Subject CB2

CMP Upgrade 2023/24

CMP Upgrade

ActEd often produces a free CMP Upgrade, which provides details of changes to the Syllabus, Core Reading and ActEd materials. However, in 2024 Subject CB2 is changing in a number of ways, including moving to online, objective-based assessment, and this has resulted in major changes to all of the Subject CB2 materials that include questions. There have also been some changes to the structure of the Modules in this course. It is therefore not practical to produce a full upgrade.

This CMP Upgrade provides some details of the changes to the Syllabus Objectives and Core Reading only. Limited details are given of the large number of changes to the ActEd text, checklists or practice questions at the end of each chapter. It also only gives high level details regarding changes to the X Assignments – none of the new or changed questions are included. **We strongly recommend that you use the 2024 study materials for the 2024 exams.**

We offer 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 respectively in this subject. Please see our 2024 Student Brochure for more details.

0 Retaker discounts

When ordering *retaker-price material*, please tick the relevant box when using the e-store.

Students have the choice of purchasing the full CMP (printed or eBook) or just the Course Notes (printed).

Further information on retaker discounts can be found at:

acted.co.uk/paper_reduced_prices.html

1 Changes to the Syllabus

All of the syllabus objectives for subject CB2 have been updated. These changes broadly relate to the wording and language of the objectives rather than the content.

In addition to the re-wording of syllabus objectives, a number of 2023 syllabus objectives have been merged together for 2024.

2 Changes to the Core Reading

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

Module 2

Section 1.7

An additional sentence has been added to the penultimate paragraph of 'The Neoclassical approach' after the words '…perception of its value'. This additional sentence reads:

'However, when consumption and production are all in equilibrium, the price will reflect costs of production too as resources flow into industries where the price consumers are willing to pay is higher than the cost of production until an equilibrium is established.'

Module 13

Section 1

Box 26.5 has been removed from the Core Reading from 2024 and so has been removed from the 2024 materials, including references to it in the guidance and checklist.

Module 14

Section 1.1

The following sentence at the end of this section has been removed:

'Development of an efficient banking sector together with developing its financial market and financial instruments will enable it to move towards achieving its economic objectives.'

Module 14

Section 3

The 2023 Core reading included the following sentences at the very start of the Module:

'At the time of writing (Winter 2022), the enduring effect of the coronavirus pandemic on both the global economy and financial markets will not be known for some time. The 2022 version of the textbook contains some material relating to the pandemic but this version of the Core Reading does not attempt to fully address these areas.'

This wording has been updated for 2024, and combined with some wording about Great Britain's exit from the European Union. An updated version of the Core Reading for 2024 is shown below:

'The 11th edition of the textbook includes some content on the economic effects of the coronavirus pandemic, as well as some updated data.

The longer term effects of the coronavirus pandemic are still uncertain. Where relevant, core reading has been updated to include short-term impacts, however this version of the

core reading does not attempt to address all areas impacted by the coronavirus pandemic or any anticipated longer term impacts.

The United Kingdom left the European Union on 1 January 2021 without an EU-wide arrangement for the operation and regulation of financial services and this continues to be the situation. This version of the core reading reflects the situation as of 31 May 2023.'

For 2024, we have included the revised wording in the introductory Module 0, rather than within Module 14.

Module 14

Section 3.1

There have been some minor changes to the Core Reading included within the text on 'Asset Bubbles' in this section.

The background reference materials included in the 2023 Core Reading at the end of this section have also been removed.

Replacement pages for Module 14 Section 3.1 can be found at the end of this upgrade.

Module 14

Section 5.1

There is some additional Core Reading added to the very end of Section 5.1. It reads as follows:

'The fact that crypto currencies lie largely outside the regulatory system is seen as an advantage by some and a problem by others. It would seem unlikely that financial stability problems would emerge from crypto currencies themselves, though they could arise from the use of derivatives tied to crypto currencies and from the failure of crypto currency exchanges. If an exchange failed, it could set off a chain of events which could lead to a key player in the financial system lacking liquidity or having its insolvency impaired.

