Subject CB1

CMP Upgrade 2021/22

CMP Upgrade

This CMP Upgrade lists the changes to the Syllabus objectives, Core Reading and the ActEd material since last year that might realistically affect your chance of success in the exam. It is produced so that you can manually amend your 2021 CMP to make it suitable for study for the 2022 exams. It includes replacement pages and additional pages where appropriate.

Alternatively, you can buy a full set of up-to-date Course Notes / CMP at a significantly reduced price if you have previously bought the full-price Course Notes / CMP in this subject. Please see our 2022 *Student Brochure* for more details.

We only accept the current version of assignments for marking, *ie* those published for the sessions leading to the 2022 exams. If you wish to submit your script for marking but have only an old version, then you can order the current assignments free of charge if you have purchased the same assignments in the same subject in a previous year, and have purchased marking for the 2022 session.

This CMP Upgrade contains:

- all significant changes to the Syllabus objectives and Core Reading
- additional changes to the ActEd Course Notes and Assignments that will make them suitable for study for the 2022 exams.

1 Changes to the Syllabus

This section contains all the ***non-trivial*** changes to the syllabus objectives.

The balance between the Syllabus topics has been amended to:

1.	Corporate governance and organisation	(20%)
2.	How corporates are financed	(25%)
3.	Evaluating projects	(15%)
4.	Constructing and interpreting company accounts	(40%)

Objective 2.1.1 has been extended to include social enterprises as follows:

2.1.1 Outline the distinctive characteristics of sole traders, partnerships, limited companies and social enterprises as business entities.

Objective 2.1.8 has been extended to include peer-to-peer lending as follows:

2.1.8 Describe alternative methods of raising finance outside the regular banking system, including 'shadow banking', direct project financing, peer-to-peer lending, crowd-funding and micro-finance.

A new objective 2.2.4 has been added on offshore taxation which reads:

2.2.4 Explain why investment funds, including private equity funds, might locate offshore if they obtain their funds from investors in a variety of jurisdictions.

Objective 2.3.2 now includes asset-backed securities in the bullet point list of financial instruments.

Objective 2.5 has been revised to include divesting, with a new sub-objective 2.5.3 and now reads:

2.5 Discuss how and why companies grow, how and why they may wish to divest and the different ways of company restructuring.

- 2.5.1 Describe why businesses want to grow larger, how companies achieve internal growth and explain the relationship between growth and profitability.
- 2.5.2 Describe the constraints on a firm's growth.
- 2.5.3 Explain why a company may wish to divest subsidiaries or business units.

A new objective 4.1.9 has been added which reads:

4.1.9 Describe the structure and content of banking company accounts.

The following objectives (which were 5.1 and 5.2 in the 2021 syllabus) have been moved into objective 4.2 and the previous sub-objectives under these headings have been removed:

4.2.7 Discuss the working capital position of a company.

4.2.11 Describe the function of forecasts and budgets as sources of management information.

2 Changes to the Core Reading and ActEd text

This section contains all the ***non-trivial*** changes to the Core Reading and ActEd text.

At the end of several chapters, some Practice Questions have been amended to reduce the level of bookwork testing. Only material changes to those questions and solutions are described here.

Study Guide

The Introduction to the Core Reading has been updated to include the following:

The United Kingdom left the European Union on 1 January 2021 without an EU-wide arrangement for the operation and regulation of financial services. Discussions will continue during 2021 and this version of the Core Reading does not attempt to address these areas.

At the time of writing of the Core Reading (early 2021), the enduring effect of the coronavirus pandemic on both the global economy and financial markets will not be known for some time. This version of the Core Reading does not attempt to address these areas.

The list of non-examinable Background references provided at the end of the Core Reading has the following amendments and additions:

- **FRC: The UK Corporate Governance Code, 2018: https://www.frc.org.uk/getattachment/88bd8c45-50ea-4841-95b0-d2f4f48069a2/2018-UK-Corporate-Governance-Code-FINAL.pdf**
- **A description of crowd funding and links to discussions of regulation: https://www.fca.org.uk/consumers/crowdfunding**
- **www.thetakeoverpanel.org.uk/the-code/download-code**
- **Global Reporting Initiative (GRI), GRI Sustainability Reporting Standards. Available at: https://www.globalreporting.org/information/sustainability-reporting/Pages/gri-standards.aspx**
- **A range of resources on sustainability reporting can be found on the Institute of Chartered Accountants of England and Wales website at: https://www.icaew.com/library/subject-gateways/environment-and-sustainability/environmental-social-and-sustainability-reporting**
- **Companies Act, 2006, Contents of the strategic report. Available at: https://www.legislation.gov.uk/ukdsi/2013/9780111540169/contents**

Chapter 1

Practice Questions

There is an additional practice question:

In theory, companies exist to maximise shareholder wealth.

Explain the problems that may arise in practice in demonstrating that companies do actually operate in such a way as to maximise their shareholders' wealth. [5]

A replacement page with the corresponding new solution is attached.

Chapter 2

Section 1

This section is extended by a new Section 1.6 describing social enterprises. A replacement page (10a) is attached.

Summary

Social enterprises have been added at the end of the Types of business entity section:

A *social enterprise* is a business with a clear social or environmental aim. Social enterprises are defined by this, rather than the legal form of the business.

Practice Questions

There is an additional practice question:

Alice established an actuarial consultancy several years ago. The business has been successful. Dhruv, one of the partnership's longest-serving actuaries, has started to look for alternative employment and Alice is considering offering him a partnership in the practice.

Discuss the implications for Alice of making Dhruv a partner. [5]

A replacement page with the corresponding new solution is attached.

Chapter 3

Section 1.2

In the final sentence of this section, towards the top of page 6, the UK personal allowance figure has been updated:

For example, in the UK, for the tax year 2021-22 the personal allowance is £12,570.

New Section

There is a new Section on Offshore investment funds. Replacement pages 14a and 14b are attached.

Summary

The chapter summary has been updated to include this material. A replacement page is attached.

Chapter 4

Section 1

This section is extended by new Section 1.7 (Asset-backed securities) and Section 1.8 (Covered bonds). Replacement pages (11-12b) are attached.

Section 2.1

On page 13, the penultimate sentence of Core Reading reads:

Shareholders hold the *equity interest* or *residual claim* since they receive whatever assets or earnings (*ie* profits after tax) are left over in the business after all its debts are paid.

Also on this page, an additional sentence has been added to the final paragraph of Core Reading, which now reads:

Ordinary shares are the lowest ranking form of finance issued by companies. On a winding-up they will rank after all creditors of the company. If a company makes losses (see below for banks), it is the holders of equity capital who suffer first.

Section 2.1 has also been extended by a new final subsection on Bank share capital. A replacement page is attached. You may find it most convenient to simply insert this immediately before the chapter summary page.

Summary

The chapter summary has been updated to reflect these changes and a replacement summary page is attached.

Chapter 5

Section 1

A new section of material on Private equity and private equity funds has been added at the end of Section 1.3. A replacement page containing this material is attached (labelled Page A and Page B for you to slip in at a convenient place in Chapter 5 of your notes).

Summary

The chapter summary has been updated to reflect these changes and a replacement summary page is attached.

Chapter 6

Section 1

An additional sentence of Core Reading has been added at the bottom of page 4:

Leasing arrangements are widely used by operators of planes, ships, trains and car fleets.

The final sentence of Core Reading on page 5 has been amended slightly and a small amount of material on lines of credit has been added on page 6. A replacement page 5/6 is attached.

Section 2.1

The final sentence of Core Reading has been replaced by:

There are no explicit arrangements for the repayment of overdrafts. However, a bank can demand immediate repayment of an overdraft, with no prior notice.

Chapter 7

There is a new Section (3.1) on peer-to-peer lending. The chapter summary has been updated to reflect this and there is also a new practice question. Replacement pages (9 onwards) reflect all of these changes.

Chapter 8

Section 3.4

A new sentence of Core Reading has been added to the end of the Risk management subsection:

A bank might make extensive use of both interest rate swaps and currency swaps.

Chapter 9

Section 2.2

The final paragraph of Core Reading (which began '**In the 1960s** ….') has been deleted.

Chapter 13

Section 1 is unchanged, Section 2 (Insurance companies) has been updated and there is a new Section 3 (Banking company accounts). Replacement pages (13 onwards) reflect all of these changes.

Chapter 14

Sections 1 to 5 have no material changes. Section 6 is unchanged except that at the end of the introductory section (page 32) the sentence referring to 'Chapter 16' is deleted.

The 2021 Chapter 16 has been removed from the 2022 course. In the 2022 course, there is a new section in Chapter 14, Section 7, which contains just the early material from the 2021 Chapter 16.

This new Section 7 is attached as replacement pages (which you should insert immediately before the Chapter 14 Summary).

Chapter 15

Section 4.2

Section 4.2 contains some additional material on reporting on sustainability and carbon emissions. Replacement page (11/12a) is attached.

Practice Questions

There is an additional practice question. A replacement page with the question is attached.

The solution is C.

Chapter 16

Please remove this chapter for 2022. The only material from here that remains in the course is included in the new Chapter 14, Section 7 above.

Chapter 17

Section 2

All of Section 2.1 is deleted.

In Section 2.2, the first two paragraphs are deleted as is the word 'Finally' at the start of the 3rd paragraph.

So, the 'Feedback' section should be read as continuing the material about budgets, and begins:

Performance will be measured against budgets. Differences between actual and budget are called *variances* and variances can be classified as 'adverse' or 'favourable'.

Chapter 18

New Section 5

There is a new Section 5 to this chapter covering motives for divesting.

A replacement page (10A/B) with this new section is attached. The chapter then continues with the existing 'Section 5' (which becomes Section 6 as a result) on page 11.

Summary

The chapter summary has been updated to reflect these changes and a replacement summary page is attached.

Chapter 19

Section 2.3

On page 17, in the second paragraph under 'Freak event' delete the final sentence (starting '**Global warming could have** …') and replace it with:

Climate change could have major economic impacts resulting either from the environment or from transition effects in the economy.

Chapter 21

Section 0

In the diagram on page 3, delete the 'Investment submission' stage of the process (as this is no longer covered in Chapter 22).

Section 3.2

At the bottom of page 22, delete '**(See also the next chapter)**' as the material referred to has been removed from Chapter 22.

The following should be added at the end of page 23:

Although it may appear that the stochastic simulation method would be superior, practical experience has shown that the results from a stochastic model cannot always be relied upon with sufficient confidence to justify the effort and expense involved.

More seriously, there is the danger of losing sight of key factors and assumptions in looking at the output from such a model. Instead, the effort of working up a scenario analysis by hand often forces the analyst to concentrate on the important risks and assumptions.

Despite this, however, a comparatively simple stochastic model may be useful to simulate one specific project activity, where the assumptions underlying the model, and its limitations, can be kept clearly in view.

Practice Questions

There is an additional practice question for this chapter. A replacement page (28A/B) is attached (with the question on one side and solution on the reverse).

Chapter 22

Section 3.1

After the second bullet point list on page 14, delete everything starting from '**Each of these main headings …**' as far as and including the paragraph on page 15 that starts '**The cells in the matrix …**'. After doing this, the first paragraph of remaining Core Reading begins '**Some of the risks identified …**'.

Section 4 (Analysis of risk) and Section 5 (Obtaining a distribution of NPVs in practice)

Both of these sections should be deleted entirely.

Section 6.3

Example 1 and its Solution should be deleted.

Section 7 (The investment submission)

This section should be deleted entirely.

Summary

A replacement chapter summary reflecting these changes is attached.

3 Changes to the X Assignments

We have made a significant number of changes to the assignments, mainly to reflect the recent changes to the IFoA exams. We have not detailed these changes in this Upgrade document.

