



Association of Colleges

FRS102 as at 31 July 2020

Advice on assumptions &
calculation spreadsheet

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Introduction

Background and Scope

We have been instructed by the Association of Colleges to provide a spreadsheet and report to enable the Colleges within the Association of Colleges (the “Colleges”) to value their enhanced (unfunded) pensions for inclusion in their financial statements under FRS102. This report is addressed to the Association, but should be made available to all Colleges intending to use the spreadsheet.

This report, and the accompanying spreadsheet, will permit the Colleges to make such provision, based on the yields, other financial assumptions and most recent mortality tables as at 31 July 2020.

The report and spreadsheet were last produced in 2019. It is our recommendation that this report should be reviewed annually, and Colleges relying on a report from a previous period should do so with the understanding that they will need to determine an appropriate yield and will need to use this yield in the spreadsheet, and that the most up-to-date mortality experience will not have been included.

This report sets out our advice on the proposed actuarial method and approach to deriving the actuarial assumptions for pension accounting purposes for the period.

It is the responsibility of the Directors of each College to set the actuarial assumptions to be used for pension accounting purposes. The proposed assumptions represent one possible set of assumptions that could be used for pension accounting purposes, but other assumptions may also be valid.

The advice in this report sets out the methodology we have used to derive the assumptions as at 31 July 2020.

The importance of the assumptions adopted will depend on the materiality of the pension disclosures in the context of the financial statements as a whole.

This report, and the accompanying spreadsheet, is for use solely in connection with the preparation of the Colleges’ financial statements for the period, and should not be used for any other purpose.

This report may not be disclosed to any third parties (with the exception of the Colleges’ auditors), except as required by law, without our express prior written consent.

Please note that to the fullest extent permitted by law, Broadstone does not accept or assume responsibility to anyone other than the Association of Colleges and their members for their use of this report.

This report complies with the Financial Reporting Council’s Technical Actuarial Standards where material to do so and in a manner proportionate to the decisions being taken by its users.

FRS102 requires that the actuarial assumptions adopted should be unbiased (neither imprudent nor excessively conservative), mutually compatible, and selected to lead to the best estimate of the future cashflows that will arise under the plan.

The present value of the liabilities, the profit and loss charge and the other pension disclosure items are sensitive to certain key assumptions. Sensitivity information to the discount rate and inflation assumptions can be obtained from the spreadsheet.

We set out below details of the principles that were used to derive each of the key assumptions for pension accounting purposes as at the last time this exercise was undertaken (31 July 2019) along with our proposals for the current year-end. The proposed approach to deriving the key assumptions is consistent with that adopted at 31 July 2019, except where indicated.

Please note that whilst the assumptions described in this report are, in our opinion, appropriate for valuing the liabilities for pension accounting purposes, they may not necessarily be appropriate for valuing liabilities for scheme funding purposes.

Appendix A sets out a summary of the assumptions based on the proposed methodology and on market conditions at 31 July 2020.



Actuarial Assumptions

Discount Rate & Inflation

Discount Rate

The discount rate assumption for pension accounting purposes must be determined “by reference to market yields at the reporting date on high quality corporate bonds”. In this context, high quality is usually deemed to be AA-rated. The currency and term of the corporate bonds must also be consistent with that of the pension scheme’s future cashflows.

We have set the discount rate with reference to the yield on the iBoxx over 10 year corporate bond index. This approach is consistent with that adopted last year.

The discount rate as at 31 July 2020 is 1.3% p.a., down from 2.0% p.a. as at 31 July 2019. All other things being equal, this will result in an increase in the liability.

Inflation

As the benefits provided are inflation-linked (based on the Consumer Prices Index (CPI)), the inflation assumption is also calculated and the resulting net discount rate is used in the spreadsheet. There is currently no developed market for CPI linked financial instruments, and as such there is no reliable method to calculate expected future CPI increases directly. Therefore we proposed to base the CPI inflation assumption on expected future increases in RPI.

In setting the Retail Prices Index (RPI) assumption, we have used data direct from the Bank of England’s website. As at 31 July 2020, the 10 year spot rate for RPI inflation was 3.2% p.a. This is reduced by 0.2% p.a. to allow for distortions in the inflation rates due to high demand for index-linked gilts as well as an implicit “inflation risk premium” in the fixed rate interest yield. This approach is consistent with that adopted in 2019.

