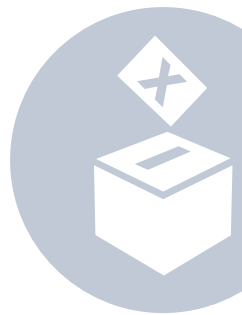




Institute
and Faculty
of Actuaries

The Future of Insurance: A **STEEP** change

Policy Briefing



Evolving risks
and the future
of insurance

Contents

Introduction	3
Executive summary	4
Chapter 1: Societal	5
Case study 1: Ageing population	5
Case study 2: Bodily injury claims	5
Chapter 2: Technological	7
Chapter 3: Economic	9
Non-life Insurance	9
Life Insurance	9
Consumer Impact	10
Chapter 4: Environmental	11
Chapter 5: Political	13
Case Study 1: EU Referendum	13
Case study 2: Social care	14
Next steps	15
References	15

Introduction

The world is rapidly changing. We are becoming increasingly globalised, we are living longer and technology is advancing at an unprecedented pace. This presents opportunities and risks for the economy, businesses and society, as well as the insurance industry.

Insurance offers protection to businesses and society and plays an important role in economic development and supporting wider societal needs. For example, in aiding responses to natural disasters, or providing people with an income should they suffer an illness or injury that prevents them from working.

The Institute and Faculty of Actuaries (IFoA) has identified 'Evolving risks and the future of insurance' as one of its key policy priorities as we believe it is essential that the potential implications of evolving Societal, Technological, Economic, Environmental and Political factors are understood. Adaptation to these risks is already taking place amongst governments, society and the insurance industry. It is important that the work of actuaries respond to these evolving risks, so insurance remains fit-for-purpose. It is also essential that the potential implications for the public are understood, as there could be unintended consequences from not responding appropriately to these risks. For example, some segments of society that would benefit from having insurance may become unable to access or afford it.

We are committed to undertaking further research and thought leadership, working alongside others to take advantage of the opportunities and to meet the challenges facing the insurance sector and those individuals and businesses that are in need of the protection that insurance provides.

The purpose of this paper is to highlight those specific policy challenges where the IFoA is focusing its efforts and will be producing further work. We invite readers to contact us at **policy@actuaries.org.uk** if you would like to be involved in, or hear more about our work programme.



Executive summary

This paper discusses both the opportunities and challenges for the insurance industry arising from changes in Society, Technology, the Economy, the Environment and Politics.



Societal

Insurance plays an important part of everyday life, yet consumers of insurance are far from homogenous. Society has different needs, different priorities and different expectations in interacting with insurance companies. Insurance companies will need to continue to adapt as quickly as society's needs are changing if they are going to meet societal need. This is particularly challenging for insurance products where the liabilities are long-term. Long-term liabilities, such as those associated with annuities or periodic payment orders for bodily injury claims, create greater uncertainty, which affects the premiums and claim value, and have raised questions around how society perceives 'fairness' of insurance products.



Technological

Technology is advancing at a rapid rate and this can help insurers to drive improvements in risk management. In particular, the unprecedented growth in data and our ability to analyse that data means that insurance companies are better able than ever to gain an accurate understanding of an individual's risk profile. As insurers optimise their use of technologies, such as telematics and wearables, there is evidence that this is encouraging policyholders to change their behaviour, reducing their risk and in turn lower their premiums. Lower risk behaviours can be beneficial for society, for example if policyholders adopt safer driving practices or healthier lifestyles.



Economic

Whilst economic trends affect life and non-life insurance companies in different ways, the overall impact is still to place the solvency of the insurance company at risk. The models and investment strategies used by insurers, as well as the scenarios that their capital position is assessed against, must be able to consider and adapt to changes in the economy, for example persistent low, or even

negative, interest rates. Economic trends can result in consumers being under-insured, both from life and non-life insurance products. This can be problematic for individuals, businesses and wider society, for example if individuals or businesses are less able to recover from an unforeseen 'shock' because they do not have adequate insurance to support their recovery.



