Principal risk types

The types of risk to which the Group is exposed, described in the table below, have not changed significantly over the year. The principal impact on the Group's risk profile of the planned acquisition of Friends Life, subject to successful completion, will be to increase our exposure to equity price risk and UK life insurance risks, in particular persistency risk. The operational risks of integration will also require close management.

Risk type	Risk preference	Mitigation
Credit risk • Credit spread and default ◆	We take on credit risk as we believe we have the expertise to manage it. As an insurer, we benefit from being able to invest for the long term due to the relative stability and predictability of our cash outflows.	• Risk appetites set to limit overall level of credit risk • Credit limit framework imposes limits on credit concentration by issuer, sector and type of instrument • Investment restrictions on sovereign and corporate exposure to some eurozone countries • Credit risk hedging • Specific asset de-risking
Market risk • Equity price ◆ • Property • Interest rate • Foreign exchange • Inflation	We actively seek some market risks as part of our investment and product strategy. We have a limited appetite for interest rate, foreign exchange and inflation risks as we do not believe that these are adequately rewarded.	• Risk appetites set to limit exposures to key market risks • Active asset management and hedging in business units • Scaleable Group-level equity and foreign exchange hedging programme • Pension fund de-risking • Asset and liability duration matching limits impact of interest rate changes and actions taken to manage guarantee risk, through product design
Life and health insurance risks • Longevity ◆ • Persistency • Mortality • Morbidity • Expenses • New business	We take measured amounts of life and health insurance risks where we have the appropriate core skills in underwriting. We like longevity and mortality risks as they diversify well (i.e. have little or no correlation) against other risks we retain.	• Risk appetites set to limit exposures to key life and health insurance risks • Risk selection and underwriting on acceptance of new business • Product design that ensures products and propositions meet customer needs • Use of reinsurance to mitigate mortality/morbidity risks • Staff pension scheme longevity swap covering approximately £5 billion of pensioner in payment liabilities
General insurance risk • GI catastrophe • GI reserving (latent and non-latent) • GI underwriting / new business	We take general insurance risk in measured amounts for explicit reward, in line with our core skills in underwriting and pricing. We have a preference for those risks that we understand well, that are intrinsically well managed and where there is a spread of risks in the same category. GI risk diverisifies well with our life insurance and other risks.	• Risk appetites set to limit exposures to key general insurance risks • Extensive use of data, financial models and analysis to improve pricing and risk selection • Underwriting limits linked to delegations of authority that govern underwriting decisions • Product development in management framework that ensures products and propositions meet customer needs • Documented claims management philosophies and procedures • Use of reinsurance to reduce the financial impact of a catastrophe and manage earnings volatility
Liquidity risk	The relatively illiquid nature of insurance liabilities is a potential source of additional investment return by allowing us to invest in higher yielding, but less liquid, assets such as commercial mortgages.	• Maintaining committed borrowing facilities (£1.55 billion)[1] from banks • Asset liability matching methodology develops optimal asset portfolio maturity structures in our businesses to ensure cash flows are sufficient to meet liabilities • Commercial paper issuance • Contingency Funding Plan in place to address liquidity funding requirements in a significant stress scenario
Asset management risk • Retention • New business • Expenses	Risks specific to asset management should generally be reduced to as low a level as is commercially sensible, on the basis that taking on these risks will rarely provide us with an upside.	• Product development and review process • Investment performance and risk management oversight and review process • Propositions based on customer needs • Client relationship teams managing client retention risk
Operational risk • Conduct & reputation • Legal & regulatory • People • Process • Data security • Technology	Operational risk should generally be reduced to as low a level as is commercially sensible, on the basis that taking operational risk will rarely provide us with an upside, and operational failures may adversely impact our reputation, impairing our ability to attract new business, or lead to poor customer outcomes.	• Application of enhanced business standards covering key processes • Monitoring of controls through assurance activity and information on the operation of the control environment from management, internal audit and risk functions, supported by operational risk and audit registers and first line control logs • Scenario based approach to determine appropriate level of capital for operational risks • Conduct risk management framework

◆ Aviva's top three risks ranked by economic capital at risk in a 1-200 year loss event over a one year time horizon.