If you would like the new assignments *without* marking, then retakers can purchase an updated CMP or standalone X Assignments at a significantly reduced price. Further information on retaker discounts can be found at: **www.acted.co.uk/paper_reduced_prices.html**.

If you wish to submit your scripts for marking but have only an old version, then you can order the current assignments free of charge if you have purchased the same assignments in the same subject in a previous year, and have purchased marking for the 2022 session. We only accept the current version of assignments for marking, *ie* those published for the sessions leading to the 2022 exams.

4 Other tuition services

In addition to the CMP you might find the following services helpful with your study.

4.1 Study material

We also offer the following study material in Subject CB1:

- Flashcards
- Revision Notes
- ASET (ActEd Solutions with Exam Technique) and Mini-ASET
- Mock Exam and AMP (Additional Mock Pack).

For further details on ActEd's study materials, please refer to the 2022 *Student Brochure*, which is available from the ActEd website at **www.ActEd.co.uk**.

4.2 Tutorials

We offer the following (face-to-face and/or online) tutorials in Subject CB1:

- a set of Regular Tutorials (lasting a total of three days)
- a Block (or Split Block) Tutorial (lasting three full days)
- an Online Classroom.

For further details on ActEd's tutorials, please refer to our latest *Tuition Bulletin*, which is available from the ActEd website at **www.ActEd.co.uk**.

4.3 Marking

You can have your attempts at any of our assignments or mock exams marked by ActEd. When marking your scripts, we aim to provide specific advice to improve your chances of success in the exam and to return your scripts as quickly as possible.

For further details on ActEd's marking services, please refer to the 2022 *Student Brochure*, which is available from the ActEd website at **www.ActEd.co.uk**.

4.4 Feedback on the study material

ActEd is always pleased to receive feedback from students about any aspect of our study programmes. Please let us know if you have any specific comments (*eg* about certain sections of the notes or particular questions) or general suggestions about how we can improve the study material. We will incorporate as many of your suggestions as we can when we update the course material each year.

If you have any comments on this course, please send them by email to **CB1@bpp.com**.

It is difficult for shareholders to monitor the day-to-day actions of the directors to ensure that they are acting in the shareholders' best interests. [1]

Maximising shareholder wealth is assessed via the performance of the share price. However, the share price only reflects information that is in the public domain. [1]

The directors may choose to withhold information, *eg* if they believe that it is commercially sensitive and would be of benefit to their competitors, and so the share price may not reflect the company's wealth immediately. [1]

In addition, the share price may rise simply because share prices in general are rising, and this may have little to do with the actions of the directors of the company. [1]

It is difficult to be sure that directors are acting to maximise shareholder wealth and not in their own interest, *eg* in the interests of their job security. [1]

The financial reports and auditor's report provide some reassurance about such potential conflicts, but it is not possible to check whether the results would have been better for the shareholders if the directors had made different decisions. [1]

Companies may also have other objectives beyond simply maximising shareholder wealth, including social and ethical responsibilities. [1]

[Maximum 5]

1.6 Social enterprises

Most enterprises in which institutions can invest will tend to focus on maximising owner value subject to ethical, cultural, legal or political constraints. However, some companies have a specific social purpose which takes priority over maximising owner-value.

A social enterprise has a clear social or environmental mission.

This might be, for example, to provide low-cost loans to small farmers in poor countries, provide low-cost private schools or support vaccination programmes.

A social enterprise is a business with a clear social or environmental aim set out in its governing documents. Social enterprises are defined by this *aim* of the business, not the *legal form* of the business. A social enterprise could be, for example, a partnership, an LLP, a limited company with shares or a company limited by guarantee.

There is a variety of capital and legal structures that a social enterprise can take and some of these are not designed to attract a wide range of outside investors. However, social enterprises can issue shares and dividends can be paid.

They must make the majority of their income from trading.

Social enterprises are businesses. They cannot totally rely on donations or volunteers to operate. Once established, social enterprises must generate more than 50% of their income from their trading activities. (However, they are allowed to rely on donations, grants *etc* initially in order to get started.)

Social enterprises are distinguished from standard businesses by how they use their profits. A social enterprise must use the majority of its profits towards furthering its social or environmental mission, *eg* reinvesting them in the business or in the community. Unlike standard businesses, social enterprises are not driven by the goal of maximising owner wealth.

The limited returns that can be provided by social enterprises means that they are likely to be insignificant in the investment strategy of most financial insurance companies and pension funds. However, there is a variety of ways in which financial intermediaries might support social enterprises and investment funds are available which provide capital to the sector.

Dhruv becoming a partner should avoid the risk of him leaving the business. [1]

This might be important to Alice as Dhruv is 'long-serving' and so may have acquired knowledge and skills on which the business depends. [1]

Dhruv may also be motivated by the new responsibility and potential rewards of partnership. [1]

Dhruv would likely have to buy into the partnership. This cash might be invested in the business and help it grow. [1]

As a partner, Dhruv will be entitled to an agreed share of the profits, which could be costly to Alice. [1]

In a partnership, all partners are jointly and severally liable, and Alice would face the implications of any mistakes Dhruv made (which may be more significant if Dhruv has more responsibilities as a partner than as an employee). [1]

Partnerships have partnership agreements, where the rights of the partners are documented. This would need to be changed to add Dhruv, which would involve costs. [1]

[Maximum 5]

5 Offshore investment funds

Differences between tax systems can make international investment complex and may lead investors to pay more tax than is intended within the jurisdiction in which they live.

For example, in many countries, it is not intended that pension funds and charities pay tax on investment returns. However, corporations will often pay tax on profits that is not reclaimable even by non-taxpayers.

Imagine a pension fund, which does not have to pay tax on its investment income, invests in shares. When the pension fund receives dividends on those shares, the company paying the dividends is paying them from its after-tax profits. The tax system *may* enable the pension fund to reclaim the tax that has been paid. In many countries however, the tax system does not allow such reclaiming.

The same is true of certain types of investment fund. This restricts investments in instruments which would normally not bear tax (such as real estate or bonds) if these investments are held in a legal form on which tax is levied at source.

A charity may want to invest via an investment fund (sometimes called a mutual fund or a collective investment vehicle). Investment funds manage investments for a group of investors and so provide investment expertise and diversification. For real estate (*ie* property) investment for example, investing in a property investment fund would give the charity a share of a wide range of properties, and so access to expertise and diversification it might lack if it instead invested directly by buying properties.

However, if the charity invested in property directly, it might not have to pay any tax on the rental income it would receive. If it invests via an investment fund, the investment fund receives the rental income and then pays it out to investors in the fund. The investment fund may have to pay tax on the rental income before it pays it out to investors, and investors such as the charity may not be able to reclaim this tax paid.

This problem is compounded if we have investors from a wide range of jurisdictions wishing to invest in a particular asset class through an investment vehicle. Different investors in different jurisdictions will have different tax rates and reliefs.

Double taxation treaties (see Section 6) often cannot cope with this complexity.

Double taxation treaties between two countries may prevent the same income being taxed twice, both in the country of origin as well as in the country of the recipient, but they cannot result in tax being reclaimed.

To resolve these problems, investment funds might operate offshore in a jurisdiction in which no little or corporate tax is due.

Offshore jurisdictions include, for example, the Bahamas, Cayman Islands and Jersey.

To extend the example above, a real estate investment fund might be established in a jurisdiction where no tax is payable on the returns. Investors from a wide range of countries may then be able to invest in the fund. The investors will pay tax on the income and capital gains at the appropriate rates in their own countries with the fund itself not paying tax.

A UK pension fund investing in such a vehicle, for example, would pay no further tax. However, a UK life insurance company would pay tax on the dividends received.

Although offshore investment funds can be abused in some situations, they are a method of ensuring tax transparency and of ensuring that the tax paid is that due according to the rules of the country in which a particular institution or individual live.

The main potential abuse here is that an investor may not disclose to the domestic tax authorities their offshore investments and the returns they receive from them.

Chapter 3 Summary

Personal taxation

Personal taxation is levied on all the financial resources of an individual. The main sources are:

- income both earned (wages and salaries) and unearned (investment income and rent)
- profit from operating as a sole-trader or partner
- capital gains
- inheritance
- wealth, *eg* property.

Individuals (including partnerships) are usually subject to *income tax* and may, in addition, pay *social security contributions*.

Income tax is calculated with reference to *taxable income*, which includes income in kind, such as subsidised mortgages, and also investment income.

Income tax liability may be reduced by tax relief on certain forms of income, such as income from an ISA, and on certain forms of expenditure, such as contributions to an approved pension scheme.

A person's taxable income for a certain year will be reduced by any *allowances* to which they are entitled, *eg* personal allowance, age-related allowance.

Capital gains tax

Individuals are subject to capital gains tax on *chargeable gains*.

chargeable gain = sale price – purchase cost

Capital losses can normally be offset against capital gains in the same year.

Individuals are usually given a CGT allowance (the *annual exempt amount*).

For an individual in the UK, typical CGT rates are 10% and 20% depending on taxable income. Certain assets are exempt from CGT.

Company taxation

Companies are liable to *corporation tax* on their taxable profits. Taxable profits include both income (less allowable expenses) and capital gains. A company's *accounting profit* has to be adjusted to *taxable profit* by:

- adding back on any business expenses or potential expenditure that are not allowable
- adding back depreciation and deducting the capital allowance
- deducting any special reliefs, *eg* research and development.

The government can use the corporation tax system to encourage or discourage certain behaviour. For example, the government can encourage investment by taxing retained profit less heavily than distributed profit.

Offshore investment funds

An offshore investment fund operates in a jurisdiction in which no little or corporate tax is due and so the fund itself pays little or no tax.

Investors from a wide range of countries are then able to invest in the fund and pay tax on the income and capital gains at the appropriate rates in their own countries.

Double taxation relief

Most countries have a *double taxation agreement* with other countries.

These agreements allow companies and individuals with overseas income or capital gains to offset tax paid overseas against their liability to domestic tax on such income or capital gains.

Most trading in them occurs through the banks rather than through a stock exchange.

Eurobonds are also used to raise large sums – the minimum acceptable issue is $75*m* or more.

Similar to unsecured loan stock, Eurobonds are not secured against the assets of the issuing company.

A key difference between Eurobonds and unsecured loans is that Eurobonds are marketed in a different way. A Eurobond is an issue underwritten by an international syndicate of banks and typically (but not exclusively) sold in countries other than the country of the currency in which it is denominated. Issues are often marketed in several countries simultaneously.

Common currencies of issue include the US Dollar, the Japanese Yen and Sterling. Issues in these currencies are respectively known as 'Eurodollar', 'Euroyen' and 'Eurosterling' issues.

Risk

There is no security for the loan. Also, Eurobond issues do not always place restrictions on the issuing company's future borrowing powers and so investors are very dependent upon the profitability and good name of the issuing company. However, issuers of Eurobonds tend to be large stable firms or institutions.

Return

Gross redemption yields depend upon the issuer (and hence risk) and issue size (and hence marketability). Inflation will affect the real return achieved.

Marketability

Trading through the banks may mean that marketability is better than debentures and unsecured loan stocks.

Conclusion

Eurobonds are unsecured loans subject to less regulation and are issued with either fixed or floating rates of interest. They normally have a fixed maturity date.

They represent a convenient method of raising large amounts of foreign currency denominated funds without having to enter overseas financial markets. It may be possible to raise funds at a lower rate of interest than is available on domestic currency funds, but there may be associated exchange rate risks if the funds raised are converted for use in domestic projects.

1.6 Floating-rate notes

Most people are aware of the idea of floating or variable interest rates. Most people's savings earn a variable rate of interest and the interest rates on many mortgages in the UK are variable (though elsewhere fixed-interest mortgages are more common).