Environmental

Extreme weather events are increasing in frequency and climate change poses further risk. As the economic and human consequences of these events can be so severe, governments have already started to work with the insurance industry to ensure that those most vulnerable have access to affordable insurance. Protecting those who are most vulnerable to environmental factors requires consideration of the trade-off between risk-reflective pricing and risk pooling. Governments and governmental organisations are already helping to create partnerships that ensure affordability of insurance for some of those people who are most vulnerable to extreme weather events on both a national and international level. However, insurance coverage remains low amongst many vulnerable communities.



Political

Policy decisions made by governments affect the insurance industry, and ultimately consumers and potential consumers of insurance products. For example, many developed countries are grappling with rising social care costs and governments in different countries are implementing a range of different policies to meet the increase in demand and expenditure, with varying degrees of success. It is therefore important that the insurance industry is able to help governments to understand the potential consequences of their policy decisions. These decisions will affect the role of insurance in offering protection to society, as well as having consequences on State expenditure, both in the short and long term.



Chapter 1: Societal

Insurance is an important part of everyday life for many people.

- Life insurance provides financial protection to families in the event of death and has a role in helping people to support themselves through periods of unemployment and in retirement.
- Non-life insurance helps people to respond to damage and loss of their home, belongings and livelihood in the face of adverse events.

Here we present two case studies to demonstrate areas where the industry must continue to adapt if it is going to meet societal needs.

Case study 1: Ageing population

The number of people aged over 85 in the UK is set to double in the next 20 yearsⁱ. Both life and non-life insurance products will be important in meeting the needs of an ageing population.

Older consumers should not be treated unfairly because of their age. The protection that some non-life insurance products offer against unexpected costs could be of even greater significance once people are in retirement. There is a benefit, both financially and psychologically, to having peace of mind from paying a regular insurance payment that will protect against a volatile cost that may arise from an adverse event. Examples of this include home insurance, travel insurance and even pet insurance. These products should offer value for money and be affordable for older consumers and it is important that older consumers are not priced out of these markets. One example where this might have been the case is travel insurance. Age UK found that 97 percent of annual travel insurance policies impose an upper age limit for new customers, and yet travel was the most common aspiration amongst their respondents.ⁱⁱ Whilst there may be cases where age is determined to be a relevant risk factor insurers will need to strike a balance between meeting the needs of an ageing population and ensuring that pricing is set in all customers' best interests.ⁱⁱⁱ

In addition to non-life insurance products, life products which offer protection against longevity risk are important amongst an ageing population. Without longevity protection there is a risk that if people underestimate how long they are going to live, they could run out of money before they die. Running out of funds in later life, when an individual is unlikely to be able to take remedial action could be a significant challenge, particularly if they run out of money at the time when they are most likely to develop care needs. In a number of countries,

the markets for products that mitigate longevity risk have seen fundamental reform. For example, the annuity market in the UK is still responding to the introduction of the 'freedom and choice' agenda. Since the implementation of these reforms, the sales of annuities have drastically fallen.^{iv} Whilst sales have fallen, there was already a perception that annuities offer poor value for money due to the decline in annuity rates.^v Freedom and choice has given the insurance industry an opportunity to review its longevity insurance offering and to educate consumers on the potential benefits, in order to escape the poor perception that annuities have amongst the public.

Longevity protection can help to meet the needs of an ageing population. It is imperative therefore that governments, regulators and the insurance industry take steps to ensure that legislation and regulation do not make these products less attractive to consumers who could benefit from them.

Case study 2: Bodily injury claims

A range of insurance products could cover accidents that result in a serious bodily injury, for example:

- an injury as a result of a car accident would be covered by motor insurance;
- an injury as a result of a water sport accident overseas could be covered to some extent by travel insurance;
- an injury incurred at work would be covered by the employer's liability cover in place; and
- an injury resulting from medical malpractice could be covered by the State scheme (NHSLA), or via a discretionary mutual organisation, or private insurance if it is an operation carried out by private health care.

As a result of different types of insurance covering bodily injury claims, individuals with the same or a similar bodily injury, and importantly an identical need, could expect to receive a different pay-out dependent on the type of insurance product they are claiming against.

The figure below demonstrates the variation in the pay-out for bodily injury claims in the UK. This example demonstrates the variation where the injury has resulted in a long-term cost of care, in this case because of either brain damage or paraplegia.