On 4 September 2019, the Chancellor announced that RPI is to be aligned with CPIH sometime between 2025 and 2030. Following the announcement, there was a fall in long term RPI inflation of around 0.1% to 0.2% with further falls since. It is possible to argue that markets have still not completely priced in the proposed changes to RPI and so a further deduction could be made from market implied RPI. However, market practice appears to be moving away from this approach and the quantum of any further deduction is highly subjective. As such, I propose to maintain the inflation risk premium at 0.2% p.a. and not make any further deduction.

The proposed RPI assumption as at 31 July 2020 is 3.0% p.a., which is 0.2% p.a. lower than in 2019 due to a reduction in inflation expectations over the period.

The difference between RPI and CPI arises mainly from different compositions in the two measures and from differing formulae used to produce these figures. Historically, CPI inflation has been around 0.7% p.a. – 1.0% p.a. lower than RPI inflation. However, given the Chancellor’s announcement in September 2019 affects the RPI and not the CPI assumption, we believe it is appropriate to adjust this range down. Therefore, we propose a CPI inflation assumption of 2.2% p.a., which represents a 0.8% p.a. deduction. Last year, a deduction of 1.0% p.a. was used.

The proposed CPI assumption of 2.2% p.a. is the same as 2019. All other things being equal, the liability will remain unchanged.



Actuarial Assumptions

Discount Rate & Inflation (cont.)

| | METHODOLOGY 2020 | 2020 ASSUMPTION | 2019 ASSUMPTION |
|---------------------------|---|-----------------|-----------------|
| INTEREST RATE (A) | iBoxx over 10 year corporate bond yield (rounded to 0.1% p.a.) | 1.3% p.a. | 2.0% p.a. |
| INFLATION (B) | Bank of England spot inflation 10 year term (3.24% p.a.) <u>less</u> 0.2% p.a. inflation risk premium <u>less</u> 0.8% p.a. difference between RPI and CPI inflation (rounded to 0.1% p.a.) | 2.2% p.a. | 2.2% p.a. |
| NET INTEREST RATE (C=A-B) | Interest Rate <u>less</u> Inflation Assumption (rounded to 0.1% p.a.) | -0.9% p.a. | -0.2% p.a. |



Actuarial Assumptions

Mortality

Post-retirement mortality assumptions

These are the most important demographic assumptions as they determine for how long pensions will be paid in retirement. To derive the mortality assumptions we need to make assumptions regarding base tables, which reflect current life expectancies, and future projection tables, which reflect how we expect life expectancies to improve over time.

For the disclosures at 31 July 2019, the assumptions used were 95% S3NA Year of Birth tables with CMI 2018 projections & 1.25% long term rate. As at 31 July 2020, the most up to date version of this assumption is now 95% S3NA Year of Birth tables with CMI 2019 projections & 1.25% long term rate. We propose to use this updated assumption for the disclosures at the current period-end.

The table below sets out the implied life expectancies for a 65 and 85 year-old male and female based on the proposed assumptions.

| | Base table | Improvements | Life expectancy |
|--------------------------|------------|-----------------------------------|-----------------|
| Male currently aged 65 | 95% S3NMA | CMI 2019 with a 1.25% trend | 22.6 years |
| Male currently aged 85 | | | 6.9 years |
| Female currently aged 65 | 95% S3NFA | | 25.0 years |
| Female currently aged 85 | | | 7.9 years |



Actuarial Assumptions

Other Demographic Assumptions

The proportion of members who leave a qualifying dependant is estimated from national statistics. Census data, however, only reflects the proportion of people married at any given age, so the proportions used will be as in the table below.

The age difference between a member and their surviving qualifying dependant is taken to be 3 years (males 3 years older than females).

These are the same assumptions as in 2019.

| Current Age | Proportion of males leaving a qualifying dependant | Proportion of females leaving a qualifying dependant |
|-----------------|--|--|
| Younger than 80 | 80% | 65% |
| 80-84 | 70% | 40% |
| 85-89 | 60% | 30% |
| 90-94 | 50% | 10% |
| 95 or older | 40% | 10% |





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