Central banks are also exploring the adoption of crypto currencies. This is partly a recognition of the reduced role that cash is playing in the economy (especially since Covid). There is a wide variety of models that are being explored. The crypto currency could be issued directly by a central bank and citizens could have a digital central bank wallet. Alternatively, digital tokens could be issued by the central bank but via the private sector banking system.'

Module 17

New section of Textbook added to Core Reading – 'Central Banks and Inflation Targeting':

Chapter 21 Section 5 of the Textbook has been added to the Core Reading for 2024 in addition to sections 1 and 2.

We have added a new section on this material within the Course notes to this Module, and renumbered the subsequent sections. (In 2024 this is Module 19 rather than Module 17, due to course re-ordering). Additional pages can be found at the end of this upgrade.

Module 18

Section 4

The appendix to Chapter 19 of the Textbook ('The IS-LM model') is no longer part of Core Reading from 2024.

As a result, we have removed most of Module 18, Section 4 (the IS-LM model) from the Course notes. The parts of that section on 'the goods and money markets' and 'the IS curve', which relate to Chapter 19, Section 3 of the textbook is still part of Core Reading. Module 18, Section 5 ('the IS-MP model') therefore now references all of Chapter 19, Section 3 of the textbook, including some elements which were previously in Module 18, Section 4, and for 2024 has been renumbered as Module 18, Section 4. There have also been some changes to the questions within these sections and the Practice Questions at the end of Module 18 as a result.

Module 21

Section 5

The appendix to Chapter 25 of the Textbook ('The Open Economy and IS-LM analysis') is no longer part of Core Reading from 2024.

As a result, we have removed Section 5 of Module 21 ('The Open Economy and IS-LM analysis') from the Course notes.

3 Changes to the ActEd material

The ActEd text has changed to reflect the new method of examination. In particular, guidance relating to old question types has been removed, and a number of 'wordy' questions have been replaced with OBA questions, which are more exam realistic. **Due to the large number of these changes, these are not listed here and we strongly recommend that you use the 2024 study materials for the 2024 exams.**

One clarification to the 2023 Subject CB2 notes, which we have made for 2024 is detailed below, which relates to the inflation policy of the European Central Bank within Module 15 Section 3 is:

'Finally, there is a minor inconsistency in the textbook in this section regarding the inflation policy of the European Central Bank (ECB). In the section 'The policy setting', the fifth paragraph states that 'The ECB, within the statutory objective of maintaining price stability over the medium term, has decided on the target of keeping inflation *below*, but close to, 2 per cent over the medium term.' This was, indeed, the ECB's policy prior to July 2021. However, Box 22.8 explains how this policy was then subsequently changed. The first paragraph under the heading 'The target of monetary policy' in Box 22.8 includes: 'Since July 2021 the ECB has adopted a *symmetric* medium-term 2 per cent inflation rate target. This replaces the former target rate of below, but close to, 2 per cent over the medium term'.

4 Changes to the X Assignments

The X Assignments have been changed significantly to reflect the new objective-based assessment of this subject. We have not provided the changes in this upgrade.

If you would like the new assignments, 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:

acted.co.uk/paper_reduced_prices.html

5 Other tuition services

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

5.1 Study material

ActEd might release additional products throughout the year, so please keep an eye on our website at ActEd.co.uk for the latest news on products.

We also offer the following study material in Subject CB2:

- Flashcards
- Mock Exam and AMP (Additional Mock Pack)
- PEQAS (Past Exam Questions with ActEd Solutions)

For further details on ActEd's study materials, please refer to the 2024 *Student Brochure*, which is available from the ActEd website at **ActEd.co.uk**.

5.2 Tutorials

We offer the following tutorials in Subject CB2:

- a set of Regular Tutorials (lasting a total of four days)
- a Block (or Split Block) Tutorial (lasting four full days).

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

5.3 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 **CB2@bpp.com.**

3 The history and consequences of banking crises

This section looks at the causes of banking crises, the responses of policymakers when they occur and also one or two wider issues relating to them. This material was new to the Subject CB2 syllabus in 2019 and has been amended for the 2022 exams.

