Risk and capital management

As a provider of financial services, including insurance, the management of risk lies at the heart of our business. As a result, effective risk management capabilities represent a key source of competitive advantage for our Group.

The Group's risk framework includes our appetite for risk exposures as well as our approach to risk management. Under this approach, we continuously assess the Group's top risks and monitor our risk profile against approved limits. Our main strategies for managing and mitigating risk include asset liability management, using derivatives to hedge relevant market risks, and implementing reinsurance and corporate insurance programmes.

A. Group risk appetite

Prudential defines and monitors aggregate risk limits based on financial and non-financial stresses for its earnings volatility, liquidity and capital requirements.

Earnings volatility: the objectives of the limits are to ensure that:

a the volatility of earnings is consistent with the expectations of stakeholders,
b the Group has adequate earnings (and cash flows) to service debt, expected dividends and to withstand unexpected shocks, and
c earnings (and cash flows) are managed properly across geographies and are consistent with funding strategies.

The two measures used to monitor the volatility of earnings are European Embedded Value (EEV) operating profit and International Financial Reporting Standards (IFRS) operating profit, although EEV and IFRS total profits are also considered.

Liquidity: the objective is to ensure that the Group is able to generate sufficient cash resources to meet financial obligations as they fall due in business as usual and stressed scenarios.

Capital requirements: the limits aim to ensure that:

a the Group meets its internal economic capital requirements,
b the Group achieves its desired target rating to meet its business objectives, and
c supervisory intervention is avoided.

The two measures used are the EU Insurance Groups Directive (IGD) capital requirements and internal economic capital requirements. In addition, capital requirements are monitored on a local statutory basis.

Our risk appetite framework forms an integral part of our annual business planning cycle. The Group Risk Committee is responsible for reviewing the risks inherent in the Group's business plan and for providing the Board with input on the risk/reward trade-offs implicit therein. This review is supported by our Group Risk function, which uses submissions by business units to calculate the Group's aggregated position (allowing for diversification effects between business units) relative to the limits contained within the risk appetite statements.

B. Risk exposures

The Group Risk Framework deploys a common risk language, allowing meaningful comparisons to be made between different business units. Risks are broadly categorised as shown below:

Category	Risk type	Definition
Financial risks	Market risk	• The risk of loss for our business, or of adverse change in the financial situation, resulting, directly or indirectly, from fluctuations in the level or volatility of market prices of assets and liabilities.
	Credit risk	• The risk of loss for our business or of adverse change in the financial position, resulting from fluctuations in the credit standing of issuers of securities, counterparties and any debtors in the form of default or other significant credit event (eg downgrade or spread widening).
	Insurance risk	• The risk of loss for our business or of adverse change in the value of insurance liabilities, resulting from changes in the level, trend, or volatility of a number of insurance risk drivers. This includes adverse mortality, longevity, morbidity, persistency and expense experience.
	Liquidity risk	• The risk of the Group being unable to generate sufficient cash resources or raise finance to meet financial obligations as they fall due in business as usual and stress scenarios.
Non-financial risks	Operational risk	• The risk of loss arising from inadequate or failed internal processes, or from personnel and systems, or from external events.
	Business environment risk	• Exposure to forces in the external environment that could significantly change the fundamentals that drive the business's overall strategy.
	Strategic risk	• Ineffective, inefficient or inadequate senior management processes for the development and implementation of business strategy in relation to the business environment and the Group's capabilities.

The key financial and non-financial risks and uncertainties faced by the Group, that have been considered by the Group Risk Committee during the year, and our approaches to managing them, are described below.

B.1 Financial risks

a Market risk

i Equity risk

In the UK business, most of our equity exposure is incurred in the with-profits fund, which includes a large inherited estate estimated at £6.1 billion as at 31 December 2011 (2010: £6.8 billion), which can absorb market fluctuations and protect the fund's solvency. The inherited estate itself is partially protected against falls in equity markets through an active hedging policy.

In Asia our shareholder exposure to equities is minimal and is mainly attributed to revenue from unit-linked products. From a capital perspective, we have a small exposure to falling equity markets from the with-profits businesses.

In the US, where we are a leading provider of variable annuities, there are well-understood risks associated with the guarantees embedded in our products. We provide guaranteed minimum death benefits (GMDB) on substantially all policies in this class, guaranteed minimum withdrawal benefits (GMWB) on a significant proportion of the book, and guaranteed minimum income benefits (GMIB) on only 5 per cent. To protect the shareholders against the volatility introduced by these embedded options, we use both a comprehensive hedging programme and reinsurance. The GMIB is no longer offered, with existing coverage being reinsured.

