SA7: CMP Upgrade 2022/23 Page 1

CMP Upgrade 2022/23

Subject SA7

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 2022 CMP to make it suitable for study for the 2023 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 2023 *Student Brochure* for more details.

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 2023 exams.

Page 2 SA7: CMP Upgrade 2022/23

1 Changes to the Syllabus objectives

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

The syllabus objectives have not changed from 2022 to 2023.

SA7: CMP Upgrade 2022/23 Page 3

2 Changes to the Core Reading

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

Chapter 1

Section 1

The foreword now has the following amended paragraph and URL link ...

Please read the IFoA Examinations Handbook and IFoA Examinations Regulations before sitting any IFoA examination. For the 2023 exams, these will be updated and published in the weeks leading up to each exam session, and will be available under the Qualify webpages on the IFoA website:

actuaries.org.uk/qualify

... and the following paragraph has been removed:

At the time of writing (Winter 2021), the 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 following paragraph has been added at the end:

Resources

On the Curriculum pages of the IFoA website, candidates will find a list of suggested additional resources for this subject that complement the IFoA Core Reading. All titles are hyperlinked to their source publication or the IFoA Library. Where the resource is available through the IFoA Library, members, students and affiliates can 'Request' from the IFoA Library Service, subject to availability.

We recommend you read through the syllabus for this subject, located at the end of this Core Reading. The syllabus objectives have a useful cross-reference to the relevant Core Reading unit to support your exam preparation.

Chapter 3

Section 3.5

The following paragraph has been removed.

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

Transitional arrangements may be available for some aspects (eg technical provisions, risk-free interest rates) for a defined period (up to 16 years). The intention is to avoid unnecessary disruption of markets and availability of insurance products.

Page 4 SA7: CMP Upgrade 2022/23

Chapter 3

Section 4.1

The following paragraph has been removed.

Under Solvency II, the unit and non-unit components must be unbundled for the purposes of determining the technical provisions. The non-unit component can be negative.

Chapter 3

Section 9.1

The final paragraph has been re-written as follows:

An insurance company typically receives premiums before paying claims or benefits, sometimes for a very long period beforehand. Its liabilities are long duration while its assets are short duration. Depending on the nature of its business, it may not be concerned with short-term liquidity. A bank on the other hand has long-term assets (loans made to customers) and short-term liabilities (deposits from customers). It will be very focused on managing duration risk and liquidity risk.

In section 9.2 the definition of liquidity risk has been re-written as follows:

b) Liquidity risk – the risk that customers do not act independently but panic and want their money back at the same time, or in the case of a bank which relies on short-term funding through the capital markets, that it is unable to borrow when needed.

Chapter 3

Section 9.2

The following paragraph has been removed:

Capital acts as a buffer against future unidentified losses, thereby protecting clients. This must extend beyond 'normal' losses in any particular period — capital must be sufficient to cover even very improbable events if the institution is to be regarded as sound. Risk capital is, therefore, the amount needed to cover the potential reduction in the value of assets relative to liabilities, over a given time period, at a given level of confidence.

SA7: CMP Upgrade 2022/23 Page 5

Chapter 4

Section 4.2

The following paragraphs have been deleted:

In the UK, such companies are often traded in the Alternative Investment Market (AIM) and a new Techmark 100 index has been established to follow the performance of technology stocks.

The top four industries covering 50% of the market weightings of the AIM are currently oil and gas, technology, retail and goods and services (as of January 2014). In the United States, the Nasdaq market is dominated by technology companies (notably Microsoft and Alphabet).

Nasdaq acquired the equivalent Easdaq market for European stocks, based in Brussels. These indices now broadly cover a wide range of industries.

Chapter 4

Section 10

There are a number of charts in this section, some of which have been updated. For simplicity replacement pages are included at the end of this upgrade note.

Chapter 6

Section 7.5

The following bullet list has had an item added at the start:

Bank finance offers numerous benefits relative to raising finance in the capital markets. These include:

- the ability to raise finance quickly
- the development of a relationship between the company and the bank which can bring about stability of finance costs, known depth of access and flexibility to change terms
- costs of finance can be lowered by companies that use the bank for other services (eg paying fees for managing bond issuances)
- advice on finance due to a regular contact with the bank
- no need for credit rating agency involvement in management time.