1 As at 31 December 2014.

Emerging risks and causal factors

We also manage and monitor risks and causal factors which may impact our longer term profitability and viability, in particular our ability to write profitable new business. For example, such risks and factors include:

- **Climate change** – potentially resulting in higher than expected weather-related claims and inaccurate pricing of general insurance risk.
- **New technologies –** failure to understand and react to the impact of new technology and its effect on customer behaviour and how we distribute products could potentially result in our business model becoming obsolete.
- **Regulatory change** – our businesses face considerable regulatory change as a result of Solvency II, our designation by the Financial Stability Board as a Global systemically important insurer (G-SII) and developments in conduct regulation, which will affect how much capital we hold, how we operate and how we sell and distribute our products. While ongoing consultations on implementing standards and supervisory guidelines have reduced the level of uncertainty over the final capital impact on our business of Solvency II (effective 1 January 2016), some uncertainty remains, including over the outcome of the Group's application to use an internal model to calculate our capital requirements.
- **Political risk** – governments in the markets in which we operate incentivise long-term saving and private pension provision through tax benefits, while also providing an alternative through state provision. In some markets there are (or could be in the future) restrictions and controls on premium rates, rating factors and charges. Any change in public policy could influence the demand for, and profitability of, our products. For example, in March 2014 the UK Government announced the end of compulsory annuitisation, which has significantly reduced demand for individual annuities. The diversity of our product offering and the geographies in which we operate partly mitigates this risk.
- **Cyber crime** – criminals may attempt to access our IT systems to steal or utilise company and customer data, or plant malware viruses, in order to access customer or company funds, and/or damage our reputation and brand. While we have IT security and data encryption to prevent this happening, the increasing sophistication of criminals and the focus on digital automation as part of our strategy make this an increasing risk.

Case study

Being prepared for the worst

The Group and its businesses have contingency plans in place to ensure a swift and effective response in case risks crystallise into major loss events, including:

- **Financial Event Response Plans** – to ensure we can respond promptly to severe adverse financial events (e.g. equity market crash, sovereign default etc.) that may weaken the financial position of Aviva
- **Business Continuity Plans** – to ensure we can continue to operate and serve our customers in the event of terrorism, pandemic, cyber-attack or other events disrupting our operations
- **Major Incident Response Plans** – to ensure we can maintain our level of customer service in response to a spike in demand resulting from a major weather event (e.g. floods, windstorms) or other loss event.

We use 'war-gaming' to test the effectiveness of our plans in the event these risks crystallise.

- **Prolonged low interest rate environment** – if current low interest rates continue for a prolonged period it will adversely affect the 'spread' we can earn between the returns we can offer customers and the return we earn on our investments, as well as the attractiveness of the returns we can offer to new customers.
- **Macroeconomic growth** – the slowdown in economic growth in Asia, and re-emerging concerns over the economic performance of the eurozone, could precipitate a wider global economic slowdown, which could adversely impact our investments, customer retention and new business levels.
- **New and emerging latent claims** – new claims on policies written a long time in the past may arise as a result of future court judgements extending liability, new legislation, new historic evidence and interpretation, emerging medical science on health effects of long-term exposures to chemicals etc. Examples over the last 30 years include asbestosis, repetitive strain injury and industrial deafness.
- **Medical advances and healthier life styles** – medical advances and healthier life styles may increase life expectancy of our annuitants and thus future payments over their lifetime may be in excess of the amounts we currently expect. Historic examples include the positive impact on life expectancy of reduced rates of smoking over the last 40 years.
- **Pandemics, new diseases and antibiotic resistance** – the adverse impact on mortality could negatively impact the profitability of our life protection products, increase private health insurance claims, and even affect general insurance claims. A pandemic might also disrupt our operations.
- **Big Data** – failure to keep pace with the use of data to price more accurately and to detect insurance fraud could lead to loss of competitive advantage and financial losses.
- **Changes in customer behaviour** – changes in the legal environment or as a result of advances in technology may change the rates at which customers exercise options embedded in their contracts or enable them to take advantage of additional information available to them to exercise options in a way that is adverse to us.

See pages 18 and 52 on how we address the risks of new technologies and climate change through our business strategies and corporate responsibility respectively.