Many UK borrowers prefer to issue fixed-interest bonds because they know their costs in advance and can plan their cashflows. However, when interest rates are high, companies are reluctant to borrow.

Floating-rate notes (FRNs) are medium-term debt securities issued in the Euro market whose interest payments 'float' with short-term interest rates, possibly with a stipulated minimum rate.

It is common for floating-rate notes to have a minimum interest rate below which the coupons will not fall even if the benchmark interest rate falls lower. This is known as an interest-rate floor.

Thus, the issuer does not need to estimate the likely levels of future inflation and interest rates when issuing the notes, and the lender does not require an inflation risk premium.

If inflation increases, then short-term interest rates tend to increase. A company that issues floating-rate stock does not need to worry about future inflation. A company that issues fixed-interest stock has to estimate future inflation in order to give a satisfactory return (after inflation) to the investors. Investors too need to consider the risk of inflation wiping out the return received from an investment. If they are uncertain about inflation they might demand a higher interest rate from a fixed-interest stock as a premium to cover the risk they are taking.

1.7 Asset-backed securities

Asset-backed securities (ABSs) are securities backed by ring-fenced pools of assets (which are held in trusts). Investors are repaid through interest and capital payments made from the pools of assets.

In this sense, they are similar to debentures rather than unsecured loan stocks, because there are assets that bond holders have a claim on in the event that there is a credit event. Indeed the ring-fenced pool of assets generates the income to pay the interest on the ABS bonds, and generates the capital to ensure that the bonds are repaid.

ABSs are normally issued in tranches (often called A, B and C) with different yields and different levels of risk. Under this structure, A tranches may get high credit ratings and may be sold to institutional investors.

If, for example, a pool of assets with a value of £500*m* is ring-fenced, ABS bondholders may be offered a choice of three bonds to invest in. The first (bond A) has a prior claim on all of the ring-fenced assets, and may have a nominal of, say, £300*m*. This issue would be considered to be very secure and would get a top credit rating, irrespective of the credit rating of the company that was raising the loan. It would also get a very low interest rate or coupon.

The second tranche (bond B) of say £150*m* may have the second claim on all of the ring-fenced assets, and will be secure provided not more than £50*m* of the ring-fenced assets default. It may get a reasonable or 'investment-grade' credit rating.

The bottom tranche of £50*m* (bond C) will have the last claim on the assets and will only get income if there is enough left over after paying the interest on tranches A and B. It will probably get a very low rating if it is rated at all.

ABSs may be backed by mortgages, in which case they are known as mortgage-backed securities (MBSs). Alternatively, assets-backed securities may be backed by car loans, unsecured personal loans, credit cards or other types of loan.

The type of asset that is ring-fenced, and the tranche of the bond in the structure, will determine how secure the bondholders feel.

Question

Describe the key differences between debentures and asset-backed securities.

Solution

The main difference is that the company issuing a debenture is still legally responsible for the payment of interest and capital to the bondholders. So if the company goes bankrupt, and the debenture holders find that the asset or security is not sufficient to repay their loan, then they can claim against the company for any outstanding balance. Asset-backed loans are secured on a ring-fenced pool of assets, and if those are insufficient to pay interest or capital, the bondholders will be partially defaulted and they have no claim against the company itself.

Another difference is that debentures are issued as single bonds, secured by either floating or a fixed charge on an asset (or on various named assets). Asset-backed bonds are typically issued in a tranched structure offering various possible bonds to investors, all secured on the same pool of assets.

There may be differences in the size and marketability of the bonds. Typically debentures are of limited size, secured on a single large property, whereas asset-backed bonds can be very large issues secured on very large pools of assets. There is almost no limit to the pool of assets, or the type of assets for an asset-backed issue. Marketability will increase with the size of issue.

An ABS issue may partially default if there is not enough income or capital in the ring-fenced pool. If a debenture partially defaults, the company is in default, and will be wound up by debenture holders.

ABSs give investors access to lending assets, without having to issue their own loans.

So if an asset-backed bond issued by a bank is secured on credit card debt, the bond investors are exposed to the credit risk of credit card debt. However, the bank (and not the bond holders) is responsible for issuing the credit card debt to its customers.

Credit risk is reduced by the loans being secured on pools of assets and by the diversification of loans within the pools of assets. In addition, the structuring reduces credit risk on senior tranches.

Collateralised debt obligations (CDOs) are a form of ABS. CDOs backed by US sub-prime mortgages came to be regarded as 'toxic' during the banking crisis of 2007-08.

CDOs secured on their own asset pool are as secure as the assets backing them. However, before the banking crisis of 2007-08, it became the norm to issue CDOs secured on middle and lower tranches of other asset-backed (typically mortgage-backed) bonds. As you can imagine, if a pool of assets for a CDO comprises a large number of tranche B and tranche C bonds from the example above, and the CDO itself is then tranched into D, E and F, then assessing the credit rating of these tranches can become complicated to say the least. Complicated became dangerous in the banking crisis, and the term 'toxic' was used to describe the CDO tranches.

1.8 Covered bonds

Covered bonds are bonds issued by banks or building societies with ring-fenced pools of assets that will repay investors if the issuing institutions fail. Unlike for asset-backed securities, the ring-fenced assets continue to be legally owned by the issuing banks or building societies unless they fail.

So covered bonds are more like debentures in that the company remains legally responsible for the payment of interest and capital to the bondholders. Bondholders have a 'dual recourse' to reclaim their money, firstly from the issuing company and then secondly from the pool of assets. They are often considered to be very secure and often receive a AAA rating.

Bank share capital

Because the failure of a bank can cause such serious problems in the financial system, regulations normally require banks to hold a minimum amount of equity capital. This equity capital for banks must be in the form of Common Equity Tier 1 (CET1) capital, as defined in the global standard for banks known as the Basel regulations. CET1 capital is the only form of capital against which banks can write off their losses immediately while they remain a going concern.

You can think of CET1 as being very similar to the normal equity share capital that a typical company would issue. The Basel regulations are global standards that most countries have adopted, and which serve as the basis for bank regulation almost everywhere in the world.

Banks must hold sufficient capital to absorb losses that might arise, even in a severe stress scenario such as a deep recession. However, banks are likely to be reluctant to hold 'excess' CET1 capital because it would reduce their earnings per share (a key measure for investors) and because, without large losses, it might not be needed.

Earnings per share is calculated by dividing the earnings (*ie* the profit after tax) by the number of equity shares. If a bank increases the number of shares in issue, this ratio falls and makes the bank look less attractive to investors than competing banks.

Banks may therefore issue contingent convertible securities (see Section 3.2 below) which, in the event of a capital trigger being breached, can be converted into CET1 capital. This enables banks to access additional capital to absorb losses, should the need for it arise in a very severe stress scenario. Contingent convertible securities issued by banks fall within a category of bank capital known as Additional Tier 1 (AT1) capital.

Equity capital can always be thought of as the capital that 'absorbs losses'. If a company makes a modest loss rather than a profit, the company's lenders will still be paid, and equity shareholders will see the value of their stake in the company fall. With a bank, the losses that can be made in an economic crisis can be very substantial if bank assets are 'written down' in value, and in some cases this can threaten the solvency of the bank itself. This can in turn threaten depositors who the regulator wants to protect. Bank regulations therefore insist that a bank has a substantial amount of lower-ranking equity capital so that losses don't reduce the value of deposits.

Banks may also issue debt capital, as defined in the Basel regulations. Debt capital may not be used to absorb losses as long as the bank remains a going concern. However, in the event that the bank ceases to remain a going concern, debt capital can be used to absorb losses, giving additional protection for depositors.

We discuss bank capital in much more detail in Chapter 13 where the Basel ratios are introduced. Bank debt ranks alongside depositors, and so if a bank fails, it cannot default on bondholders but choose not to default on depositors. It has to treat both equally. So in this sense bank debt capital does not 'absorb losses' in that it does not protect depositors.

Chapter 4 Summary

Long-term finance

Long-term company finance can be classified as *share capital* and *loan capital*.

Ordinary shares are the most common type of share capital. They give rights to a share of the residual profits of the company, and to the residual capital value if the company is wound up, together with voting rights and various other rights. Banks are deemed to be of special systemic importance and bank regulations place minimum limits on the amount of equity capital a bank must have. Bank equity can be classed as Common Equity Tier 1 (CET1) which is designed to absorb bank losses and protect depositors.

Preference shares give their holders a preferential right to dividends and return of capital, compared to ordinary shareholders. Preference shares usually pay a fixed dividend. They do not normally give voting rights.

Holders of loan capital are *creditors* of the company. They do not have voting rights. They receive *interest payments* which are a cost to the company, not a distribution of profits. Interest is normally paid twice a year.

Debentures are loans which are secured on some or all of the assets of the company. They are regulated by a *Trust Deed* which is overseen by a *trustee*. Debentures may be secured by a *fixed charge* on specified assets, or by a *floating charge* across a class of assets.

With *unsecured loan stock* there is no specific security for the loan. *Convertible unsecured loan stocks* give their holders the right to convert into ordinary shares of the company at a later date.

Subordinated debt is junior debt and is paid after all senior debt holders are paid.

A *Eurobond* is a form of unsecured loan capital that is issued outside the legal and tax jurisdiction of any country. It is a *bearer document*, paying interest normally once a year. Interest is paid *gross*. It may pay a variable rate of interest, in which case it is known as a *floating-rate note*.

An *asset-backed security* (ABS) is bond secured on a pool of ring-fenced assets, which might be mortgages, credit card debt, car loans, or almost any other type of asset. The security of the ABS depends on the quality of the assets in the pool, and investors can claim the assets in the event that the ABS defaults. They have no claim on the company itself though, only the ring-fenced assets. ABS issues are typically tranched into bonds with different credit ratings.

Covered bonds are bonds issued by a company that have a ring-fenced pool of assets as an additional security. The bonds are, however, secured by the company itself, and the assets in the pool remain on the company's balance sheet.

Hybrid types of finance that straddle the divide between debt and equity finance include convertibles, contingent convertibles and executive stock options.

The various forms of company capital differ in many ways:

Risk

Debentures, *asset-backed securities* (ABSs) and *covered bonds* are the most secure form of company capital from the investor's perspective. Debentures are covered by a floating charge over the company's assets or a fixed charge on a specific asset. ABSs and covered bonds have a ring-fenced pool of assets that act as security.

Eurobonds and *unsecured loans* are the next most secure for an investor – they have a prior right to profits before *preference* share capital or *ordinary shares*, which are last on the list in that order.

Convertibles will be as risky as the corresponding preference share or loan stock until they are converted into equity, at which point the riskiness increases.

Return

Investors expect a higher return for accepting higher risk.

As such the expected return from each form of capital is in reverse order to the list for risk, namely (highest to lowest): *ordinary shares, preference shares, unsecured loans/Eurobonds,* and *debentures/ABSs/covered bonds.*

The actual cost to the company will be equal to the return achieved by the investor (ultimately), however the immediate cost to the company of servicing the capital may be higher for debt than for equity if the dividends are low or indeed if they are zero.

Marketability

Equity is often the most common form of company capital, and is as such often the most marketable. The marketability of the other forms depends very much on the size of the issue.

Tax

Most forms of company debt have the advantage that interest payments are deducted from pre-tax profits in the company's accounts and so help to reduce the company's tax charge. Ordinary and preference shares pay dividends that are deducted from the company's profits after tax.

Private equity and private equity funds

For a variety of reasons, the owners of companies might decide that they do not wish their shares to be publicly traded. Such companies would be described as being in the private equity sector. The circumstances surrounding companies in this sector can vary widely.