Page 6 SA7: CMP Upgrade 2022/23

Chapter 8

Section 3

This section has a number of charts which have been updated. For simplicity replacement pages are included at the end of this upgrade note.

© IFE: 2023 Examinations

SA7: CMP Upgrade 2022/23 Page 7

3 Changes to the ActEd material

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

There have been some minor updates to the wording on events such as BREXIT and inflation levels to reflect the changes in circumstances and changes in these variables.

ActEd Course Notes

Chapter 9

Section 5 and 6

There was a large section of ActEd text relating to the historical returns on assets. This material was of use in the sorts of questions that were asked in Subject SA6, but these questions no longer appear in the same way in Subject SA7. This ActEd text has therefore been deleted. Likewise there was a table of market yields that contained up-to-date yield information on a variety of markets in Section 6. This has also been deleted.

Page 8 SA7: CMP Upgrade 2022/23

4 Changes to the X Assignments

Assignment X3

Question X3.1 has been replaced with a more topical question on high inflation and its impact on business. The question and its solution included as replacement pages at the end of this update note.

Assignment X3

Question X3.2 (iii) has been simplified slightly. The new question and its solution are as follows:

- X3.2 The loan stock trades in the market at a yield margin of 1% pa above government bonds, which offer a gross yield of 4% pa. The company finance director (FD) has measured the beta of the company's shares by observing their movements relative to the FTSE BorisLand All-Share index over the last year (the FTSE BorisLand All-Share gave a return of 10% over the year). The FD has stated that the measured beta of 1.8 seems to be rather high, and that it may put investors off if the company were to have a rights issue. The FD thought that changing the gearing level to around 25% (ie 20 debt / 80 equity) would decrease the equity beta to around 1.2, which was more acceptable. You may assume that corporation tax in BorisLand is payable at 30%.
 - (iii) Calculate the impact of a change to 25% gearing on the company's equity beta and comment on whether the FD's claims are correct. [5]

Solution

(iii) Reduced level of gearing

We know that the risk-free rate is 4% pa and that the company's debt yields 5% pa, therefore we can deduce that the beta of the company debt is given by:

$$5\% = 4\% + \beta_{deht} \times ERP$$
 [½]

where the equity risk premium (ERP) is 10% - 4% = 6% pa

Therefore
$$\beta_{debt} = 0.17$$
 [1]

Using the current mix of debt and equity, and the known betas of the debt and geared equity we can determine that the underlying assets (and therefore the ungeared equity) of the company have a beta of value:

$$\beta_{assets} = \frac{500}{1,000} \times 0.17 + \frac{500}{1,000} \times 1.8 = 0.98 = \beta_{equity}^{ungeared}$$
 [½]

Thus
$$R_{assets} = 4\% + 0.98 \times 6\% = 9.9\%$$
 [1]

SA7: CMP Upgrade 2022/23 Page 9

Suppose that the capital structure was changed to 20% debt / 80% equity. Then the geared equity beta would be given by the formula:

$$\beta_{assets}$$
 (or 'ungeared beta') = 0.98 = 0.2×0.17 + 0.8× β_{equity}^{geared} [1]

therefore
$$eta_{equity}^{geared} = 1.18$$
 [½]

At this point we have assumed that there is no change to the required return on the company's debt (and therefore its beta) as a result of the restructuring process. [½]

The outcome is that the FD is correct in the conclusion about the change in the company's equity beta. [½]

[Maximum 5]

Page 10 SA7: CMP Upgrade 2022/23

5 Other tuition services

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

5.1 Study material

We also offer the following study material in Subject SA7:

- Flashcards
- Mock Exam and AMP (Additional Mock Pack).

For further details on ActEd's study materials, please refer to the 2023 *Student Brochure*, which is available from the ActEd website at **www.ActEd.co.uk**.

5.2 Tutorials

We offer the following (face-to-face and/or online) tutorials in Subject SA7:

- a set of Regular Tutorials (lasting three full days)
- a 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**.

5.3 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 2023 *Student Brochure*, which is available from the ActEd website at **www.ActEd.co.uk**.

5.4 Feedback on the study material

ActEd is always pleased to get 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 SA7@BPP.com.

