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# cover

*25 Years*

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## TREATING CUSTOMERS FAIRLY

lunch-time

TRANSFORMATION  
Still treading  
too lightly?

TRUSTS  
Taxing but  
still a trend

TECHNOLOGY  
Stay ahead  
of the game

LOSS ADJUSTERS  
Still an essential  
partnership

# Pandemic catastrophes and consequences

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**D**espite the fact that diseases kill more people than wars, earthquakes, tsunamis and volcanoes, they are feared less, perhaps because we cannot see their mighty destructive power. The influenza virus is, however, a killer with the ability suddenly to kill millions of people.

The 1918 Spanish flu was the most catastrophic pandemic of recent times, infecting about 500 million people and killing up to 100 million. Contrast this with fatalities of other well-known natural and man-made catastrophes: World War I (37 million deaths), the Asian tsunami of 2004 (230 000 deaths), and the 9/11 World Trade Center terrorist attack (2996 deaths). The largest South African natural catastrophes include the 1981 Laingsburg flood (104 deaths), the 1984 cyclone (about 200 deaths), and the 1987 flood in Kwa-Zulu Natal (388 deaths).

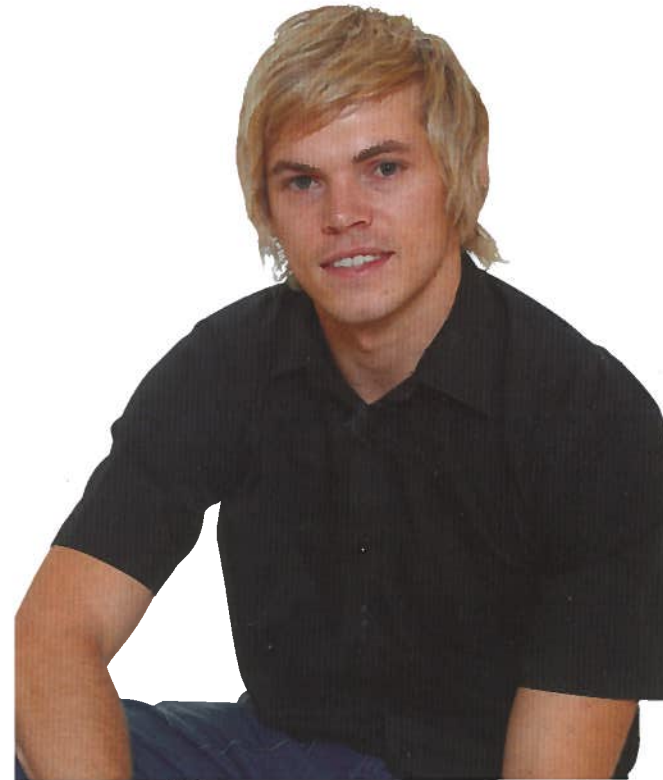
Pandemics pose an enormous risk to human life. The International Actuarial Association (IAA) suggests that the two most deadly diseases affecting the populace are not, as one might suspect, AIDS, malaria, Ebola or hepatitis, but rather influenza and SARS (not taxes, but Severe Acute Respiratory Syndrome, though some may argue the point).

A widespread flu outbreak would not only pose an enormous threat to human life, but also to life as we know it. Business processes would be heavily affected by sick and grief-stricken employees possibly being too demoralized to work properly, and investment markets would most probably fall significantly due to low investor confidence and bad sentiment regarding the ability of companies to perform amidst such a calamity.

## Impact on life insurers

Plummeting markets would deal a particularly heavy blow to financial companies with large investment portfolios, resulting in their total asset values falling. The impact would be suffered twofold by life insurers: the abnormal number of life insurance claims and resulting payouts in short succession caused by a large scale pandemic would increase a life insurer's liabilities with a simultaneous fall in assets. It is easy to foresee that, in such a scenario, the liquidity position of these insurers would come under tremendous strain.

Life insurers can protect themselves against the financial



impact of pandemic risk by purchasing reinsurance cover. Essentially, life insurers must be willing to pay large enough premiums to reinsurers to accept the pandemic risk. This would appear to remove the risk for the ceding life insurers, but only if the reinsurers are capable of making the contractual payments in the event of a pandemic. This, however, depends on whether reinsurers are capable of absorbing the impact of the pandemic against which the insurers are seeking protection; if a pandemic kills enough insurance policyholders, then many simultaneous reinsurance claims could also dramatically affect the solvency positions of the reinsurers. It is therefore evident that the reinsurance industry has a large risk exposure to pandemics. Reinsurers themselves need to be protected, but even retrocession arrangements (reinsurance for reinsurers) cannot limit the losses that the reinsurance industry as a whole would suffer in the event of a catastrophic pandemic.

Life insurers and reinsurers can prepare for a pandemic by improving their understanding of pandemics and their

