Risk and risk management

Risk management is key to Aviva's success. We accept the risks inherent to our core business lines of life, health and general insurance and asset management. We diversify these risks through our scale, the variety of the products and services we offer and the channels through which we sell them.

We receive premiums which we invest to maximise risk-adjusted returns, so that we can fulfil our promises to customers while providing a return to our shareholders.

In doing so we, have a preference for retaining those risks we believe we are capable of managing to generate a return.

Looking forward, these risks may be magnified or dampened by current and emerging external trends (including those set out in "the external environment" section) which may impact our current and longer-term profitability and viability, in particular our ability to write profitable new business.

This includes the risk of failing to adapt our business model to take advantage of these trends. The 'Principal risk trends and causal factors' table in this section describes these trends, their impact, future outlook and how we manage these risks.

How we manage risk

Rigorous and consistent risk management is embedded across the Group through our Risk Management Framework, comprising our systems of governance, risk management processes and risk appetite framework.

Our governance

This includes risk policies and business standards, risk oversight committees and roles and responsibilities. Line management in the business is accountable for risk management which, together with the risk function and internal audit, form our 'three lines of defence'. The roles and responsibilities of the Customer, Conduct and Reputation Committee, Audit and Risk Committees and management's Disclosure, Asset Liability and Operational Risk Committees in relation to the oversight of risk management and internal control is set out in the 'Directors' and Corporate Governance report' in the Annual Report and Accounts.

Our process

The processes we use to identify, measure, manage, monitor and report risks, including the use of our risk models, and stress and scenario testing, are designed to enable dynamic risk-based decision-making and effective day-to-day risk management. Having identified and measured the risks of our business, depending on our risk appetite, we either accept these risks or take action to reduce, transfer or mitigate them.

Our risk appetite framework

This refers to the risks that we select in pursuit of return on capital deployed, the risks we accept but seek to minimise and the risks we seek to avoid or transfer to third parties, including quantitative expressions of the level of risk we can support (e.g. the amount of capital we are prepared to put at risk). In 2020, we integrated climate into our risk appetite framework – see 'Our climate-related financial disclosure' for more information.

Types of risk inherent to our business model:

Risks customers transfer to us

- Life insurance risk includes longevity risk (annuity customers living longer than we expect), mortality risk (customers with life protection), expense risk (the amount it costs us to administer policies) and persistency risk (customers lapsing or surrendering their policies).
- General insurance risk arises from loss events (fire, flooding, windstorms, accidents etc). Health insurance exposes the Group to morbidity risk (the proportion of our customers falling sick) and medical expense inflation.

Risks arising from our investments

- Credit risks (actual defaults and market expectation of defaults) create uncertainty in our ability to offer a minimum investment return on our investments.
- Liquidity risk is the risk of not being able to make payments when they become due because there are insufficient assets in cash form.
- Market risks result from fluctuations in asset values, including equity prices, property prices, foreign exchange, inflation and interest rates.

Risks from our operations and other business risks

- Operational risk is the risk of direct or indirect loss, arising from inadequate or failed internal processes, people and systems, or external events including changes in the regulatory environment.
- Asset management risk is the risk of customers redeeming funds, not investing with us, or switching funds, resulting in reduced fee income.

Principal risk types

The types of risk to which the Group is exposed have not changed significantly over the year and are described in the table below. All of the risks below, and in particular operational risks, may have an adverse impact on our brand and reputation. The impact of COVID-19 on these risk types has been considered further as a spotlight in this section.