The Jackson IFRS shareholders' equity and US statutory capital are sensitive to the effects of policyholder behaviour on the valuation of GMWB guarantees, but to manageable levels. For example, at 31 December 2011, on two severe stress test scenarios:

- A halving in lapses of significantly 'in the money' policies would have given rise to indicative reductions of £200 million in IFRS shareholders' equity and £235 million on US statutory capital; or
- A 10 per cent increase in utilisation by all policyholders would have given rise to indicative reductions of £100 million on IFRS shareholders' equity and £240 million on US statutory capital.

Risk and capital management

In our variable annuity sales activities, we focus on meeting the needs of conservative and risk averse customers who are seeking reliable income in retirement, and who display little tendency to arbitrage their guarantees. These customers generally select conservative investment options. We are able to meet the needs of these customers because of the strength of our operational platform.

It is our philosophy not to compete on price; rather, we seek to sell at a price sufficient to fund the cost we incur to hedge or reinsure our risks and to achieve an acceptable return for shareholders.

We use a macro approach to hedging that covers the risks inherent across the US business. Within this macro approach we make use of the natural offsets that exist between the variable annuity guarantees and the fixed index annuity book, and then use a combination of over-the-counter (OTC) options and exchange traded derivatives to hedge the remaining risk, considering significant market shocks and limiting the amount of capital we are putting at risk. Internal positions are generally netted before any external hedge positions are considered. The hedging programme also covers the fees on variable annuity guarantees.

Jackson hedges the economics of its products rather than the accounting result. This focus means that we accept a degree of variability in our accounting results in order to ensure we achieve the appropriate economic result. Accordingly, while Jackson's hedges are effective on an economic basis, due to different accounting treatment for the hedges and some of the underlying hedged items on an IFRS basis, the reported income effect is more variable.

ii Interest rate risk

Interest rate risk arises primarily from Prudential's investments in long-term debt and fixed income securities. Interest rate risk also exists in policies that carry investment guarantees on early surrender or at maturity, where claim values can become higher than the value of backing assets as a result of rises or falls in interest rates.

In the US, there is interest rate risk across the portfolio. The majority of Jackson's fixed annuity and life liabilities allow for an annual reset of the crediting rate, which provides for a greater level of discretion in determining the amount of interest rate risk to assume. The primary concerns with these liabilities relate to potential surrenders when rates increase and, in a low interest environment, the minimum guarantees required by state law. For variable annuities, interest rate changes will influence the level of reserves held for certain guaranteed benefits. With its large fixed annuity and fixed index annuity books, Jackson has natural offsets for its variable annuity interest-rate related risks. Jackson manages interest rate exposure through a combination of interest rate swaps and interest rate options.

In the UK, the investment policy for the shareholder-backed annuity business is to match the annuity payments with the cash flows from investments. As a result, assets and liabilities are closely matched by duration. The impact on profit of any residual cash flow mismatching can be adversely affected by changes in interest rates; therefore the mismatching position is regularly monitored. The guarantees written in the with-profits business also give rise to some interest rate discounting risk (ie falling rates result in an increase in the cost of guarantees) albeit these impacts are in the first instance absorbed by the with-profits fund and not IFRS shareholders' equity.

The exposure to interest rate risk arising from guarantees in Asia is at modest levels: for some non-unit-linked investment products it may not be possible to hold assets which will provide cash flows to match exactly those relating to policyholder liabilities. This results in a mismatch due to the duration and uncertainty of the liability cash flows and the lack of sufficient assets of a suitable duration. While this residual asset/liability mismatch risk can be managed, it cannot be eliminated.

iii Foreign exchange risk

Prudential principally operates in the UK, the US, and in 13 countries and territories in Asia and the Middle East. The geographical diversity of our businesses means that we are inevitably subject to the risk of exchange rate fluctuations. Prudential's international operations in the US and Asia, which represent a significant proportion of our operating profit and shareholders' funds, generally write policies and invest in assets denominated in local currency. Although this practice limits the effect of exchange rate fluctuations on local operating results, it can lead to significant fluctuations in our consolidated financial statements when results are expressed in pounds sterling.