- **It will include small companies that have decided they do not wish to go public.**
- **It will also include companies where there is a strong family interest in ownership.**
- **In addition, companies that require a really focused period of restructuring may be able to achieve that more effectively with a smaller body of shareholders many of whom may also be involved with the management of the company.**
- **Companies may also not want the expense of dealing with the requirements of a public listing.**
- **Private equity status may also be important in situations where specialist knowledge of the details of the company's investment projects is required when taking investment decisions (for example in tech companies or infrastructure).**

The private equity sector can include smaller private companies, where the disadvantages of a quotation in Section 1.3 above outweigh the advantages of a quotation. Family ownership might cause shareholders to avoid the quoted markets so that an acquisitive company will find it harder to buy enough shares to take over control of the company. A takeover will be much harder without the communication benefits of the stock market.

Some large companies can also end up in the private equity sector. For example, the pharmaceutical company Boots in the UK was purchased by a group of private shareholders resulting in the company's shares no longer being quoted on the London Stock Exchange. Boots has subsequently gone through a number of purchases and sales, but for a time it was an example of a large company that was being restructured in the private equity market.

Private equity has been growing rapidly whilst the value of publicly quoted companies has shrunk on many markets in recent years. Insurance companies, banks and pension funds can invest in private equity in a variety of ways:

1. **They can provide loans or buy equity interests directly.**

   Loan investment would be called private debt, and equity investment would be private equity.

2. **They can also invest in bespoke private equity funds which, in turn, invest in a range of private equity interests, the returns being passed to the investors in the funds.**

   These funds will normally require substantial minimum investments.

   There are some mutual funds and exchange-traded funds which allow retail investments in private equity.

'Retail' investors here means individual investors as opposed to professional, institutional investors.

Question

State the benefits and drawbacks for an institution of investing in private equity using a collective vehicle, such as a private equity fund, rather than investing directly.

Solution

Benefits

- Better diversification by being part of a larger fund with many private equity investments
- Access to the equity selection skills of the fund manager
- Speedier investment in the sector which might otherwise take years
- Possibly the ability to sell the shares in the fund at a later stage, which would be easier than selling individual private equity shares

Drawbacks

- Loss of control over which shares are purchased for the fund
- The need to pay the fund fees, which may be high for such a specialist sector

As well as private equity being a potential investment for some insurance companies and banks, other companies may use private equity themselves as a way of obtaining finance.

Private equity funds can be an important source of medium-term finance for companies, including banks and insurance companies.

There are some examples of banks and insurance companies, particularly newer companies, that have used private equity as a funding base to expand their operations. The best-known larger insurance companies and banks tend to use the quoted markets.

Chapter 5 Summary

Reasons to obtain a stock exchange quotation

A company may decide to obtain a *quotation* on a stock exchange:

- in order to raise extra capital
- to make it easier for future issues of capital
- to provide an exit route for its existing shareholders
- to make its shares more easily valued and marketable.

Conversely, the advantages of remaining or becoming a private company are:

- that a small group of shareholders is likely to retain control of the company
- that principal-agent problems are reduced
- less onerous disclosure and reporting requirements and so lower costs
- non-financial benefits such as continuity of a family tradition.

Some companies prefer to remain in the 'private equity' domain where shares are not quoted on an exchange. The reasons can include maintaining a family's control over the company, avoiding the expenses of quoted markets, or where having a tight group of shareholders can benefit the business during a restructuring phase. It can also be beneficial in specialist industries such as the tech industry.

Methods of obtaining a quotation

The main methods of obtaining a quotation are:

- offer for sale at a fixed price (the usual method of obtaining a quotation)
- offer for sale by tender (where the shares are allocated at a *strike price,* which is paid by all the successful applicants, no matter how much more they had bid)
- offer for subscription
- placing
- introduction.

Offers for sale are *underwritten* by an *issuing house*.

Rights issues

Companies can raise more money from their existing shareholders by offering them a *rights issue*.

A rights issue reduces the share price and increases both the share capital and reserves of the company.

1.4 Bank loans

A bank loan is a form of medium-term borrowing from a bank where the full amount of the loan is paid into the borrower's current account and the borrower undertakes to make interest payments and capital repayments on the full amount of the loan.

Bank loans are usually secured on the borrower's assets using a floating charge, that is, all the assets of the company (or the individual) are assigned as security for the loan.

For a small business, the owner of the company may even provide a fixed charge on his house as security.

Bank loans can be used to buy non-current assets such as machinery and vehicles. Although loans are usually secured, banks do sometimes grant unsecured loans.

The interest rate is usually variable.

It might be set at a margin above the bank's own base rate, or as a margin over a benchmark interest rate such as SONIA. (SONIA stands for the Sterling Overnight Index Average – it is the average rate at which banks borrow funds overnight from other financial institutions).

Although variable rate loans are usual, fixed rate bank loans do also exist.

Bank loans in the UK are typically for a period of about seven years, although the terms offered vary.

In general, UK banks have been reluctant to lend for longer terms, preferring companies to use loan capital and share capital for longer terms. In the EU, banks are more willing to lend longer term, and loan capital is less important.

Loan ‘facilities’ and lines of credit

Over the last decade the range of types of bank finance that are available has widened.

Loans are available where the borrower can take out the loan in instalments, giving the bank a few days’ notice before each new bit is taken out. Such arrangements are called ‘loan facilities’.

Companies often arrange lines of credit with their banks, enabling them to borrow money if required, up to agreed limits.

A line of credit provides flexibility for the borrower with regards to the timing of the finance and also how the borrower uses the money. Many lines of credit are ‘revolving’ which means that once an amount has been repaid it becomes available again.

Other variations

Complex loans are available for large-scale borrowing. For example:

- **multi-currency loans**

  In these the bank acts as a middle man and arranges to borrow money in whichever currency looks the best value to borrow in. The bank then swaps the loan into sterling or whatever currency is required.

- **syndicated loans: where the loan facility is provided by a group of banks**.

  This would be used where the sums to be borrowed are larger than any one bank would happily lend on a single project.

Solution

The expected rate of return on donation-based funding is a loss of the amount 'invested'.

Pre-payment or reward-based ranks next highest, returning whatever is the financial value of the reward. (An investor in this type of project presumably also derives some non-financial reward, *eg* from the satisfaction of supporting a particular artist, author or film producer in producing new work.)

As usual, debt finance would have a lower expected rate of return than equity-type finance in the same business, and so loan-based funding ranks next and finally investment-based funding.

The different types of crowdfunding will have other relative advantages and disadvantages to a business considering which to use to raise finance. For example:

- Rewards-based funding might have lower cost, but it might also appeal to a smaller number of potential investors, *ie* those who would value the particular reward.
- Investment-based funding would potentially offer the longest delay before any return had to be paid to investors, but at the cost of dilution of ownership and having to share future profits if the venture ultimately succeeds.
- Loan-based funding avoids this giving away of equity but a company might struggle to find investors with a risk appetite to find it appealing, *ie* investors who want the relative security of a loan in a potentially high-risk venture.

Some types of crowdfunding are subject to regulation by supervisory authorities. For example in the UK, loan-based crowdfunding and investment-based crowdfunding are regulated by the Financial Conduct Authority. The return for the investors could be high compared to some other alternatives but the risks could also be higher.

In addition to the risks we have already seen for loan and equity investment, the crowdfunding approach brings additional risks, for example the lack of a secondary market (so risk of being unable to cash in the investment), risks associated with the crowdfunding site collapsing, the risk that the project may not go ahead if insufficient investors are found and uncertainty about how long the call for funds will be open.

3.1 Peer-to-peer lending

Peer-to-peer (P2P) lending is a relatively recent innovation. It started in the UK in 2005 and in the US in 2006, and is now available in a number of countries including China and India.

Peer-to-peer lenders such as Zopa and Funding Circle have established technology platforms to match borrowers and lenders online. In practice, investors do not normally invest in individual loans; their investment is matched with percentages of a large number of loans. This reduces risk for investors, relative to investing in single loans.

The exact mechanics of this splitting of investors' investments vary between platforms. For example, the platform operator might assess the creditworthiness of loan applicants and allocate them a risk rating and loan interest rate accordingly. Investors may then choose how they'd like to split their investments into proportions loaned to different businesses at different levels of risk and return.

The platform manages the payments, collecting repayments from lenders and distributing them to investors. Investors may be able to choose whether they receive the repayments as cash or re-invest them into further lending.

Loans available on peer-to-peer lending platforms include unsecured personal loans, car loans and small business loans.

Investors are typically individuals looking for income and willing to accept the credit risk, but also include some institutional investors.

Individuals may be attracted to peer-to-peer lending as the interest rates may look attractive when compared with those available on bank savings.

Question

Suggest possible reasons why institutional investors may be attracted to peer-to-peer lending.

Solution

- As for individuals, institutions may find the expected returns attractive for the level of risk
- It provides access to a sector and type of borrower that institutions may not have been able to reach otherwise
- Diversification from their other investments, *eg* equities and bonds

Peer-to-peer lenders do not accept deposits and are not banks. However, they are regulated – in the UK by the Financial Conduct Authority (FCA) and in the US by the Securities and Exchange Commission (SEC).

In the UK, the FCA rules cover, for example, the marketing of P2P lending to investors and levels of disclosure of information to investors. However, peer-to-peer lending is not covered by the Financial Services Compensation Scheme that protects individuals' savings (up to a limit) if a bank or insurance company goes bust.

4 Microfinance

Microloans are small loans that are usually easier and faster to secure than the traditional loans.

These are the two key characteristics of microloans:

- small amounts (typically smaller than the smallest traditional business loan that a bank might offer)
- available to borrowers who may not have access to traditional loans, for example because of a lack of lenders in their location or because of their poor credit-worthiness or lack of assets as security.

Microloans therefore broaden financial inclusion.

No interest is paid on the loan and the investor has the benefit of being involved in initiating a venture. Microloans are used for start-ups and small businesses and often have generous repayment periods. Charities involved in reducing poverty and promoting small scale start-ups in the developing countries use microfinance to encourage investors to fund small scale businesses.

In these circumstances, the reasons to invest are non-financial.

However, although there may be no interest payable, the costs of providing microloans have to be borne by the parties involved (in some proportions). These costs are likely to be high compared to the relatively small loan amounts involved.

The model has attractions to both charities and donors when compared to charitable donations. In particular, microloans aim to be a sustainable model for benefiting a neighbourhood or community. For example, a charity may lend to a family to enable them to start a small scale business, *eg* selling clothes or food products. This may have wider benefits such as the family's children staying in education longer rather than having to work to provide for the family. The business may provide jobs for other members of the community. The charity may provide support in setting up and running the business venture. When the loan is repaid, the money may be returned to the original investor or they may make it available to help someone else in the same community.

If a charity is involved in the provision of the loan, the charity may provide expertise and support on the ground, as well as the money. This may be costly, but should also increase the chances of success.

It can also be argued that microloans have disadvantages for the recipients compared to charitable donations. For example, there is the risk of failed business ventures and increased indebtedness of the loan recipients.

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Chapter 7 Summary

Shadow banking

Shadow banks are non-bank financial institutions that convert short-term liabilities to long-term assets outside the regulated banking system.

Unlike banks, shadow banks do not take deposits but instead borrow short term funds in the money market.

Since shadow banks are outside the banking regulatory system, they are not subject to capital requirements and reserve requirements imposed on the commercial banks. However, they are not able to borrow from the central banks and are thus more exposed in an emergency.

To reduce the exposure of the traditional banks to shadow banks and the effect on the economy as a whole, in future shadow banks are likely to be increasingly subject to the same banking regulation as regular banks.

Direct project finance

Project financing is used in financing large infrastructure projects, often involving public-private partnerships (PPP). The projects are often very large, high-risk and long-term.