SA7-04: Asset markets Page 47

There are relatively few drawbacks other than the fact that the charges will be quite high relative to equity and bond CISs. Investors may also find that the forestry portfolio is invested more globally than they would prefer, exposing them to currency and political risks.

Perhaps the lack of ability to control the investment directly could be a negative. But in reality there are not many sub-sectors into which to divide forestry, so control may not be that much of an issue.

Depending on the commodity involved, the investment horizon could be short (many crops have 12-month or shorter growing cycle) or very long term (a timber tree may take many years to reach suitable size for harvesting).

The investor would also need to evaluate whether they have the necessary skills to set up, manage and harvest or extract the commodity. A typical pension fund, for example, is unlikely to have expertise running a plantation but may deem it worthwhile to obtain such expertise or partner with a production company if the perceived reward from the plantation investment is high.

Page 48 SA7-04: Asset markets

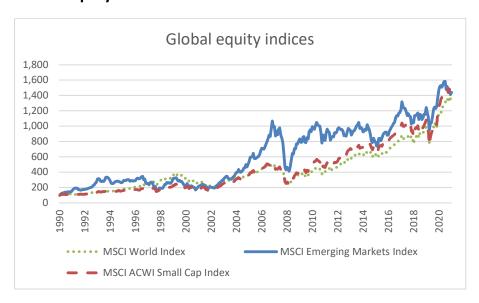
10 Historical performance of asset markets

The following section is quite long and looks at the historical performance of various asset classes. It is more important to know the general shape of the historical performances, and the reasons for the trends and any sharp movements, rather than know the exact returns over historical periods.

The following charts illustrate the historical behaviour of various main market indices and indicators.

10.1 Equity markets

Global equity markets



Source: MSCI: IFoA calculations

The World index is the one that is less volatile in the picture, and emerging markets is most volatile.

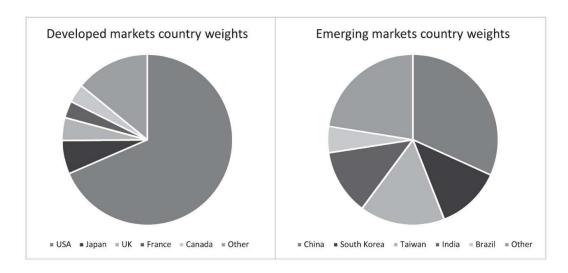
Performance of the MSCI World Index, a widely used index for global developed market equities, and the MSCI Emerging Markets and small cap indices, rebased and shown from Dec 1990 – Dec 2021.

The MSCI World index actually measures both developed and emerging markets together, however the large relative size of the developed markets means that in practice the performance tracks developed markets.

SA7-04: Asset markets Page 49

The World Index is dominated by developed markets, notably the USA. Note how performance is positive overall, but with significant negative periods corresponding (in the case of World Index):

- to the 'dot.com' bubble bursting in 2000-2001
- to the 2008-2009 financial crisis
- (in the case of the Emerging Markets Index) additionally to the Russian and emerging markets debt crisis of 1997-1998.



Source: MSCI; As at 31 December 2020

If the colour categories cannot be easily seen in black and white, the segments begin at 12 o'clock and work clockwise (eg in the first graph USA is the largest, then clockwise Japan, UK, France, ...)

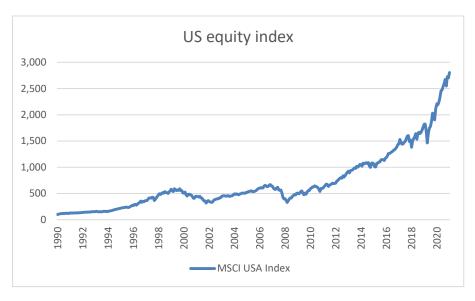
The USA is the world's largest equity market, representing over half of global market capitalisation. In emerging markets, China has grown rapidly over recent decades to become the largest single constituent.

The information technology sector is the largest individual sector in both, making up around 20% of each index.

The historic dividend yield for both indices was just under 2% as at 31 December 2020. It has been in the range 1.5%–2.5% for most of the past decade.