3.1 History and consequences of banking crises

Economic cycles

Economies have typically shown cycles of growth above and below their long-term trends, with periods of rapid growth and periods of low growth or recession. Periods of rapid growth have often been encouraged by lower interest rates (to encourage growth) and readily-available bank credit, while periods of recession have often been caused by higher interest rates (to combat inflation) and tightening banking credit.

Economic cycles pose a greater challenge for banks than they do for insurance companies. In periods of rapid growth, strong competition can erode banks' margins, while in periods of recession rising unemployment and poor corporate performance can lead to much higher credit losses on bank lending to individuals and businesses. It is prudent for banks to build up their capital in periods of economic growth, so that they can absorb higher credit losses in periods of recession.

This isn't unique to banks nor even financial institutions. It could be argued to apply to some extent to individuals, small firms, large firms, banks, insurance companies and the government.

Asset bubbles

Economic cycles can be extended, on the upside and subsequently on the downside, by asset bubbles and bank lending. Asset bubbles can be encouraged by excessive monetary growth or bank lending, creating an imbalance between demand and supply and leading to a rapidly-rising price, with both investors and banks expecting the rise in price to continue.

Such expectations cause speculation, which causes further price increases.

When the price of the asset reaches an unrealistic level and buyers are no longer prepared to purchase the asset, the bubble bursts, and the price of the asset falls, often quite sharply. Falling asset prices lead to losses by investors and by the banks that lent to them. If banks become more cautious about lending, their actions can add to recessionary pressures, amplifying the downside. The bursting of the bubble may be precipitated by a change in monetary policy with central banks increasing interest rates or sharply reducing monetary growth in order to deal with the consequences of earlier excesses.

Asset bubbles are not a new phenomenon. The first major financial bubble was *tulipmania*. In the 17th century, tulip flowers were brought into Holland from Turkey. When the demand for this unusual flower began to increase significantly, investors and speculators kept bidding to buy tulips and pushed prices up so that, at the peak of the market, tulips were more expensive than gold. However, the bubble burst when a buyer failed to collect his purchase and fear spread through the market that others might do the same. So confidence in the market was lost and prices collapsed in a matter of days.

More recent bubbles have included the rise in Wall Street prior to the Crash of 1929, Japanese land prices in the 1980s and the technology or 'dot.com' bubble in 2000.

A feature of asset bubbles is the psychology that develops and feeds the bubble. Previous investors are reluctant to sell in case they miss a further rise in prices. Potential investors rush to buy, worried that they might have to pay higher prices later. Speculators are drawn in by the expectation that prices will continue to rise. These behaviours reflect the emotions of fear and greed in a rapidly rising market.

The Austrian school of economics is relevant to the study of asset bubbles – see Module 16 Section 1.11, especially the last paragraph.

Banking crises

Banking crises occur when a number of banks fail or come very close to failure. In such circumstances, a run on one bank (*ie* customers withdrawing their deposits) can cause customers of other banks to lose confidence in the safety of their deposits and can result in widespread bank failure.

The failure of one bank can have a knock-on impact on other banks with which it is connected – for example, through inter-bank deposits or derivative transactions. The banking sector is more inter-connected than the insurance sector.

For further details on banking failure due to systemic risk see Section 1 of this module.

Asset bubbles can lead to banking crises. When asset prices fall, banks suffer losses if their customers who had invested in the asset are unable to repay their loans in full. Also, banks may themselves have invested in the asset, and suffer losses on their own investments.

In addition, after a bubble in which many banks have participated, the actions of individual banks can make things worse for other banks. For example, if one bank sells the asset at depressed prices, it will lead to larger losses by other banks. Alternatively, if one bank cuts back its lending to protect its capital position, its action can add to recessionary pressures and lead to greater losses on banking lending.

Banking crisis 2007-08

The banking crisis of 2007-08, though it had some novel features, was in fact a classic financial panic following an asset bubble.

Ahead of the banking crisis, the asset bubble was in US house prices. However, when the bubble burst, the problems that arose came not from direct investment in property but from securities based on US mortgages, particularly from collateralised debt obligations (CDOs), complex securities based on sub-prime (*ie* higher risk) mortgage lending in the US.