The main features of project finance are:

- It involves the formation of a new legal entity as a Special Purpose Vehicle (SPV).
- It is a non-recourse method of financing.
- It offers off-balance-sheet financing.

Crowdfunding

Crowdfunding enables a large number of participants support a business, project, campaign or an individual. Often the profile of a project is set up on a dedicated crowdfunding website. Participants decide the amount they wish to contribute to fund a particular venture.

There are different types of crowdfunding:

- donation-based crowdfunding: there are no financial rewards and donors derive satisfaction from helping the charitable cause
- pre-payment or reward-based crowdfunding: participants are rewarded by receiving a service or a product such as concert tickets or a new computer game
- loan-based crowdfunding (also known as 'peer-to-peer lending'): investors receive interest on the money they lend and their capital is repaid over time
- investment-based crowdfunding: investors buy shares and benefit if the business succeeds.

Some types of crowdfunding are subject to regulation by supervisory authorities.

Key features of peer-to-peer lending are:

- lenders and borrowers are matched online via a lending platform
- lenders typically diversify, investing a small amount in a large number of different loans
- borrowers are typically individuals and small businesses
- lenders are typically individuals, but also include some institutional investors
- regulated in the UK by the Financial Conduct Authority (FCA) and in the US by the Securities and Exchange Commission (SEC).

Microfinance

Microloans are small loans that are usually easier and faster to secure than traditional loans.

No interest is paid on the loan and the investor has the benefit of being involved in initiating a venture.

Charities involved in reducing poverty and promoting small scale start-ups in the developing countries use microfinance to encourage investors to fund small scale businesses.

Chapter 7 Practice Questions

Exam style

All of the questions that follow are exam style.

7.1 Which of the following is NOT a type of crowdfunding?

A donation-based
B pre-payment
C loan-based
D non-recourse. [2]

7.2 Which of the following statements about project finance is true?

A It entails the formation of a new legal entity.
B It is a recourse method of financing.
C It provides on-balance-sheet financing.
D It always involves the public sector. [2]

7.3 Outline the similarities and differences between shadow banking and regular banking. [5]

7.4 Discuss the possible advantages and disadvantages to individual investors of peer-to-peer lending platforms opening up to also allow institutional investors to lend money. [5]

The solutions start on the next page so that you can separate the questions and solutions.

Chapter 7 Solutions

7.1 Answer = D

The fourth type of crowdfunding mentioned is investment-based.

7.2 Answer = A

Project finance is a non-recourse, off-balance sheet method of obtaining finance. It often involves public-private partnerships, but does not have to involve the public sector.

7.3 *Similarities*

Both perform 'maturity transformation' *ie* the conversion of short-term liabilities to long-term assets. [1]

Both face the risk of investors losing confidence which can create a liquidity risk. [1]

Differences

In regular banking, the liabilities are cash deposits from banking customers. Shadow banks do not take deposits. Instead they borrow money in the money markets. [1]

Customers in regular banks may demand the return of their deposits. The bank will not hold enough in cash to meet this demand if a large number of customers want their money at the same time. [1]

Shadow banks may struggle to roll over their short-term borrowings, for example if investors are concerned about the value of the shadow banks assets. [1]

Shadow banks are outside the banking regulatory system and so are not subject to the reserve and capital requirements imposed on regular banks. [1]

Shadow banks are not able to borrow from the central bank and so are more exposed in an emergency. [1]

[Maximum 5]

7.4 *Advantages*

More institutions investing may enable platforms to expand the scale of their operations and this may lead to economies of scale, which individuals may benefit from via lower platform charges. [1]

More institutional investment will put more capital into the sector and this might make platforms more secure and so less likely to go bust. [1]

Disadvantages

Platforms may struggle to attract sufficient potential borrowers to meet the increase in demand caused by institutions looking to invest large amounts. [1]

This may lead to individuals missing out on the best investments … [1]

… or the platform may lend to higher-risk borrowers increasing the riskiness of individuals' lending. [1]

Institutions typically invest larger amounts than individuals, and this may cause problems when they wish to withdraw their money, *eg* if an institution wishes to disinvest it may disrupt the platform. [1]

[Maximum 5]

In practice, a large group would find it almost impossible to permit a subsidiary to fail without compensating the company's creditors because of the negative publicity it would cause. It is also possible to insist on a formal guarantee from the parent as a condition of granting a loan to a group member.

Any support between group members could be restricted by the overseas location of some subsidiaries, and therefore subject to exchange restrictions or other local regulations which prohibit the payment of funds back to head office.

Alternatively, minority shareholders might be able to block transactions which would be damaging to their company, even though they were potentially beneficial for the group as a whole.

It is also notable that the accounting techniques associated with consolidated financial statements has recently been one of the most controversial areas for regulators.

Question

Define the following terms:

(i) parent company

(ii) subsidiary company

(iii) associated undertaking

(iv) non-controlling interest.

Solution

(i) ***Parent company***

A company which holds shares in other companies.

(ii) ***Subsidiary company***

A subsidiary is a company controlled by a parent company. This control may be through holding a majority of voting rights or by being able to appoint or remove directors holding a majority of voting rights at board meetings.

(iii) ***Associated undertaking***

An associated undertaking is one which is not a subsidiary, but which is subject to significant influence by the parent. A significant influence would normally arise if the parent owned between 20% and 50% of the associate's voting rights.

(iv) ***Non-controlling interest***

The non-controlling interest is the value of the share capital and reserves provided by the subsidiary's minority shareholders.

2 Insurance companies

2.1 Introduction

Insurance companies are effectively subject to the same reporting regime as any other type of limited company. As for other companies, a statement of financial position and a statement of profit or loss must be produced.

For most companies, the concept of profit is relatively intuitive. If a company sells an item of stock for more than it costs to make, it makes a profit. For an insurance company, the concept of profit is not so clear-cut.

When a policy is sold, the policyholder pays the company a premium and the company incurs sales and administration expenses. However, at this point the company does not know how much profit it will make as the policy may last for many years, during which time the company will have to pay claims and incur expenses and further premiums may be paid.

To allow for these future cashflows, the company will set up an estimated liability (a reserve) in its statement of financial position. A conservative approach may be adopted in estimating this to avoid too much profit being made at the start of the policy.

The preparation of insurance company accounts is complicated by two special features:

- **The underlying contracts (liabilities) fall due outside the accounting period and are uncertain in size.**
- **Premature transfer of 'profit' to shareholders may endanger the financial stability of the company and the ability to meet future liabilities.**

In order to address these features, insurance accounts contain special features.

This section looks at the special features of insurance company accounts. We consider both general insurance (short-term insurance, *eg* car or buildings insurance) and long-term insurance (*eg* life insurance).

2.2 Estimation of liabilities and timing of profit

Estimated values for future liabilities must be assessed, either on a statistical basis or by expert judgement.

Premiums already received in respect of such liabilities need to be identified and held until the liabilities have expired.

Additional sums may have to be set aside to meet any anticipated worsening in claims experience or any failure by third parties to honour their commitments towards meeting eventual liabilities.

Regulatory requirements, such as those under the Solvency II regime, may increase further the amounts held against future liabilities.

Therefore, the provisions (reserves) made for future liabilities are likely to be conservative in nature, with the result that current profit is under-stated.

This feature is exacerbated by the profit profile of long-term contracts, whereby business written initially causes a financial strain due to the costs of setting up the contracts and establishing adequate initial reserves.

There may be a loss on the policy in the early years, due to the initial expenses and the need to set up initial reserves. This is known as *new business strain.*

However, the product design will provide for these initial costs to be subsequently recovered, and will also aim to provide an overall return to the company. The question arises as to when (and how) this profit should be reported.

A further problem is introduced by the taxation environment whereby particular classes of business may operate under different tax rules. This may require that the overall activities of the company are allocated to separate sub-funds for tax purposes.

For example, general insurance may be taxed differently from long-term insurance.

2.3 Statement of profit or loss

The statement of profit or loss for an insurance company is constructed in two stages. In general, all items relating to the main insurance businesses (general insurance and long-term business) are shown in the first section, which will consist of two 'revenue accounts'.

The second section then brings together the total revenue from the two types of business and adds in any profit made on other non-insurance business. To this is added other items such as the investment return on investments other than those supporting the insurance business and tax on profit to give the overall profit to shareholders.

The statement of profit or loss typically starts with revenue accounts for each area of business of the form:

Each revenue account will take the form:

	Earned premiums (net of reinsurance)
+	**Investment income**
+	**Realised capital gains**
–	**Claims incurred (net of reinsurance) or benefits payable**
–	**Net operating expenses incurred (including investment expenses)**
	Balance on revenue account

where the investment income and realised capital gains are those earned on the investments held to cover the insurance liabilities. There may need to be transfers from the reserves to cover the actual liabilities which are payable.

For general insurance or long-term business, unrealised gains or losses on investments might be included.

There may be additional items in the revenue account depending, for example, on company practice, accounting standards *eg* IFRS 17 (Insurance Contracts), regulatory requirements *eg* Solvency II, or the purpose of the accounts.

The balances on the revenue accounts can then be transferred to the statement of profit or loss:

	Balance on general insurance revenue account
+	**Balance on long-term insurance revenue account**
+	**Investment income**
+	**Realised and unrealised gains (losses) on investments**
+	**Profit (or loss) from other ordinary activities before tax**
–	**Tax on profit (or loss) from all activities**
	Profit or loss for the financial year

where investment income and capital gains are those earned on investments relating to shareholders' funds / free reserves.

'Other ordinary activities' would be other business activities of the company that are not general or long-term insurance business.

2.4 Statement of financial position

Remember the balance sheet equation:

Assets = Liabilities + Equity

We can see that some of the assets of the business cover the liabilities and some of the assets cover the equity capital (or shareholders' fund or free reserves).

The statement of financial position contains the usual items plus, typically, these additional entries:

Assets

- **Assets held to cover insurance liabilities**

  Insurance companies consider the term of their liabilities and invest in appropriate assets. For example, long-term insurers tend to invest in medium- and long-term assets whereas general insurers tend to invest in short-term assets.

- **Assets representing free reserves**

  The shareholders' fund or free reserves is the value of the share capital and reserves of the business. The greater the free reserves, the more freedom the company has in its investment policy, *eg* it could invest in long-term assets that yield a greater return.

- **Reinsurers' share of technical provisions (see below)**

  If the insurer is using reinsurance, then the reinsurer will pay the insurer for their share of the claims. This can be shown as an asset in the balance sheet.

- **Trade receivables arising out of direct insurance operations (policyholders, shareholders)**

  These are amounts owed to the company by policyholders or sales intermediaries.

- **Trade receivables arising out of reinsurance operations**

  These are amounts owed to the company by reinsurers.

- **Prepayments and accrued income**

  Prepayments are amounts paid in advance. Accrued income is income that has accrued on an investment since the last payment.

Liabilities

- **Fund for future appropriations**

  This is a type of reserve applicable to some old types of life-insurance business.

- **Technical provisions:**

  – **long-term insurance business provisions, including the actuarially estimated value of the company's liabilities including bonuses already declared and after deducting the actuarial value of future premiums.**

  – **general insurance business provisions, including unexpired risk reserves and outstanding claims reserves.**

    The unexpired risk reserve is to cover the claims and expenses that are expected to emerge from an unexpired period of cover.

    The outstanding claims reserve is to cover the claims and expenses for all outstanding claims that have not yet been settled.

Shareholders' fund

In insurance company accounts, the assets less the liabilities equals the shareholders' funds.

Insurance company accounts will be considered in more detail in the relevant Specialist subjects.

Similar issues arise with respect to pension scheme accounts. Again, the relevant Specialist subjects will address these.

Question

State where the following items appear in the accounts of an insurance company.