These include both the quantum and type of payment (i.e. whether it is a lump sum or periodic payment order). The figure shows that travel, medical malpractice private cover, employer's liability and public liability all have limits on the value of the claim. Whereas, the claim is unlimited if the injury is incurred as a result of a motor accident as long as the person claiming is not at fault for the accident i.e. is the driver.

In the case of medical malpractice, both the quantum of the pay out and the style of pay out vary depending on whether the injury is because of an operation carried out under the NHS or within the private sector.

Figure 1: Paraplegia / Quadraplegia and Brain Damage in the UK.^{vi}

Travel	<ul style="list-style-type: none"> Limited liability Typically insurer will repatriate with cost of medical and future care then falling to NHS or PMI
Medical malpractice private cover	<ul style="list-style-type: none"> Discretionary cover generally along with some limited liability in Lloyds Unlikely to be granted a PPO - discretionary providers do not typically grant PPOs
Employers liability	<ul style="list-style-type: none"> Limited liability PPO is a possibility but can be granted by the courts but is impacted by the limited liability
Public liability	<ul style="list-style-type: none"> Limited liability PPO is a possibility but can be granted by the courts but is impacted by the limited liability
Medical malpractice state cover	<ul style="list-style-type: none"> Unlimited liability Generally cover is provided through a PPO (style) arrangement
Motor	<ul style="list-style-type: none"> Unlimited liability PPO can be granted by the courts

Some of the questions that this raises and we intend to explore are:

- Should a claim for serious bodily injury have different claim entitlements dependent on the product type against which the injured person is claiming?
- Whether the claim is limited or unlimited will affect the availability and quality of care the injured person is able to afford. Should the availability and quality of care vary where the person is seriously injured through no fault of their own?
- Should the insurance sector and / or State play a role in investigating the equity of the treatment of bodily injury claims?



Chapter 2: Technological

Technology is advancing at a rapid rate and this can help insurers to drive improvements in risk management.

In particular, the unprecedented growth in available data and our ability to analyse that data means that insurance companies are better able than ever to gain an accurate understanding of an individual's risk profile. This is already revolutionising the relationship between financial services and consumers.

An example from non-life insurance is the use of the 'black box' by motor insurance companies to collect data on their policyholders' driving. Gathering data on drivers allows insurers to offer premiums based on an individual's ability to drive safely, as opposed to differentiators such as age that allow for an approximation of risk. In addition, those drivers with a 'black box' may perceive that by driving more carefully they have greater control over their future premiums. A desire to pay a lower premium and to be considered a low risk to insurers has the potential to have a positive impact on behaviours and encourage drivers to reduce high-risk behaviours, such as speeding.

Another area where advances in technology have meant insurers are better able to assess an individual's actual risk, as opposed to using proxies, is health. This too has had positive effects on behaviours and resulted in lower premiums. In the US, the insurance sector is using wearables to promote healthier living. One example is 'Blue Shield: Wellvolution', a non-for-profit insurer based in California. Wellvolution assigns employees challenges, which they earn points for completing. This scheme has resulted in a 50 percent reduction in smoking, 66 percent reduction in hypertension and a \$3million saving per annum in insurance premiums amongst its 5,000 employees.^{vii} Another example is Discovery Limited in South Africa. Its Vitality programme incentivises members to live healthier lifestyles by providing them with rewards for achieving specified health goals. This programme allows members to collect points by connecting their wearables to their profile, which allows the programme to capture data. This enables the insurer to develop a more granular assessment of a policyholder's risk and provides greater insight into a policyholder's morbidity and mortality risk.^{viii}

The UK is beginning to see similar initiatives. Havenrock Group's income protection cover incorporates wearables to improve employee health and productivity by reducing stress, fatigue and absenteeism. This cover gives each insured employee a free activity tracker and a free annual health check-up at their workplace. Data from these are combined on an online health portal that offers employees advice, annual reports and notification of any health issues for which they might wish to seek medical advice. The employer also benefits from an anonymised overall annual health status report on its employees.^{ix}

These examples highlight the pivotal role of technological advances, which mean that insurers and actuaries are better able to assess a policyholder's risk profile, rather than using proxies such as age or location. Access to the continuous picture of a policyholder's behaviour can reduce future premiums for policyholders.