Risk type	Risk preference	Mitigation
Credit risk • Credit spread[1] • Credit default	We take a balanced approach to credit and believe we have the expertise to manage it and the structural investment advantages conferred to insurers with long-dated, relatively illiquid liabilities that enables us to earn superior investment returns.	• 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 certain sovereign and corporate exposures • Credit risk hedging programme • Specific asset de-risking
Market risk • Equity price[1] • 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 and property 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 • Scalable Group-level equity and foreign exchange hedging programme • Pension fund active risk management • 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 risk • Longevity[1] • Persistency • Mortality and morbidity • Expenses	We take measured amounts of life insurance risk provided we have the appropriate core skills in underwriting and pricing.	• Risk selection and underwriting on acceptance of new business • Longevity swaps covering pensioner-in-payment scheme liabilities • Product development and management framework that ensures products and propositions meet customer needs • Use of reinsurance on longevity risk for our annuity business, including the bulk annuity buy-in transaction with the staff pension scheme
General insurance risk • Catastrophe • Reserving (latent and non-latent) • Underwriting • Expenses	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. General insurance risk diversifies well with our Life Insurance and other risks.	• Use of reinsurance to reduce the financial impact of a catastrophe and manage earnings volatility • Application of robust and consistent reserving framework to derive best estimate with results subject to internal and external review, including independent reviews and audit reviews • Extensive use of data, financial models and analysis to improve pricing and risk selection • Underwriting appetite framework linked to delegations of authority that govern underwriting decisions and underwriting limits • Product development and management framework that ensures products and propositions meet customer needs
Liquidity risk[2]	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 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 • Use of our limit framework covering minimum liquidity cover ratio and minimum Group Centre liquidity • Contingency funding plan in place to address liquidity funding requirements in a significant stress scenario
Asset management risk • Fund liquidity • Performance and margin • Product • Retention risks	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

1 Top three risks ranked by diversified Solvency II Solvency Capital Requirement
2 Not quantifiable in terms of economic capital

Risk type	Risk preference	Mitigation
Operational risk • Conduct • Legal & regulatory • People • Process • Data security • Technology • Brand and Reputation	Operational risk should generally be reduced to as low a level as is commercially sensible. Operational risk will rarely provide us with an upside.	• Application of enhanced business standards covering key processes • Our Operational Risk & Control Management Framework which includes the tools, processes and standardised reporting necessary to identify, measure, manage, monitor and report on the operational risks and the controls in place to mitigate those risks within centrally set tolerances • Enhanced scenario-based approach to determine appropriate level of capital to be held in respect of operational risks • On-going investment in simplifying our technology estate to improve the resilience and reliability of our systems and in IT security to protect ours and our customers' data

Spotlight: COVID-19 – Risk management in action

The COVID-19 pandemic has impacted all the geographic markets in which we operate and all the major risk types inherent to our business. Prior to and during the COVID-19 pandemic we have taken active risk management actions to protect our capital position, ensure continuous service to our customers and manage our risk exposures, as set out below:

Risk Type	Risk mitigation
Life insurance risks Impacted because of increased mortality and morbidity as a result of COVID-19	**Individual Life Protection –** Mostly reinsured and we have strict underwriting criteria that limits our exposure to cohorts of the population at highest risk of COVID-19. **Group Life Protection –** Potential greater net exposure, however we have taken pricing actions to limit our exposure from new business. The impact of COVID-19 on our annuity products has been limited over 2020. However, we will continue to closely monitor the impact on the future longevity experience of our portfolio.
General insurance risks Primarily impacted as a result of business interruption and travel disruption consequential to government action to contain the COVID-19 virus spread	**Business interruption –** Standard commercial policy wording does not provide cover for COVID-19. However, we have some exposure through broker determined wordings where we are the lead or follow insurer and many of the issues were subject to the FCA test case. The Supreme Court appeal took place on 15 January 2021, following the verdict the legal uncertainty in the UK around gross losses has been significantly reduced. **Travel –** COVID-19 wording has been clarified to eliminate ambiguity, pricing adjusted to ensure risk is appropriately priced and further reinsurance cover has been purchased.
Credit & Market risks Impacted as financial markets have reacted to the potential economic impact of government actions to manage the pandemic and central bank monetary policy to mitigate the impact.	As a result of the significant financial market impact of COVID-19, particularly to credit and equity markets and interest rates, we took a number of actions to reduce our exposure to credit, equity and interest rate risk across all our markets. Actions include purchasing tactical derivative hedges, asset disposals and reallocations and reducing new business sales in certain markets and products.
Operational risk Impacted by government lockdown measures to reduce the COVID-19 virus spread	**Customer service –** Continued service, despite increased absenteeism and childcare commitments, maintained through IT-enabled home-working and increased customer digital interaction. **Financial crime –** Programme of employee and customer communication and guidance undertaken in response to use of COVID-19 as a pretext for phishing activity, leading to pension and investment fraud, as well as exaggerated and fraudulent claims. **New risks relating to extensive home-working –** We have adapted our processes and controls to address heightened risks including cyber, data loss and occupational health to ensure these remain at an acceptable level.
Asset management risk Impacted by financial market response to COVID-19 pandemic and in particular the commercial property sector	Trading and liquidity management actions were taken within our funds, to ensure continued and uninterrupted service to our customers. However, due to the adverse impact of COVID-19 on the UK commercial property sectors, and in particular the difficulty in being able to assign values to our commercial property portfolios, we temporarily suspended our unit-linked property funds to redemptions for six months in March 2020.