Use the following abbreviations:

- P1 if it appears in the first section of the P&L
- P2 if it appears in the second section of the P&L
- A for assets
- L for liabilities
- S for shareholders' fund.

(i) investment income earned on investments relating to insurance liabilities

(ii) balance on general insurance revenue account

(iii) unexpired risk reserve

(iv) reinsurers' share of technical liabilities.

Solution

(i) P1

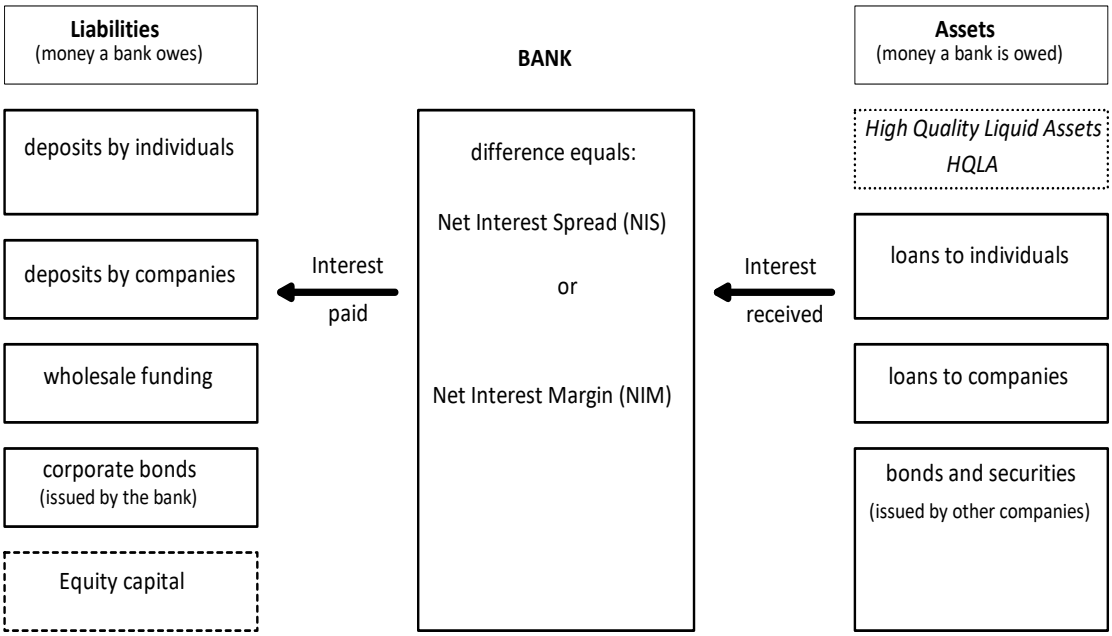
(ii) P1 (the bottom line) and carried forward to P2

(iii) L

(iv) A

3 Banking company accounts

3.1 Balance sheet



The above diagram is part of the Core Reading.

Banks hold equity capital to protect savers from unexpected losses.

Banks hold HQLAs to protect savers against withdrawals of deposits.

The diagram above shows how a bank would generate income on the right from its assets, and pay interest to those that it has borrowed from on the left.

The assets of a bank include cash (including reserves held at their central bank), loans to personal and corporate customers, bonds, equities and other securities.

A bank's assets comprise of investments that are due to be paid back to the bank over time such as loans and overdrafts given to individuals or companies, credit card debt, corporate and government debt that the bank has purchased, deposits of cash that the bank must have with the central bank, and certain other money market instruments that are 'highly marketable and liquid'.

The liabilities of a bank include deposits made by personal and corporate customers, wholesale funding and the bank's capital. The total amounts of assets and liabilities must be equal.

Wholesale funding consists of money borrowed in the money markets, usually from other banks. A bank can also raise money in the same way as other companies by issuing unsecured bonds in the stock market. Where these rank alongside depositors (as is usual), they are treated the same as other deposits.

Within a bank's liabilities, its capital must include equity capital, in the form of Common Equity Tier 1 (CET1) capital (see Chapter 4, Section 2), and may include contingent convertibles (see Chapter 4, Section 3.2) and debt capital (see Chapter 4, Section 1.1). CET1 capital can be used to absorb losses, including credit losses on loans, market losses on investments in bonds, equities and other securities, and operational losses from fraud, processing and customer-facing activities.

The way a regulator views capital can sometimes seem the wrong way round. In the event of a bank making losses, the regulator wants to ensure that the depositors and unsecured lenders are protected. If a liability ranks above those depositors, such as a debenture, the regulator will not view it as protection. If capital ranks below depositors, such as equity or preference shares, the regulator will view it as protection in a crisis. The lower it ranks, the 'better' the capital is, which is why equity capital is regarded as CET1 or 'tier 1' capital in the regulators' eyes.

A bank's assets must include sufficient cash or near cash, qualifying as high quality liquid assets (HQLAs), to provide a liquidity buffer against possible outflows of deposits during a 30 calendar day period of significant liquidity stress. This liquidity buffer is intended to avoid a run on the bank, which might happen if it was not able to meet demands to withdraw deposits.

Some of the information above relates to 'Basel III' regulations which are due to come into effect in January 2023. Banks currently operate under Basel II which has slightly less stringent requirements.

Key balance sheet ratios for a bank include:

1. **CET1 capital ratio: the ratio of a bank's CET1 capital to its total risk-weighted assets (a measure of the scale and degree of a bank's risks, across credit risk, market risk and operational risk). A bank's CET1 capital ratio must be at least 7%. However, at the end of 2019 (*ie* before the Covid-19 pandemic), many European banks had CET1 capital ratios around twice the minimum of 7%.**
2. **Liquidity coverage ratio: the ratio of a bank's high quality liquid assets to its expected outflows over a 30 calendar day period of significant liquidity stress. This ratio must be at least 100%.**
3. **Loan to deposit ratio: the ratio of a bank's personal and corporate loans to its personal and corporate deposits. A high loan to deposit ratio might suggest over-reliance on wholesale funding, which are generally regarded as less stable.**

A bank's 'risk-weighted assets' is a measure of the risk that the bank is taking, much of which will be default risk. If a bank owns a loan of £200*m* to a corporate entity which is rated 'A' by a credit rating agency, the Basel regulations will assign a risk weighting to that loan, such as 50%. The risk-weighted assets would then be calculated as 50% of £200*m* which equals £100*m*. If the loan was made to a more highly-rated entity such as 'AA+', the weighting might drop to 20% to reflect the lower risk. The sum of these across all assets reflects the total credit risk exposure and is referred to as the risk-weighted assets. It is complicated by the addition of risk-weighted assets that reflect other risks such as operational and market risks, but the concept is the same; the more risky the bank's operations, the higher the risk-weighted assets.

If a bank has total risk-weighted assets of £4,000*m*, and has equity capital of £360*m*, then it would have a ratio of $\frac{£360}{£4,000} = 9\%$ which exceeds the 7% minimum. If the ratio fell below the 7% minimum, the bank would either have to make its assets more secure, or raise equity capital in the stock market.

The reason for the 'loan to deposit' ratio requirement is to ensure that banks do not rely too heavily on money raised from other banks in the wholesale money markets. During the banking crisis, the money markets dried up, and banks that relied on that source of deposits found themselves unable to raise cash for their day-to-day operations. Many of these bank either failed or required central bank loans to survive. The regulators do not want this situation to repeat itself and therefore insist that banks have a sizeable proportion of their deposits raised from individual or corporate deposits.

3.2 Profit and loss account

Net interest income
+ Non-interest income
= Total income
– Expenses
– Impairments
= Profit before tax
– Tax
= Earnings for shareholders

Banks receive two types of income: net interest income and non-interest income.

Net interest income is interest received on interest-earning assets less interest paid on interest-earning liabilities. Non-interest income includes fees and commissions and trading profits. Non-interest income often represents a low proportion of a bank's total income.

Within a bank's expenses, some items can be related to product categories. However, a large proportion of a bank's expenses is likely to be shared costs, for activities such as central functions, IT, Treasury, marketing and distribution (including the costs of branch networks).

Impairments include credit losses. Under the previous accounting standard for financial instruments, IAS 39, impairments included credit losses as they were incurred. However, from 1 January 2018, under IFRS 9, impairments must include provisions for expected credit losses. Credit losses are subsequently written off against these provisions.

Question

In the past, banks took impairment costs when there was 'evidence' that a credit loss had occurred. What are the advantages and disadvantages of requiring banks to make provisions for credit losses that are expected to occur in the future?

Solution

Advantages

If the bank predicts that a loan is on a declining path and that the credit rating is likely to be reviewed downwards, then the bank will recognise the loss earlier. This is a more prudent approach.

The bank will model its credit portfolio, anticipating business cycles, and the effects of unexpected events such as a pandemic. This will allow shareholders to see the impact of these events earlier than if the bank was to wait until losses occurred.

Disadvantages

The process involves modelling the credit worthiness of an entity, which is by its very nature a subjective assessment. It could turn out to be overly prudent, or not prudent enough. Accountants believe that financial statements that are overly prudent can be as misleading as those that are not prudent enough.

Credit losses often rely very heavily on business cycles and 'black swan' events. These are almost impossible to predict, so the modelling could be largely guesswork.

Key profit & loss account ratios for a bank include:

1. **Net interest margin (NIM): this is total net interest income divided by average interest-earning assets. The NIM of a bank is typically around 2%. Net interest spread (NIS) is the difference between the average interest rate received on assets and the average interest rate paid on deposits. A bank's NIM and NIS may fluctuate over a business cycle, in response to greater or lesser competitive pressure.**

   The difference between NIM and NIS is very fine, and they can be viewed as being very similar measures. If a bank has interest earning assets of £1,000*m* on which is earns £60*m* interest, and has interest bearing liabilities of £1,200*m* on which it pays out £30*m*, then:

   $$\text{NIM} = \frac{£60m - £30m}{£1,000m} = 3\% \text{ and}$$

   $$\text{NIS} = \frac{£60m}{£1,000m} - \frac{£30m}{£1,200m} = 3.5\%.$$

2. **Cost/income ratio: this is the ratio of a bank's expenses to its total income. The cost/income ratio of a bank is typically around 60% to 70%. A bank's cost/income ratio indicates its operational efficiency. However, in comparing banks, allowance must be made for different cost/income ratios associated with different business mixes.**

3. **Return on capital: this is the ratio of a bank's after-tax earnings to its total capital. Investors in banks normally focus on return on equity (CET1) capital. This is a key measure of the performance of a bank.**

Chapter 13 Summary

Group accounts

Consolidated accounts are needed when one company owns a substantial proportion of another company. These accounts reflect the operations of the whole group owned by the parent or holding company, including its subsidiaries and associated companies.

Subsidiary company

Company S is said to be a subsidiary company of holding Company H when Company H has a *controlling interest* in Company S, *ie* holds the majority of the shares of Company S or controls the board of directors of Company S in some other way.

If Company H owns 100% of the shares in Company S, S is a *wholly owned subsidiary*.

If H owns less than 100% of the shares in S, S is a *partially owned subsidiary*. The portion held by other shareholders is termed the *non-controlling interes*t.

Consolidated accounts must be produced. This basically involves adding up the items in the statement of profit and loss and the statement of financial position, presenting the statements as if the group is a single unit. Any interrelationships between members of the group are cancelled.

Associated company

Company A is an *associate* of Company H if Company H has an investment in the shares of Company A that gives Company H a significant influence but not control over Company A.

Normally, a holding by H of between 20% and 50% of A's shares will make A an associate of H.

The consolidated statement of profit or loss and statement of financial position of the group include single line entries showing the parent company's share of the associate's income, assets and liabilities.

Goodwill

Goodwill represents the excess of the value paid for a subsidiary company over the value to the predator company of the share of assets purchased. It is shown in the consolidated statement of financial position of the group.