Where the policyholder wishes to influence their premium and take action to lower their risk and therefore the cost, this can have positive implications for society, for example by encouraging people to drive more safely, or to improve their health.

As insurers optimise their use of technologies such as telematics and wearables to gain greater access to larger volumes of data, there is a role for these insurance companies to work with policymakers and public services. For example, having sufficient data to be able to identify those individuals with a higher risk of mortality or morbidity could help to target health services more effectively. In addition, the role of wearables to encourage individuals to improve their health, in order to lower their premiums, could lead to lower State expenditure on poor health, if there is sufficient penetration to improve a large number of the population's health.

To this end, the IFoA has established the *Modelling, Analytics and Insights from Data Working Party* to develop a toolkit for dealing with advances in data collection and analysis, as well as considering what problems these techniques can be applied to addressing.

One of the key public policy challenges that will need to be addressed as our use of data expands is ownership i.e. is it the policyholder, the insurer, or perhaps even a third party that has collected the data from 'the black box' or a wearable that owns the data? Telematics enable the insurer to access information from sources other than the policyholder's application. Having data responsibility means having robust data protection in place to prevent hacking or data leaks. Unauthorised access to policyholder data could damage an insurance company's reputation and if this were to happen across a number of insurance companies, it could have a detrimental impact on the reputation of the broader insurance industry. This is of course notwithstanding the primary concern, which is the potential detrimental impact it could have on the policyholder.^x





Chapter 3: Economic

Economic conditions can impact the demand for insurance, insurers returns on investments and assets, as well as the prevalence of claims.

The 2008 financial crisis has illustrated the important inter-linkages between adverse economic conditions and the insurance sector and this has led to an increased focus on the role of the insurance sector for overall financial stability.^{xi}

Both life and non-life insurers are exposed to adverse economic conditions.

- **For non-life insurers the impact is likely to be because of a decrease in the value and volume of policies purchased and an increase in the value and frequency of claims.**
- **For life insurers, the impact is likely to be due to falling interest rates affecting returns on investments and assets, as well as the discount rate increasing the value of liabilities. The current low interest rate environment is also having a material impact on insurers' risk margin and capital requirements held under Solvency II.**

Non-life Insurance

During adverse economic conditions, both individuals and businesses are less likely to buy insurance. Individuals and companies with less to spend may forego insurance or under-insure themselves or their property to get lower premiums. This has been seen across transport, travel, property and income protection insurance products.^{xii}

Periods of economic downturn also tend to lead to surges in claim costs amongst most lines of non-life business.

Between 2007 and 2008, the number of fraudulent claims by individuals increased by 17 percent. The value of these claims was £730 million.^{xiii}

This pattern is not seen just across individual insurance products such as home or motor insurance, but also for commercial entities. Commercial property claims, in particular from businesses that are struggling financially, also increase during a period of recession.^{xiv}

Interest rates typically fall during recessions to stimulate economic growth and aid recovery. Low rates of interest also affect the profitability and pricing for most types of insurance business. The profits made in the non-life industry have reduced proportionately in line with the reduction in investment yields available.^{xv}

Life Insurance

Adverse economic conditions have meant that life companies have experienced losses on their equity and bond portfolios. On top of this, the setting of low interest has reduced the rate at which life companies can discount liabilities.^{xvi}

In response to these pressures life companies are:

- **Reviewing their product mix**
For example by reducing their overall exposure to products with guarantees. Persistent low interest rates have exacerbated the decline in insurance products that offer a guarantee, such as an annuity. The regulatory regime makes these products much less attractive in a low interest rate environment owing to the treatment of capital reserves.
- **Increasing investment in alternative assets**
Insurers have previously used two tools to increase yields on investments – increasing duration and lowering credit quality (e.g. investing in bonds that have a lower credit rating). With consistently low interest rates, insurers have started looking at a third option - using their excess liquidity to invest in illiquid assets. This has meant they are accepting more risk for a (relatively) higher yield. However, this is a departure from actuaries' traditional investment experience and expertise.

Insurers are not just grappling with low interest rates, but also negative interest rates. Negative interest rates are now a reality in a number of countries (including Sweden and Switzerland).