Page 50 SA7-04: Asset markets

US equity markets

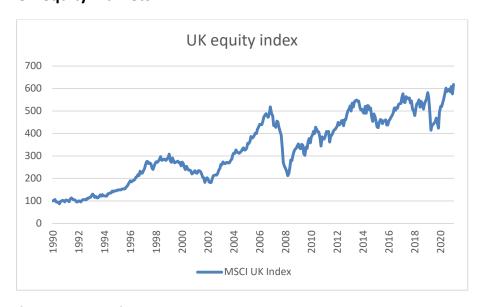


Source: St Louis Federal Reserve; IFoA calculations

The performance of the S&P500 Index is widely used for large cap shares in the US equity market, and the Russell2000 Index for small cap shares.

Small cap shares have outperformed very slightly over the period 1990 to 2021 but with periods of under- and outperformance at various times.

UK equity markets



Source: London Stock Exchange; IFoA calculations

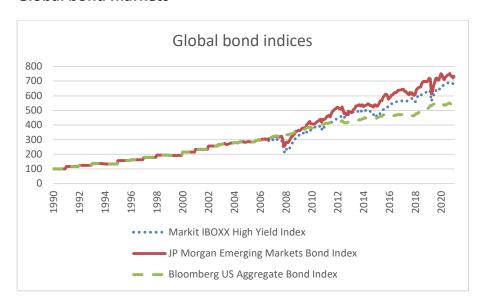
Performance of the MSCI UK Index, the main market index for the UK equity market, rebased and shown from Dec 1990 – Dec 2021.

SA7-04: Asset markets Page 51

The performance pattern is broadly similar to the US market index. More recently the higher number of 'mega cap' technology companies on the US market has resulted in some divergence in performance.

10.2 Fixed income markets

Global bond markets



Source: iShares.com; IFoA calculations

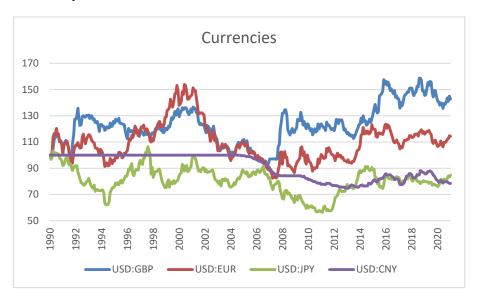
Performance of the Markit iBoxx US Liquid Investment Grade Corporate Bond Index and Markit iBoxx US Liquid High Yield Bond Index, both representative of the US bond market, rebased and shown from Dec 1990 – Dec 2021.

As might be expected bond indices have displayed a smoother, less volatile (and overall less rewarding) profile than comparable equities. Having said that, high yield bonds suffered particularly during the 2008-2009 financial crisis; this may be as expected since the crisis was foremost a *fixed income* or *credit* crisis rather than one affecting equities more generally.

Performance of the JP Morgan Emerging Markets Bond Index, shown above, is a representative index of emerging market bond performance, rebased and shown from Dec 1990 – Dec 2021.

Page 52 SA7-04: Asset markets

10.3 Currency markets



Performance of the GBP/USD, EUR/USD, JPY/USD and CNY/USD exchange rates, rebased and shown from Dec 1990 – Dec 2021. An increase in the chart level indicates a *weakening* of the respective currency against the US Dollar.

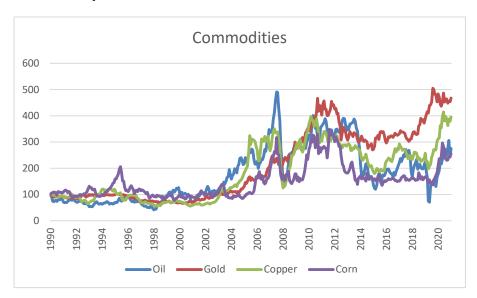
A rise in the currency chart indicates a weakening currency relative to the dollar. The smoother chart is the Canadian dollar, the weakest performer (top line) is the pound, and the top performer (bottom line) is the Yen. Many of these charts would change materially if they included the Ukrainian conflict and should be reviewed online nearer the exam date.

Some exchange rates are driven by market forces whereas others tend to be managed by the relevant Central Bank (that is, the movement in the exchange rate is a combination of market forces and intervention by the Central Bank to achieve a particular level or particular path). The Chinese Renminbi for example, tends to experience less volatile behaviour than, say, UK Sterling because the People's Bank of China is more active in managing the path of its exchange rate.