Non-controlling interest

In the consolidated statement of financial position, the value of the subsidiary's share capital and reserves that is owned by minority (non-controlling) shareholders is shown separately in the equity section, after the capital and reserves attributable to equity holders.

Insurance companies

Insurance companies complete their accounts in a manner comparable to other limited companies, but the preparation of insurance company accounts is complicated by two special features:

- The underlying contracts (liabilities) fall due outside the accounting period and are uncertain in size.
- Premature transfer of 'profit' to shareholders may endanger the financial stability of the company and the ability to meet future liabilities.

In order to address these features, insurance accounts contain special features.

The statement of profit or loss is divided into two sections.

The first section shows the revenue made on the main insurance business and is split into a general business account and a long-term business account.

	Earned premiums (net of reinsurance)
+	Investment income
+	Realised capital gains
–	Claims incurred (net of reinsurance) or benefits payable
–	Net operating expenses incurred (including investment expenses)
	Profit or loss for the financial year

The second section adds in other sources of profit to show the profit attributable to shareholders.

The statement of financial position has the usual items plus typically, for assets:

- Assets held to cover insurance liabilities
- Assets representing free reserves
- Reinsurers' share of technical provisions
- Trade receivables arising out of direct insurance operations
- Trade receivables arising out of reinsurance operations
- Prepayments and accrued income

and for liabilities:

- Fund for future appropriations
- Technical provisions for long-term and general insurance business.

Banks

Banks earn profits by earning more interest on their assets than they are required to pay to finance their liabilities. The difference is called the Net Interest Spread (NIS) or Net Interest Margin (NIM). In addition, a bank will need to regularly assess 'impairments' to the values of some assets, which will lead to further losses, and banks will earn profits from other activities referred to as 'non-interest income'.

Banks are heavily regulated to protect depositors in the event that the bank makes losses. This regulation can involve:

- requiring a bank to hold capital that ranks lower than depositors (for example, equity capital or Core Equity Tier 1 (CET1) capital)
- requiring a bank to hold a proportion of its assets in highly marketable instruments
- ensuring that the riskiness of a bank's asset portfolio, as measured by its risk-weighted assets, is not excessive with respect to its equity capital buffer.

Three key accounting ratios that reflect a bank's balance sheet strength include:

1. CET1 capital ratio which equals $\frac{\text{CET1 capital}}{\text{risk-weighted assets}}$

2. Liquidity coverage ratio which equals $\frac{\text{High Quality Liquid Assets}}{\text{30 calendar day stresses outflows}}$

3. Loan to deposit ratio which equals $\frac{\text{personal and corporate loans}}{\text{personal and corporate deposits}}$.

Three key accounting ratios that help analyse a bank's profitability include:

4. Net Interest Margin (NIM)
5. Cost to income ratio
6. Return on capital employed.

The practice questions start on the next page so that you can keep the chapter summaries together for revision purposes.

Chapter 13 Practice Questions

Exam style

All of the questions that follow are exam style.

13.1 A Ltd paid £400,000 for 200,000 shares in B Ltd. B Ltd's share capital was 250,000 £1 ordinary shares, and at the time of the share purchase it had reserves of £125,000. Calculate the goodwill associated with this purchase.

A £25,000
B £100,000
C £200,000
D £275,000 [2]

13.2 Filton plc has shares in three companies.

It has a 35% holding in Worthington Ltd and has a right to appoint 6 of the 10 directors.

It has a 55% holding in Bartley Ltd and has used its voting rights to appoint all of its directors.

It has a 25% holding in Dudley Ltd and has a right to appoint 3 of the 10 directors.

Which are subsidiaries of Filton plc?

A Dudley Ltd, Worthington Ltd and Bartley Ltd
B Worthington Ltd and Bartley Ltd
C Bartley Ltd only
D Dudley Ltd only [2]

13.3 Which of the following items does NOT occur in the 'revenue account' of insurance company accounts?

A earned premiums
B claims incurred
C investment income on investments relating to shareholders' funds
D realised capital gains on investments held to cover insurance liabilities [2]

13.4 Describe how non-controlling interests are treated in a consolidated statement of financial position, explaining why they are treated in this way. [5]

13.5 Company A takes over Company B. Immediately before the takeover, Company B's statement of financial position appeared as follows:

Company B	*£000s*
Non-current assets	240
Current assets	190
Assets	**430**
Ordinary share capital (10*p* shares)	60
Reserves	250
Long-term debt	120
Share capital and liabilities	**430**

The terms of the offer made to B's shareholders for every nine shares held in B were:

- 3 shares (50*p* market value each) in A *plus*
- 90*p* cash *plus*
- 2 £2 convertible preference shares in A (valued at par).

The terms of the conversion on the £2 preference shares are 5 ordinary shares for each £2 preference share.

Calculate the goodwill which will initially appear in A's consolidated accounts as a result of the offer assuming

(i) conversion does not take place

(ii) full conversion.

[5]

13.6 Shareholders of DEF bank have expressed their unhappiness at the low return that they achieve on their equity investment, which they define to be $\frac{\text{profits before tax}}{\text{share capital + equity reserves}}$. The rate of return appears to be below what shareholders in other banks earn.

Describe what steps DEF's management could take to improve the return and state the drawbacks of any such actions. [5]

Chapter 13 Solutions

13.1 Answer = B

Goodwill is calculated as $400,000-\frac{200,000}{250,000}\times(250,000+125,000)=100,000$

13.2 Answer = B

The parent company has a controlling interest in Bartley and Worthington but not Dudley.

13.3 Answer = C

The revenue account is concerned with revenue from normal insurance business. Investment income on investments relating to shareholders' funds appears in the P&L (the second section).

13.4 Non-controlling (or 'minority') interests are shown as a separate item in a consolidated statement of financial position. [1]

Minority interests are shown in the equity section, after the capital and reserves attributable to equity holders. [1]

If a parent company has a controlling interest in a subsidiary company, it holds a percentage of the subsidiary's shares but it controls all of its assets. [1]

Therefore it would not be acceptable to simply include the appropriate percentage of net assets (as would be the case for an associate company). [1]

Instead, on consolidation, all of the subsidiary's assets are included (including goodwill) along with a separate item to identify non-controlling interests. [1]

[Total 5]

13.5 (i) ***Goodwill arising assuming conversion does not take place***

Number of shares in B = $\frac{60,000}{0.1}=600,000$ [1]

Net asset value of B = £60,000 + £250,000 = £310,000 [1]

Value of A's offer = $\frac{1}{9}\times(3\times0.50+0.9+2\times2)\times600,000=£426,667$ [1]

Goodwill value of B = £426,667 – £310,000 = £116,667 [1]

(ii) ***Goodwill assuming full conversion***

Value of A's offer = $\frac{1}{9}\times(3\times0.50+0.9+2\times5\times0.50)\times600,000=£493,333$ [1]

Goodwill value of B = £493,333 – £310,000 = £183,333 [1]

[Maximum 5]

13.6 ***Increasing the return on equity***

There are a number of ways that DEF could increase the return up the level of its competitors, which include:

- investing the bank's assets in more risky assets, with lower credit ratings, which earn a higher return [1]
- reducing the amount of equity capital through a share buyback [1]
- increasing the size of the bank by making more loans and creating more interest-earning assets [1]
- improving efficiency and cutting costs such that the cost to income ratio is improved. [1]

The main problem with the first three of these suggestions is that DEF's capital ratio will suffer. A reduction in equity capital will lower the ratio, and an increase in risk or an increase in size will increase the risk-weighted assets. [1]

If the bank breaches the Basel capital guidelines it will be investigated by regulators. [1]

If the bank cuts costs by shedding staff, its risk control functions may suffer and its operational risk may increase, which would also increase the bottom line of the Basel capital ratio. [1]

[Maximum 5]

7 Evaluation of working capital

This section builds on the liquidity and efficiency ratios and considers a company's working capital management *ie* the decisions a company's management might take in running their businesses.

Working capital comprises current assets, less current liabilities.

Current assets are assets that are either cash or will be converted into cash in the normal course of business and consist of short-term investments including cash, trade receivables and inventory.

Current liabilities are liabilities that are due for payment within one year. Typical examples would be short-term loans, overdrafts and trade payables, all of which provide funds to finance current assets.

Working capital management is an important aspect of a company's financing activities. Companies need to select the optimal level of current assets and the optimal combination of long-term and short-term funds to finance those assets.

Insufficient liquidity (*ie* insufficient cash to meet the company's liabilities) could lead to:

- **deterioration of credit rating**
- **forced sale of assets**
- **bankruptcy, or**
- **liquidation.**

For example, if wage bills are not settled then the workforce will strike and if trade payables are not settled on time then the business will be unable to buy further goods on credit.

There are particular examples of this during the coronavirus pandemic when many firms were pushed into bankruptcy through inadequate cash and where some governments tried to alleviate this through the rapid provision of bank loans and grants.

On the other hand, excessive investment in cash and liquid assets would tie up funds in assets that generally offer little or nothing in the way of return. A company needs to have sufficient current assets available to meet immediate commitments, but it is inefficient to have excessive working capital.

In balancing these, a company will be aware that insufficient working capital can lead to a major crisis. It is generally safer to risk having too much working capital than too little.

Accounting ratios can be used to measure a company's liquidity and effectiveness of the management of its assets.

The current and quick ratios give us a valuable insight into the relationship between current assets and current liabilities.

Three other accounting ratios are also relevant; each measures the time taken to dispose of, or settle, an element of working capital.

Accounting ratio	Time taken to perform function	Turnover period
Inventory turnover period	**The average time taken to sell an item of inventory after it has been purchased**	**As an asset management/turnover ratio, shows how current assets are managed over time.** **Inventory turnover period depends on the production cycle of the industry.**
Trade receivables turnover period	**The time taken to collect payment from a credit customer**	**As an asset management/turnover ratio, shows how current assets are managed over time.** **Trade receivables turnover period is determined by credit terms offered by the firm.**
Trade payables turnover period	**The time that the company takes to pay for goods after their purchase**	**The number of days of payables shows how effectively payment of bills is arranged.**

Suppose we have calculated these three efficiency ratios with the following results:

- inventory turnover period = 32 days
- trade receivables turnover period = 44 days
- trade payables turnover period = 39 days.

This suggests that the company takes 32 days to sell an item of inventory. If it is sold on credit, this will result in a trade receivable which will then take an average of 44 days for settlement. So, it takes a total of 32 + 44 = 76 days from the acquisition of an item of inventory until there is cash flowing in from its subsequent sale and the customer's settlement.

However, the company only pays for goods on average 39 days after their purchase. This means that it does not have cash tied up in this sequence until day 39 and so the company only has cash committed for a total of 76 – 39 = 37 days.

The working capital cycle (or net operating cycle) of the firm is the time from payment to suppliers for the materials to receiving cash from the sale of goods produced from the materials.

The working capital cycle is equal to:

inventory turnover period

+ trade receivables turnover period

– trade payables turnover period.

Shorter operating cycles enable the company to generate cash faster and reduce the need for liquid assets and external financing.

The working capital cycle can be negative.

- This means that the company is selling stock and getting paid for it more quickly than it is paying for the goods it buys on credit.
- This may indicate the business is running efficiently.
- However, it could lead to strained relationships with suppliers, who are being used as a source of finance.

Looking at financial ratios over time or comparing the ratios with those of a peer group will provide a good indication of company's performance.