It is vital that the models used by insurers are able cope with negative interest rates and are able to assess a range of future scenarios – including the continuation of low interest rates, and the floor for negative rates.

This questioning encompasses both the financial models embedded in insurer's Solvency II modelling, together with wider asset liability management tools. Low interest rates have had material impacts on insurers' risk margins and capital requirements under Solvency II, and managing interest rate sensitivity in the current environment has become a particular focus for many insurers.

Ultimately, very low interest rates lead to a transfer of wealth away from the insurance industry. The increased cost to produce insurance liability cash flows and the low returns of bonds lead to deteriorating balance sheets and financial positions.

Consumer Impact

Persistent low rates of interest – in conjunction with a range of other factors - have helped reduce the viability of a range of insurance products and by extension, potential solutions to a range of societal needs. For example, the low interest rate environment has been a catalyst for the increase in the cost of annuities and consequent bad press. Products with investment guarantees had appealed to a range of market segments, as demonstrated by the earlier popularity of with-profits business which smoothed investment returns and provided guarantees, but these products have long since been in decline. The introduction of risk-sensitive capital frameworks and a diminishing appetite for product complexity were partly behind this, but falling interest rates and consequent increasing cost of guarantees have also been contributory factors.

Where insurers reduce or remove product guarantees to lower capital costs, the loss of such guarantees will reduce policyholder choice. Furthermore, it is anticipated that following the implementation of Solvency II, further insurer consolidation may follow, partly influenced by downward pressure on insurer margins and upwards pressure on capital. Such consolidation would further restrict the degree of consumer choice.



Chapter 4: Environmental

Changes in extreme weather and climate events have been observed since 1950.

The Intergovernmental Panel on Climate Change (IPCC) has stated with a very high level of confidence that impacts from recent climate-related extremes such as heat waves, droughts and floods reveal significant vulnerability and exposure of some ecosystems and many human systems to current climate variability.^{xvii} Increased frequency and severity of these extreme events have increased the risks and costs of insurance. Insurance losses from weather-related events have increased from an annual average of 10 billion US Dollars in the 1980s to around 50 billion over the last decade.^{xviii}

Some groups of people will face greater challenges because of climate-related events than others based on a number of factors:

- **Geographic location** – those living in a coastal area prone to flooding or in arid areas prone to drought
- **Financial wealth** – those with limited financial resources will be less able to take mitigating actions or recover after a climate-related event, for example if droughts cause crop failure, which in turn causes a food shortage and a subsequent increase in the cost of food
- **Occupation** – those working in industries such as agriculture
- **Health** – those in poorer health could be more susceptible to both heat waves and reductions in temperature, as well as the consequences these might have on food and / or water supply.

Insurance relating to climate risk is a vital instrument within a comprehensive climate-risk management system and can play numerous roles, particularly for those most vulnerable, including:

- providing security against the loss of assets and livelihoods
- ensuring reliable post-event relief
- setting incentives for prevention
- providing certainty for weather-affected investments (both public and private)^{xix}

To help ensure that the world's most vulnerable people are able to benefit from climate-related insurance the G7 launched the InsuResilience Initiative in 2015. This initiative aims to deliver direct and indirect climate-related insurance protection to an

additional 400 million vulnerable people by 2020. G7 members have jointly committed to a goal of mobilising 100 billion US Dollars per year by 2020. It aims to strengthen resilience to climate change in vulnerable countries through mitigation actions and insurance solutions. Because of its global leadership, the G7 has a unique opportunity to attract private sector finance by creating viable, sustainable business cases.

In the UK, Government legislation has led to the implementation of Flood Re as flood events have become more frequent and severe. As such, both homeowners who had been flooded before, and those who insurers believe to be at high risk of flooding in the future, have been subject to large premiums and high excesses. With an increasing number of homes affected by this affordability issue, the Government and the insurance industry have worked together to create a Flood Re. Flood Re is a not-for-profit, publically accountable reinsurance company, which enables insurance companies to insure themselves against losses because of flooding. Flood Re will be in place for 25 years and is designed to:

- enable flood cover to be affordable for those households at highest risk of flooding
- increase availability and choice of insurance for customers
- allow time for the Government, local authorities, insurers and communities to become better prepared for flooding
- create a 'level playing field' for new entrants and existing insurers in the UK home insurance market^{xx}

Flood Re will look to support stakeholders in working towards these aims, whether this involves using its extensive body of data to help direct and prioritise flood defence spending, engaging consumers to increase competition in the market, or incentivising insurers and homeowners to increase flood resilience of individual homes.

