

USS briefing: Reconciling the outcome of the 2018 valuation with the 2020 valuation

This note provides a reconciliation of the 2018 valuation deficit and the future service cost with Scenario 2 for the 2020 valuation (see our [Trustee Update](#)).

A straightforward comparison of the factors driving the differences in contribution requirements between the 2018 and 2020 valuations is challenging, for two reasons:

1. The 2018 valuation was concluded on the basis of assumptions on covenant support measures that were to be put in place on a permanent basis to support the 2020 valuation. The proposals from Universities UK on covenant support that underpin the actuarial report to the JNC ('76.1 report') for the 2020 valuation are in fact less comprehensive than was anticipated, and so the 2020 valuation is concluded on a different basis than 2018.
2. The methodology adopted for the 2020 valuation uses (among other changes) a dual discount rate approach, which treats liabilities in respect of members pre and post retirement differently for funding purposes. This was adopted by the Trustee following recommendations made by the stakeholders' Joint Expert Panel (JEP), and was supported by the Trustee Board. It makes a straightforward read across of the underlying assumptions more challenging.

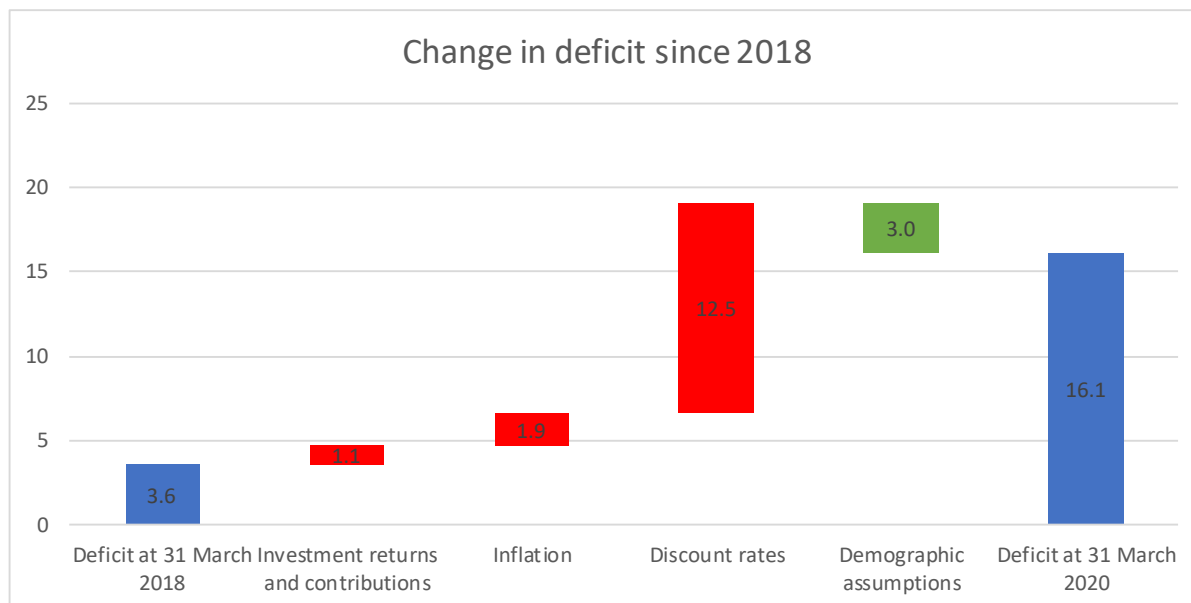
Given this complexity, in order to provide the most accessible comparison, we have converted both valuation methodologies to a 'gilts+' basis and used the position as at 31 March 2018 (a single equivalent discount rate of gilts+1.33% pa) as the starting point.

Increases in the deficit and future service cost since 2018 are largely attributable to changes in the discount rate and expected inflation. This reflects a change in the outlook for, and confidence in, the level of future expected investment returns we (prudently) plan to take credit for today in funding our members' pensions.

The question of prudence and risk – as noted in our Technical Provisions consultation for the 2020 valuation – is covered in more detail in a separate briefing note on our website [here](#).