Over time, exchange rates have fluctuated, however there is also an argument that exchange rates are somewhat mean-reverting – in that they return to a long-term level after short-term deviations. Certainly looking at the historical performance as above shows there have been large intra-period moves, but without an obvious trend in favour of any one major currency. Currencies which are undervalued tend to result in cheaper exports for the country in question, which increases the inflow of foreign currency from foreign consumers, which in turn causes the local currency to re-appreciate. As a consequence, many investors prefer to hedge out their currency exposure, or to engage in short-term tactical currency trading. Few investors consider unhedged currency positions as long-term strategic allocations.

SA7-04: Asset markets Page 53

10.4 Commodity markets



Source: macrotrends.net; IFoA calculations

Performance of oil, gold, copper and corn spot prices, in nominal terms, rebased and shown from Dec 1990 – Dec 2020.

Commodity prices typically exhibit greater price volatility than equities. In particular, commodities can be prone to 'bubble' and 'depression' behaviour, where belief of a shortage (or conversely belief of excess production) has a significant impact on short term prices. Also, there is an argument that the price of a commodity does not necessarily have any long-term growth underpin – unlike, say, a company which can grow its earnings year by year. Continuously increasing commodity prices would imply either an ever-worsening shortage caused by some combination of ever-increasing demand (with constant supply) or constant demand with a depleting resource. New sources of production or substitutes for demand are often found, causing the market to adjust back to a 'normal' level. An example of this would be the discovery / invention of the shale oil process over recent decades which enabled large previously-untapped oil reserves to be accessed. This was initially driven by a high oil price, promoting the discovery and development of new drilling techniques which in turn led to an increase in supply.

Students should be aware of the major events that have occurred in the last 10 years, and the events that dominate financial market discussion leading up to the exam dates (for the 2023 exams for example, that means events up to the end of 2022).

They often say that history never repeats itself, but it often rhymes. This means that the same situations rarely occur exactly as they did before, but certain similarities in the outcomes can be foreseen and predicted.

Page 54 SA7-04: Asset markets

This page has been left blank so that you can keep the chapter summaries together for revision purposes.

3 Key global economic and monetary trends

3.1 Monetary Policy and Central Banks

In 1971, the US officially terminated the convertibility of the US Dollar into gold, thereby making the US Dollar a fiat currency. A fiat currency is one without any intrinsic value. This brought to an end the Bretton Woods agreement for the management of international monetary regimes established at the end of World War II, whereby internationally currencies, not backed by gold, could be converted into US Dollars, which was convertible into gold. The Bretton Woods agreement was a quasi-gold standard. Before Bretton Woods, the gold standard was in operation whereby international currencies were mostly convertible into gold.

Since 1971, the money of most countries does not have any intrinsic value. Historically in such regimes the money eventually became worthless as governments began to print increasing amounts of it. As Voltaire put it, 'Paper money eventually returns to its intrinsic value'.

A graph showing the growth of OECD broad money (M3) since 1990 is given below:

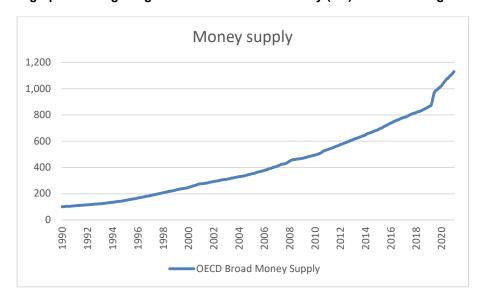


Figure 8.2

Source: https://data.oecd.org/money/broad-money-m3.htm

Broad money (M3) is defined by the OECD as currency, deposits with an agreed maturity of up to two years, deposits redeemable at notice of up to three months and repurchase agreements, money market fund shares/units and debt securities up to two years.

The graph shows that money supply has increased at a significant rate since the end of Bretton Woods, and very significantly since the start of 2019 in response to the COVID19 pandemic.

130% 120% 110% 100% 90% 80% 70%

1960 1965 1970 1975 1980 1985 1990 1995 2000 2005 2010 2015 2020
——OECD

A graph showing OECD broad money as a percentage of GDP is given below:

Source: OECD

50%

Figure 8.3

The graph is based on data from the World Bank and shows broad OECD money supply as a percentage of GDP increasing considerably since the collapse of Bretton Woods. For example, in UK the percentage went from 40% to almost 140% from 1960 to 2015.