Principal emerging trends and causal factors

This table describes the emerging trends and causal factors impacting our inherent risks, their impact, future outlook and how we take action to manage these risks. We consider the individual and aggregate impact from these trends when designing and implementing our risk management processes:

Key trends and movement	Risk management	Outlook
Economic & credit cycle – uncertainty over prospects for future macroeconomic growth, credit and current low interest rates, and the response of Central Banks, could adversely impact the valuation of our investments or credit default experience as well as the level of the returns we can offer to customers going forwards and our ability to profitably meet our promises of the past. Trend: Increasing Risks impacted: Credit risk, Market risk, Liquidity risk	We limit the sensitivity of our balance sheet to investment risks. While interest rate exposures are complex, we aim to closely duration-match assets and liabilities and take additional measures to limit interest rate risk. We hold substantial capital against market risks, and we protect our capital with a variety of hedging strategies to reduce our sensitivity to shocks. We regularly monitor our exposures and employ both formal and ad hoc processes to evaluate changing market conditions. Other actions taken in the past include reducing sales of products with guarantees and shifting our sales towards protection and unit-linked products.	The Group remains exposed to the uncertain economic impact of COVID-19 and the decision for the UK to leave the European Union. Areas of uncertainty include: credit downgrades and defaults, interest rate reductions and falls in property prices. We continue to manage our key interest rate exposures, specifically in Italy and France. We have action plans in place to manage exposures should they move outside our risk appetites.
UK-EU relations – the nature of the UK's relationship with the EU and the EU's treatment of 3rd countries in respect of financial services has implications for our business model, in particular for our asset management and insurance businesses in the EU and how our UK and EU businesses interact. Trend: Stable Risks impacted: Operational risk	Following the end of the decision for the UK to leave the European Union transition period, in 2021 we will continue to actively monitor developments in EU policy towards 3rd countries such as the UK, which could impact our business model and identify contingent management actions to address these. Specifically in respect of: relevant financial services equivalence decisions and the implications where not granted; additional restrictions to asset management delegation rights as a non-EU manager; limitations on reinsurance back to the UK by our EU subsidiaries; limitations on outsourcing back to UK-based experts by EU subsidiaries; restrictions on use by EU insurers (including Aviva's Irish subsidiary) of UK branches for passporting; and restrictions on brokers ability to place business in the UK and restrictions over the transfer of personal data from the EU to the UK and other 3rd countries, including intra-group transfers for data processing.	EU pronouncements over recent years have expressed concerns over the systemic risk posed by dependence of the EU on critical financial infrastructure and services provided by 3rd countries, in particular the UK. Later in 2021 the EU will begin further consultations on changes to regulation of EU domiciled investment funds (AIFMD, UCITS) which may propose restrictions on delegation of asset management activities to the UK. In light of the ECJ's judgement in the Schrems II case, the EU in 2021 will also be revisiting the safeguarding of EU personal data transferred to 3rd countries such as the UK and the legal obligations on the data transferor to ensure data is protected notwithstanding the existence of standard contract clauses (SCCs).