Explanation of change in deficit

The Technical Provisions deficit at 31 March 2018 was £3.6bn, whereas the 2020 valuation shows a deficit of £16.1bn under Scenario 2. A visual representation of what has driven this increase is provided below.



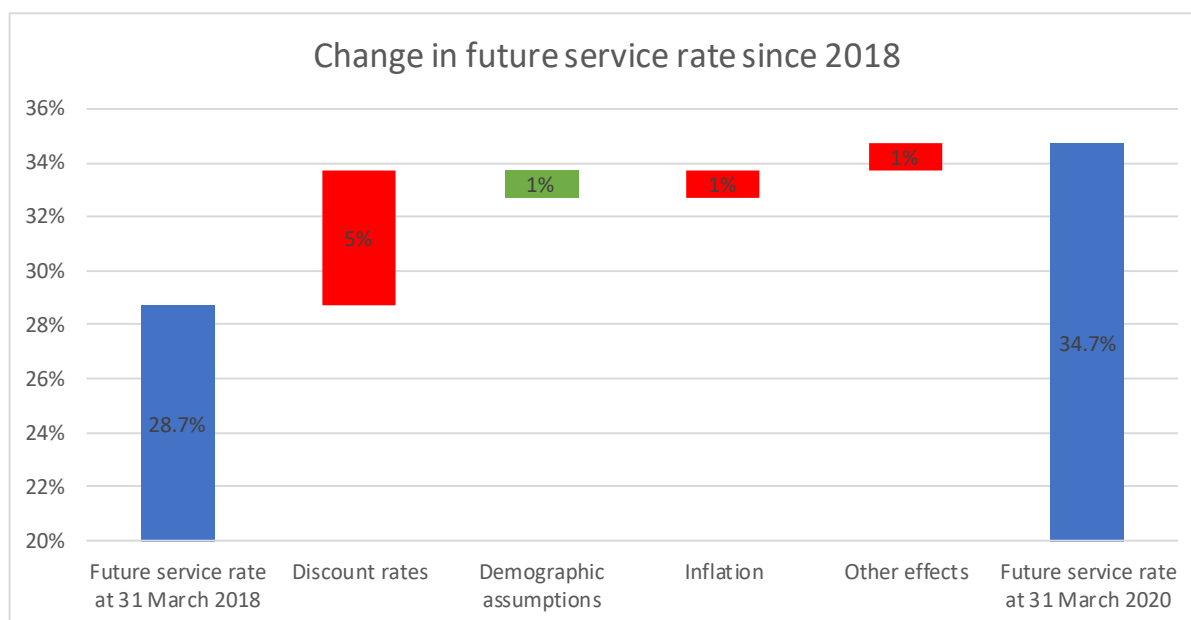
These factors are broken down as follows (note that a positive number corresponds to an increase in the deficit and a negative number a decrease).

- **Investment returns and contributions (+£1.1bn):**
This relates to conditions *experienced* over 2018 to 2020:
 - **Interest on the deficit (+£0.2bn):**
This reflects the fact that, all else equal, an existing deficit will increase over time as the future benefit payments become nearer and the discounting of them unwinds.
 - **Actual investment returns compared with prudent expectations (+£0.2bn):**
This reflects the small shortfall between the investment returns achieved between the two valuation dates and our prudent expectations as at 31 March 2018.
 - **Contributions lower than cost of new benefit accrual (+£0.7bn):**
For the majority of the period between the 2018 and 2020 valuations, the contributions had not changed to reflect the 2018 valuation results. A rate of 30.7% has been paid since 1 October 2019 in order to give employers time to prepare for the full rate of 34.7% (due to be paid from 1 October 2021). This shortfall has increased the deficit.
- **Inflation (+£1.9bn):**
Inflation has been, and is expected to continue to be, slightly higher than was expected at the 2018 valuation. This has increased the deficit in the following ways:
 - **Pension increase compared with expected (+£0.5bn):**
The aggregate rate of CPI inflation over the 2018/20 period – used to increase benefits already earned – was slightly higher than expected.

