



CHANGES TO THE SYLLABUS AND CORE READING FOR SUBJECT SA5 FOR THE 2018 EXAMINATIONS

Changes to the Syllabus and their impact on Core Reading

There have been no changes to the Syllabus.

Changes to Core Reading

UNIT 0

The detail has been updated and a revised Unit is attached.

UNIT 1

The detail has been updated and a revised Unit is attached.

UNIT 3

The detail has been updated and a revised Unit is attached.

UNIT 4

The detail has been updated and a revised Unit is attached.

UNIT 5

Amendments have been made to this Unit and a revised Unit is attached.

The only other changes that have been made to the Core Reading are to correct typographical errors and improve the style.

Attachments: Unit 0, 1, 3, 4 and 5

UNIT 0 — INTRODUCTION TO FINANCE SPECIALIST APPLICATIONS

1 Structure of professional examinations

Earlier parts of the actuarial qualification have covered accounting, discount rates, economics and financial economics in the CT subjects. CA1 — Actuarial Risk Management brings all the Core Technical skills together and shows how actuaries use them in risk management, which is the fundamental skill of an actuary.

The two practical exams CA2 and CA3, covering modelling and communication skills, add the softer skills that are now essential in the work of all actuaries. Actuaries need rigour in the development of the modelling skills that underpin a great deal of actuarial analysis, and communication skills to enable them to explain the results of their work, their assumptions and the conclusions that they draw from their analysis to the various stakeholders. The practical exam CT9, covering business awareness, further adds to the skills needed by any professional working in today's business environment.

The Specialist Technical level courses introduce technical concepts that are not necessary for all actuaries to know, but are essential to those practising in the particular field. Finally at Specialist Application level the student is asked to apply all the skills learnt throughout his professional education to the solution of complex problems in his chosen field.

2 UK specifics

When carrying out any work an actuary (or actuarial student) must comply with any professional standards or guidance relevant to the work being done and the professional body to which he or she belongs.

Standards required of its members by the Institute and Faculty of Actuaries (IFoA) are detailed in the Actuaries' Code, Technical Actuarial Standards and IFoA Actuarial Profession Standards.

Although it only applies to actuaries working in the UK, or for UK regulated entities, the Technical Actuarial Standard TAS 100 (formerly TAS R, TAS D plus TAS M) is covered in the CA subjects, particularly CA2. This is because, despite the restricted applicability, the content forms a good foundation for all actuarial work.

The Actuaries' Code sets out five core principles which all members of the IFoA are expected to observe in their professional lives, and which must be complied with in both the spirit and the letter. The content of the Actuaries' Code is outside the scope of this Subject, but should be known by all members (students and actuaries) of the IFoA.

Throughout the previous subjects, there has been no requirement to be aware of particular legislative and regulatory requirements that pertain in the UK, or indeed in any other

country. Because the IFoA is the UK professional body, examples in the Core Reading for other subjects often explain the UK position, but there is no requirement for candidates to learn UK specifics for assessment in an examination.

The SA subjects are UK specific examinations and candidates are expected to have a good knowledge of the specialist subject as it is transacted in the UK. Consequently, students in subject SA5 are expected to have a good knowledge of the UK financial environment and the features of the UK economy in order to enable them to solve problems set in a UK context. They should also be aware of the UK legislation and regulation and how it affects the specialist area. This subject is focused on practical application and “real world” solutions to investment and finance issues.

The examiners will expect candidates to demonstrate a breadth and depth of competency as would be expected from a practising actuary or senior student in a frequently evolving discipline. Hence students need to read around the basic material to develop their understanding of the subject, acquire an appreciation of its practical application and keep up to date with developments in this field. To succeed in this subject, students are strongly advised to read widely — in particular, the Financial Times and the Economist, and other investment related articles in the press and journals, as well as papers and books on the list of suggested reading. Access to electronic versions for many of the items on this list is available via the SA5 Learning Portal on the IFoA’s website at <http://www.actuaries.org.uk/studying/plan-my-study-route/fellowshipassociateship/specialist-applications-subjects/sa5-finance>.

You may be asked to log in, using your normal website login, to access some items. In case of difficulty in accessing any item, contact the libraries (e-mail libraries@actuaries.org.uk).

3 Previous subjects

At Specialist Applications level, knowledge of all relevant previous subjects is assumed. The subject that is most relevant to SA5 is ST5 — Finance and Investment Specialist Technical A. This forms an important background to this subject and you are encouraged to refresh your knowledge of it before embarking on the study of this subject. Examination questions may include sections based on this prior knowledge in the formation of an answer.

Students who have followed the IFoA’s courses for previous subjects will already have covered all the preliminary concepts. This Core Reading makes the assumption that these courses have been followed, and there is therefore no duplication of material between this and earlier subjects. However, you are reminded that the examiners examine the syllabus, not the Core Reading, and the specific links to earlier subjects referred to in the syllabus should be noted.

Students who have covered earlier subjects through an accredited university course should be aware that the accreditation process allows universities to teach a slightly different syllabus, provided that the topics covered and the assessment procedure are broadly

equivalent. Thus students in this position are advised to review the Core Reading for subject ST5, in particular, to ensure that they have covered all the necessary ground.

END

UNIT 1 — ECONOMIES AND MARKETS

Syllabus objectives

- (a) Demonstrate a knowledge and understanding of the financial markets, with particular reference to the needs of a United Kingdom user.
- (i) Outline the main features of the capital markets in the United Kingdom, and other developed and emerging markets.
- (iii) Outline the main features of the structures of the economies of the United Kingdom, and other developed and emerging markets.

1 The UK economy

The UK Government's economic strategy has six main elements:

- maintaining macroeconomic stability
- meeting the productivity challenge
- increasing employment opportunity for all
- building a fairer society
- delivering high-quality public services
- protecting the environment

The UK economy is the world's fifth or sixth largest, being of a similar size to that of France (with relative positions varying over recent time) but smaller than that of the USA, China, Japan and Germany, when measured by nominal Gross Domestic Product (GDP). When measured by Purchasing Power Parity (PPP) it typically falls lower in the rankings, being exceeded also for example by that of India.

After a strong growth period, the UK economy went into recession (i.e. successive quarterly reductions in GDP) during 2008 and 2009. The economy shrank by around 5% during that period, but subsequently recovered. Although there have been some periods of negative growth since then, the much speculated "double dip recession" did not occur. Recent growth rates have been in the order of 1%–3% per annum.

Consumer price inflation was in the order of 3%–4% per annum in the early 2010s, but reduced to much lower levels. For example, in 2015, it was negligible (i.e. close to 0%). However, it has increased more recently, being 2.3% for the year to March 2017.

Retail price inflation has tended to be around 1% higher than consumer price inflation over the same period, although it was negative during part of 2009.

The Bank of England base rate varied from between 3.75% and 6.0% up to the financial crisis of 2008. It was subsequently cut in stages to reach 0.5% in March 2009, where it remained until it was reduced to 0.25% in August 2016.

The UK had a current account deficit of £32.7 billion in the fourth quarter of 2015, falling to £12.1 billion in the fourth quarter of 2016. The UK is highly dependent on foreign trade. It must import almost all its copper, ferrous metals, lead, zinc, rubber and raw cotton and about one-third of its food. The UK exports manufactured items such as telecommunications equipment, cars, automatic data processing equipment, medicinal and pharmaceutical products and aircraft parts. Its main trading partners are the European Union, the USA, China and Japan.

Students should keep up to date with key changes in the UK economic environment.

1.1 The banking sector

The Bank of England is the UK's central bank and is responsible for promoting and maintaining a stable and efficient monetary and financial framework. In pursuing this goal, it has three main purposes:

- maintaining the integrity and value of the currency
- maintaining the stability of the financial system
- seeking to ensure the effectiveness of the financial services sector

The Bank's monetary policy objective is to deliver price stability (defined by the Government's inflation target) and, subject to that, to support the Government's economic policy, including its growth and employment objectives. The Bank's Monetary Policy Committee has responsibility for meeting this target and for setting interest rates.

Banks are dual regulated in the UK: the Prudential Regulation Authority (PRA) is responsible for their prudential regulation (i.e. their solvency), while the Financial Conduct Authority (FCA) is responsible for regulating their conduct (i.e. their adherence to rules and regulations). The FCA also regulates the wider conduct in financial markets and supporting infrastructure.

Banks are required to meet minimum standards on the integrity and competence of directors and management, the adequacy of capital and cash flow, and the systems and controls to deal with the risks which they experience.

1.2 The insurance sector

The insurance sector is also dual regulated by the PRA and FCA. The main focus of the PRA is on insurers maintaining financial resources sufficient to meet their responsibilities to policyholders, including their ability to absorb any market falls that may occur. The main focus of the FCA is the way in which insurers do business with their customers.

The London Insurance Market (London Market) is a distinct part of the UK insurance and reinsurance industry. It is the main centre for world reinsurance business and for energy, marine, aviation, satellite and other forms of transport insurance. It comprises insurers, reinsurers, Lloyd's syndicates, Protection and Indemnity Clubs (mutual insurers for ship owners) and brokers.

1.3 Investment

The UK has considerable expertise in fund management, which involves managing funds on behalf of investors, or advising them how best to invest their money. The main institutional groups are long term insurance funds, general insurance funds, self-administered pension funds, investment trusts and unit trusts.

2 Major overseas markets

Students should have an appreciation of the key characteristics of the major global capital markets and economies; however, knowledge of the detailed information is not required.

A useful resource is the Economist “World in 2017” Report (<http://www.theworldin.com/>)

Relevant articles include those on key economies, including USA, China, the Eurozone (especially Germany and France), Russia and Latin America.

Relevant statistics include those relating to individual countries and regions.

Country reports published and updated by the Economist Intelligence Unit are also of interest (<http://country.eiu.com/AllCountries.aspx>).

3 Shadow banks

Shadow banks are non-bank financial intermediaries providing services similar to those offered by traditional commercial banks. They include entities such as hedge funds, money market funds, structured investment vehicles, credit investment funds, exchange-traded funds, private equity funds, credit insurance providers, securitisation and finance companies.

Shadow banks operate world wide and provide a more direct link between providers and users of capital than traditional banks who charge fees for intermediating. The services they offer including matching lenders and borrowers and providing investment advice. The matching of lenders and borrowers can be both direct and indirect through fund structures.

Shadow banks are usually subject to much less regulation than commercial banks. This enables them to offer similar products more cost effectively and to bring new products to market faster. They can also offer products that are not typically available in the traditional banking market. They offer a vast array of investment funds using many products to increase returns, lower correlations and reduce relative risk. The products can include debt leverage, derivatives, swaps, commodities, specialist investment products. They can offer customers securitisation — to create safe assets and collateral intermediation — to help reduce counterparty risks and facilitate secured transactions.

Shadow banks operate with relatively much lower reporting requirements and hence much less transparency than traditional banks. This enables them to take advantage of technical

expertise (proprietary strategies) for longer. It also enables them to claim that their superior abilities are down to expertise and not the result of undisclosed risk-taking. Shadow banks provide outside stakeholders with relatively little information. The lack of information means that outsiders cannot assess the risks that shadow banks are running to produce their returns.

The risks arising from the operation of shadow banks include:

- Leverage — as they do not have to keep the levels of capital relative to financial exposure, they tend to leverage and are more exposed to booms and busts. The relative out-performance in boom times is advertised to clients as being superior rather than the result of leverage. This leads to more money moving to shadow banks and exacerbates any future financial crisis.
- Increased systemic risk — which in turn increases the risk of future financial crises being worse than they would otherwise have been. This is because the shadow banks operate with similar levels of excess leverage and are exposed to similar external risks.
- Liquidity risk — as there is no access to central banks as the lenders of last resort.