During the course of the 25 years, Flood Re will regularly review the impact of the scheme on affordability and availability, and analyse whether a truly affordable risk-reflective market is possible. This will make use of actuarial analysis and modelling, taking into account the exposure of the policies passed to Flood Re, and the impact of climate change.^{xxi}

Both of these case studies illustrate the importance of insurance and governments, both nationally and internationally, in providing protection. These case studies also illustrate the trade off between:

- setting premiums that most closely represent a person's risk, which could result in premiums being unaffordable for those with a high level of personal risk, and arguably therefore most in need of insurance; and
- the role of risk pooling, which by its definition will have those that lose out, as well as those that benefit. There may be some cases where society determines that the 'fairest approach' for all is that some individuals pay more and cross-subsidise other's premiums so that more people are able to afford insurance.

These case studies show that where insurance is deemed a societal necessity that governments and governmental organisations can help to create partnerships between insurance companies to ensure affordability of insurance for those most vulnerable in society, whether that is through legislation or establishing agreements which build a platform for partnership.





Chapter 5: Political

The political agenda also influences the insurance sector.

There are many areas where the actions of governments and policymakers affect exposure to and perceptions of risk, such as climate-related risks and longevity risk. The skill-set of actuaries and those working within insurance companies can help policymakers grapple with a range of 'political risks' - from extreme political risks, such as the potential for terrorist attacks, geopolitical conflict, poverty and distribution of income and resources. As well as less extreme risks such as the inherent short termism in politics caused by the duration of a parliamentary term and the impact of pressures from the electorate as exemplified by the recent swathe of referenda in the UK.

Actuaries use data and risk modelling techniques that can grapple with a wide variety of seemingly opaque and interconnected risks. These techniques can help governments and policymakers to understand the likelihood of these risks occurring and the potential consequences should these risks become a reality.

Case Study 1: EU Referendum

The UK recently (June 2016) voted to leave the European Union. It is not clear yet what European legislation the UK will retain and what European legislation the UK may wish to review. However, there are a number of potential legislative changes that would have an impact on pricing and reserving for insurance policies in the UK. Two examples are the Solvency II Directive and the Gender Directive.

Solvency II

Solvency II stems from a European directive and is now enshrined in UK law. It came into effect in the UK from January 2016 and harmonises insurance regulation regarding capital requirements for insurance companies across the European Union. As firms have spent a significant amount of time and money (the Association of British Insurers estimates in the region of £3bn) on the implementation of Solvency II, this is unlikely to be completely unravelled during the UK's exit negotiations. However, there are elements of Solvency II that the UK may wish to amend, dependent on whether it maintains access to the Single Market or otherwise.

Access to the Single Market means that UK insurance firms have direct access to a single insurance market, which spans 28 countries and approximately half a billion people, without requiring any further authorisation of costs.^{xxii} If the UK were to leave the Single Market, this would have an impact on UK-based insurance companies. Even if the UK decides to retain equivalence to Solvency II to have access to this market, this would mean any future updates to this regulation would have to be adopted to maintain equivalence. However, crucially the UK would no longer be able to influence the development of future European regulation in the same way that it is able to do so now as a Member State.

Gender Directive

Under gender-neutral pricing, which forms part of the European Gender Directive, it is illegal for insurers anywhere in the European Union to base the cost of a policy by using gender as a risk factor. The effects of this are particularly pronounced in motor insurance and for annuities as gender was previously determined a key factor in pricing these products. Males, in particular young males, were assessed as more dangerous drivers than females, meaning their premiums were higher. However, since the Directive was introduced at the end of 2012, females have not been able to get lower premiums than their male counterparts have. Whereas for annuities the affects were felt in the opposite direction as females have longer life expectancies than males and so were offered lower annuity rates than their male counterparts, who will now no longer be able to get better annuity rates than females. If this Directive were to be repealed, meaning that gender could again be used as a differentiator, there would be winners and losers with younger males losing out, but potentially gaining in retirement. This again illustrates the different approaches that can be taken between differentiating and charging according to risk vs cross subsidising, which is led by what society deems to be fair.