We do not generally seek to hedge foreign currency revenues, as these are substantially retained locally to support the growth of the Group's business and meet local regulatory and market requirements. However, in cases where a surplus arising in an overseas operation supports Group capital or shareholders' interest, this exposure is hedged if it is economically optimal to do so. Currency borrowings, swaps and other derivatives are used to manage exposures.

b Credit risk

In addition to business unit and Group-wide operational limits on credit risk, we monitor closely our counterparty exposures at Group level, highlighting those that are large or of concern. Where appropriate, we will reduce our exposure, purchase credit protection or make use of collateral arrangements to control our levels of credit risk.

The Group held the following total investments at 31 December 2011.

	2011 £bn				2010 £bn
	Participating funds	Unit-linked and variable annuities	Shareholder-backed	Total Group	Total Group
Debt securities	57.2	8.9	58.4	**124.5**	116.4
Equity	26.0	59.9	1.4	**87.3**	86.6
Property investments	8.5	0.7	1.6	**10.8**	11.2
Mortgage loans	1.0	–	4.7	**5.7**	5.0
Other loans	1.7	–	2.3	**4.0**	4.3
Deposits	7.2	1.5	2.0	**10.7**	10.0
Other investments	4.5	0.1	3.0	**7.6**	5.8
Total	106.1	71.1	73.4	**250.6**	239.3

The table below presents the balances of investments related to shareholder-backed operations.

	2011 £bn				
	Asia life	UK life	US life	Other	Total
Total shareholder-backed investments	7.1	28.5	34.0	3.8	73.4

Shareholders are not directly exposed to value movements on assets backing participating or unit-linked operations, with sensitivity mainly related to shareholder-backed operations.

i) Debt portfolio

The investments held by the shareholder-backed operations are predominantly debt securities, of which 95 per cent are rated, either externally or internally, as investment grade compared to 95 per cent at 31 December 2010.

The below table presents the balances of debt securities at 31 December 2011.

	2011 £bn				2010 £bn
	Participating funds	Unit-linked and variable annuities	Shareholder-backed	Total Group	Total Group
Insurance operations					
UK	47.6	6.2	24.2	**78.0**	74.3
US	–	–	27.0	**27.0**	26.4
Asia	9.6	2.7	5.4	**17.7**	14.1
Asset management operations	–	–	1.8	**1.8**	1.6
Total debt securities	57.2	8.9	58.4	**124.5**	116.4

UK

The UK's debt portfolio on an IFRS basis is £78.0 billion as at 31 December 2011, including £47.6 billion within the UK with-profits fund. Shareholders' risk exposure to the with-profits fund is limited as the solvency is protected by the large inherited estate. Outside the with-profits fund there is £6.2 billion in unit-linked funds where the shareholders' risk is limited, with the remaining £24.2 billion backing the shareholders' annuity business and other non-linked business (of which 78 per cent is rated AAA to A, 20 per cent BBB and 2 per cent non-investment grade). The UK shareholder-backed portfolio did not experience any default losses in 2011.

Risk and capital management

US

The most significant area of exposure to credit risk for the shareholders is Jackson in the US. At 31 December 2011 Jackson's fixed income debt securities portfolio consisted of:

Summary	2011 £m	2010 £m
Corporate and government security and commercial loans:		
Government	2,163	2,440
Publicly traded and SEC Rule 144A securities	16,281	14,747
Non-SEC Rule 144A securities	3,198	3,044
Total	21,642	20,231
Residential mortgage-backed securities (RMBS)	2,591	2,784
Commercial mortgage-backed securities (CMBS)	2,169	2,375
Other debt securities	620	976
Total US debt securities	27,022	26,366

Of the £19.5 billion of corporate debt, 95 per cent is investment grade. Concentration risk within the corporate debt portfolio is low, with the top ten holdings accounting for approximately 4 per cent of the portfolio. Our largest sector exposures in the investment grade corporate debt portfolio are Utilities and Energy each at 15 per cent. We actively manage the portfolio and will sell exposures as events dictate.

Within the RMBS portfolio of £2.6 billion, the portion guaranteed by US government sponsored agencies is 60 per cent. Another 18 per cent of the portfolio is non-agency prime and Alt-A investments with pre-2006/2007 vintages, where experience has been much more positive than later vintages. Our exposure to the 2006/2007 vintages totals £343 million of which £337 million is invested in the senior part of the capital structure. The actual exposure to non-senior 2006/2007 Prime and Alt-A RMBS is only £6 million. The total RMBS portfolio has an average fair value price of 92 cents on the dollar.