Governments allow shadow banks to operate in their country, as if they did not the shadow banks would go elsewhere costing jobs, tax receipts and prosperity. Shadow banks increase liquidity in the economy. If shadow banks were not allowed to operate legally in a country then:

- The financial system would lose at least some entrepreneurs and innovators.
- Investors would still find ways to use shadow banks overseas, but at much increased risk.
- The government would be unable to impose any level of scrutiny or operating standards on shadow banks.
- The country may experience capital outflows.

A government could regulate shadow banks in a manner which would be acceptable to shadow banks in the following ways:

- The government could legislate that it could regulate all institutions of systemic importance.
- It could require all investment advisers advising clients to invest in shadow banks to register with the government and provide evidence that they are fit and proper to act.
- It could require the regulators regulating the securities exchanges to increase reporting levels for those shadow banks wishing to list securities.

- It could help the industry to introduce a voluntary standards office which could suggest operational standards, reporting standards and the like and award compliant firms with certificates.

END

UNIT 3 — ENVIRONMENTAL INFLUENCES

Syllabus objectives

- (b) Demonstrate knowledge of the influences over the United Kingdom commercial and economic environment from
- Central banks
 - Government policy

1 Central banks

1.1 General

The influence of central banks varies according to the division of power between related government ministries, central banks and other regulatory bodies. The degree of independence of the central bank from the political echelon will also determine the bank's importance.

A central bank may be interested in:

- monetary, interest rate and inflation policy
- banking regulation
- implementation of government borrowing
- performance and integrity of financial markets
- intervention in currency markets
- printing and minting of notes and coins, and
- taxation

However, which of these are set by the central bank in a particular country (and which are truly determined by an independent central bank rather than just implementing decisions made by political entities) will vary from country to country.

In many countries, central banks are now primarily concerned with monetary policy and control:

- adjustment of banking sector liquidity
- control of money supply growth and short-term interest rates

Money market intervention is achieved through buying and selling bills to influence the level of liquidity within the banking sector and short-term interest rates. This will include activity to stabilise rates (when cash flows between the government and private sectors would otherwise impinge on bank liquidity). The central bank may also use non-market (direct) controls such as:

- setting minimum liquid reserve ratios

- setting interest rate ceilings for bank deposits
- issuing directives regarding the types of lending to be undertaken

1.2 The Bank of England

1.2.1 Interest rates and inflation

In Britain, the Bank of England (“the Bank”) has had operational responsibility for setting interest rates since May 1997. The Government sets an inflation rate target (confirmed in each Budget statement) and the Bank has responsibility for setting short-term interest rates to achieve that target. The operational target for monetary policy of 2% is based on the 12-month increase in the Consumer Price Index (CPI). If inflation moves away from the target by more than 1 percentage point in either direction, the Governor of the Bank is required to write to the Chancellor of the Exchequer explaining:

- the reasons why inflation has moved away from the target by more than one percentage point
- the policy action which the Bank is taking to deal with it
- the period within which inflation is expected to return to the target
- how this approach meets the Government’s policy objectives

The inflation target was first breached in March 2007 and has been breached several times since during the subsequent recession and recovery period. The CPI increased to 2.9% in December 2009 and remained above 2% until December 2013. Since then it has fallen to around zero, including occasional periods of deflation (negative inflation), despite a very loose monetary policy by the Bank of England. However, more recently it has increased, being 2.3% for the year to March 2017.

In addition, monetary policy is required to “support the Government’s economic policy, including its objectives for growth and employment”.

The Bank’s operational decisions on interest rate policy are made by a Monetary Policy Committee (MPC). The MPC comprises nine members: the Governor, three Deputy Governors for Monetary Policy, Financial Stability and Markets & Banking, the Bank’s Chief Economist and four external members appointed directly by the Chancellor. A representative from the Treasury also sits with the Committee at its meetings. The Treasury representative can discuss policy issues but is not allowed to vote. The MPC meets monthly and its decisions are announced immediately after the meeting. Minutes of each meeting are published simultaneously with the interest rate decision.

In March 2009, the MPC and the Chancellor of the Exchequer started a programme of quantitative easing which injected £375 billion into the UK economy by April 2013.

The MPC reduced the interest rate to 0.5% p.a. in March 2009 and it remained at that level until it was reduced to 0.25% in August 2016.

In August 2013, the newly appointed Governor of the Bank of England, Mark Carney, launched a policy of “forward guidance”. Under this policy, the Bank will not raise interest rates above 0.5% p.a. or cut back on the quantitative easing programme until unemployment in the UK has fallen below 7%.

In February 2014, the Governor of the Bank of England issued further guidance on the setting of monetary policy once this unemployment threshold has been reached, as follows:

- The MPC sets policy to achieve the 2% inflation target, and, subject to that, to support the Government’s economic policies, including those for growth and employment.
- Despite the sharp fall in unemployment, there remains scope to absorb spare capacity further before raising Bank Rate.
- When Bank Rate does begin to rise, the appropriate path so as to eliminate slack over the next two to three years and keep inflation close to the target is expected to be gradual.
- The actual path of Bank Rate over the next few years will, however, depend on economic developments.
- Even when the economy has returned to normal levels of capacity and inflation is close to the target, the appropriate level of Bank Rate is likely to be materially below the 5% level set on average by the Committee prior to the financial crisis.
- The MPC intends to maintain the stock of purchased assets at least until the first rise in Bank Rate.
- Monetary policy may have a role to play in mitigating risks to financial stability, but only as a last line of defence if those risks cannot be contained by the substantial range of policy actions available to the Financial Policy Committee and other regulatory authorities.

In response to the financial crisis, the Bank of England set up its Financial Policy Committee (FPC). It is a macro-prudential regulator which oversees regulation of the UK’s financial sector. Its role is to monitor and identify potential risks in the financial system and to take action if it considers that dangerous patterns are creating systemic risk within the sector. The FPC has eleven members: ten experts plus a non voting member from HM Treasury, who meet at least four times a year. The FPC is also responsible for the Bank of England’s bi-annual Financial Stability Report.

The Bank also publishes a quarterly Inflation Report, which provides a detailed analysis of inflation and gives an assessment for prospects for inflation relative to the inflation target. The report sets out and justifies the Bank’s analysis of the economy and explains how the Bank intends to meet the inflation target and support the Government’s economic policy.

In extreme economic circumstances, if the national interest demands it, the Government has the power to give instructions to the Bank on interest rates for a limited period.

As banker to the Government and the commercial banks, the Bank is able to forecast fairly accurately the pattern of money flows between the Government's accounts and the commercial banks. It acts on a daily basis to smooth out the imbalances that arise. Settlement banks are obliged to maintain a minimum balance of zero on their Bank of England settlement accounts at the end of each day — i.e. there is, in effect, a one-day maintenance requirement in the UK and, unlike in some other countries' systems, there are no positive reserve requirements and no reserve averaging over a maintenance period. In practice, the settlement banks prefer their end-of-day balances to be slightly greater than the bare minimum of zero, in order to cover themselves against uncertainties in their daily cash flows. Consequently, the Bank targets a small positive level of bankers' operational balances within its overall forecast of the system's liquidity each day.

In practice, the pattern of Government and bank operations usually results in a shortage of cash in the market each day. The Bank then supplies the cash that the banking system as a whole needs in order to achieve balance by the end of each settlement day, and chooses the interest rate at which it will provide these funds, which then effectively becomes the marginal borrowing rate for the market as a whole.

1.2.2 Financial stability

Since 1997, the Bank has had responsibility for the stability of the UK financial system as a whole. As noted in Unit 1, banking supervision is the responsibility of the PRA and FCA. Responsibility for Government debt management (including the sale of gilts, oversight of the gilts market and cash management) is with the Debt Management Office (DMO), a part of the Treasury.

As mentioned previously, the FPC has responsibility for overseeing the Bank's work in the area of financial stability.

Where a threat to the stability of the financial system is perceived to be present, the Bank may intervene to stand between an intermediary and the market place in order to facilitate payments and settlements which might otherwise not be completed. In extreme cases, emergency financial support by the Bank might be provided — the "lender of last resort" function — but this is only done where the failure of one institution could bring down other, otherwise viable, institutions.

As part of its responsibility for financial stability, the Bank also analyses developments in overseas financial markets and considers their impact on the UK financial sector.

Research on issues and an assessment of financial stability are published bi-annually in the Bank's Financial Stability Report.

1.2.3 Effectiveness of the UK's financial services

The UK Government wants a financial system that offers opportunities for firms of all sizes to have access to capital on terms that give adequate protection to investors and

which enhance the international competitive position of the City of London and other UK financial centres.

The Bank aims to achieve these goals:

- through its expertise in the market place
- by acting as a catalyst to collective action where market forces alone are defective
- by supporting the development of a financial infrastructure that furthers these goals
- by advising the Government
- and by encouraging British interests through its contacts with financial authorities overseas

1.2.4 Exchange rates

The UK Government is responsible for deciding the exchange rate regime, but the Bank has its own separate pool of foreign exchange reserves to use at its discretion to intervene in support of its monetary policy objective. The Bank also acts as agent, instructed by the Government, to intervene in the foreign exchange markets by buying or selling the Government reserves.

2 Government policy

2.1 General

Government policy clearly has the potential to impact every aspect of the commercial and economic landscape. The main forms of government policy are:

- *Monetary policy* — the control of some measures of the money supply and / or the level and structure of interest rates.
- *Fiscal policy* — decisions on the level and structure of taxation and government expenditure and hence, by implication, the public sector borrowing requirement (or debt repayment).
- *National debt management policy* — the manipulation of the outstanding stock of government debt instruments held by the domestic private sector, in order to influence the level and structure of interest rates or the availability of liquid reserve assets to the banking sector.
- *Exchange rate policy* — directed towards achieving some target for the exchange rate of the domestic currency in terms of foreign currencies, perhaps with the

objective of influencing the country's international trading and investment patterns.

- *Prices and incomes policy* — aimed at influencing the rates of wage and price inflation.

Policy regarding taxation, its overall level and distribution between personal direct, indirect, corporate and other (e.g. stamp duty) will affect demand for goods and services, including labour, either because of changes in consumer spending ability or because of the impact on the prices of goods and services.

Competition policy will be a crucial element of the operating environment, especially for the increasing number of naturally oligopolistic industries.

To the extent that governments can influence currency exchange rates, this will influence the competitiveness of a location for internationally traded goods. It is the relationship between currency exchange rates and the price in local currency of inputs, including labour, that determines competitiveness. Many countries seek to actively manage their exchange rates so as to achieve or maintain a level of global competitiveness.

Labour policies will set the background for the flexibility of labour and the bargaining power of organised labour. The related domain of social policies will determine the cost of health services, welfare benefits and state pensions. To the extent that these are provided by government and paid for out of charges which are separate from taxation, they will have to be separately added to the cost of labour. Such add-on costs to employment (which might be labelled as "health insurance" or take the form of compulsory pension savings) can be a crucial element of total labour costs.

Incentives for investment can vary enormously and will be important to both suppliers of investment goods and to companies making investment decisions.

Government funded, or otherwise encouraged, investment in infrastructure will help determine how easy it is to for an organisation to put in place the physical requirements of its business within a territory.