The volume of such CDOs increased rapidly in the 2000s, with increased supply and demand. On the supply side, US legislation encouraged US banks to support the needs of low- and medium-income neighbourhoods: this encouraged US banks to engage in sub-prime lending. On the demand side, US interest rates had been reduced to low levels after the 'dot.com' bubble burst in 2000.

CDOs based on sub-prime mortgages offered higher interest rates, with the expectation that risk would be reduced by diversification within the pools of sub-prime mortgages. Indeed, this expectation led to senior tranches of CDOs being rated AAA by credit rating agencies.

In the event, the expected benefits of diversification did not materialise. US house prices had risen across the country and, when they fell, they fell by similar amounts across the country. So the correlation between sub-prime loans was higher than had been assumed, and values of CDOs fell sharply.

When the US house price bubble burst, some banks were holders of CDOs, particularly of lower-grade tranches. Because these CDOs were held in banks' trading books, they had to be marked to their market values, meaning that the affected banks suffered substantial losses in 2008.

Memorable events in the banking crisis of 2007-08 include, in the UK, queues forming outside Northern Rock branches in September 2007 as customers sought to withdraw their deposits, prior to Northern Rock being rescued by the UK government and, in the US, employees removing their personal possessions from Lehman Brothers following its failure in October 2008.

The response to banking crises

After the failure of Lehman Brothers, governments in various countries, including the US and the UK, intervened to support their banking systems and to prevent a systemic chain reaction.

Changes to the Basel regulations for banks over recent years have addressed issues that became apparent in the banking crisis of 2007-08. Banks are now required to hold more equity capital (Common Equity Tier 1 (CET1) capital) to absorb losses and to hold sufficient liquidity to cope with outflows during a period of liquidity stress.

An important lesson from the banking crisis is the need to consider system-wide risks as well as bank-specific risks.

Lehman Brothers illustrated the risk of contagion from banks that are 'too big to fail'. Banks that are systemically-important, globally and within individual countries, must now hold additional capital as a systemic risk buffer. In addition, in the EU, all banks must have recovery and resolution plans in place so that, in the event of problems, they can recover if that is possible or, if not, they can fail in an orderly manner, without creating systemic risk.

Regulation and systemic risks in the banking sector were discussed in Section 1 of this module.

3.2 The recent crisis and rationality

Economics is the study of human behaviour and assumes humans make decisions rationally and not unduly based on emotions.

Classic economic theory is based on the idea that individuals are rational. For example, consumers buying goods and services are assumed to maximise utility and investors faced with uncertainty are assumed to maximise expected utility. However, there is an increasing body of empirical evidence suggesting that in practice emotional and psychological factors often influence economic decisions.

Since the crisis of 2008, psycho-analysts have begun to take more note of the behaviour of the participants in the stock market and have discovered human emotions have a critical impact on financial markets.

For example, there is evidence that *group*, or *herd*, *behaviour*, whereby investors copy the behaviour of other investors (whether rational or not) contributes to stock market cycles.

Other explanations for bubbles are based on the management of monetary policy, as discussed in the final paragraph of Module 16, Section 1.11.

The classic economic theory focuses on explaining the way that economic agents behave but it does not concern itself with whether the result is good or bad, moral or ethical. The crisis has generated discussion by focusing attention on ethical issues. For example, the rescue of the major banks by governments has caused the debate about moral hazard and private gain/public loss.

3.3 Checklist

Task	*√when completed*
Ensure that you can:	
• explain what is meant by an asset bubble	☐
• explain how banking crises can arise	☐
• describe the causes of the 2007-08 banking crisis	☐
• outline government's response to the 2007-08 banking crisis	☐
• outline the failings of classic economic theory.	☐

3.4 Questions

Question

Describe the moral hazard issue that arises if, in the event of a financial crisis, the government rescues financially distressed banks.