Since the financial crisis of 2008 - 2009, the main monetary policy used by the large developed economies in the world has been QE. This involves the central banks printing money and buying assets that increase the size of their balance sheets.



Question

Discuss the reasons why QE has become the dominant monetary policy in developed countries since the crisis.

Solution

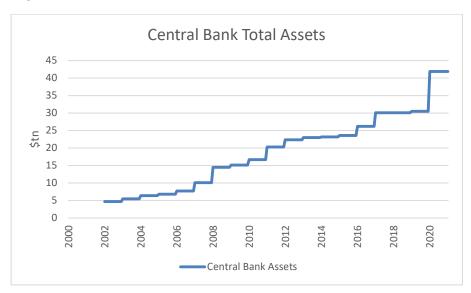
One of the main reasons is that the other traditional tool, lowering and raising short-term overnight interest rates, has become constrained by the fact that rates in most developed countries are close to or at zero. If central banks wish to stimulate growth (through borrowing) then there is no more scope for interest rate reductions. QE is then the tool of choice as its use is not constrained. A central bank can theoretically increase its balance sheet indefinitely as it is not subject to regulatory constraints such as Basel II or Basel III.

A second reason is that the developed countries have found that the currencies of countries that do not embark on QE strengthen on the FX markets, causing difficulties for exporters, and causing an increase in imports from overseas. It has therefore become difficult to resist the trend when other countries are engaging in QE. This is linked to the fact that some central banks may believe that competitive devaluation of their currency is the right thing to do at this stage in the economic cycle.

A third reason is the threat of deflation. This has been considered to be a danger since various economies became stuck in a devaluation 'spiral', whereby consumers put off any purchases because they believed that prices would be lower in a year's time. This further weakened spending and therefore caused companies to further decrease prices to sell their products, and hence deflation became worse. Many developed country central banks believe that QE is a way to avoid this, by ensuring that the commercial banks have plenty of scope to increase their lending books and expand money supply.

A fourth reason is perhaps that QE can lead to a catch-22 situation, whereby if a central bank that has undertaken significant QE states that the policy is to end or be unwound, the bond markets can collapse. This leaves the central bank with large losses (which are transferred to the government that underwrote the policy).

A graph showing the increase in the size of central bank balance sheets in these countries is given below:



Source: Statista

Figure 8.4

At the time of the financial crisis the rapid increase in central bank balance sheets was unprecedented, and in relative terms remains a very significant increase indeed. With the benefit of hindsight the continued application of QE and more recently the response to COVID 19 has resulted in balance sheets today being many multiples larger than they were before the financial crisis.

3.2 A brief history of political economy

Most western developed economies are 'capitalist' as distinct from the more centrally planned economies of communist and formerly communist countries.

Capitalist economies aim to give more economic freedom to their people. This freedom has usually enabled people to take more risk, by giving them greater access to markets and to speculate on these markets, which may result in a better allocation of capital to profitable projects (as those projects with higher expected returns attract capital). However, the same freedom also increases the volatility of the capitalist economy, as people are free to be fearful and greedy at different points of the economic cycle.

The easier access to markets brought about by financial deregulation and improvements in technology has arguably brought in more investors less well equipped to make good investment decisions (particularly individual investors) which might be regarded as also contributing to the greater volatility.

Some of the challenges of operating a free economic and political model are summarised in a discussion by the American public relations expert, Edward Bernays:

'It might have been better to have, instead of propaganda and special pleading, committees of wise men who would choose our rulers, dictate our conduct, private and public, and decide upon the best types of clothes to wear and the best kinds of food to eat. But we have chosen the opposite method, that of open competition. We must find a way to make free competition function with reasonable smoothness. To achieve this society has consented to permit free competition to be organised by leadership and propaganda.'