In reality, there is considerable overlap between policies. Throughout the post-war period and until the 1970s, monetary policy played a subsidiary supportive role to fiscal policy in most countries. Governments tended to emphasise the use of demand management techniques in an attempt to "fine tune" the economy. The money supply was often allowed to accommodate money demand, with little attention paid to the possible inflationary implications.

From the 1970s onwards, a much more positive role was adopted for monetary policy in many countries, with explicit recognition being given to the control of the money supply as an important element in the fight against inflation. Monetary policy was brought to the forefront of the economic policy package, and the other policies were seen as being merely supportive to this. Governments have adopted medium term financial strategies aimed at reducing inflation (via a policy of strict monetary control) while reducing the proportion of national resources taken for public sector use and the burden of taxation on the working

population. Such “supply side” measures are aimed at boosting incentives for investment and, hopefully, encouraging long-term economic growth.

The success of a government’s economic policy can best be assessed in terms of the major economic objectives:

- unemployment
- inflation
- balance of payments (or the exchange rate)
- economic growth

With the focus of economic policy being directed at monetary policy, it is appropriate to consider the effects of changes in interest rates on the major elements of the domestic economy:

- A major direct effect of higher interest rates for the *personal sector* is likely to arise via the increase in mortgage loan interest payments. Consumers’ expenditure may also be discouraged by higher rates on credit facilities and higher rates of interest may also encourage higher levels of saving.
- The impact of higher interest rates on the *business sector* is likely to be detrimental since capital investment and economic growth prospects will be reduced. This is due to the increased opportunity cost of committing funds for investment and the higher cost of borrowing. Also, the reduction in anticipated levels of economic activity, and higher domestic currency exchange rates, will reduce the viability of capital investment projects.
- Higher levels of interest payments on outstanding debt will reduce corporate profitability. All of these features are likely to result in reduced employment prospects and a slower rate of improvement in living standards.
- As regards the *balance of payments*, an increase in domestic interest rates is likely to attract an inflow of foreign investment funds and may also encourage the repatriation of domestic funds held overseas. Thus, there is likely to be upward pressure on the domestic currency’s exchange rate.

The effects on the other elements of the capital account will depend on investors’ expectations of domestic growth prospects. If it is believed that domestic economic activity is likely to be depressed, then there may be reduced inward flows of direct capital investment.

The effect on the current account will depend on the extent to which exchange rates alter. If exchange rates rise, then this is likely to lead to a decrease in exports and an increase in imports, but the ultimate effects on the current account will depend on the elasticities of demand for traded goods and services.

2.2 UK Government policy

The UK Government's macroeconomic framework is designed to maintain long-term economic stability.

The macroeconomic framework is based on the principles of transparency, responsibility and accountability. The Monetary Policy Committee framework seeks to ensure low and stable inflation, while fiscal policy is underpinned by clear objectives and two strict rules that ensure sound public finances over the medium term while allowing fiscal policy to support monetary policy over the economic cycle.

2.2.1 Monetary policy

From its introduction in 1997 up until 2007, the monetary policy framework has delivered inflation close to the Government's target and allowed the Bank of England's Monetary Policy Committee (MPC) to mitigate the effects of global events on the UK economy. However, it has not been able to counter the down turn experienced by the world economy since 2007.

The framework is based on four key principles:

- clear and precise objectives — while the primary objective of monetary policy is to deliver price stability, the adoption of a single symmetrical inflation target ensures that outcomes below target are treated as seriously as those above, so that monetary policy also supports the Government's objective of high and stable levels of growth and employment
- full operational independence — for the MPC in setting interest rates to meet the Government's inflation target
- openness, transparency and accountability — which are enhanced through the publication of MPC members' voting records, prompt publication of the minutes of monthly MPC meetings and publication of the Bank of England's quarterly Inflation Report; and
- credibility and flexibility — the MPC has discretion to decide how and when to react to events, within the constraints of the inflation target and the open letter system

These arrangements have removed the risk that short-term political factors could influence monetary policy and ensured that interest rates are set in a forward-looking manner to meet the Government's symmetrical inflation target.

2.2.2 Fiscal policy

The fiscal rules are the foundation of the Government's public spending framework, which facilitates long-term planning and provides departments with the flexibility they need in order to tailor the quality of public services and deliver specified outcomes. These policies work together in a coherent and integrated way.

The Government's fiscal policy framework is based on transparency, stability, responsibility, fairness and efficiency. The code requires the Government to state its objectives and the rules through which fiscal policy will operate. The Government's fiscal policy objectives are:

- during the medium term, to ensure sound public finances and that spending and taxation are fair within and between generations; and
- for fiscal stability

During the economic cycle, the Government's current aim is to borrow only to invest and not to fund spending. Public sector net debt is expected to be held over the economic cycle at a stable and prudent level. Other things being equal, net debt would be maintained at less than 40% of GDP over the economic cycle.

The rules are set over the economic cycle. This allows the fiscal balances to vary between years in line with the cyclical position of the economy, permitting the automatic stabilisers to operate freely to help smooth the path of the economy in the face of variations in demand.

2.2.3 Results

Up until 2007, the frameworks for monetary policy, fiscal policy and public spending appeared to provide a coherent strategy for maintaining high and stable levels of growth and employment and for minimising the adverse effect of external events.

However, in 2007, as a consequence of the global financial crisis, the world economy went into decline, with the collapse of several major financial institutions and with governments (or central banks) spending huge amounts of money to support others. The global financial crisis has resulted in the tightening of financial regulations worldwide.

The UK economy officially went into recession in the final quarter of 2008 and only emerged from recession in the final quarter of 2009. Fears were expressed at the time that there could be a further period of recession in the near future (a double-dip recession), although this did not materialise.

However, since then the UK economy has recovered and returned to reasonable levels of growth.

END

UNIT 4 — TAXATION

Syllabus objective

- (c) Demonstrate a knowledge of the personal and corporate taxation framework in the United Kingdom.

Figures quoted in this Unit are current as at May 2017 and are applicable to the United Kingdom.

1 Income tax

In the UK, an individual's liability to income tax is based on total income arising from sources such as employment, trading, property holdings, pensions, savings and investments.

Benefits in kind provided to employees (e.g. loans on favourable terms, living accommodation, company car, medical insurance) are also treated as if they were income for tax purposes, even though the employee is not actually paid any money. The tax is based on the "cash equivalent", which is normally the cost of providing the benefit.

A basic Personal Allowance (£11,500) is deducted from an individual's total income to determine the amount of taxable income. [The Personal Allowance is reduced by £1 for every £2 of income above £100,000.]

Additional allowances are given to low income families, disabled persons, blind persons and pensioners.

Taxable income above the allowances is split into bands. Each of these bands is taxed at an increasing rate: basic rate (20%; for taxable income up to £33,500), higher rate (40%; for taxable income over £33,500 and up to £150,000) and additional rate (45%; for taxable income over £150,000).

Further details on the taxation of savings income is given in Section 5.1.

[Scottish taxpayers may be subject to tax at different rates, to be set by the Scottish Assembly.]

2 Inheritance tax

Inheritance tax (IHT) is a tax on the value of a deceased person's estate at death plus certain lifetime transfers which are not exempt (or potentially exempt). Husbands and wives are taxed separately; however, there is no IHT on transfers between spouses.

Other exemptions include gifts to charities, small gifts of up to £250 per recipient, and an annual exemption for lifetime gifts of up to £3,000 per donor.

IHT is normally charged at 40% on death, with the first £325,000 being tax-free. An additional nil rate band has been introduced from April 2017, when a residence is passed on death to a direct descendant.

Where a donor of a lifetime gift dies within seven years of making the gift, IHT may be due on the gift. The full rate of tax is reduced depending on the interval between the gift and the date of death. Such transfers, where there is no immediate liability to IHT, are known as “potentially exempt transfers”.

The value of assets for IHT is their open market value.

Relief is given on business assets, provided the transferor has owned them for at least two years.

3 Corporation tax

Corporation tax is a tax on the taxable profits of limited companies and some organisations including clubs, societies, associations, co-operatives, charities and other unincorporated bodies.

Taxable profits for corporation tax include:

- profits from taxable income such as trading profits and investment profits (except dividend income which is taxed differently)
- capital gains — known as “chargeable gains” for corporation tax purposes

If a company or organisation is based in the UK, it has to pay corporation tax on all its taxable profits — wherever in the world those profits come from.

If a company is not based in the UK but operates in the UK (for example through a UK branch) it only has to pay corporation tax on any taxable profits arising from its UK activities.

Tax relief in the form of capital allowances allows the cost of some of a company’s or organisation’s assets to be written off against its taxable profits. This replaces any depreciation shown in the company’s or organisation’s accounts, which is not allowable for corporation tax purposes.

Capital allowances are available on:

- the cost of most plant and machinery that a company or organisation uses for its business

- certain building works — for example converting space above commercial premises to flats for renting
- certain research and development

Indexation allowance adjusts for the effect of inflation when calculating chargeable gains.

The main rate of corporation tax is 19%.

A company's trading losses can normally be set against:

- income and gains of the same accounting period
- income and gains of a previous year (subject to a cap from April 2017)
- trading profits from the same trade in future years (with greater flexibility from April 2017)

4 Capital gains tax

Capital gains tax (CGT) is charged on net gains i.e. total chargeable gains realised during a tax year after deducting total allowable losses realised in the year.

CGT can only arise on the disposal of an asset. Normally this means sale, but it could also mean a gift or compensation for loss or damage to an asset. The value on which the gain (or loss) is based is normally the consideration received.

No CGT is payable on death, and beneficiaries of a deceased person's estate are treated as if they had acquired the assets of the deceased at their market value on death.

Certain costs are allowable in computing chargeable gains, including the acquisition cost and expenditure incurred on purchasing, disposing of and enhancing the asset.

Losses brought forward from previous tax years can offset gains.

The first £11,300 of an individual's net gains realised during the tax year is free of CGT.

The excess is generally taxed at 10% if the individual is a basic rate tax payer (provided total income and capital gains remain within the basic rate band) and 20% if the individual is a higher rate tax payer. However, gains from certain assets, including residential property, are taxed at 18% and 28% respectively.

Gains on certain assets are exempt (and losses not allowable), including:

- an individual's (or married couple's) only or main residence
- government securities, loan stocks, qualifying corporate bonds and National Savings and Investments certificates

- amounts held in Individual Savings Accounts (ISAs) and Personal Equity Plans (PEPs)
- life assurance policies disposed of by their original owner
- betting and lottery wins
- shares held by the trustees of share incentive plans
- enterprise investment scheme, venture capital trust and business expansion scheme shares
- chattels (provided the consideration is not more than £6,000)

As described in Section 3, companies are subject to corporation tax on chargeable gains at the normal rates.

5 Taxation of investments

5.1 Money market instruments

All of the return from money market instruments is taxed as income. This is true even where a security is issued at a discount to its redemption value.

Tax on income from money market instruments and deposits is due at the individual's marginal tax rate. However, the Personal Savings Allowance introduced in April 2016 means that such savings income is tax-free up to a limit of £1,000 for basic rate taxpayers and £500 for higher rate taxpayers (zero for additional rate taxpayers).

There is also a nil-rate savings interest band of up to £5,000 available for those on lower incomes. This means that if total income including savings interest is less than £5,000 plus the basic Personal Allowance, no tax will be payable. If income excluding savings interest falls below this amount but income including savings interest is above it, then the savings interest component will be partially taxable at basic rate to the extent that the difference exceeds the tax-free allowance mentioned above.

5.2 Gilts and other qualifying securities

Institutional investors pay corporation tax on interest and capital gains. Relief is available on capital losses.

