

# Subject F105

## CMP Upgrade 2022/23

### CMP Upgrade

This CMP Upgrade lists the changes to the Syllabus, Course Notes and X Assignments 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 CMP at a significantly reduced price if you have previously bought the full-price CMP in this subject. Further information on retaker discounts can be found at [https://acted.co.uk/south\\_africa.html](https://acted.co.uk/south_africa.html)

This CMP Upgrade contains:

- all significant changes to the Syllabus
- additional changes to the ActEd Course Notes and Assignments that will make them suitable for study for the 2023 exams.

# **1 Changes to the Syllabus**

There are no material changes to the Syllabus Objectives.

## 2 Changes to the Course Notes

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

LIBOR has been replaced by a series of reference rates *eg* SONIA or SOFR (see change in Chapter 4 below). There are a good number of references made to LIBOR throughout the Course Notes. These have been changed to 'reference rate'. Other amendments to the wording of reference rates have been included below.

### Chapter 4

#### Page 4

The Core Reading and ActEd text at the top of page 4 has been adjusted to read:

**In the UK, money market interest rates were historically often quoted relative to LIBOR (the London Inter Bank Offered Rate).**

**LIBOR has been replaced by a series of reference rates such as the Sterling Overnight Index Average (SONIA) or for US Dollars the Secured Overnight Funding Rate (SOFR).**

SONIA/SOFR and LIBOR differ in their calculation. LIBOR rates are forward-looking interest rates determined by asking a panel of banks to estimate rates at which they could borrow from other banks over a variety of terms. SONIA/SOFR are backward-looking overnight interest rates based on actual transactions. Whilst LIBOR incorporated some credit risk, SONIA and SOFR are considered to be (very nearly) risk-free.

#### Page 16

The first sentence of ActEd text now reads:

The floating-rate payment to be paid at a particular date may be based on the value of the relevant forward-looking floating rate at the *previous* cashflow payment date.

#### Page 17/18

In the first paragraph of the example, '1-year (spot) LIBOR rate' has been replaced by '1-year forward-looking (spot) reference rate'

The second column of the table in both question and solution has been changed to read 'Forward-looking reference rate % at start of year'.

#### Page 27

In the final paragraph of ActEd text, the text in brackets now reads:

(as the first floating rate payment will be based on the level of the forward-looking floating rate at outset)

## Chapter 8

### Section 1.3

The first paragraph on page 5 has been extended to include the following:

**Regulators will also be aware that professional market participants are likely to have superior knowledge to the general public and many elements of financial market regulation are designed to protect the general public from abuse by professionals.**

## Chapter 12

### Section 1.5

The penultimate sentence on page 11 has been changed to read:

Instead the contract is settled at time  $T_1$ , based on the forward-looking interest rate then prevailing.

### Section 1.8

The reference to LIBOR in the opening paragraph has been removed. It now reads as:

**The cashflows are usually discounted using a reference rate like (a forward-looking version of) SONIA or SOFR zero-coupon interest rates (since this reference rate is the cost of funds for a financial institution).**

The penultimate sentence on page 19 now reads:

Here we are implicitly assuming that the floating-rate bond pays a forward-looking market rate of interest and the same variable rates are used both to estimate the future coupon payments and to discount them.

The question/solution on page 21 now refers to forward-looking floating reference rates.

### Section 1.9

The procedure has been adjusted to read:

1. **Calculate forward rates for each of the reference rates that will determine swap cashflows.** This is done using the formula described in Section 1.4.
2. **Calculate swap cashflows on the assumption that the reference rates will equal the forward rates.** In other words, we assume that the forward rates will actually be realised.
3. **Set the swap value equal to the present value of these cashflows.** Here the cashflows are discounted using the appropriate reference zero rates.

## Chapter 13

### Section 1.4

On page 11, the opening paragraph has been adjusted to remove the reference to LIBOR:

**Suppose the interest rate  $R_K$  on the floating rate note is reset every three months to equal a reference interest rate (the time between resets is known as the *tenor*). The payoff provided by the cap will be:**

$$L \times 0.25 \times \max(R_K - R_X, 0)$$

The question/solution at the end of page 11/start of page 12 now refers to 'the forward-looking reference rate'.

On page 12, the first paragraph of Core Reading has been adjusted to remove the reference to LIBOR:

**Each payoff is a call option on the reference interest rate observed at time  $t_k$  (with the payoff occurring at time  $t_{k+1}$ ) and is known as a *caplet*. The cap is a portfolio of  $n$  such options.**

### Section 1.8

The third row of the table on page 15 is now titled 'Forward-looking reference rate at quarter start'.

### Section 1.10

On page 17, the section of Core Reading has been adjusted to remove the reference to LIBOR:

**Assuming that the swap rate at the maturity of the option is lognormally distributed, we consider a swaption with the right to pay  $R_X$  and receive a floating reference rate on a swap that will last  $n$  years starting in  $T$  years. We suppose there are  $m$  payments per year under the swap and that the principal is  $L$ .**

## Chapter 14

### Section 2

The oil and gas industry has now been renamed as 'Energy'. The first paragraph of the Energy section reads:

**These companies are involved in the extraction and supply of oil and gas products used throughout the economy as well as the production of renewable energy.**

## Chapter 15

### Section 3.1

The second paragraph of Core Reading has been reduced to read:

**From June 2001 the weightings of all FTSE constituents were altered to reflect the availability of stock in the market, called a 'free float' adjustment.**

## Section 3.2

The Core Reading paragraph on the Dow Jones index has been amended to read:

**The Dow Jones Industrial Average, commonly known as the Dow Jones index, is made up of 30 shares. It is an unweighted index. It provides a quick guide to shares in the industrial sector, but it is not representative of the American equity market as a whole. It is of limited use as a true gauge of market performance. Nevertheless, it is very widely reported.**

## Section 3.4

The description of DAX has been updated to include 40 rather than 30 shares:

**The Deutsche Aktienindex (DAX) is a real-time index of 40 leading shares. It is a total return index.**

## Section 4.1

The number of stocks included in the FTSE All-World Index has been updated:

**Finally, there is a FTSE All-World Index comprising the Large/Mid-Cap aggregate of around 4,000 stocks from the Global Equity Series.**

# Chapter 23

## Section 3.4

On page 17 the second paragraph of Core Reading has been adjusted to remove the reference to LIBOR:

**The equity swaps can be modified to provide international diversification (by swapping returns on a domestic index for a foreign index) or to move between market sectors. Similarly, interest rate swaps can be used to modify the shape of a fixed interest portfolio, swapping floating rate reference interest rates returns for fixed interest returns on long-term bonds.**

### 3 Changes to the X Assignments

Question X3.3 has been adjusted to refer to 'forward-looking reference rates'. All dates have been moved forward by 4 years.

### 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 [SP5@bpp.com](mailto:SP5@bpp.com).