The CMBS portfolio of £2.2 billion is performing strongly, with 35 per cent of the portfolio rated AAA and only 2 per cent rated below investment grade. The entire portfolio has an average credit enhancement level of 30 per cent. This level provides significant protection, since it means the underlying collateral has to incur a 30 per cent loss, net of recoveries, before our holding is at risk.

Jackson's debt securities experienced total credit-related losses in 2011 of £52 million (2010: £213 million). This includes net recoveries on sales of previously impaired bonds of £10 million (2010: loss of £89 million) and IFRS write-downs of £62 million (2010: £124 million). Of this amount of write-downs, £21 million (2010: £71 million) was in respect of RMBS securities. In addition to the amounts for debt securities, there were £28 million (2010: £12 million) of write-downs on Jackson's commercial mortgage loan portfolio. In 2011 and 2010 Jackson did not have any defaults in its debt securities portfolio.

The impairment process reflects a rigorous review of every bond and security in our portfolio. Our accounting policy requires us to book full mark to market losses on impaired securities through our balance sheet. However, we would expect only a proportion of these losses eventually to turn into defaults, and some of the impaired securities to recover in price over time.

Jackson's net unrealised gains from debt securities was positive £2,057 million at 31 December 2011, compared to positive £1,210 million at 31 December 2010. The gross unrealised loss position was £246 million at 31 December 2011 (31 December 2010: £370 million). Gross unrealised losses on securities priced at less than 80 per cent of face value totalled £158 million at 31 December 2011 compared to £224 million at 31 December 2010.

Asia

Asia's debt portfolio totalled £17.7 billion at 31 December 2011. Of this, approximately 70 per cent was in unit-linked and with-profits funds with minimal shareholders' risk. The remaining 30 per cent is shareholder exposure and is invested predominantly (73 per cent) in investment grade bonds. For Asia, the portfolio has performed very well, and did not experience any default losses in 2011.

Asset management

The debt portfolio of the Group's asset management operations of £1.8 billion as at 31 December 2011 is principally related to Prudential Capital operations. Of this amount £1.5 billion were rated AAA to A- by S&P or Aaa by Moody's.

ii) Group shareholder sovereign debt exposure

Sovereign debt represented 16 per cent or £9.2 billion of the debt portfolio backing shareholder business at 31 December 2011. 43 per cent of this was rated AAA and 94 per cent investment grade. Of the Group's holdings in Continental Europe of £690 million, 87 per cent was AAA rated. Prudential's direct exposure to the eurozone is small in the context of our overall balance sheet. Shareholder exposure to the Eurozone sovereigns of Portugal, Italy, Ireland, Greece and Spain (PIIGS) is £44 million. The Group does not have any sovereign debt exposure to Greece, Portugal, Ireland or France.

The exposure of the Group's shareholder and with-profits funds to sovereign debt (including credit default swaps that are referenced to sovereign debt) at 31 December 2011 is as follows.

	Shareholder sovereign debt £m	With-profits sovereign debt £m
Continental Europe		
Italy	43	52
Spain	1	33
	44	85
Germany	598	602
Other Europe (principally Isle of Man and Belgium)	48	62
	690	749
United Kingdom	3,254	2,801
United States	2,448	2,615
Other, predominantly Asia	2,850	332
Total	9,242	6,497

iii) Exposure to bank debt securities

Prudential expects that any second order sovereign credit exposures would most likely be concentrated in the banking sector. The Group's bank exposure is a function of its core investment business, as well as of the hedging and other activity undertaken to manage its various financial risks. Prudential relies on public information, such as the results of the July 2011 European Banking Authority (EBA) stress tests to identify banks with large concentrations of indirect exposure.

Prudential has a range of controls and processes to manage credit exposure. In addition to the control frameworks that cover shareholder and policyholder credit risk within each Business Unit, the Group Credit Risk Committee oversees shareholder credit risk across the Group. The Committee receives comprehensive management information, including details of counterparty and invested credit exposure (including structured credit and loans), secured and unsecured cash balances, top 30 credit exposures, and an analysis of shareholder exposure by industry/country and rating. The Group Risk function also continually monitors the portfolio for emerging credit risks through various tools and processes.

Prudential actively mitigates the level of Group wide credit risk (invested credit and counterparty) through a comprehensive system of hard limits, collateralisation agreements and centrally managed 'watch lists'.