Trusts and individual investors are liable to pay income tax on interest received and accrued, but capital gains are tax-free (other than for gilt strips, where capital gains are treated as income). Income from gilts and corporate bonds forms part of the "savings income" which is included within the Personal Savings Allowance tax-free limit mentioned in Section 5.1.

Most (but not all) Eurobonds are “qualifying bonds” and do not attract capital gains tax. “Deep discounted” bonds incur income tax (not capital gains tax) on gains.

5.3 Equities

Dividends from UK companies are exempt from corporation tax if received by companies. However, companies are charged to corporation tax on chargeable gains.

From April 2016, dividends of up to £5,000 have been tax-free for individuals. Dividends above this level are taxed at 7.5% for basic rate taxpayers, 32.5% for higher rate taxpayers and 38.1% for additional rate taxpayers. The £5,000 amount will reduce to £2,000 from April 2018.

Individuals are normally subject to capital gains tax on equity gains.

5.4 Convertibles

Income from convertible loan capital is taxed in the same way as from normal loan capital.

Income from convertible preference shares is taxed in the same way as from normal share capital.

Convertibles are non-qualifying securities, so there is no capital gains tax exemption.

5.5 Unit trusts

[This section is concerned with the way in which an investor who holds units in a unit trust is taxed.]

Individuals are liable for income tax on dividend and interest distributions from unit trusts.

Capital gains tax is applied to unit trust holdings in the normal way.

For corporate investors there are mechanisms that look through to the underlying assets of the trust and attempt to replicate the taxation of the underlying assets. These methods are beyond the scope of this course.

5.6 Investment trusts

Shares in investment trusts are equity investments and are taxed as such.

5.7 Property

Normal rules apply: rental income is subject to income tax or corporation tax (depending on the recipient) and capital gains tax or corporation tax is payable on chargeable gains. Property management expenses can be offset against rental income. Individual investors can also offset interest payments on a loan used to purchase the property.

5.8 Derivatives

For individuals, proceeds from investment in derivatives are taxed as capital gains.

Derivative traders pay corporation tax on the profits from the trade.

5.9 Stamp duty land tax

Stamp duty land tax (SDLT) is paid at the time of transfer of title by the purchaser of property.

The SDLT rate for property in the UK (apart from Scotland) depends on:

- the purchase price of the property
- whether the property is residential and, if so, whether it is an additional property
- whether the buyer is a corporate body.

No SDLT is payable on the first £125,000 of the price of a residential property, and increasing rates are applied to bands of additional value above this.

SDLT is charged at a higher rate on high value residential properties bought by bodies such as companies and collective investment schemes, with some exceptions.

For non-residential and mixed-use properties, the nil-rate band is higher and the SDLT rates are generally lower than for residential properties.

Since 2015, SDLT does not apply in Scotland. Instead, purchasers pay land and buildings transaction tax (LBTT) when they buy a property. The tax rates and bands for residential property transactions under LBTT are similar to those under SDLT, but with a slightly higher nil-rate band threshold and narrower subsequent bands.

5.10 Stamp duty on shares

Stamp duty reserve tax (SDRT) is payable by the purchaser of most UK listed shares.

The amount of SDRT paid is based on the “chargeable consideration” given for the stocks or shares.

SDRT is payable at the rate of 0.5% of the value of the chargeable consideration.

Most share transactions undertaken by individuals are “paperless”, i.e. carried out electronically. The settlement system automatically collects SDRT and sends it to HM Revenue & Customs (HMRC); the buyer's stockbroker claims the money due from the buyer (and completes any paperwork) on the buyer's behalf.

SDRT is also payable on any “off market” transactions, for which HMRC needs to be notified.

5.11 Taxes on overseas investment

The overseas investment income of UK residents is subject to UK tax. The most common form of double taxation agreement (DTA) between the UK and other countries means that tax paid in those countries can be offset against UK tax as described below.

Profits tax or corporation tax paid in overseas countries on corporate earnings can be offset against any UK corporation tax on that slice of earnings. If the rate of corporation tax in the overseas country is higher than or equal to the rate of corporation tax in the UK, then no UK corporation tax is payable on that slice of earnings.

Most countries impose a withholding tax on dividends and sometimes on interest payments made to investors who are resident overseas. These withholding taxes can usually be set against UK tax liabilities.

Provided certain conditions are met, dividends from non-UK companies received by individuals are treated in the same way as dividends from UK companies.

6 Financial institutions

6.1 Pension funds and charities

UK registered pension funds and recognised charities are exempt from income tax and capital gains tax on their investments. They can reclaim income taxes deducted at source on interest. In the case of overseas investment income, withholding tax deducted in the host country cannot be recovered unless the relevant double taxation agreement permits this.

6.2 Life insurance companies

For tax purposes, a UK life insurance company has to split its policyholder funds into Basic Life Assurance and General Annuity Business (BLAGAB) and Other Long-Term Business (OLTB or “non-BLAGAB”). The latter includes pensions business, reinsurance of life assurance, business sourced from overseas and PHI (a category of long term health insurance) business, together with all life assurance protection business written on or after 1 January 2013.

BLAGAB is taxed on an “I-E” basis, i.e. investment income and chargeable gains less allowable expenses of management. Dividend income is (following the general principles) excluded from further tax and there are special rules for the calculation of chargeable gains. The “I-E” calculation is subject to a minimum profits test and is split between policyholder profit (taxed at the basic rate of income tax) and, if applicable, shareholder profit (taxed at the corporation tax rate).

Non-BLAGAB is taxed on a trading profits basis in line with the company’s accounts. Reserves for policyholders (i.e. actuarial liabilities) are an allowed deduction from profits. The tax rate applied is the corporation tax rate.

Further detail on life insurance business taxation is beyond the scope of this course, but is covered in Subject SA2.

6.3 General insurance companies

General insurance companies are taxed on a trading profits basis. The profits of a proprietary general insurance company calculated for taxation purposes are likely to differ from those disclosed in its financial statements. These differences can include investment return, depreciation and disallowable expenses.

For tax purposes, the insurance technical provisions are deductible following the accounting policy adopted in the financial statements.

Further detail, including the taxation of mutual general insurance companies, is beyond the scope of this course, but is included in Subject SA3.

6.4 Health and care insurance

Health and care insurance business is written by long term or short term insurance companies (perhaps in a subsidiary fund), depending on the specific product type, and so is subject to the relevant taxation approach as described above.

6.5 Investment trusts

Investment trusts pay corporation tax on unfranked investment income.

Management and interest charges can be offset against such income. Equity dividends received are not subject to further corporation tax. Approved investment trusts are exempt from tax on chargeable gains.

Consultation is currently underway to simplify the tax framework for such companies.

6.6 Unit trusts

Authorised unit trusts pay corporation tax on unfranked investment income less management expenses. Equity dividends received are not subject to further corporation tax. Unit trusts are exempt from capital gains tax.

Exempt trusts do not pay tax on either income or capital gains.

6.7 OEICS

The taxation of open-ended investment companies (OEICs) is the same as for unit trusts.

6.8 “Traders in securities”

Institutions such as banks, proprietary general insurance companies, building societies and discount houses are classified as “traders in securities”. Their profits, whether from income or realised capital gains, less expenses, are taxed at the corporation tax rate.

END

UNIT 5 — THE LEGISLATIVE AND REGULATORY FRAMEWORK

Syllabus objectives

- (d) Demonstrate a knowledge of the legislative and regulatory framework for finance in the United Kingdom:
- Corporate governance
 - Role of the listings authority
 - Competition and fair trading controls
 - Monopolies regulators
 - Provision of financial services
 - EU legislation
 - Role and responsibilities of directors

The regulatory environment described in this Unit is that current as at the time of writing (May 2016). All actuaries and students should of course keep up-to-date with regulatory changes, although for the purposes of the SA5 examination answers based either on what is described here or on more up-to-date regulation will in principle be acceptable.

1 Corporate governance

Until the 1950s, governments did not see it as their place to interfere with the running of private enterprise except to ensure that the public were not abused. However, the growth of national, international and global conglomerates over the last 50 years or so has once again forced governments around the globe to tighten the reins of accountability. There is now a requirement to monitor and enforce public governance in order to try to maintain a suitable balance between the state, the community and private enterprise.

Corporate governance refers to the high level framework within which managerial decisions are made in a company. The aim of good corporate governance is that a company should be managed in order to best meet the appropriate requirements of its stakeholders — the shareholders, employees, pensioners, customers, suppliers and others who may be affected by the company's operations whilst not having any contractual relationship with the company at any time.

Good corporate governance requires management to make decisions based on the interests of relevant stakeholders rather than on its own personal interests.

Good corporate governance can be enhanced by ensuring that remuneration incentivises management to act in the interests of stakeholders. Share options may be seen as part of this, though the lack of sufficient downside for management can limit how well share options perform this function. Non-executive directors are also often part of a structure aimed at good corporate governance.

2 Role of the listings authority

A listings authority is responsible for ensuring that any new issue of shares is conducted in an orderly and fair way, and that the conduct of the company remains consistent with the listing of the shares after the issue. This would include an initial offering of shares in a company that was previously privately held.

A listed company's shares may be bought and sold by any member of the public, without any necessity for personal access to, or direct negotiations with, a current holder. The negotiation at the point when the shares are sold is purely a matter of price and, unlike a transaction for the sale of a share in a privately held company, no financial information is disclosed as part of this process. It is therefore important that a reasonable amount of financial information is in the public domain.

Listings authorities are normally concerned with:

- The production of relevant business and financial information on the issue of shares.
- The process by which shares are offered to potential shareholders and the price is set for the issue of shares.
- Continuing production and dissemination of business and financial information on a timely basis on companies with listed securities.
- The continuing conduct of the market in listed securities, with a view to ensuring that the market is fair to all participants and that the pricing process is fair and reasonable.
- Rules to ensure that companies with listed securities and connected parties continue to behave in a manner that does not conflict with other objectives of the listings authority.

In the UK, the Financial Conduct Authority (FCA) is the competent authority for listing. In this capacity, it is referred to as the UK Listings Authority (UKLA) and maintains the "official list". This is a list of the securities that have, together with their issuers, complied with the requirements of the listing rules (so far as they apply) and any other requirements imposed by the UKLA. Issuers whose securities have been admitted to the official list must, in order to remain on the official list, comply with the continuing obligations set out in the listing rules.

A set of rules, known collectively as the listing rules, has been created. These reflect requirements that are compulsory under the relevant European Union Directives as well as the additional requirements of the Financial Services and Markets Act 2000.

The rules are intended to:

- Provide an appropriate level of protection for investors in listed securities.
- Facilitate access to listed markets for a broad range of enterprises.
- Seek to maintain the integrity and competitiveness of UK markets for listed securities.

Subsidiary aims include:

- To provide issuers with ready access to the listed market for their securities while protecting investors.
- To promote investor confidence in standards of disclosure, in the conduct of issuers' affairs and in the market as a whole by the listing rules, and in particular the continuing obligations regime.
- To ensure that listed securities should be brought to the market in a way that is appropriate to their nature and number and which will facilitate an open and efficient market for trading in those listed securities.
- To ensure that an issuer makes full and timely disclosure about itself and its listed securities, at the time of listing and subsequently.
- To ensure that holders of listed equity securities should be given adequate opportunity to consider in advance and vote upon major changes in the company's business operations and matters of importance concerning the company's management and constitution.