Key trends and movement	Risk management	Outlook
Changes in public policy – any change in public policy (government or regulatory) could influence the demand for, and profitability of, our products. In some markets there are (or could be in the future) restrictions and controls on premium rates, rating factors and charges. Trend: Volatile Risks impacted: Operational risk	We actively engage with governments and regulators in the development of public policy and regulation. We do this to understand how public policy may change and to help ensure better outcomes for our customers and the Company. The Group's multi-channel distribution and product strategy and geographic diversification underpin the Group's adaptability to public policy risk, and often provides a hedge to the risk. For example, since the end of compulsory annuitisation in the UK, we have compensated for falling sales of individual annuities by increasing sales of other pension products – particularly bulk purchase annuities.	In the UK pressure on public finances may result in further erosion of tax relief for pension savings, and increase in Insurance Premium Tax. Also in the UK, the FCA following the conclusion of its consultation are expected to issue regulations preventing existing customers being charged higher premiums on renewal than new customers. The regulator in Ireland has expressed similar concerns over renewal pricing. In Canada, where motor premium increases are approved by provincial regulators, pressure to minimise these will persist. In Poland pension reform which could radically impact the pensions industry has been delayed until 2021, while regulatory pressure on charges on unit-linked products is likely to increase. EU intends to conclude its review of Solvency II in 2021, while at the same time we expect greater clarity on how the UK might seek to diverge from Solvency II to better suit the needs of UK insurers and policyholders. Both reviews could impact the amount of prudential capital our businesses are required to hold in the UK and EU.
New technologies & data – 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. 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 underwriting losses. Trend: Increasing Risks impacted: Operational risk	Aviva continues to develop our data science capabilities to both inform and enable improvements in the customer journey, our understanding of how customers interact with us and our underwriting disciplines. Our Data Charter, now implemented across the Group, sets out our public commitment to use data responsibly and securely. Our new Group Data Strategy will provide a renewed focus to ensuring that Aviva derives increased value from the data we hold for our customers in a secure and ethical way across the Group.	Data mastery and the effective use of 'Big Data' through artificial intelligence and advanced analytics has and will continue to be a critical driver of competitive advantage for insurers. However, this will be subject to increasing regulatory scrutiny to ensure this is being done so in an ethical, transparent and secure way. The competitive threat to traditional insurers will continue to persist with the potential for big technology companies and low cost innovative digital start-ups to enter the insurance market, where previously underwriting capability, risk selection and required capital have proven to be a sufficient barrier to entry.
Climate change – potentially resulting in higher than expected weather-related claims (including business continuity claims), inaccurate pricing of general insurance risk, reputational impact from not being seen as a responsible steward/investor, as well as adversely impacting economic growth and investment markets. Trend: Increasing Risks impacted: General insurance risk, Credit risk, Market risk	'Our climate-related financial disclosure' sets out how Aviva incorporates climate-related risks and opportunities into governance, strategy, risk management, metrics (e.g. Climate Value-at-Risk) and targets. We commit to aligning our business to the 1.5°C Paris Agreement target and plan to be a Net Zero company by 2040.	Aviva considers climate change to be one of the most material long-term risks to our business model. Global average temperatures over the last five years have been the hottest on record. Despite the UNFCCC Paris agreement, the current trend of increasing CO_2e emissions is expected to continue, in the absence of radical action by governments, with global temperatures likely to exceed pre-industrial levels by at least 2°C and weather events (floods, droughts, windstorms) increasing in frequency and severity. Disclosure of potential impacts against various climate scenarios and time horizons will continue to become increasingly common for all companies.