Of the £58.4 billion of debt securities backing shareholder business (excluding holdings attributable to external holders of consolidated unit trusts), 4 per cent or £2.1 billion was in Tier 1 and Tier 2 hybrid bank debt. A further £2.2 billion was in the form of senior debt.

In terms of shareholder exposures to the bank debt of PIIGS, we held £328 million at 31 December 2011. This comprised £107 million of covered bonds, £59 million senior debt, £16 million Tier 1 debt and £146 million Tier 2 debt. There was no direct exposure to Greek banks.

Risk and capital management

The Group held the following direct exposures to banks' debt securities of shareholder-backed business at 31 December 2011:

	Bank debt securities – shareholder-backed business						
	Senior debt			Subordinated debt			
	Covered £m	Senior £m	Total senior debt £m	Tier 2 £m	Tier 1 £m	Total subordinated debt £m	Total £m
Portugal	–	24	24	–	–	–	24
Ireland	–	13	13	–	–	–	13
Italy	–	11	11	56	14	70	81
Greece	–	–	–	–	–	–	–
Spain	107	11	118	90	2	92	210
	107	59	166	146	16	162	328
Austria	–	–	–	9	–	9	9
Belgium	–	–	–	–	–	–	–
France	2	34	36	78	35	113	149
Germany	–	28	28	1	–	1	29
Luxembourg	–	–	–	–	–	–	–
Netherlands	–	7	7	81	64	145	152
United Kingdom	228	145	373	615	95	710	1,083
Total Europe	337	273	610	930	210	1,140	1,750
United States	–	1,362	1,362	352	2	354	1,716
Other, predominantly Asia	–	246	246	562	33	595	841
Total	337	1,881	2,218	1,844	245	2,089	4,307

In addition to the exposures held by the shareholder-backed business, the Group held the following banks' securities at 31 December 2011 within its with-profits funds:

	Bank debt securities – participating funds						
	Senior debt			Subordinated debt			
	Covered £m	Senior £m	Total senior debt £m	Tier 2 £m	Tier 1 £m	Total subordinated debt £m	Total £m
Portugal	–	7	7	–	–	–	7
Ireland	–	–	–	–	–	–	–
Italy	–	45	45	49	2	51	96
Greece	5	–	5	–	–	–	5
Spain	137	–	137	1	–	1	138
	142	52	194	50	2	52	246
Austria	–	–	–	–	–	–	–
Belgium	–	–	–	–	–	–	–
France	–	80	80	47	17	64	144
Germany	–	7	7	–	–	–	7
Luxembourg	–	7	7	–	–	–	7
Netherlands	–	80	80	14	28	42	122
United Kingdom	319	385	704	772	74	846	1,550
Total Europe	461	611	1,072	883	121	1,004	2,076
United States	–	1,378	1,378	396	278	674	2,052
Other, predominantly Asia	1	384	385	341	20	361	746
Total	462	2,373	2,835	1,620	419	2,039	4,874

iv) Other possible impacts of a eurozone crisis

Other knock on impacts of a eurozone crisis may represent some risk to the Group, both in terms of financial market impact and potential operational issues. These third order exposures are intrinsically more difficult to quantify. However, as well as the monitoring routines noted above, Prudential has also developed tools to identify the Group's exposure to counterparties at risk (including contingent credit exposures), and has in place Group-wide processes to facilitate the management of such risks should they materialise.

In respect of operational risks, we have strong investment operations, counterparty risk and change management capabilities and we are confident in our ability to manage the transition to a new eurozone regime if events require us to do so.

v) Loans

Of the total Group loans of £9.7 billion at 31 December 2011, the following are held by shareholder-backed operations.

	2011 £bn			2010 £bn		
	Mortgage loans	Other loans	Total	Mortgage loans	Other loans	Total
Asia insurance operations[(i)]	–	0.4	0.4	–	0.5	0.5
US insurance operations[(ii)]	3.6	0.6	4.2	3.6	0.6	4.2
UK insurance operations[(iii)]	1.1	–	1.1	1.0	–	1.0
Asset management operations[(iv)]	–	1.3	1.3	–	1.4	1.4
Total loans held by shareholder-backed operations	4.7	2.3	7.0	4.6	2.5	7.1

Notes

(i) The majority of Asia insurance operations loans are commercial loans held by the Malaysian operation that are rated investment grade by two local rating agencies.