The UKLA has responsibility for the following specific functions under The Financial Services and Markets Act 2000 (the Act):

- Application for listing.
- Cancellation and suspension of listing.
- Approval of listing particulars, prospectuses and other such documents.
- The approval of sponsors and regulation of sponsors in relation to the application of the listing rules.
- Investigation of breaches of the listing rules and certain offences under the Act.
- The imposition of financial penalties on issuers, directors and former directors and the issue of public statements censuring an issuer, director, former director or sponsor for breaches of the listing rules.

There are three sets of rules under the UKLA framework:

- Listings rules
- Disclosure and transparency rules — UK implementation of the EU market abuse regime
- Prospectus rules

Guidance has been issued to help users understand the application of the listing rules.

3 Competition, fair trading controls and monopolies regulators

Increasing corporate consolidation raises the profile of competition and monopolies regulation. The pursuit of genuine economies of scale (which has to some extent been encouraged by the impact of technology in diminishing the diseconomies of scale) has led to new concentrations of market share. The process has made real pricing power, both with suppliers and customers, potentially accessible to many companies for the first time. Such pricing power is of concern to governments and other stakeholders.

In recent decades, privatisation of state monopolies operating in sectors such as utilities, telecommunications and transport (where “natural” monopolies are likely to persist) has led to the development of new regulatory authorities charged with the control of the pricing policies of the privatised companies.

Regulatory concern is mostly aimed at protection of the interests of customers (particularly individuals) and suppliers. Regulators are normally acting under national legislation and have responsibilities to national constituencies. On the other hand, companies are often multinational. A company may therefore argue that a takeover resulting in a high market share in one territory will not confer unacceptable pricing power because of the potential entry of international competitors. The growth of the online marketplace (e-commerce) makes it much easier for consumers to source products or services from regions of their choice instead of being restricted to local suppliers. It is up to the regulator as to how these various arguments are treated.

The definition of the product or service is generally a second area of debate for competition decisions. A high market share in a narrowly defined product area or service may translate into a much lower share of a more widely defined category that contains possible substitutes for the product or service under review.

Fair trading controls also aim to ensure that sellers do not exploit members of the public who may be in a weak bargaining position. This may relate to the price paid, the quality provided or rights of redress if a product or service is unsatisfactory.

4 The UK system of financial services regulation

Prior to 2013, the Financial Services Authority (FSA) was the primary regulator for financial services in the UK. The FSA exercised its statutory powers under the Financial Services and Markets Act 2000 (FSMA) in the regulation of banks, insurance companies and financial advisers.

In the summer of 2010, the UK Government announced plans to substantially alter the system of financial services regulation. The financial crisis of 2007/08 was the catalyst for abolishing the “tripartite” system of safeguards of financial stability in the UK. The tripartite system had involved shared responsibility for stability held by the HM Treasury, the Bank of England (BoE) and the FSA. The system was criticised for failing to anticipate the crisis and failing to provide clear, decisive leadership during the crisis.

In April 2013 three new regulatory bodies were established by the FSMA: the Financial Policy Committee (FPC), the Prudential Regulation Authority (PRA) and the Financial Conduct Authority (FCA). The PRA and the FCA have effectively taken over the functions of the FSA.

Financial Policy Committee (FPC)

As introduced in Unit 3, the FPC is a committee of the Court of Directors of the BoE and is responsible for macro-prudential regulation (in contrast to the PRA’s responsibility for micro-prudential regulation).

The FPC’s objective is to contribute to the BoE’s achievement of its financial stability objective under the Banking Act 2009 by identifying, monitoring and taking action to remove or reduce systemic risks. For these purposes a “systemic risk” is a risk to the stability of the UK financial system as a whole or to a significant part of that system.

The FPC has a “toolkit” of macro-prudential powers intended to address financial stability issues. Although it is for the FPC to decide whether a particular tool should be used, the PRA and, if necessary, the FCA, is responsible for applying a tool directly to regulated firms.

The FPC monitors the financial system as a whole. Consequently, unlike the PRA and the FCA, it does not have direct regulatory responsibility for any particular types of firm.

The FPC is chaired by the Governor of the BoE. Other members of the FPC include the PRA chief executive and the FCA chief executive.

The FPC is accountable to the BoE Court of Directors, to Parliament (in particular, the Treasury Select Committee) and to HM Treasury itself.

Prudential Regulation Authority (PRA)

The PRA is a subsidiary of the BoE and is responsible for the prudential regulation of all deposit-taking institutions, insurance providers and large investment firms.

These firms are referred to as PRA-authorized firms and also dual-regulated firms, as the FCA is their conduct regulator.

The PRA has the following primary objectives in respect of insurance company supervision:

- promoting the safety and soundness of the companies that it supervises
- contributing to securing an appropriate degree of protection for those who are or may become policyholders

A key feature of the PRA's approach is risk-based supervision. The PRA assesses the risk that a particular firm, activity or issue poses to the PRA's objectives and concentrates its supervisory effort on high-risk areas. It is not the PRA's role to ensure that no insurance company fails.

The PRA has operational independence from the BoE and the FPC for day-to-day regulation and supervision of dual-regulated firms. Its focus is on setting institution-specific capital requirements.

The PRA's board includes the Governor of the BoE as chairman and the BoE Deputy Governor for prudential regulation as chief executive. The FCA chairman also sits on the PRA board.

The PRA is accountable to the BoE, to Parliament (in particular, the Treasury Select Committee) and to the National Audit Office.

Financial Conduct Authority (FCA)

The FCA is responsible for regulation of conduct in financial markets (and the infrastructure that supports those markets) and the prudential regulation of financial services companies that do not fall under the scope of the PRA (e.g. insurance brokers and smaller investment firms).

The FCA has inherited the majority of the FSA's roles and functions. In particular:

- it is responsible for the conduct of business regulation of all firms, including those regulated for prudential matters by the PRA;
- it is responsible for the prudential regulation of firms not regulated by the PRA; and
- it has inherited the FSA's market conduct regulatory functions, with the exception of responsibility for systemically important infrastructure — which has been transferred to the BoE.

The FCA has a strategic objective and three operational objectives. The strategic objective is to ensure that the “relevant markets” function well. The operational objectives are:

1. to promote effective competition in the interests of consumers;
2. to secure an appropriate degree of protection for consumers; and
3. to protect and enhance the integrity of the UK financial system.

The FCA is also obliged to discharge its general functions in a way that promotes competition.

The FCA is independent of the Government and the BoE, and takes the form of a company limited by guarantee. It has adopted the legal corporate identity of the FSA.

The FCA is accountable to Parliament (in particular, the Treasury Select Committee) and to the National Audit Office. It must also have regard to the various financial services panels: the Consumer Panel, the Practitioner Panel, the Smaller Businesses Practitioner Panel and a new Markets Panel.

The FCA has been given a number of powers additional to those that were held by the FSA, including powers to:

- make temporary product intervention rules, allowing it to block an imminent product launch or to stop an existing product
- require firms to withdraw or amend misleading financial promotions with immediate effect
- publish details of the start of enforcement proceedings against a firm for rule breaches or compliance failings (the PRA also has this power); and
- impose requirements on certain unregulated parent undertakings that exert influence over authorised persons (the PRA also has this power)

Who regulates which firm?

The following firms are dual-regulated, i.e. regulated by the PRA for prudential purposes and the FCA for conduct purposes:

- banks
- building societies
- credit unions
- insurers (including friendly societies)
- Lloyd’s of London and Lloyd’s managing agents; and
- certain systemically important investment firms that have been designated by the PRA

The FCA is the prudential and conduct regulator for all other firms (i.e. those not listed above) that were previously regulated by the FSA.

The new regulatory system is meant to eliminate shared responsibility for the same aspect of stability between several parties. However, opponents of the new system have pointed out that having multiple regulators supervising some firms may in some cases result in an outcome that is no better than under the old tripartite system.

5 Powers under FSMA

The FCA is endowed with a coherent set of regulatory powers:

- the power to grant, refuse or withdraw the authorisation, or restrict the business, of firms
- the power to impose fines for breaches of principles or other rules
- the ability to approve individuals carrying on specific roles in each area of regulated activity
- powers in the area of market abuse and financial crime
- powers to prosecute money laundering or insider dealing offences

FSMA created an appeals tribunal, the Financial Services and Markets Appeals Tribunal, although this has since been abolished with its duties transferred to the normal judiciary process (Upper Tribunal).

It also established the framework for a single ombudsman (the Financial Services Ombudsman) and a single compensation scheme (the Financial Services Compensation Scheme).

The Act makes provision, amongst other things, for:

- the constitution of the FCA and PRA
- the definition of the scope of regulated activities
- the control of financial promotion
- the powers of the FCA and PRA to authorise, regulate, investigate and discipline authorised persons and to intervene in their activities
- the recognition of investment exchanges and clearing houses
- the arrangements for approval of controllers and employees of authorised persons
- the regulation of Lloyd's

- certain criminal offences
- powers to impose civil fines for market abuse
- provision of financial services by members of the professions

6 Principles for businesses

There are eleven principles for businesses set out by the FCA in its Handbook for the conduct of investment business:

1. Integrity

A firm must conduct its business with integrity.

2. Skill, care and diligence

A firm must conduct its business with due skill, care and diligence.

3. Management and control

A firm must take reasonable care to organise and control its affairs responsibly and effectively, with adequate risk management systems.

4. Financial prudence

A firm must maintain adequate financial resources.

5. Market conduct

A firm must observe proper standards of market conduct.

6. Customers' interests

A firm must pay due regard to the interests of its customers and treat them fairly.

7. Communications with clients

A firm must pay due regard to the information needs of its clients, and communicate information to them in a way which is clear, fair and not misleading.

8. Conflicts of interest

A firm must manage conflicts of interest fairly, both between itself and its customers and between a customer and another client.

9. Customers: relationships of trust

A firm must take reasonable care to ensure the suitability of its advice and discretionary decisions for any customer who is entitled to rely upon its judgement.

10. Clients' assets

A firm must arrange adequate protection for clients' assets when it is responsible for them.

11. Relations with regulators

A firm must deal with its regulators in an open and cooperative way, and must disclose to the PRA and/or FCA appropriately anything relating to the firm of which the appropriate regulator would reasonably expect notice.

The PRA moved in 2014 to the following set of “Fundamental Rules”, which are similar to the above principles:

1. A firm must conduct its business with integrity.
2. A firm must conduct its business with due skill, care and diligence.
3. A firm must act in a prudent manner.
4. A firm must at all times maintain adequate financial resources.
5. A firm must have effective risk strategies and risk management systems.
6. A firm must organise and control its affairs responsibly and effectively.
7. A firm must deal with its regulators in an open and cooperative way and must disclose to the PRA appropriately anything relating to the firm of which the PRA would reasonably expect notice.
8. A firm must prepare for resolution so, if the need arises, it can be resolved in an orderly manner with a minimum disruption of critical services.

The FCA Handbook and PRA Rulebook of rules and guidance are based on “principles based” regulation, under which there are fewer prescriptive rules and the FCA and PRA instead rely on these higher level principles.

Specific guidelines are given on such things as:

- prudential requirements
- conduct of business
- senior management systems and controls
- complaints handling

7 Regulated activities

The types of activity that may require authorisation under FSMA 2000 are:

- accepting deposits
- effecting or carrying out contracts of insurance
- establishing, operating or winding up a collective investment scheme (e.g. unit trusts, OEICs)
- dealing or arranging deals in investments (e.g. a stockbroker or an exchange)
- safeguarding and administering securities or contractually based investments as principal
- using computer based systems for giving investment instructions
- discretionary investment management
- investment advice (the area with which actuaries are most likely to be concerned)
- managing the underwriting capacity of, or advising on the merits of membership of, a Lloyd's syndicate

All regulated activity should be carried out or supervised by a suitably qualified, competent and experienced individual within the licensed firm. If someone is providing advice under PRA or FCA authorisation, the requirements under the FCA's Training & Competence Sourcebook will apply to that person.