3.3 Quantitative Easing

Undoubtedly the most significant policy of the recent past has been Quantitative Easing (QE). Its impact and relationship to financial markets is summarised in the graph below:

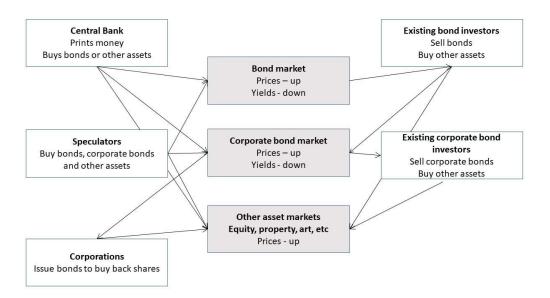


Figure 8.5

General comment

The Subject SA7 exam will consist of up to four longer questions which should be answered in a period of 3.25 hours. Although the later assignments reflect this structure, Assignments X1 to X4 include a series of smaller questions aimed at testing your understanding of a greater number of topics to help build your knowledge of the course. Assignments X1 to X4 also contain at least one long exam-style question which should give you a feel for the difficulties that such questions pose.

X3.1 MEAL is a manufacturer of washing machines and produces machines at the top end of the quality range, charging a premium over other manufacturers. The company has continuously innovated and has a number of components that improve energy efficiency, environmental efficiency and machine longevity. The company has been financed using significant amounts of debt, such that the accounting values of the shareholders' capital and reserves is very similar to the accounting value of its loan stock, both being equal to £500 million.

In the last year or so, global inflation has risen sharply, pushing fuel prices and metal prices up by a significant factor, therefore creating supply chain issues for MEAL. Profitability has dropped sharply, and the CEO believes that the situation is likely to continue in the medium term.

- (i) Describe the difficulties that manufacturing companies such as MEAL face in times of sharply higher inflation. [6]
- (ii) Describe any positive aspects for MEAL of this new economic environment. [4]

Due to the uncertainty in the economy, the CEO has suggested that MEAL should have a rights issue in order to pay down some of its debt.

(iii) Discuss the pros and cons of this suggestion from the perspective of MEAL's main stakeholders. [5]

As an alternative suggestion, the CEO has proposed sharply reducing the budget for research, and the budget for staff training for a temporary period, in order to maintain the firm's profitability.

(iv) Discuss the advantages and disadvantages of these suggestions for MEAL. [6] [Total 21]

All study material produced by ActEd is copyright and is sold for the exclusive use of the purchaser. The copyright is owned by Institute and Faculty Education Limited, a subsidiary of the Institute and Faculty of Actuaries.

Unless prior authority is granted by ActEd, you may not hire out, lend, give out, sell, store or transmit electronically or photocopy any part of the study material.

You must take care of your study material to ensure that it is not used or copied by anybody else.

Legal action will be taken if these terms are infringed. In addition, we may seek to take disciplinary action through the profession or through your employer.

These conditions remain in force after you have finished using the course.

SA7: Assignment X3 Solutions Page 1

Assignment X3 Solutions

Solution X3.1

(i) Difficulties faced in times of higher inflation

Companies face rapidly rising cost pressures in times of high inflation, due to the increase in raw material prices, fuel and energy prices. [1]

Unless the company can rapidly increase the price of its goods to maintain its profit margin, then it will find its profits squeezed. It is not easy to raise prices of finished products because they are often sold well ahead of being manufactured in forward agreements at a pre-determined price.

[1]

Estimating the price at which to sell a future product is difficult. The company can add a 20% premium to the cost of raw materials and manufacturing costs, but still find that after the deal has completed, the proceeds are not sufficient to purchase the next order of raw materials because the prices have risen so sharply over the period.

[1]

When inflation is high, employees and unions demand higher salary increases, and MEAL may find that its staff costs are running above expectations and above budget, and that staff relations are becoming difficult. [1]

In a high inflation environment, central banks raise interest rates, which increases the costs on companies' bank and short-term debt. [1]

Also, long-term corporate debt will be priced to give a yield above inflation, so the yield on long-term debt will also rise. As MEAL's debt matures and has to be refinanced, it will be conducted at increasing rates of interest.

If the inflation is caused by excess demand, then supply chains can break down as other manufacturers out-bid MEAL for existing supplies. This can affect anything from computer chips to lubricating products to specialist glass products, all of which will be required in MEAL's business.

[Maximum 6]

(ii) Positive aspects of higher inflation

If MEAL can keep salary rises below inflation, then its staff costs will fall in real terms, which can increase profits. This is easier when inflation is high, when the economy is experiencing difficulties and when unemployment is rising.