(ii) All commercial mortgage loans held by US insurance operations are collateralised by properties. The US commercial mortgage loan portfolio does not include any single-family residential mortgage loans and therefore is not exposed to the risk of defaults associated with residential sub-prime mortgage loans. Jackson incurred impairments of £28 million on its commercial mortgage book (2010: £12 million). Other loans represents policy loans.

(iii) The majority of mortgage loans held by UK insurance operations are mortgage loans collateralised by properties.

(iv) Relates to bridging loan finance managed by Prudential Capital.

vi) Counterparty credit risk

The Group enters into a variety of exchange traded and over-the-counter derivative financial instruments, including futures, options, forward currency contracts and swaps such as interest rate swaps, cross-currency swaps, swaptions and credit default swaps.

All over-the-counter derivative transactions, with the exception of some Asian transactions, are conducted under standardised ISDA (International Swaps and Derivatives Association Inc) master agreements and the Group has collateral agreements between the individual Group entities and relevant counterparties in place under each of these market master agreements.

The Group's exposure to derivative counterparty credit risk is subject to the same framework of Group-wide operational limits and monitoring as our invested credit risk. Where appropriate, we will reduce our exposure, purchase credit protection or make use of additional collateral arrangements to control our levels of counterparty credit risk.

c Insurance risk

The processes of determining the price of our products and reporting the results of our long-term business operations require us to make a number of assumptions. In common with other industry players, the profitability of our businesses depends on a mix of factors including mortality and morbidity trends, persistency, investment performance, unit cost of administration and new business acquisition expenses.

We continue to conduct rigorous research into longevity risk using data from our substantial annuity portfolio. The assumptions that Prudential makes about future expected levels of mortality are particularly relevant in its UK annuity business. The attractiveness of reinsurance is regularly evaluated. It is used as a risk management tool where it is appropriate and attractive to do so.

Prudential's persistency assumptions reflect recent experience for each relevant line of business, and any expectations of future persistency. Persistency risk is mitigated by appropriate training and sales processes and managed proactively post sale. Where appropriate, allowance is also made for the relationship – either assumed or historically observed – between persistency and investment returns, and for the resulting additional risk.

Risk and capital management

d Liquidity risk
The parent company has significant internal sources of liquidity which are sufficient to meet all of our expected requirements for the foreseeable future without having to make use of external funding. In aggregate the Group has £2.1 billion of undrawn committed facilities, expiring between 2013 and 2017. In addition, the Group has access to liquidity via the debt capital markets. For example, Prudential plc issued US$550 million perpetual subordinated Tier 1 securities in January 2011. Prudential also has in place an unlimited commercial paper programme and has maintained a consistent presence as an issuer in this market for the last decade. Liquidity uses and sources have been assessed at the Group and at a business unit level under base case and stressed assumptions. The liquidity resources available and the subsequent Liquidity Coverage Ratio (LCR) have been assessed to be sufficient under both sets of assumptions.

B.2 Non-financial risk
Prudential is exposed to operational, business environment and strategic risk in the course of running its businesses.

With regard to operational risk, the Group is dependent on processing a large number of complex transactions across numerous diverse products, and is subject to a number of different legal and regulatory, including tax, regimes. Prudential also has a significant number of third-party relationships that are important to the distribution and processing of our products, both as market counterparties and as business partners. This results in reliance upon the operational performance of these outsourcing partners.

Prudential's systems and processes incorporate controls that are designed to manage and mitigate the operational risks associated with its activities. The Prudential Group Governance Manual was developed to make a key contribution to the sound system of internal control that the Group is expected to maintain under the UK Corporate Governance Code and the Hong Kong Code on Corporate Governance Practices. Group Head Office and business units confirm that they have implemented the necessary controls to evidence compliance with the Manual.

The Group has an operational risk management framework in place that facilitates both the qualitative and quantitative analysis of operational risk exposures. The output of this framework, in particular management information on key operational risk and control assessments, scenario analysis, internal incidents and external incidents, is reported by the business units and presented to the Group Operational Risk Committee. This information also supports business decision-making and lessons-learned activities; the ongoing improvement of the control environment; and determination of the adequacy of Prudential's corporate insurance programme.

With regard to business environment risk, the Group has a wide-ranging programme of active and constructive engagement with governments, policymakers and regulators in our key markets and with relevant international institutions. Such engagement is undertaken both directly and indirectly via trade associations. The Group has procedures in place to monitor and track political and regulatory developments. Where appropriate, the Group provides submissions and technical input to officials and others, either via submissions to formal consultations or through interactions with officials.