Case study 2: Social care

Another area where politics has had an affect on insurance market development is social care. The effects of governmental policy on the insurance sector can be seen internationally.



In France, there is a mixture of public and private funding. Local governments fund around 70 percent of the State care budget, with the remaining 30 percent being funded by central Government. Central Government funding is through employers' social security contributions, as well as general taxation, with additional funding coming from France's Solidarity Day. On Solidarity Day, employees donate their earnings from that day to fund care. This Government-led public awareness campaign has also led to a growth in private insurance. Less than one percent of care spending in 2007 was from private insurance provision, but by 2010, 15 percent of the population, aged over 40, had a care policy. This growth has been mostly attributed to the public becoming more aware of the risks and costs involved, as well as the gaps in public provision.



In Germany, there is a mixture of public and private insurance schemes. Compulsory social insurance was introduced in 1995. However, those with higher incomes, civil servants and the self-employed may opt for private insurance instead of the social insurance. Contributions to social insurance are split between the individual and the employer. This structure enables both public and private systems to sit alongside one another.



In 2000, Japan created a social care insurance programme. This programme covers domiciliary and residential care and the benefits are set nationally. It is compulsory for those over 40 years of age to contribute and it offers access to social care for those aged over 65. The level of contribution is dependent on income, but the benefit is dependent on need, as opposed to being means-tested. There is minimal private insurance for social care in Japan.



The Netherlands set up a publically funded scheme to ensure no one had high expenses for meeting care needs. However, this has undergone a number of reviews as costs have ballooned, rising by 66 percent from €14bn to €23bn between 2000 and 2010. This has meant the system has been in constant flux and that there is no private insurance for social care.



Medicaid in the US is funded through general taxation and is a means-tested welfare programme for the poorest. The private insurance market is relatively well developed with products covering both domiciliary and residential care. The 2010 Affordable Care Act regulates and subsidises health insurance to make it more affordable and as of 2016, large employers have to provide health-coverage to fulltime workers.^{xviii}

Policy decisions made by governments affect the industry, and therefore, ultimately consumers and potential consumers of insurance products. The case study of social care in particular, highlights the range of policy options that governments might adopt to meet a societal need and the impact this has on insurance market development. It is important that the industry is able to help governments understand potential consequences of decisions they make on the role of insurance, in offering protection to society and the consequences this could have on State expenditure. Actuaries in particular take a long-term perspective, considering time periods much longer than a Parliamentary term, which is likely to be the focus of the Government at any given time.

As a Royal Chartered body, the IFOA will continue to use its members' expertise to inform policymakers of the long-term consequences of policy decisions on insurance and society, in the public interest. We will also be completing analysis of the current UK funding system for social care, as well as the deferred Care Cap and new means testing thresholds contained in the 2014 Care Act.

Next steps

The IFoA is committed to actively developing thought leadership, commentary and research on the risks facing the insurance sector, not just in the short-term, but also in the longer-term.

As a Royal Chartered professional body all of our research and policy analysis is undertaken in the public interest. As we have already stated, the insurance industry provides an important public good, protecting those in society and helping them to recover when they are most at need.

In view of the importance of good insurance to society, and our role, over the next 12 months, the IFoA will be completing further analysis on:

- Brexit
- Longevity risk
- Bodily injury claims
- Low interest rates
- Climate change
- Modelling and data analytics
- Social care funding

Again, we invite readers to take part in this discussion by contacting policy@actuaries.org.uk