[1]

High inflation undermines the national currency. When the currency weakens it will be easier for MEAL to export its products abroad as its product will look more competitive relative to overseasmanufactured products. [1]

Likewise, overseas manufacturers that sell their product in MEAL's domestic market will have to raise their prices sharply when the domestic currency fall, or they will not cover their own costs.

This will make MEAL's product in the domestic market more competitive.

[1]

MEAL's competitors may not be able to manage their business when inflation surges, leading to some of MEAL's competitors going bust. This should make it easier for MEAL to raise its domestic product prices as competition will decrease.

In some circumstances and in some countries, companies are allowed to reduce realised gains by increasing their costs by inflation over the period that an asset has been held (country-specific, and not the case in the UK at present). This can reduce corporation tax and increase profits. [1]

[Maximum 4]

(iii) Pros and cons of a rights issue

Pros

Having a high amount of debt when profits are under pressure is dangerous for any company.

Debt interest and debt repayments must be made otherwise the company will be in breach and will be wound up, however, equity dividends can be suspended.

[1]

During uncertain times, it is less likely that MEAL will find willing lenders when debt comes up for repayment. If it cannot refinance the debt it will have to find the funds to pay it off which may require a firesale of profitable parts of the business. This will be less of an issue if debt is paid down using equity shares.

Increasing equity and reducing debt will reduce the geared beta of the shares, making them less risky and perhaps more appealing to future investors. [1]

Cons

In difficult economic conditions it is challenging to convince equity shareholders to back a rights issue. If a large number are opposed then the rights will not succeed, or will be voted down. If the rights issue is pressed through, the share price may fall sharply. [1]

A lower share price exposes MEAL to the threat of a takeover.

A rights issue may be seen by the market as a sign that MEAL is experiencing cashflow difficulties and raise the fear of default. This could upset MEAL's business, causing customers to cancel orders and banks to reduce credit lines.

There are many costs of financial distress, such as employees not wanting to work for MEAL, shareholders worrying about having to defend against legal action taken by debt providers, and even the concern by shareholders that management will run the company inefficiently in a drive to avoid financial distress (such as turning down profitable projects to retain cash). These worries may weaken the share price.

The reputational impact may be particularly extreme for a 'high brand' company such as MEAL that relies on its premium reputation and charges higher prices. [1]

Reducing debt will reduce the expected return on the shares. Debt is cheaper than equity, and therefore projects financed by debt will generate higher profits for shareholders. Reducing debt and increasing equity will make the shares less attractive from a return perspective. [1]

[Maximum 5]

[½]

SA7: Assignment X3 Solutions Page 3

(iv) Cutting budgets for research and training

Research

Only through research can MEAL ensure that it has a premium brand, and only because of its premium brand can it charge high prices for its products. [1]

If research is cut back or stopped, then MEAL's product reputation will begin to fade, and it will have to price its products to be competitive with the cheapest in the market. This could have a serious impact on profitability. [1]

On the plus side, research costs a lot of money and much of it does not result in anything that can be utilised by the company. [½]

Also, many of the results of research take years to come through to improving a product. [½]

MEAL can probably cut back research for a period of time without having a material impact on the quality of its existing product line or the reputation of its products in the marketplace. [1]

Many research projects take years to complete, and even if MEAL stops funding new research, the costs of ongoing projects will continue for a long time. The change may have limited immediate impact.

Training

Staff training is essential to maintain product quality for a manufacturer. It is key to the quality assurance function, and if it is stopped, then mistakes will quickly be experienced, and costs will rise.

Staff may leave if they find that they are not being trained, as it will affect their ability to advance their careers and skill sets. [1]

Training is an annual budget, and can be cut very quickly to have an immediate impact on profits.

[1]

[Maximum 6]

[Markers award marks for other relevant ideas on research and training budgets and the impact on the firm's business.]

All study material produced by ActEd is copyright and is sold for the exclusive use of the purchaser. The copyright is owned by Institute and Faculty Education Limited, a subsidiary of the Institute and Faculty of Actuaries.

Unless prior authority is granted by ActEd, you may not hire out, lend, give out, sell, store or transmit electronically or photocopy any part of the study material.

You must take care of your study material to ensure that it is not used or copied by anybody else.

Legal action will be taken if these terms are infringed. In addition, we may seek to take disciplinary action through the profession or through your employer.

These conditions remain in force after you have finished using the course.