With regard to strategic risk, both business units and the Group Head Office are required to adopt a forward-looking approach to risk management by performing risk assessments as part of the annual strategic planning process. This supports the identification of potential threats and the initiatives needed to address them, as well as competitive opportunities. The impact on the underlying businesses and/or Group-wide risk profile is also considered to ensure that strategic initiatives are within the Group's risk appetite.

Solvency II represents a regulatory risk due to the uncertainty of what the rules will be when finalised, their potential impacts, and the timing of their introduction. The risks are that the Group may not be able to respond sufficiently quickly to the strategic implication of the change given levels of uncertainty around the content and timing; operational risk in terms of the scale and complexity of the delivery and uncertainty over timelines; and the additional capital that the Group may be required to hold. Solvency II is covered in more detail in the Capital Management section below.

B.3 Risk factors
Our disclosures covering risk factors can be found at the end of this document.

C. Capital management
C.1 Regulatory capital (IGD)
Prudential is subject to the capital adequacy requirements of the European Union (EU) Insurance Groups Directive (IGD) as implemented by the Financial Services Authority (FSA) in the UK. The IGD capital adequacy requirements involve aggregating surplus capital held in our regulated subsidiaries, from which Group borrowings, except those subordinated debt issues that qualify as capital, are deducted. No credit for the benefit of diversification is permitted under this approach.

Our capital position remains strong. We have continued to place emphasis on maintaining the Group's financial strength through optimising the balance between writing profitable new business, conserving capital and generating cash. We estimate that our IGD capital surplus is £4.0 billion at 31 December 2011 (before taking into account the 2011 final dividend), with available capital covering our capital requirements 2.75 times. This compares to a capital surplus of £4.3 billion at the end of 2010 (before taking into account the 2010 final dividend).

The movements during 2011 mainly comprise:

- Net capital generation mainly through operating earnings (in-force releases less investment in new business, net of tax) of £1.5 billion;

Offset by:

- Investment market related impacts of £0.6 billion;
- Final 2010 dividend of £0.4 billion and interim 2011 dividend of £0.2 billion;
- External financing costs and other central costs, net of tax, of £0.5 billion; and
- Net impact of £0.1 billion arising from issuance of the US$550 million perpetual subordinated Tier 1 securities in January 2011 and repayment of the €500 million subordinated notes in December 2011.

We continue to have further options available to us to manage available and required capital. These could take the form of increasing available capital (for example, through financial reinsurance) or reducing required capital (for example, through the mix and level of new business) and the use of other risk mitigation measures such as hedging and reinsurance.

In addition to our strong capital position, on a statutory (Pillar 1) basis, the total credit reserve for the UK shareholder annuity funds also protects our capital position in excess of the IGD surplus. This credit reserve as at 31 December 2011 was £2.0 billion. This credit risk allowance represents 33 per cent of the bond portfolio spread over swap rates, compared to 43 per cent as at 31 December 2010.

Stress testing

As at 31 December 2011, stress testing of our IGD capital position to various events has the following results:

- An instantaneous 20 per cent fall in equity markets from 31 December 2011 levels would reduce the IGD surplus by £350 million;
- A 40 per cent fall in equity markets (comprising an instantaneous 20 per cent fall followed by a further 20 per cent fall over a four-week period) would reduce the IGD surplus by £900 million;
- A 100 bps reduction (subject to a floor of zero) in interest rates would reduce the IGD surplus by £650 million; and
- Credit defaults of 10 times the expected level would reduce IGD surplus by £500 million.

We believe that the results of these stress tests, together with the Group's strong underlying earnings capacity, our established hedging programmes and our additional areas of financial flexibility, demonstrate that we are in a position to withstand significant deterioration in market conditions.

We also use an economic capital assessment to monitor our capital requirements across the Group, allowing for realistic diversification benefits and continue to maintain a strong position. This assessment provides valuable insights into our risk profile.

C.2 Solvency II

The European Union (EU) is developing a new solvency framework for insurance companies, referred to as 'Solvency II'. The Solvency II Directive, which sets out the new framework, was formally approved by the Economic and Financial Affairs Council in November 2009 and is anticipated to be transposed into local regulations and take effect for supervisors from 2013, with implementation currently anticipated from 2014. The new approach is based on the concept of three pillars – minimum capital requirements, supervisory review of firms' assessments of risk, and enhanced disclosure requirements.