Solution

Suppose there is a financial crisis and the government rescues financially distressed banks. This will lead the banks to believe that in the event of future financial difficulties, they are again likely to be rescued by the government. Believing this to be the case may encourage the banks to undertake more of the risky lending activities (*eg* to sub-prime borrowers), so increasing the possibility of financial difficulties in the first place. This is because if all goes well and few sub-prime borrowers default on their loans, then the banks are likely to make large profits, whereas if many borrowers default and the banks incur substantial losses, then the government will bail them out and effectively share the losses.

5 Central banks and inflation targeting

5.1 What's included in this section

- Credibility and the delegation of monetary policy
- The EAPC / LRPC and DAD / DAS frameworks
- Central banks and a Taylor rule
- The central bank and economic shocks

5.2 Guidance

As a guide to the reading, the following might be of help:

- The reading in this section builds upon the *expectations-augmented Phillips curves* introduced in the previous two sections of this module. It then combines this with the *DAD-DAS* model, which is covered in Chapter 20, Section 3 of the textbook, in order to examine the relationships between actual and expected inflation, output and unemployment. Chapter 20, Section 3 of the textbook is not part of the Core Reading and so students may not have read about the *DAD-DAS* model. Students may wish to read that section, or alternatively, the below summary of the *DAD-DAS* model before progressing onto the Core Reading set out below.
- The *DAD-DAS* model is essentially the *AD-AS* model with inflation on the vertical axis instead of the price level. The *DAD* curve slopes downwards because an increase in inflation is assumed to lead to the central bank raising interest rates, resulting in a fall in AD and hence real national income. The *DAS* curve slopes upwards because an increase in inflation is assumed to lead to an increase in profitability for firms (at least until wages and other costs catch up), resulting in them supplying more.
- This section starts by considering reasons why a government may wish to delegate monetary policy to a central bank, and then focuses on how a central bank can use interest rates to manage inflation and what the implications can be. This links to the material on the *IS-MP* model in Module 18. Box 21.6 is particularly helpful in seeing some of the potential advantages of a central bank, rather than a government, having control of monetary policy, Including in relation to inflation bias.
- The material on Taylor rules and on the response to economic shocks consider whether a central bank should focus **only** on using interest rates to target inflation, or whether other objectives (*eg* in relation to real national income or unemployment) should also be reflected in their mandate and their actions.
- This material was new to the Subject CB2 syllabus in 2024.

5.3 Reading

Task	***√when completed***
Read Chapter 21, Section 5	☐

5.4 Checklist

Task	*√when completed*
Ensure that you can:	
• define the following key terms:	
– inflation bias	☐
– credibility (of policies)	☐
– time inconsistent (& time consistent) policy announcements	☐
– Okun's law	☐
– Taylor rule (in the context of central banks / interest rates)	☐
– inflation – output stabilisation trade-off	☐
– divine coincidence in monetary policy	☐
• discuss how the success of government policy depends on the credibility of its targets	☐
• explain the shapes of the DAD, DAS and EAPC curves, and discuss what is reflected by their gradients	☐
• illustrate the concepts of inflation bias and credibility by using indifference curves combined with EAPCs	☐
• explain the relationship between the DAS curve and EAPC curve, and outline factors that would shift these curves	☐
• outline the reasons many countries have increasingly turned to inflation targeting as their main macroeconomic policy	☐
• discuss the use of a Taylor rule and illustrate the effect of different Taylor rules on the DAD curve	☐
• show how the response of central banks to economic shocks differ depending on whether a simple inflation target or a Taylor rule is used.	☐