- **Change in future inflation / pension increase expectations (+£1.4bn):**
Following advice from the Scheme Actuary, we have adopted a slightly higher assumption for future inflation (and, therefore, future pension increases) at the 2020 valuation compared to that at the 2018 valuation.
- **Change in discount rates (+£12.5bn)**
The biggest driver of the change in the deficit over period is the change in the outlook for, and confidence in, the level of future expected investment returns we (prudently) plan to take credit for today in funding our members' pensions. We now believe investments will generate less return in future than we assumed in the past:
 - **Change in gilt yields (+£14.9bn):**
There was a substantial fall in gilt yields between the 2018 and 2020 valuation dates. These broadly represent the market price of securing 'risk free' investment returns. The fall in gilt yields over the period leads to a significant reduction in the returns we can prudently expect to achieve in future, both on gilts and on other assets.
 - **Change in prudent expected investment returns relative to gilts (-£2.4bn):**
Based on Scheme Actuary advice, we have allowed for an increase in the discount rate relative to gilts under the 2020 valuation compared with the 2018 valuation. This is incorporated in the Trustee's new Dual Discount Rate approach, and partially offsets the fall in gilt yields. The level of the assumed investment return is discussed in more detail in a briefing note on prudence available [here](#).
- **Change in demographic assumptions (-£3.0bn):**
The Scheme Actuary analysed the demographic assumptions for the 2020 valuation, taking into account Scheme-specific experience and data since the 2018 valuation. This has led to a reduction in the deficit as follows:
 - **Change in mortality assumption (-£2.6bn):**
Based on Scheme Actuary analysis, we have allowed for a small reduction in average life expectancy compared with the 2018 valuation. This reduces the value placed on the liabilities at 2020 which, in turn, reduces the deficit. The long-run effects of COVID-19 will not be known for some time and will depend on a wide range of factors, but we will keep this under regular review for future valuations.
 - **Change in other demographic assumptions (-£0.4bn):**
The Scheme Actuary also analysed other demographic assumptions, including the proportion of members who are married, rates of retirement, and the level of members leaving the Scheme. We have accordingly adjusted some of our assumptions that, in aggregate, lead to a further small decrease in the deficit.

Explanation of change in future service cost

Whereas the deficit relates to the benefits members have *already* been promised, the future service cost is the rate of contributions required to cover new benefits. It was 28.7% of USS payroll at the 2018 valuation. The 2020 valuation shows a future service cost of 34.7% under Scenario 2. A visual representation of what has driven this increase is provided below.



The main components of this increase are given below (as above, note that a positive number corresponds to an increase in the future service cost and a negative number a decrease).

- **Change in discount rates and assumed investment returns (+5%)**

The biggest driver is the change in the outlook for, and confidence in, the level of future expected investment returns we (prudently) plan to take credit for today in funding our members' pensions. We now believe investments will generate less return in future than we assumed in the past:

- **Change in gilt yields (+8%):**

There was a substantial fall in gilt yields between the 2018 and 2020 valuation dates. These broadly represent the market price of securing 'risk-free' investment returns. The fall in gilt yields over the period leads to a significant reduction in the returns we prudently expect to achieve in future.

- **Change in assumed returns relative to gilts (-2%):**

Based on Scheme Actuary advice, we have allowed for an increase in the discount rate relative to gilts under the 2020 valuation compared with the 2018 valuation. This is incorporated in the Trustee's new Dual Discount Rate approach, and partially offsets the fall in gilt yields. The level of the assumed investment return is discussed in more detail in a briefing note on prudence available [here](#).

- **Allowance for additional returns during the Recovery Plan (-1%):**

We have made an allowance for additional investment returns during the Recovery Plan for the 2020 valuation. Based on advice from the Scheme Actuary, some of this allowance has been attributed to the future service cost.

- **Change in demographic assumptions (-1%):**
The Scheme Actuary analysed the demographic assumptions for the 2020 valuation taking into account new data since the 2018 valuation. This has led to an aggregate reduction in future service cost. The mortality assumption is the most significant of these assumptions.
- **Inflation (+1%):**
Following advice from the Scheme Actuary, we have adopted a slightly higher assumption for future inflation (and, therefore, future pension increases) at the 2020 valuation compared to that at the 2018 valuation. This increases the assumed cost of the benefits being promised.
- **Other effects (+1%):**
Other effects, including the impact of changes in membership, led to a small increase in the future service cost between the 2018 and 2020 valuation dates.

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