Specifically, Pillar 1 covers the quantitative requirements around own funds, valuation rules for assets and liabilities and capital requirements. Pillar 2 provides the qualitative requirements for risk management, governance and controls, including the requirement for insurers to submit an Own Risk and Solvency Assessment (ORSA) which will be used by the regulator as part of the supervisory review process. Pillar 3 deals with the enhanced requirements for supervisory reporting and public disclosure.

A key aspect of Solvency II is that the assessment of risks and capital requirements are intended to be aligned more closely with economic capital methodologies. Companies may be allowed to make use of internal economic capital models if approved by the local regulator.

The European Parliament is currently discussing the Omnibus II Directive which, once approved, will amend certain aspects of the Solvency II Directive, including the anticipated implementation date as described above. The Omnibus II Directive is expected to be finalised during 2012.

In addition the European Commission is continuing to develop, in consultation with stakeholders including industry, detailed rules that complement the high-level principles in the Solvency II Directive, referred to as 'implementing measures'. These are not expected to be finalised until later in 2012. Further guidance and technical standards are also currently being developed by the European Insurance and Occupational Pensions Authority (EIOPA). These are expected to be subject to a formal consultation and are unlikely to be finalised before early 2013.

Risk and capital management

There remains significant uncertainty regarding the outcome from this process. In particular, the Solvency II rules relating to the determination of the liability discount rate and to the treatment of US business remain unclear and Prudential's capital position is sensitive to these outcomes. With reference to the liability discount rate, solutions to remove artificial volatility from the balance sheet have been suggested by policymakers as the regulations continue to evolve. These solutions, along with transitional arrangements for the treatment of the US business, are continuing to be considered by the European Parliament as part of the process to reach agreement on the Omnibus II Directive. There is a risk that the effect of the final measures could be adverse for Prudential, including potentially that a significant increase in capital may be required to support its business and that Prudential may be placed at a competitive disadvantage to other European and non-European financial services groups. Prudential is actively participating in shaping the outcome through our involvement in industry bodies and trade associations, including the Chief Risk Officer and Chief Financial Officer Forums, together with the Association of British Insurers (ABI) and Insurance Europe (formerly known as the Comité Européen des Assurances).

Having assessed the requirements of Solvency II, an implementation programme was initiated with dedicated teams to manage the required work across the Group. The activity of the local Solvency II teams is being coordinated centrally to achieve consistency in the understanding and application of the requirements. We are continuing our preparations to adopt the regime when it eventually arrives and are undertaking in parallel an evaluation of the possible actions to mitigate its effects. Prudential regularly reviews its range of options to maximise the strategic flexibility of the Group. This includes consideration of optimising the Group's domicile, including as a possible response to an adverse outcome on Solvency II.

Over the coming months we will be progressing our implementation and remaining in regular contact with the FSA as we continue to engage in the 'pre-application' stage of the approval process for the internal model.

C.3 Capital allocation

Prudential's approach to capital allocation takes into account a range of factors, especially risk adjusted returns on capital, the impact of alternative capital measurement bases (accounting, regulatory, economic and ratings agency assessments), tax efficiency, and wider strategic objectives.

We optimise capital allocation across the Group by using a consistent set of capital performance metrics across all business units to ensure meaningful comparison. Capital utilisation, return on capital and new business value creation are measured at a product level. The use of these capital performance metrics is embedded into our decision-making processes for product design and product pricing.

Our capital performance metrics are based on economic capital, which provides a view of our capital requirements across the Group, allowing for realistic diversification benefits. Economic capital also provides valuable insights into our risk profile and is used both for risk measurement and capital management.

C.4 Risk mitigation and hedging

We manage our actual risk profile against our tolerance of risk. To do this, we maintain risk registers that include details of the risks we have identified and of the controls and mitigating actions we employ in managing them. Any mitigation strategies involving large transactions such as a material derivative transaction are subject to review at Group level before implementation.

We use a range of risk management and mitigation strategies. The most important of these include: adjusting asset portfolios to reduce investment risks (such as duration mismatches or overweight counterparty exposures); using derivatives to hedge market risks; implementing reinsurance programmes to manage insurance risk; implementing corporate insurance programmes to limit the impact of operational risks; and revising business plans where appropriate.