4.2 Advantages and disadvantages of sustainability reporting

Sustainability reporting is advocated because it:

- **compels organisations to recognise that actions taken now have implications for the future**
- **helps organisations to consider and communicate their sustainability vision and strategy in the context of their overall goals**
- **recognises the variety of stakeholders that are involved in the organisation and encourages businesses to consider the overall public interest in the decision-making process**
- **demands greater transparency, which then enables and empowers businesses, governments, consumers and citizens to make informed decisions.**

The major contributor to the development of international standards is the Global Reporting Initiative (GRI), an international independent organisation, which provides the world's most widely used standards on sustainability reporting.

Its guidelines, first reported in 2000, are broken down into three categories

- **economic**
- **social**
- **environmental**

with various 'aspects' under each category.

For example, under the environmental category, different aspects are related to emissions; water; and effluents and waste.

Some companies have been producing sustainability reports for many years – in fact, according to the Global Reporting Initiative 2017, 92% of the world's largest 250 corporations currently report on their sustainability performance.

In fact, sustainability issues, particularly climate-related ones, are now more frequently expected to form part of the main financial reports.

Climate-related financial issues include climate-related risks and opportunities. Climate-related risks include the increased costs from *physical* risks from climate change (*eg* from increased flooding) and the costs associated with the *transition* to a low carbon economy. These transition costs will depend on the government policies implemented to achieve climate targets.

Question

Give examples of possible climate-related opportunities for a large, multi-national chemical manufacturing company.

Solution

Possible examples include:

- improving the energy-efficiency of its manufacturing processes and so reducing costs
- innovating in the products it produces and so diversifying its product range
- attracting new customers, *eg* in countries with strict climate-related regulations.

Reporting carbon emissions allows stakeholders to appreciate how much financial risk is faced from the pricing of carbon emissions (including through the risk of reduced allocations under emissions trading systems, or carbon tax increases) or from having to stop using assets due to their polluting effects.

An emissions trading system is an approach a government may adopt to address pollution and meet its emissions targets. Under such a system, the government sets an overall limit on emissions (this limit will typically reduce over time) and issues permits to emit. Organisations which do not emit carbon (or emit less than their permits allow) can then trade permits with organisations with carbon emissions exceeding their permitted allowance.

Reporting carbon emissions also allows shareholders and stakeholders to have more information about sustainability issues so that they can base decisions on the policies and actions of the company.

Companies that want to be attractive to the widest possible range of shareholders and other stakeholders (customers, employees *etc*) will be conscious of their policy choices and their reporting of carbon emissions and other sustainability issues.

Companies report on sustainability issues because it:

- **enhances the company's image and reputation**
- **attracts and retains employees**
- **encourages stakeholder involvement**
- **creates competition within the industry.**

However, there are many potential problems of sustainability reporting, including:

- **The difficulties of measurement and projection, *eg* estimating the effect of water pollution and projecting these effects into the future.**
- **There is a danger that companies report the good news and hide the bad. Such behaviour leads to a lack of credibility in the reports.**

Question

Suggest ways in which the potential problem of companies reporting only good news may be addressed.

Solution

Possibilities include:

- companies reporting comparisons with any external benchmarks or industry standards, not just their own internal performance measures
- consistency over time in what information companies report
- companies always including areas requiring improvement in their reports.

The accountancy profession believes that, although sustainability reporting is challenging, it is a challenge that provides opportunities to develop the strengths of the profession in an important area.

Chapter 15 Practice Questions

Additional question

Which of the following is the least likely reason for a company making improvements to its sustainability reporting?

A to address concerns from one of the company's major shareholders
B to maintain competitive position if other similar companies report on their sustainability
C to make a simple addition to the financial reports that the company already produces
D to report appropriately on a material risk to the company. [2]

5 Motives for divesting

Companies cannot continue growing forever and they may, indeed, shrink or change their business plans thus divesting subsidiaries or units of the business.

- **This may be done because the relevant business unit is *not earning a sufficient return* on the equity needed to support it.**
- **It may be because a *potential buyer* for a business unit may value it more highly than the existing owner (perhaps because the potential buyer will manage it more effectively or be able to gain better synergies with the rest of its business).**
- **A company might wish to divest units because it wishes to *change its strategy* (either in relation to the focus of the business or in terms of its international interests).**
- **Trading in some countries might also become unprofitable or difficult for *political reasons*.**

5.1 Examples

Perhaps some of these points are best illustrated by two hypothetical examples.

1. **A health insurance company in a given country has a globally diversified business model but with a focus on Europe. Its European business is declining as a result of demographic factors and there are a number of Asian countries in which it has no presence. It has found that its return on equity and market size in Europe has fallen below an acceptable level and there is no prospect of it increasing.**

   It decides to sell the majority of its European business to another health insurer which can obtain greater economies of scale and to use the capital to develop operations in further Asian countries.

2. **An insurance company sells a variety of life and annuity business and has always had its own investment management subsidiary. It has sold a limited amount of unit trust business. However, it now finds that all its life business is best matched by portfolios of government and corporate bonds and thus does not need a general investment management operation. The rate of return on the capital invested in the investment management subsidiary has fallen.**

   It decides to close the subsidiary whilst selling the unit trust business to a specialist fund management company.

A recent example of a significant divestment is the sale by Lloyds of the TSB business and a large number of branches, though this was an action required as a result of decisions by the European Union rather than being a business decision. Another example, outside the financial sector, is the sale by Whitbread, a hotel and restaurant group, of the Costa Coffee chain to Coca Cola.

Question

Suggest likely motives for Whitbread's sale of Costa Coffee.

Solution

Whitbread could have narrowed its strategy to focus more on its hotel business. The proceeds from the sale of Costa Coffee may give it cash to enable it to invest in its hotel brands and expand its number of hotels.

The price offered by Coca Cola may have exceeded Whitbread's valuation of Costa Coffee if the synergies to Coca Cola (*eg* diversifying and achieving economies of scale within the drinks sector) were greater than those available to Whitbread.

Chapter 18 Summary

Motives for growth

The main motives are:

- to increase *profitability* benefiting from economies of scale, increasing market share and expansion into new and growing markets
- to increase *security* in terms of threat to and from other companies, barriers to entry, diversification, lower transaction costs, volatility, reputation
- *motivation* for employees and managers in terms of power, prestige, salary, stability of employment, ambition and morale.

Growth is a trade-off between these benefits and the costs of the expansion.

Constraints on growth

- Availability of finance
- Effect on the share price if cash is diverted from dividends
- Lack of management experience
- Limited time to prepare the workforce and management for changes
- Government policy on monopoly power and mergers

Methods of achieving growth

Internal growth involves expansion of existing facilities and production. Advantages:

- retain control
- avoid the disruptive influence of alien business cultures or practices
- avoid the risk of dealing with firms that lack integrity
- avoid unnecessary government intervention.

External growth involves buying existing facilities through takeover or merger. Advantages:

- an easier and quicker method of growth, especially if wish to expand geographically
- the opportunity to acquire assets or experience
- the opportunity to share the financial burden and the risk of a project
- the opportunity of a good use of spare cash for a mature company.

Most growth can be classed as

- horizontal *ie* the same stage in the production cycle
- vertical *ie* different stages in the production process
- conglomerate or diversification *ie* taking over a company in a different industry or expanding into a completely different industry.

Motives for divesting

The main motives are:

- a business unit not earning a sufficient *return* on equity
- a *potential buyer* valuing a business unit more highly than the current owner
- a change in *strategy*, *eg* in focus of business areas or locations
- trading in some countries becoming unprofitable or difficult for *political* reasons.

Evaluating a potential target

The following factors would be assessed by the acquiring company:

- resources of the target, *eg* technology, expertise, brand, raw materials, *etc*
- costs that could potentially be saved after the takeover
- market expansion potential using the target's client base and products
- opportunities to increase security of the company's profits by reducing competition, controlling different stages of production and diversifying profits
- compatibility between the two companies in terms of management style, culture and remuneration.

Steps involved in acquisition

1. Check government policy and relevant regulations.
2. Obtain shareholders' approval for the purchase of the target's shares.
3. Arrange the raising of finance (debt / equity) to purchase the target's shares.
4. Determine the payment method (*ie* cash, debt or shares) for the target firm's shares.

An approach will first be made to the target's board, who agree or fight the offer. If the takeover is *agreed* it is recommended to the target shareholders. If not the offer is dropped or taken directly to the target's shareholders; a *hostile* takeover.

Features of leveraged buyouts (LBOs)

- They involve a great deal of debt finance.
- They usually result in the target company being de-listed from the stock exchange.

Profits are often boosted due to:

- selling off the assets that are not needed
- gaining tax relief on the debt finance
- a new management team that focuses on reducing expenses and capital spending.

Management Buyouts (MBOs) are where some capital comes from the existing management team. Together with fresh debt finance it is used to buy out the company.

A small company engaged a firm of consultants to evaluate a very complicated investment opportunity. The consultancy devised a Monte Carlo simulation and ran a very large number of iterations. They discovered that the project generated a positive net present value for 85% of the simulations. The directors of the company believe that this result is sufficient for them to justify investing in the project.

Explain how the directors should go about interpreting the results of this simulation before making a final decision on the project. [5]

As the investment opportunity is very complicated, its modelling is also likely to be very complex. The directors should ensure they are happy that the model results are reliable. [1]

They should investigate the distribution of the net present values, looking at the size of both positive and negative outcomes. [1]

In particular, the results in the 15% of cases that the net present value is negative should be studied closely to identify any significant downside risks to be considered. [1]

If the losses were sufficiently large to potentially bankrupt the company, the downside risk of investing in the project may be unacceptably high even with the 85% probability of success. [1]

The anticipated income from the project should be taken into account. If the likely NPV is a small positive then that might not be sufficient to justify the 15% possibility of a loss. [1]

The directors should also consider other methods of evaluating the project. For example, they may look at a shareholder value analysis or internal rate of return. [1]

[Maximum 5]

Chapter 22 Summary

Calculating the required rate of return for a project

The use of the cost of capital to calculate the net present value in screening projects ensures that projects are only entered into that will enhance the return to shareholders, provided that it is adjusted to reflect the project risk.

The required rate of return should therefore reflect:

- the weighted average cost of capital
- the degree of systematic risk associated with the project.

The weighted average cost of capital can be calculated as:

$$WACC = \frac{Market\ value\ of\ debt}{Market\ value\ of\ debt + equity} \times net\ \text{cost}\ of\ debt$$

$$+ \frac{Market\ value\ of\ equity}{Market\ value\ of\ debt + equity} \times \text{cost}\ of\ equity$$

Systematic risk is that part of the return on a project that cannot be eliminated by investing in the same type of project many times over, nor by diversification.

If the systematic risk for a particular project is thought to be higher/lower than is usual for a company's projects, then in theory the discount rate used should be greater/lower than that which the company normally employs.

Adjusting the discount rate

A suitable adjustment to the discount rate might be based on:

- discount rates used by any companies which habitually engage in such projects
- an arbitrary addition
- the degree of cyclicality associated with the project
- the operating leverage of the project.

Certainty equivalents can be used to replace the individual risky projected cashflows and then discounted at a uniform rate of return.

Dealing with specific risks

Risks may be upside as well as downside. In order to deal with them we need to:

- identify them
- analyse them
- mitigate them.

Identification

The steps necessary to achieve an effective *identification of the risks* include:

- undertaking a high-level preliminary risk analysis
- holding a brainstorming session
- carrying out a desktop analysis
- setting out all the identified risks in a *risk register*.

A *risk matrix* can be used to systematically identify risks categorised according to the cause of risk and the stage of the project.

Causes of risk can be classified as:

- political
- business
- economic
- project
- natural
- financial
- crime.

The *stages of a project* include promotion of concept, design, contract negotiations, project approval, raising of capital, construction, operation and maintenance, receiving revenues and decommissioning.

Mitigation

Risks can be:

- avoided
- reduced
- insured
- shared
- transferred
- researched.