8 EU legislation

8.1 Financial Services Action Plan

In March 2000 the Lisbon European Council endorsed the European Commission's Financial Services Action Plan (FSAP). The FSAP had three aims:

- To create a single EU wholesale market for financial services and products.
- To create an open and secure financial retail market.
- To implement state of the art prudential rules and supervision.

In the United Kingdom the FSA was responsible for implementing the action plan, and this responsibility has now passed to the FCA.

The key directives in the plan include:

8.1.1 The Market Abuse Directive (MAD)

Market abuse refers to insider dealing and market manipulation.

The key provisions of the directive include:

- defining what constitutes inside information: inside information is precise, non-public and likely to have an effect on the price of a security
- defining market abuse as any:
 - transactions or orders to trade that give misleading signals or secure the price of a financial instrument at an artificial level
 - transactions or orders to trade that employ fictitious devices
 - dissemination of information that is likely to give false or misleading signals
- requiring all issuers to disclose inside information as soon as possible
- requiring all issuers (and their advisers) to maintain lists of individuals who have access to inside information
- requiring all persons with managerial responsibility to disclose any personal dealings in the shares of that company or related derivatives
- requiring firms arranging transactions to report to the FSA any transactions where there is a reasonable suspicion that market abuse may have taken place

The MAD was implemented in the UK in 2005. As part of this implementation the FSA sought to maintain its existing rules wherever possible, resulting in broadening of the MAD's scope.

The requirements were updated and strengthened in 2014 through a new Market Abuse Regulation.

8.1.2 The Markets in Financial Instruments Directive (MiFID)

MiFID provides a harmonised regulatory regime for investment services across the member states of the European Economic Area. The main objectives of the Directive are to increase competition and consumer protection in investment services.

MiFID:

- widens the range of core investment services and activities that are regulated by the EU to include personal investment advice, commodity derivatives, credit derivatives, contracts for difference and operating a multilateral trading facility.
- increases the governance and conduct of business requirements for firms in areas such as compliance, internal controls, outsourcing, record keeping, conflicts of interest and safeguarding of client money.
- sets out more clearly the allocation of responsibility between “home” state and “host” state for companies carrying out investment business in other countries.

Firms that comply with MiFID, in general, have to comply with the Capital Requirements Directives (CRD). For some firms not previously covered by the ISD, this meant being required to hold minimum capital amounts for the first time.

MiFID applies to:

- investment banks
- portfolio managers
- stockbrokers and broker dealers
- corporate finance firms

It also applies to many futures and options firms and some commodities firms. For retail banks and building societies, the MiFID covers only parts of their business; for example selling investment products that contain securities to their customers.

In October 2011, the European Commission published its legislative proposal for MiFID II which aims to update the original MiFID and is expected to apply from 2017.

8.1.3 The Prospectus Directive (PD)

The PD regulates the laws which govern the drawing up and publication of prospectuses whenever securities are offered to the public or admitted to a regulated exchange.

The two most important consequences of the PD are that:

- Companies can issue shares in one EU state while drawing up their prospectus in another.
- All prospectuses now have to be approved by a single regulating authority.

8.1.4 The Transparency Directive (TD)

The TD aims to increase transparency on EU capital markets which it hopes to achieve by:

- Setting out the minimum financial information that companies need to publish in their half-yearly and annual accounts.
- Requiring public notification if the size on one's shareholdings reaches, exceeds or moves below certain limits.

The TD is implemented in the UK through the Companies Act 2006.

9 Solvency II

9.1 Background and scope

The key objectives of Solvency II were to increase the level of harmonisation of solvency regulation across Europe, to protect policyholders, to introduce Europe-wide capital requirements that were more sensitive to the levels of risk being undertaken, and to provide appropriate incentives for good risk management.

The Solvency II Directive applies to all EU insurance and reinsurance companies with gross premium income exceeding €5 million or gross technical provisions in excess of €25 million. It became operative from 1 January 2016.

Transitional arrangements may be available for some aspects (e.g. technical provisions, risk-free interest rates) for a defined period (up to 16 years). The intention is to avoid unnecessary disruption of markets and availability of insurance products. However, UK firms had to make formal applications to the PRA to be permitted to use the transitional arrangements.

9.2 Structure

The Solvency II framework comprises three “pillars”.

Pillar 1 sets out the minimum capital requirements that firms are required to meet. It specifies valuation methodologies for assets and liabilities (“technical provisions”), based on market consistent principles. Under Pillar 1 there are two distinct capital requirements: the Solvency Capital Requirement (SCR) and the Minimum Capital Requirement (MCR). The SCR can be calculated using a prescribed standard formula approach, or by using a company-specific internal model, which has to be approved by the regulator. The SCR and MCR both represent capital requirements that must be held in addition to the technical provisions. Supervisors may decide that a firm should hold additional capital (as a capital add-on) against risks that are either not covered or are inadequately modelled for the SCR.

Pillar 2 includes the supervisory review process, systems of governance and risk management. Also under Pillar 2, each insurance company is required to carry out an

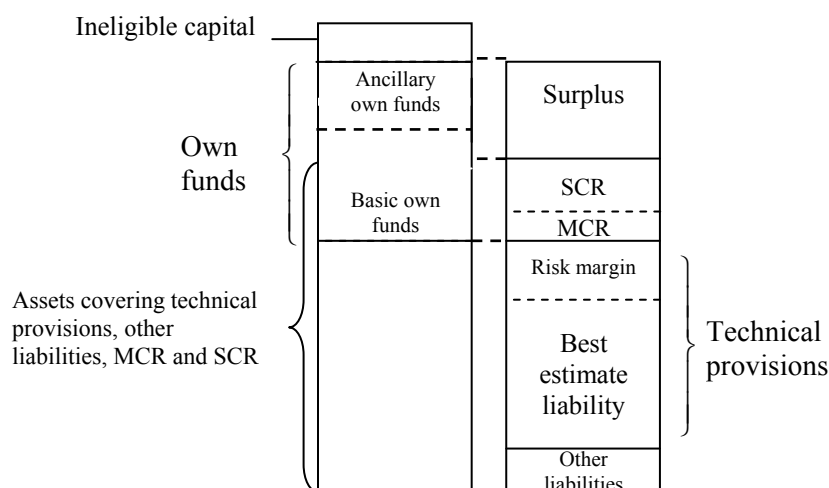
Own Risk and Solvency Assessment (ORSA). The ORSA requires each insurer to identify the risks to which it is exposed, including those not covered under Pillar 1, to identify the risk management processes and controls in place, and to quantify its ongoing ability to continue to meet the MCR and SCR.

Pillar 3 is the disclosure and supervisory reporting regime, under which defined reports to regulators and the public are required to be made.

This combination of minimum capital standards, qualitative risk management requirements, a well-defined and rigorous review process of companies' solvency by supervisors and prescribed disclosures to supervisors, policyholders and investors has been designed to deliver a more modern and secure prudential regulatory system.

The three Pillars are considered in more detail below.

9.3 Pillar 1



9.3.1 Valuation of assets

Assets are required to be valued at market value, based on readily available market prices in orderly transactions that are sourced independently (i.e. quoted market prices in active markets).

If such prices are not available then mark-to-model techniques can be used — provided these are consistent with the overall market consistent (or “fair value” or “economic value”) approach, i.e. the amount at which the assets could be exchanged between knowledgeable willing parties in an arm’s length transaction.

This was a significant change for much of Europe, where book values (i.e. original cost, possibly with depreciation) were often still used under the previous Solvency I regime.

9.3.2 Valuation of technical provisions

Also based on a market consistent approach, technical provisions should represent the amount that the insurance company would have to pay in order to transfer its obligations immediately to another insurance company.

The technical provisions consist of a best estimate liability and a risk margin. The calculation should be segmented by homogeneous product type.

9.3.3 Best estimate liability

The best estimate liability (BEL) is the present value of expected future cashflows, discounted using a “risk-free” yield curve (i.e. term dependent rates).

All assumptions should be best estimate, with no prudential margins.

9.3.4 Risk-free discount rates

The risk-free discount rates are published centrally on a monthly basis.

They are based on a stated methodology, with the intention that they can be replicated by the insurance companies and any other interested parties.

Risk-free yield curves are published for each of the key currencies within the EU insurance market. This ensures consistency between insurance companies across the EU, and also allows for the different interest rate environments across the different economies.

The rates are based on swap rates where there is a sufficiently deep and liquid swap market, or government bond rates otherwise. These rates are then adjusted to reflect the risk of default of the counterparty (i.e. credit risk adjustment). For longer maturities for which data are not available, the yield curve is extrapolated to a defined long term equilibrium rate.

For the UK, the rates are based on LIBOR swap rates with a credit risk adjustment.

It may be possible for an insurance company to use a “matching adjustment” or “volatility adjustment”, but knowledge of the nature of these features is not required for SA5.

9.3.5 The risk margin

The risk margin is intended to increase the technical provisions to the amount that would have to be paid to another insurance company in order for them to take on the best estimate liability. It therefore represents the theoretical compensation for the risk of future experience being worse than the best estimate assumptions, and for the cost of holding regulatory capital against this.

The risk margin is determined using the “cost of capital” method, i.e. based on the cost of holding capital to support those risks that cannot be hedged. These include all insurance risk, reinsurance credit risk, operational risk and “residual market risk”.

The risk margin calculation involves first projecting forward the future capital that the company is required to hold at the end of each projection period (e.g. year) during the run-off of the existing business. For Solvency II, the projected capital requirement is a subset of the SCR (see below), consisting of those risks that cannot be hedged in financial markets.

These projected capital amounts are then multiplied by a cost of capital rate. This rate can be considered to represent the cost of raising incremental capital in excess of the risk-free rate, or alternatively it represents the frictional cost to the company of locking in this capital to earn a risk-free rate rather than being able to invest it freely for higher reward. For Solvency II, it is a fixed rate of 6% per annum.

The product of the cost of capital rate and the capital requirement at each future projection point is then discounted, using risk-free discount rates, to give the overall risk margin.

Since the projection of the SCR is potentially complex, various simplified approaches can be used. For example, this could involve selecting a driver (e.g. reserves or sum at risk) which has an approximately linear relationship with the required capital or its components. The initial capital requirement can be expressed as a percentage of that driver, and the projected capital is then approximated as the same percentage of the projected values of the driver. In practice, more sophisticated methods using a combination of drivers and correlations may have to be used.

Although the risk margin must be disclosed separately for each line of business, it can be reduced to take into account diversification between lines up to legal entity level. The allocation of diversification benefit can be approximated by apportioning the total diversified risk margin across lines of business in proportion to the SCR calculated on a standalone basis for each line, or by other approximate methods if appropriate given the materiality of the results.

9.4 Capital Requirements

9.4.1 Solvency Capital Requirement (SCR)

The SCR is a Value at Risk measure based on a 99.5% confidence interval of the variation over one year of the amount of “basic own funds” (broadly assets minus technical provisions; this concept is covered in section 9.5 below).

There is a prescribed list of risk groups that the SCR has to cover:

- non-life underwriting risk
- life underwriting risk
- health underwriting risk
- market risk

- counterparty default risk
- operational risk

The SCR can be calculated using standard prescribed stress tests or factors, which are then aggregated using prescribed correlation matrices. This approach is known as the standard formula.