Key trends and movement	Risk management	Outlook
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. Trend: Increasing Risks impacted: Operational risk	Aviva has invested significantly in cyber security introducing additional automated controls to protect our data and critical IT services. This investment has enhanced our ability to identify, detect and prevent cyber-attacks and we regularly test ourselves through our own 'red team' hackers to test our cyber defences and crisis management protocols. Aviva encourages a cyber aware culture by regularly undertaking activities such as employee phishing exercises, computer-based training and more regular communications about specific cyber threats.	In 2020 there continued to be high profile cyber security incidents for corporates in the UK and elsewhere. Cyber threat is expected to persist in 2021 with increasing levels of sophistication and industrialisation anticipated. Aviva continuously monitors the external threat environment to ensure that our cyber investment remains appropriate to mitigate the continued and changing nature of the cyber threat.
Medical advances and healthier lifestyles – these contribute to an increase in life expectancy of our annuity customers and thus future payments over their lifetime may be higher than we currently expect. Trend: Stable Risks impacted: Life insurance risk (longevity)	We monitor our own experience carefully and analyse external population data to identify emerging trends. Detailed analysis of the factors that influence mortality informs our pricing and reserving policies. We add qualitative medical expert inputs to our statistical analysis and analyse factors influencing mortality and trends in mortality by cause of death. We also use longevity swaps to hedge some of the longevity risk from the Aviva Staff Pension Scheme and longevity reinsurance for bulk purchase annuities and for some of our individual annuity business.	There is considerable uncertainty as to whether the improvements in life expectancy that have been experienced over the last 40 years will continue into the future. In particular, there is likely to be a reduced level of improvement from the two key drivers of recent improvements, smoking cessation (as you can only give up smoking once) and the use of statins in the treatment of cardiovascular disease (where the most significant benefit from use in higher risk groups has now been seen). Also, despite continued medical advances emerging, dietary changes, increasing obesity and strains on public health services have begun to slow the historical trend, leading in the UK to some significant industry-wide longevity reserve releases in recent years. In the longer term this may even result in a reversal in the trend of increasing life expectancy.
Changes in customer behaviour – will impact how customers wish to interact with us and the product offering they expect, including the exercise of options embedded in contracts already sold by us. Trend: Increasing Risks impacted: Operational risk	We listen to our customers to ensure we meet their savings, retirement and insurance needs. We also seek to improve the way we serve our customers by simplifying our interactions with them, resolving queries at their first point of contact where appropriate and enhancing our digital capabilities.	The financial impact of a recession will be felt across our customer demographic. This could include rising unemployment as government support packages end or retiree drawdown due to low interest rates and falling markets. These pressures will inevitably cause changes in customer behaviours and we maintain an agile approach with our strategy, plans, and in particular product development. We also expect regulatory scrutiny to increase to ensure we continue to serve and treat our existing customers fairly particularly those who are vulnerable.
Outsourcing – we rely on a number of outsourcing providers for business processes, customer servicing, investment operations and IT support. The failure of a critical outsourcing provider could disrupt our operations. Trend: Stable Risks impacted: Operational risk	Our businesses are required to identify business critical outsourced functions (internal and external) and for each to have exit and termination plans and business continuity and disaster recovery plans in place in the event of supplier failure, which are reviewed annually. We also carry out supplier financial stability reviews at least annually. Specific focus areas have been on contingency and exit planning.	We expect regulatory scrutiny (including PRA's CP19/30 – Outsourcing and Third Party Risk Management) of outsourcing arrangements to remain high following financial difficulties faced by some providers.

Key trends and movement	Risk management	Outlook
Pandemic – in an increasingly globalised world, new or mutations of existing bacteria or viruses may be difficult for stretched healthcare systems to contain, disrupting national economies and affecting our operations and the health and mortality of our customers. Trend: Increasing Risk impacted: Life Insurance risk (mortality, longevity, morbidity), General Insurance (business interruption, travel) and Operational risk.	We have contingency plans which are designed to reduce as far as possible the impact on operational service arising from mass staff absenteeism, travel restrictions and supply chain disruption caused by a pandemic, which we were able to put into action during the current COVID-19 pandemic. We reinsure much of the mortality risk arising from our Life Protection business and hold capital to cover the risks of a 1-in-200 year pandemic event. We model extreme pandemic scenarios (e.g. a repeat of the 1918 global influenza pandemic or COVID-19). In the Group and commercial insurance business we limit our potential exposure through our policy wordings. As an investment manager and investor, we engage with companies to ensure the responsible use of antibiotics to reduce the risk that antimicrobial resistance negates the efficacy of medical treatment.	We expect the current COVID-19 pandemic to continue until an effective vaccine is fully rolled-out in 2021 or failing that the virus becomes endemic with the long-term impact on mortality and morbidity dependent on the extent natural immunity develops in the general population and the efficacy of new healthcare treatments. Going forward, trends such as global climate change, urbanisation, antimicrobial resistance and intensive livestock production are likely to increase the risk of future pandemics, while reductions in migration and international travel as a result of COVID-19 are likely to be temporary making the containment of future pandemics more challenging. We expect the experience and learnings from the current COVID-19 will improve the effectiveness of the public healthcare response to any future pandemics.