References

- ⁱ Office for National Statistics (2014) *Mid-2013 Population Estimates UK*
- ⁱⁱ Age UK (2015) *Later Life in the United Kingdom*. Available online: https://www.ageuk.org.uk/Documents/EN-GB/Factsheets/Later_Life_UK_factsheet.pdf?dtrk=true
- ⁱⁱⁱ IFoA (2012) *Fairness in insurance pricing* [Authors: L. Michael et al.]
- ^{iv} Association of British Insurers (2016) *ABI pension freedom statistics – one year on factsheet*.
- ^v Financial Conduct Authority (2014) *Occasional Paper No. 5 The value for money of annuities and other retirement income strategies in the UK*.
- ^{vi} IFoA (2013) *Treatment of Bodily Injury Claims in Society* [Authors: Ian Burningham and Fiona Annandale]
- ^{vii} <https://www.blueshieldca.com/bsca/about-blue-sheild/careers/wellvolution/incentives.sp>
- ^{viii} IFoA (2016) *Wearable technology: A health and care actuary's perspective* [Author: Matan Abraham]
- ^{ix} *ibid*
- ^x IFoA (2016) *IFoA response to the FCA's 'Big data in retail general insurance'*
- ^{xi} Christophersen, C. and Jakubik, P. (2014) *Insurance and the Macroeconomic Environment*. Financial Stability report May 2014. European Insurance and Occupational Pensions Authority
- ^{xii} Kumer, M. (2009) *Impact of Recession on Insurance Industry*. Online article available: www.einsuranceprofessional.com/artrecession.html
- ^{xiii} Association of British Insurers (2009) *Recession Britain insurers detecting record amounts of fraudulent claims*. Online article available: <https://www.abi.org.uk/News/News-releases/2009/04/Recession-Britain--insurers-detecting-record-amounts-of-fraudulent-claims>
- ^{xiv} Wells, G., Newton, D. and Sanders, D. (2009) *Milliman White Paper: Non-life insurance claims in recession*. 2009 Milliman, Inc
- ^{xv} Solvency II Wire (2013) *Low interest rate environment and the impact on insurers*. Online article: www.solvencyiiwire.com/promotions/low-interest-rate-environment-and-the-impact-on-insurers
- ^{xvi} Impavido, G. and Tower, I. (2009) *How the financial crisis affects pensions and insurance and the impacts matter*. IMF Working Paper 09/151. International Monetary Fund
- ^{xvii} IPCC (2014) *Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)]. IPCC, Geneva, Switzerland, 151 pp.
- ^{xviii} Bank of England (2015) *The impact of climate change on the UK insurance sector: A Climate Change Adaptation report by the Prudential Regulation Authority*
- ^{xix} Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH (2015) *Climate Risk Insurance for strengthening climate resilience of poor people in vulnerable countries: A background paper on challenges, ambitions and perspectives*. Commissioned by the German Federal Ministry for Economic Cooperation and Development
- ^{xx} Flood Re - <http://www.floodre.co.uk/industry/about-us>
- ^{xxi} IFoA (2016) *Policy Summary: The Future of UK Flood Policy*
- ^{xxii} Oliver James Associates (2016) *Brexit and its Impact on the UK Insurance Industry*. Online article available: <https://www.ojassociates.com/blog/2016/03/brexit-referendum-and-its-impact-on-the-uk-insurance-industry>
- ^{xxiii} IFoA (2012) *Long term care: A review of global funding models* [Authors: S. Elliot, S. Golds, I. Sissons and H. Wilson]



Institute
and Faculty
of Actuaries

London

7th Floor · Holborn Gate · 326-330 High Holborn · London · WC1V 7PP
Tel: +44 (0) 20 7632 2100 · Fax: +44 (0) 20 7632 2111

Edinburgh

Level 2 · Exchange Crescent · 7 Conference Square · Edinburgh · EH3 8RA
Tel: +44 (0) 131 240 1300 · Fax: +44 (0) 131 240 1313

Oxford

1st Floor · Park Central · 40/41 Park End Street · Oxford · OX1 1JD
Tel: +44 (0) 1865 268 200 · Fax: +44 (0) 1865 268 211

Beijing

14F China World Office 1 · 1 Jianwai Avenue · Beijing · China 100020
Tel: +86 (10) 6535 0248

Hong Kong

1803 Tower One · Lippo Centre · 89 Queensway · Hong Kong
Tel: +852 2147 9418

Singapore

163 Tras Street · #07-05 Lian Huat Building · Singapore 079024
Tel: +65 6717 2955

www.actuaries.org.uk

© 2017 Institute and Faculty of Actuaries