rarely the case. By the late 1970s, it was increasingly clear that the so-called “economic man” – ie, the rational consumer – was in fact substantially less rational than assumed. Psychologists Daniel Kahneman and Amos Tversky noted that utility theory did not always function as predicted.

After studying preferences in gambles and options, in 1979, they developed and published a paper, “Prospect Theory: An Analysis of Decision Under Risk,” which advanced the idea that the manner in which alternatives are presented matters as well as the actual value of the alternatives.

This theory, which clarified how choices are made when risk is involved and outcome probabilities are known, won its author a Nobel Prize in economics in 2002, as it was a first step in reintegrating psychology back into the economics of decision-making. It also laid the groundwork for the new field of behavioural economics, which has integrated rapidly into today's economic thinking.

The role of biases

Although it might seem logical for an individual faced with an insurance purchase decision to research the options and then analyse the results, rational thinking frequently takes a back seat to a gamut of preconceptions and cognitive biases. These include:

- **Anchoring:** latching onto an idea whether it has a basis in fact or not. As an example, until a few years ago, the existing rate of a group risk scheme in South Africa, as well as its claims experience, was required to be shared for all groups with more than 200 lives. What happened, however, was that the existing rate started to dictate the subsequent year's rate. The industry decision for insurers not to share the latest scheme rate has helped bring some rationality back into the system by helping insurers place more emphasis on experience based credibility-weighted pricing rather than purely relying on market pricing.
- **Overconfidence:** the tendency to overestimate knowledge, underestimate risk and exaggerate ability to control events. Indeed, it is one of the reasons consumers many times think they do not need to buy insurance. Auto insurer Progressive (in the US) as an example appeals to driver overconfidence by offering a device to policyholders that attaches to their vehicles and measures driving patterns – how they accelerate, brake usage, late-night driving, texting behaviors, etc – and telling policyholders that the better they drive, the lower their premiums. This can be a good strategy, considering that most consider themselves "better than average" drivers (which we know is not statistically possible).
- **Recency:** placing more weight upon information received later than information received earlier. For example, a bull market might not go up forever, but as it continues, people may start to invest when it is near the top. Conversely, when the market is falling or has been languishing for a while, consumers will tend to think it may never come back, and so tend not to invest.
- **Priority effect/middle order effect:** these two concepts have to do with the order in which items are presented to consumers. In priority effect, studies have shown that people will tend to choose the first option on a list, typically a long list. Restaurant owners like to capitalise on this by placing high-margin items higher on menus. Middle order effect is a cognitive bias that comes into play when one is presented with a list of three options – consumers will tend to choose the option in the middle. When developing call-centre scripts, it is essential that insurers take this bias into account, in order to position the desired customer choice as the middle option. It is also essential, however, that insurers, knowing this cognitive bias exists, bear in mind their responsibility for ensuring this choice is also good for the customer.
- **Inertia (or status quo):** preferring to stick with a previously made decision rather than risking a new one based on new information, due to loss aversion. This bias is linked to fear of regret.

The strategy of framing can take advantage of cognitive biases to influence customer choices. In the European Union, for example, insurers can no longer use gender as a rating factor. One UK insurer developed an auto insurance product marketed as "car insurance for girls", even though the product can be bought by either gender at gender-neutral rates. Men would be far less likely to apply for this cover even though they would qualify, and the insurer may be able to achieve its aim of attracting female policyholders and hence improve its potential to lower its overall claims costs.

Behavioural economics is also important in designing financial products that protect people from their own irrational decision-making so that they receive long-term benefits from their choices rather than near-term rewards.

For example, the SMarT (Save More Tomorrow) programme, developed in 2004 by economists Richard Thaler and Shlomo Benartzi, tackles the problem of inadequate retirement savings in defined contribution plans by simply proposing the increased plan contributions to be selected three months before a salary increase. By doing so, individuals are less likely to feel the pinch of a cut in take-home pay since the increase in their retirement contribution is timed with their salary increase. By offering the choice three months ahead of the salary increase, the plan takes advantage of hyperbolic discounting – which is the tendency for people to not want to part with money now but be willing to commit to parting with it at a future date. Although the plan allows for opt-out it capitalises positively on inertia, making the process ultimately beneficial for participants.

Care is required

Today, behavioural economics has gained substantial acceptance in the US and Europe, but it is still an emerging branch of economics for actuaries in Asia.

Insurers must be very aware of consumer biases and be careful to use them fairly – from actuaries designing products to marketers designing sales campaigns – as human behaviour affects decision-making. In leveraging any consumer bias, insurers are well advised to do so ethically, keeping every customer's best interest top of mind.

Ms Jaqui Wassenaar is Chief Marketing Officer at RGA Japan.

Highlights

- Consumer purchase decision processes tend to be less than logical. Rational thinking frequently takes a back seat to a gamut of preconceptions and cognitive biases; and
- Behavioural economics is important when it comes to the design of financial products, as it can protect people from their own irrational decision-making.