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your  
clients  
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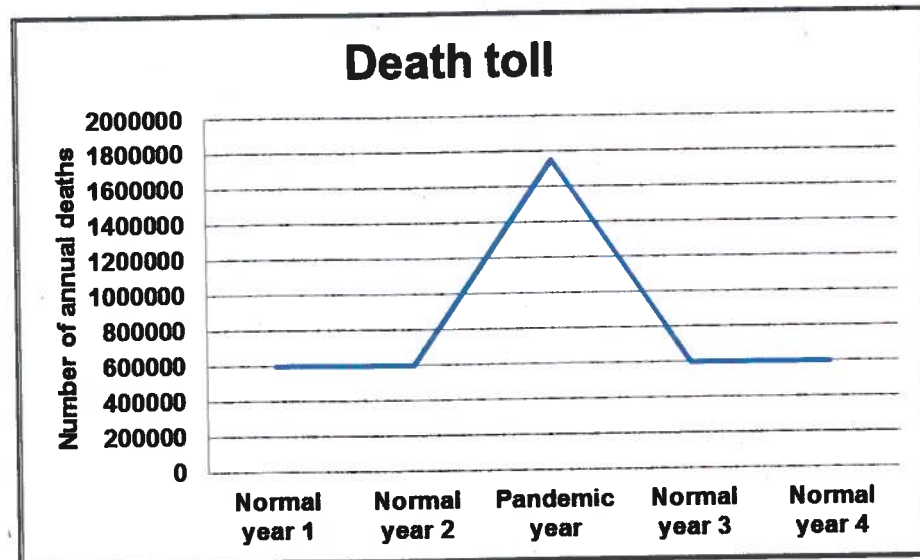
consequences, a sentiment supported by financial regulators. The Financial Services Board (FSB) is in the process of implementing the Solvency and Assessment and Management (SAM) regime, which treats catastrophes as a separate and sizeable risk. Life insurance firms will be required to perform an assessment to test whether sufficient reserves and risk capital are allocated to catastrophe risk (not surprisingly, the greatest component of catastrophe risk is pandemic risk). Insurers need to assess whether they have sufficient assets to pay all claims and continue doing business if a disaster were to occur. It is therefore critical for firms to gauge the potential severity of a pandemic.

The only valid benchmark for this comparison is the 1918 Spanish flu pandemic. Pandemics before the 20th century are of limited use as reference points due to a lack of reliable data and conditions being too dissimilar to those of modern times. Other well-known pandemics often referenced include the 1957 Asian flu, the 1968 Hong Kong flu, the 1977 Russian flu and the SARS pandemic of 2003.

The IAA estimated that the Spanish flu caused between 400 and 500 "excess deaths" world-wide

To quantify the impact of a pandemic, one needs to estimate the number of "excess deaths" (the number of individuals per 100 000 dying because of an outbreak). The IAA estimated that the Spanish flu caused between 400 and 500 "excess deaths" world-wide, while the worst hit areas in South Africa experienced between 2300 and 4000. The death toll graph shows that 2300 "excess deaths" in the current South African population would cause our total annual death toll nearly to triple from 600 000 to 1 750 000.

These past figures are not necessarily what one could expect today owing to changes since the historical



pandemic occurred - among the most significant that would alleviate the impact of pandemics is advances in modern medicine: the development of antibiotics, vaccines and antivirals. Other changes are quarantines, travel restrictions, higher media awareness, and the Global Influenza Surveillance Network established in 1952 by the World Health Organization (WHO).

Changes that could increase the spread and fatality of an influenza virus include a larger and denser

world population, increased mobility and higher fertility rates in developing countries - pregnant mothers and infants are especially vulnerable. An emerging concern is the possible mutation of viruses to form new strains with the ability to spread and kill more severely than pandemics of the past. The H5N1 virus (bird flu) kills about 60% of the infected individuals, and our primary protection currently is the virus's own handicap - its inability to transmit effectively between people. Were the H5N1 virus to evolve and be able to spread sustainably, it could precipitate an apocalyptic pandemic.

The IAA has developed a disease model that estimates the magnitude of an influenza pandemic similar

in nature to the 1918 Spanish flu, but with allowance for the changes in circumstances. It has estimated the number of "excess deaths" (on an international scale) to be 245. A South African specific model, developed by Stipp et al., produced estimates of 1500 and 2000 for two different scenarios. A refinement of this model by Dreyer et al. produced estimates of 400 "excess deaths" for a mild pandemic and 10 000 "excess deaths" for an ultra-severe pandemic - equivalent to one out of ten people dying from flu. A pandemic model developed by Kramer for Swiss Reinsurance company suggests that the largest pandemic one could expect in 500 years would cause 471 "excess deaths" in South Africa. This may not sound like much, but collectively is equivalent to 2,3 million flu deaths in South Africa.

*Predicting the potential consequences of a pandemic is a tough task, and even if we get it spot on, we are not yet protected from the flu's killing capacity. Hopefully, the warning systems around the world are sophisticated enough to prevent a large scale pandemic. Committed researchers and catastrophe planners fortunately work tirelessly to reduce the threat that diseases pose to life. Similarly, financial regulators and insurance experts have the massive responsibility to ensure that the financial risk to firms is appropriately managed.*



# SOUTH AFRICA'S RETIREMENT CRISIS

The results of the 2013 Sanlam BENCHMARK Survey show where employees are going wrong with their retirement planning - leading to a grim reality for our pensioners...

## MISTAKES

### MADE BY EMPLOYEES DURING WORKING LIFE

**56%** start saving at 28 - recommended age 23.



On average we invest only **7%** of our salary every year - 15% is minimum needed.



**62%** of us don't reinvest our retirement savings for retirement if we change jobs or are retrenched.



**90%** of us don't relook retirement savings after initially signing up.



**38%** of us never get professional advice about our retirement savings.



## REALITIES

### AFTER RETIREMENT

**51%** of South Africa's pensioners can't make ends meet.



**1/3** of pensioners don't have enough funds to cover their medical expenses (their second biggest expense).



**61%** are unable to save for a 'rainy day' fund after retirement due to pressures of expenses.



**33%** are still in debt after they stop working and **53%** still have adult dependants to support.



**62%** would strongly advise the youth of today to start their saving and planning for retirement EARLY.



## WHAT YOU NEED TO RETIRE COMFORTABLY:

After working for **10 years**, you need to have saved: **2 x** your annual salary.

- 20 years = 4 x salary
- 30 years = 7 x salary
- 40 years = 12 x salary