The SCR can alternatively be calculated using an internal model, which must be approved by the insurance company's supervisory authority and which must meet a number of standards including the "use test". This effectively requires the company to demonstrate that the internal model is widely used within the company and plays an important role in its decision-making and governance processes.

Firms choosing to use the standard formula are expected to be able to justify that this is appropriate.

The two approaches are described in more detail below.

A combination of internal model and standard formula approaches can also be adopted, referred to as a partial internal model.

Simplifications can be applied, provided they are proportionate to the nature, scale and complexity of the risks.

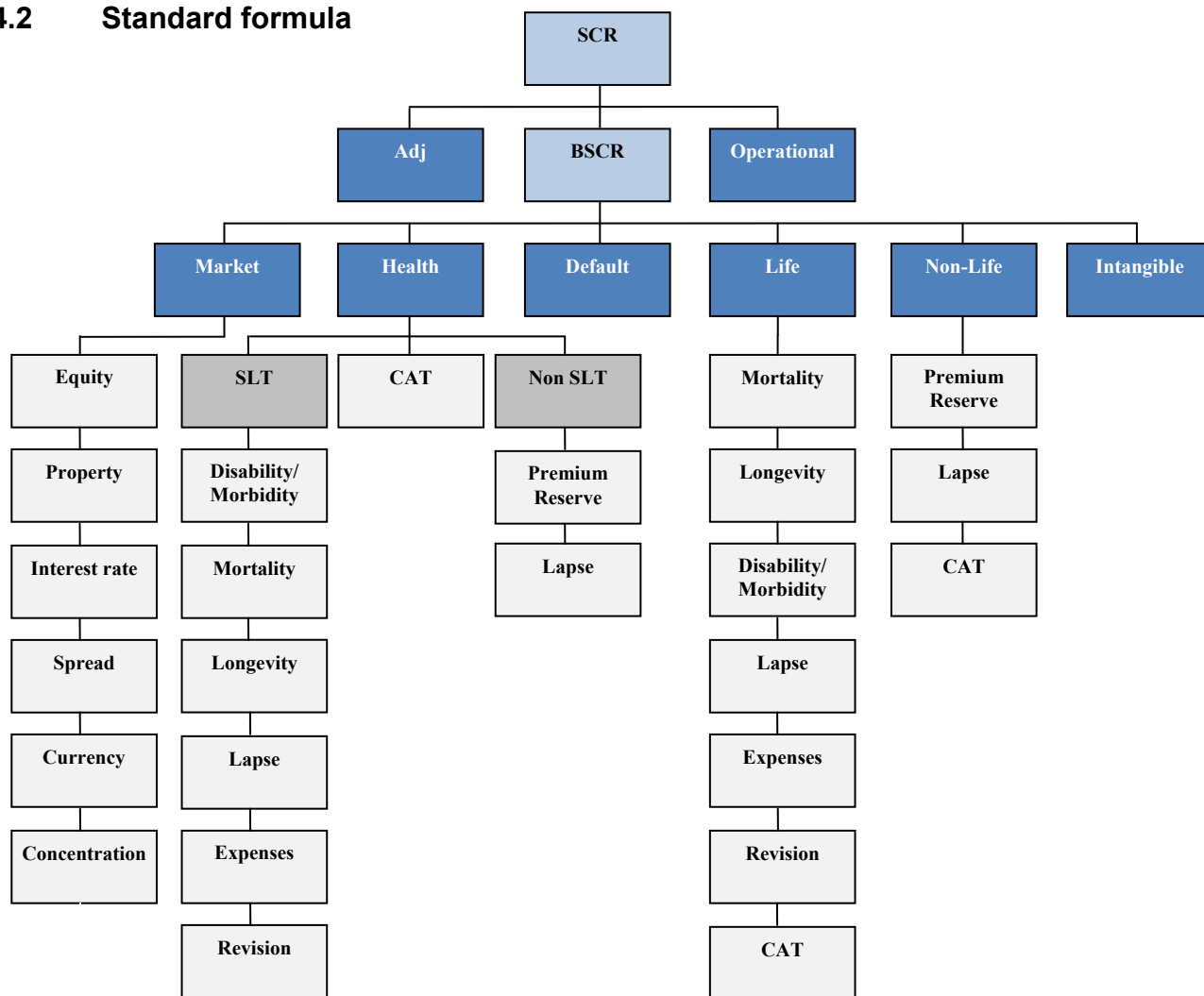
Additional constraints apply to the calculation of the SCR if there are ring-fenced funds with limitations on capital fungibility.

The benefits of risk mitigation techniques can be recognised in the SCR, provided any basis risk (i.e. mismatch between the risk and its mitigation technique) is immaterial or can be reflected in the SCR. All residual risks (e.g. counterparty risk arising from a risk transfer arrangement) should also be recognised. Dynamic hedging is not permitted to be recognised under the standard formula approach, but may be allowed in the internal model.

For some parts of the standard formula, insurance companies can apply to use "undertaking specific parameters" instead of the prescribed parameters.

Once the SCR has been calculated, the regulator typically has the power to require the insurer to hold further capital where the regulator believes that certain risks have not been adequately captured within the computation. For example, in the UK, the PRA has the power to require a capital "add-on" to be held, in excess of the SCR calculated by the insurance company. This may be the case where some aspect of the company's risk profile differs from the assumptions underlying the standard formula, and the risk is not being internally modelled.

9.4.2 Standard formula



The diagram above illustrates the typical structure of the SCR calculation under the standard formula.

The Basic SCR is calculated by considering different modules of risks: market (equity, property, interest rate, credit spread, currency, concentration and illiquidity), counterparty default, insurance (separately for life, health and non-life business) and intangible assets.

The SCR is first calculated for each module, as listed above. For the market and insurance risk modules, each individual stress is performed separately according to detailed rules. The calibration and application of each stress is specified within the standard formula, e.g. -25% stress to property values, immediate and permanent 15% increase in mortality rates.

The SCR for each individual risk is then determined as the difference between the net asset value (for practical purposes this can be taken as assets less best estimate liabilities) in the unstressed balance sheet and the net asset value in the stressed balance sheet. These

individual risk capital amounts are then combined across the risks within the module, using a specified correlation matrix and matrix multiplication.

For the counterparty risk module the calculation approach is similar, but the company must first differentiate between type 1 (may not be diversified and the counterparty is likely to be rated) and type 2 (usually diversified and the counterparty is unlikely to be rated) exposures. Different detailed approaches are specified for the determination of the SCR for each type of exposure, which are then combined using a given formula.

Having obtained the SCR for each module, a further specified correlation matrix is used to combine them to give the Basic SCR (BSCR). Aggregation is therefore performed at different levels.

To obtain the overall SCR, two adjustments are made to the BSCR: an allowance for operational risk and an allowance for the loss absorbing capacity of technical provisions and deferred taxes.

The loss absorbing capacity of technical provisions could include the ability to reduce discretionary benefits under the stressed conditions. The loss absorbing capacity of deferred taxes could, for example, include a reduction in any base balance sheet deferred tax liability, as this would no longer be fully payable in a stressed scenario. In practice, the BSCR is calculated both with and without allowance for the loss absorbing effects and the “adjustment” is determined as the difference.

The operational risk module is relatively simple, being based on percentages of earned premiums and technical provisions. The resultant operational capital amount is added to the BSCR, with no recognition of any partial correlation or diversification effects with other risks.

9.4.3 Internal model

Provided that it has been approved by the insurance company’s regulatory body, an internal model can be used as a full or partial alternative to the detailed standard formula approach.

For example, this might be appropriate if the risk profile of the business differs materially from that covered by the standard formula, and/or if the company already uses such a model for risk management or other decision-making purposes (e.g. pricing, investment strategy). Indeed, the supervisor can compel an insurance company to develop an internal model, if it feels that the standard formula is not appropriate to the risk profile of the company.

The overall capital requirements resulting from the use of an internal model will generally differ from the outcome of the standard formula calculation, and may be either higher or lower depending on how the firm’s tailored risk profile compares against the assumptions underlying the standard formula.

However, the internal model must still generate an SCR based on the stated requirements, including coverage of the risk types as noted above and providing at least the equivalent protection to a 99.5% confidence level over one year.

The tests that the model must pass before it can gain approval are:

- The “use test” — companies have to demonstrate that their internal model is widely used throughout all relevant areas of the business and that it plays a significant role in the internal governance, risk management and decision-making processes, as well as the economic and solvency capital assessments and capital allocation processes.
- Statistical quality standards — a number of minimum quality standards must be met relating to assumptions and data, including probability distribution forecasting, the use of expert judgement, materiality considerations and methods of aggregation.
- Calibration standards — these standards aim to assess whether the SCR derived from the internal model has a calibration equivalent to the Value at Risk at 99.5% confidence over one year.
- Profit and loss attribution — this includes a requirement to demonstrate how the categorisation of risk chosen in the internal model will be used to explain the causes and sources of actual profits and losses.
- Validation standards — the internal model must have been fully validated by the insurance company and must be subject to regular control cycle review, including testing results against emerging experience.
- Documentation standards — the design and operational aspects of the internal model must be clearly and thoroughly documented.

The “use test” is seen as one of the most challenging aspects of gaining internal model approval. As well as embedding the model throughout the company and developing an effective risk culture, companies need to be able to evidence that this is the case.

The quality of data and assumptions can also be an issue. A key challenge is that historic data available to calibrate extreme events is limited. In practice, there may be convergence towards industry consensus or ranges indicated by the regulator, e.g. for credit spreads or property market movements. It is important for companies to allow for their own specific features however, e.g. the extent to which their actual holdings are more or less volatile.

Similarly, setting dependency structures and correlation factors that apply under extreme conditions is challenging.

It should also be recognised that a combination of a certain subset of events happening at the same time, with an overall one-year probability level of 1 in 200, may produce a higher capital requirement than combining all of the individual capital requirements for separate 1

in 200 events using a correlation matrix. This is caused by “non-linearity” and “non-separability” of individual risks, the latter referring to the ways in which risk drivers interact with each other. Allowance needs to be made for these effects.

Furthermore, an internal model can be structured in any way that the company chooses, provided the above tests are met. It does not have to follow the structure of the standard formula, and can for example be based on stochastic simulations rather than stress tests plus correlation matrices, perhaps using copulas to model dependency structures.

Calibration of such models will also require care and expertise. In particular, the probability distribution used should properly reproduce the more extreme behaviour of the variable being modelled, taking care to ensure that it does not understate the frequency of more extreme outcomes.

A tight deadline was imposed of six months from the supervisory authority receiving an application for internal model approval to communication of the decision. Many regulators (e.g. in the UK) therefore chose to set up a more informal approach (called “pre-application”), encouraging companies to engage with them early on in their model development and refinement processes — although formal final approval could not be given until the Solvency II regulations came into force.

In the UK, the approval process is known as the Internal Model Application Process (IMAP). As part of IMAP, the PRA requires companies to submit a detailed “self-assessment template” which provides evidence of compliance with the relevant requirements, including the six tests mentioned above. It also requires information on the risks which are covered by (and any which are excluded from) the internal model.

Having already developed models for the similar Individual Capital Assessment (ICA) calculation prior to the introduction of Solvency II, insurance companies within the UK, particularly larger ones with economies of scale, have been more likely to choose to apply to use the internal model option than insurers in some areas of continental Europe.

9.4.4 Minimum Capital Requirement (MCR)

The MCR is defined as a simple factor-based linear formula which is targeted at a Value at Risk measure over one year with 85% confidence.