5.5 Questions

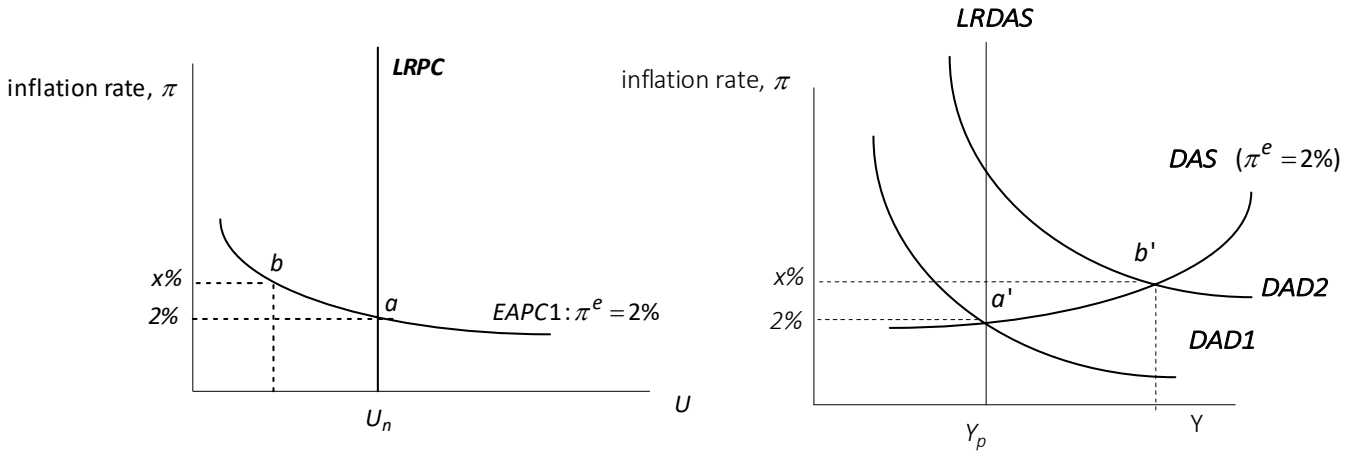
Question

An economy is currently in equilibrium with output and unemployment at their long-run equilibrium values and inflation on target. The central bank is inflation averse and has control of monetary policy and a clear inflation target. The population believe that the central bank will be successful in keeping inflation close to the target. Which of the statements below is likely to be true?

A Both the EAPC and the DAS curve will be relatively flat.
B Both the EAPC and the DAS curve will be relatively steep.
C The EAPC curve will be relatively flat, and the DAS curve will be relatively steep.
D The EAPC curve will be relatively steep, and the DAS curve will be relatively flat.

Solution

Option A.



Suppose that we initially have actual inflation equal to target inflation at 2% *pa*, with output at Y_p and unemployment at U_n, as shown in the two diagrams above. Then suppose that an exogenous economic shock occurs – for example increasing aggregate demand. This will cause the central bank to raise interest rates to control the impact on inflation. The DAD curve will shift to the right and there will be a movement along the EAPC curve.

Both the *DAS* curve and the *EAPC* curve show the short-run trade-off between inflation and economic activity. As the central bank has control of monetary policy and people believe that it will be successful with inflation targeting, the central bank should find it relatively easy to keep inflation under control (and so close to the target of *2% pa*), meaning the move from *a'* to *b'* on the diagram on the right will correspond to only a small increase in inflation (from *2%* to *x%)*. This will mean a relatively flat *DAS* curve. Similarly, this will mean that the move along the *EAPC* curve illustrated on the left hand side diagram from point *a* to point *b* will also reflect only that small change in inflation, hence a relatively flat *EAPC* curve.

Question

Explain, with reference to its equation, what is meant by a Taylor rule.

Solution

A *Taylor Rule* takes two economic objectives into account. It typically states how much the real interest rate must be raised if:

- inflation is above the target, or
- real GDP is above the potential level (or unemployment is below the natural rate).

The relative importance of the two objectives will be decided by the government or the central bank.

The general form of the Taylor rule equation is as follows:

$$r = r^* + b(\pi - \pi^*) + c(Y - Y_p)$$

where:

- r is the real interest rate set by the central bank
- r^* is the real interest rate consistent with long-run equilibrium in the economy
- π is the current inflation rate
- π^* is the target inflation rate
- Y is the current level of real GDP
- Y_p is the potential level of real GDP
- b, c are positive constants (in the textbook these are denoted w_π and w_Y).

The equation implies that the central bank will raise the real interest rate if inflation goes above its target value or if real GDP goes above its potential level, with *b* and *c* representing the weights attached to the two economic objectives.

For example, a higher value of *b* indicates that the central bank is more concerned with high inflation. Consequently, it will raise the real interest rate more sharply when inflation is above its target level, resulting in a greater fall in real GDP.