The MCR has a floor of 25% and a cap of 45% of the SCR and there is also an absolute minimum capital requirement stated in €.

9.4.5 Supervisory intervention levels

The two capital requirement calculations outlined above define two rungs of a “ladder of supervisory intervention”, under which increasingly severe (prescribed) supervisory authority actions will be taken as a company’s eligible capital falls below the SCR (the first point of intervention) and approaches the MCR. The MCR is the ultimate point of supervisory intervention, below which the company would lose its authorisation.

9.5 Quality of capital resources

The phrase “own funds” refers to assets in excess of technical provisions (and includes subordinated liabilities, rather than deducting them).

Own funds are split into basic and ancillary own funds, which are then tiered based on specific criteria.

Basic own funds is broadly capital that already exists within the insurer. Ancillary own funds is capital that may be called upon in certain adverse circumstances, but which does not currently exist within the insurer (e.g. unpaid share capital).

The capital is tiered based on its loss absorbency and permanency. Tier 1 capital is of the highest quality and is the most loss absorbent and permanent form of capital (e.g. paid up ordinary share capital); Tier 3 is of the lowest quality (e.g. subordinated debt).

Restrictions are placed on the quality of capital that can be used to cover the MCR and SCR. For example, the SCR must be backed by at least 50% Tier 1 capital and less than 15% Tier 3, and the MCR must be backed by at least 80% Tier 1 capital and no Tier 3 capital.

9.6 Data quality

Advice on “Standards for Data Quality” has been issued under the implementing measures. This highlights the importance of having good quality data for the valuation of technical provisions.

This quality is deemed crucial because:

- The more complete and correct the data, the more consistent and accurate will be the final estimates.
- The application of a wider range of methodologies for calculating the best estimate is made possible, improving the chances of application of adequate and robust methods for each case.
- Validation of methods is more reliable and leads to more credible conclusions, once a reasonable level of quality of data is achieved.
- Effective comparisons over time and in relation to market data are possible, which leads, for instance, to a better knowledge of the businesses in which the undertaking operates and its performance.

It is also noted that the issue of data quality is relevant to other areas of the solvency assessment, such as the SCR using either the standard formula or internal models. A consistent approach to data quality issues needs to be taken across Pillar 1, without disregarding the different objectives.

9.7 Pillar 2

9.7.1 Governance requirements

Pillar 2 sets out requirements for the roles and responsibilities of key functions within the business, with the Board having overall responsibility for ongoing compliance with Solvency II.

All insurance companies are required to have a risk management function, actuarial function, compliance function and internal audit function. The organisational structure must have clear segregation of responsibilities, the minimum levels of which are defined within the Pillar 2 framework.

9.7.2 ORSA

In addition to calculating the MCR and SCR under Pillar 1, each insurance company is required to carry out an Own Risk and Solvency Assessment (ORSA).

The ORSA is defined as: “The entirety of the processes and procedures employed to identify, assess, monitor, manage and report the short and long term risks an insurance undertaking faces or may face and to determine the own funds necessary to ensure that the undertaking’s overall solvency needs are met at all times.”

It requires each insurance company to identify *all* the risks to which it is subject and the related risk management processes and controls. This includes some of the more qualitative risks that have not necessarily been assessed under Pillar 1, such as reputational risk.

The company must also quantify its ability to continue to meet the MCR and SCR over the business planning horizon (usually three to five years), allowing for new business. This does not have to be at a prescribed confidence level, but at a level that the company feels is appropriate, for example relating to its own stated risk appetite and/or to achieving a target credit rating.

The ORSA is one of the elements considered by the supervisor when determining whether a further capital “add-on” is required.

Insurance companies have to produce evidence to the supervisor showing that the ORSA is used by senior management, including for example in making strategic decisions.

9.8 Pillar 3 — Disclosure and reporting requirements

The disclosure requirements are intended to increase transparency and so are more extensive than the previous Solvency I reporting regime.

The results of the solvency calculation and details of the ORSA and risk management processes need to be disclosed privately to the supervisor in the Regular Supervisory Report (RSR) which includes both qualitative information and Quantitative Reporting

Templates (QRT). The RSR, including QRT, must be submitted annually, although under certain conditions a summary RSR is acceptable, concentrating on material changes. A subset of the QRT (to support the MCR calculation) is required quarterly.

Except for certain items that can be demonstrated to be of a confidential nature, extracts from the QRT and some of the qualitative information from the RSR will also be disclosed in a public Solvency and Financial Condition Report (SFCR), produced annually.

Local regulators are permitted to impose additional reporting requirements on insurance companies in the form of “national specific templates”.

9.9 Other Solvency II issues

9.9.1 Group reporting requirements

9.9.1.1 Groups

Solvency II aims to enable insurance groups to be supervised more efficiently through a “group supervisor” in the home country, co-operating with other relevant national supervisors. This ensures that group-wide risks are not overlooked and should enable groups to operate more effectively, whilst continuing to provide policyholder protection.

It also aims to address the double use of capital within an insurance group (for example where regulated entities make subordinated loans to each other) and double leverage (where a parent raises debt which is then used to fund an investment in a regulated subsidiary, improving the solo capital position of the regulated entity).

Each insurance group must cover its overall group SCR (which allows for diversification benefits across the group) as well as its group solvency floor (which is calculated as the sum of MCRs, or local equivalent, for each insurance or reinsurance entity within the group) and each insurance subsidiary needs to cover its own SCR and MCR.

Group supervision would normally be carried out at the top level company, which may be within the European Economic Area (EEA) or in a “third country”, i.e. non-EEA. Solvency II requires that where there is a third country parent, EEA supervisors must assess whether the third country parent is subject to “equivalent” group supervision. Depending on this assessment there may be further requirements imposed, which could include establishing an EEA holding company.

9.9.1.2 Equivalence

If an aspect of a third country regulatory regime is considered to be broadly compliant with Solvency II, then that aspect of the regime can be said to be “equivalent”.

Equivalence can be “full” (granted for an indefinite period), “provisional” (granted for a limited period that will end on 31 December 2020 or on the date on which the prudential regime of the third country is deemed equivalent, whichever is earlier) or “temporary” (granted for a 10 year period with possible extension for further 10 year periods).

9.9.2 Impact on business culture and strategy

Engagement with Solvency II is important throughout the business, including right up to senior management and Board level. This is the case for all insurance companies and not just those opting to use an internal model — although as noted above, being able to demonstrate full integration of Solvency II into the business is a key part of the internal model approval process.

Solvency II is not just a reporting framework, but a risk management framework with implications for capital allocation, risk mitigation activities and performance management.

The regime may also have an impact on the optimal product mix for the company, and on product design.

It is also likely to impact the optimal asset mix for the company, since some asset classes have become relatively more attractive as a result of their lower capital requirements.

The availability, or otherwise, of risk diversification benefits may also affect corporate structures and generate merger and acquisition activity.

Management information has changed to align Solvency II with the business and strategic decision-making process.

The impact on the market of the external disclosures also needs to be considered.

10 Role and responsibilities of directors

Directors are responsible for the overall direction of the company, primarily for the benefit of shareholders. It is ultimately the responsibility of directors to ensure that a company meets all its legal obligations and to be responsible for the solvent trading of the company. As such it is the responsibility of directors to:

- arrange that accounts are produced
- appoint the management and
- approve dividend payments

There is no necessity for directors to have any executive position, full or part time, in the company. Shareholder pressure groups have been active in ensuring that directors use their power for the benefit of shareholders.

Specific problems have arisen in connection with the principle of agency under which directors act on behalf of shareholders. There have been many examples of directors abusing their position of trust as managers or agents of the company's assets. A response has been to propose a legal framework of governance for executive and non-executive directors, with the aim of trying to protect the shareholders and stakeholders from director abuse.

Such a framework might include:

- The establishment of formal audit committees to, amongst other things, ensure that the financial accounts give a “true and fair” view.
- Independent remuneration committees to monitor the pay and benefits packages of senior executives.

If the proposed extension of directors’ liability comes about, it is likely that shareholders will be able to sue directors for any failure to act in accordance with their moral, ethical and fiduciary duties.

11 UK corporate governance requirements (including roles and responsibilities of directors)

In the UK, a series of corporate governance practice reviews have been conducted in recent years. These include consideration of:

- internal control (the Turnbull committee, 1999)
- the role and effectiveness of non-executive directors (the Higgs report, 2003)
- audit committees (the Smith report, 2003)
- recruitment and development of non-executive directors (the Tyson report, 2003)
- risk committees (the Walker review, 2009)

The recommendations and findings of these and earlier reviews were combined into a Corporate Governance Code, first published in July 2003 and since updated by the Financial Reporting Council.

The UK Listing Authority rules require each listed company to:

- report on how it applies the principles in the Code
- confirm that it complies with the Code’s provisions or — where it does not — to provide an explanation

This “comply or explain” approach offers flexibility of application — it is for shareholders and others to evaluate the company’s statement. Thus smaller listed companies (in particular those new to listing) may judge that some of the provisions are disproportionate or less relevant in their case.

The disclosure of corporate governance arrangements required by the Listing rules provides for a statement to be included in the annual report relating to compliance with the Code (as above).

In addition, the annual report should record:

- A statement of how the board operates, including a high level statement of which types of decisions are to be taken by the board and which are to be delegated to management.
- The names of the chairman, the deputy chairman (where there is one), the chief executive, the senior independent director and the chairmen and members of the nomination, audit and remuneration committees.
- The number of meetings of the board and those committees and individual attendance by directors.
- The names of the non-executive directors whom the board determines to be independent, with reasons where necessary.
- The other significant commitments of the chairman and any changes to them during the year.
- How performance evaluation of the board, its committees and its directors has been conducted.
- The steps the board has taken to ensure that members of the board, and in particular the non-executive directors, develop an understanding of the views of major shareholders about their company.

The report should also include:

- A separate section describing the work of the nomination committee, including the process that it has used in relation to board appointments, a description of the board's policy on diversity and related objectives, and an explanation if neither external search consultancy nor open advertising has been used in the appointment of a chairman or a non-executive director.
- A description of the work of the remuneration committee including, where an executive director serves as a non-executive director elsewhere, whether or not the director will retain such earnings and, if so, what the remuneration is.
- An explanation from the directors of the basis on which the company generates or preserves value over the longer term (the business model) and the strategy for delivering the objectives of the company.
- A statement from the directors on whether they considered it appropriate to adopt the going concern basis of accounting, and identifying any material uncertainties to the company's ability to continue to do so over a period of at least twelve months.

- A report that the board has conducted a review of the effectiveness of the group's risk management and internal controls systems.
- Confirmation by the directors that they have carried out a robust assessment of the principal risks facing the company, including those that would threaten its business model, future performance, solvency or liquidity. The directors should describe the risks and explain how they are being managed or mitigated.
- A separate section describing the work of the audit committee in discharging its responsibilities.
- Where there is no internal audit function, the reasons for the absence of such a function.
- Where the board does not accept the audit committee's recommendation on the appointment, reappointment or removal of an external auditor, a statement from the audit committee explaining the recommendation and the reasons why the board has taken a different position.

The five main principles and sections of the Code are:

- Leadership
- Effectiveness
- Accountability
- Remuneration
- Relations with shareholders

It provides that at least half the board should comprise independent, non-executive directors and imposes restrictions on length of service of directors. Other provisions include that the same individual should not exercise the roles of Chairman and Chief Executive, and that a Chief Executive should not go on to be the Chairman of the same company.

END