BANK OF AMERICA

Bank of America UK Retirement Plan

Funding Report for the 31 December 2021 actuarial valuation

April 2023

Introduction

Why bring you this report?

Section 224(2)a of the Pensions Act 2004 requires the Trustee to receive this formal report from me (as Scheme Actuary) setting out the results and conclusions from the actuarial valuation of the Bank of America UK Retirement Plan (the Plan) at 31 December 2021.

My report summarises the key aspects of the valuation process, including:

- The funding objective and background details
- The technical provisions
- The agreed recovery plan and other contributions
- The results on the solvency basis.

It also includes the results of the section 179 valuation at the same date.

Some further information is provided for compliance purposes.

In the main part of this report, defined contribution (DC) benefits (including DC AVCs) have been **excluded** from the valuation results because in my view this provides a clearer picture. In order to comply formally with the legislation, an alternative presentation of the valuation results (which includes DC benefits) is provided as an appendix.

The value of members' Common Investment Fund (CIF) balances is included in both the value of the assets and liabilities shown in this report.

Next steps

Some key deadlines are highlighted on the right.

The valuation process is complete when all the following have been agreed and are in place:

- This scheme funding report, including my certification of the technical provisions
- Schedule of contributions, including my actuarial certification of the adequacy of the schedule of contributions.

Jonathan Wicks

Signature

29 March 2023

Date

Key deadlines

By 31 March 2023: The details from the section 179 valuation certificate must be submitted to the PPF via Exchange to meet the deadline for this year's levy.

By 5 April 2023: A copy of this report must be provided to the Company within 7 days of receiving it.

By 14 April 2023: The valuation summary must be submitted to The Pensions Regulator via Exchange.

By 30 June 2023: A summary funding statement must be provided to members within 18 months of the valuation date.

By 31 December 2024: The **next** actuarial valuation and section 179 valuation must be carried out no later than 31 December 2024 (i.e. three years after the effective date of this valuation).

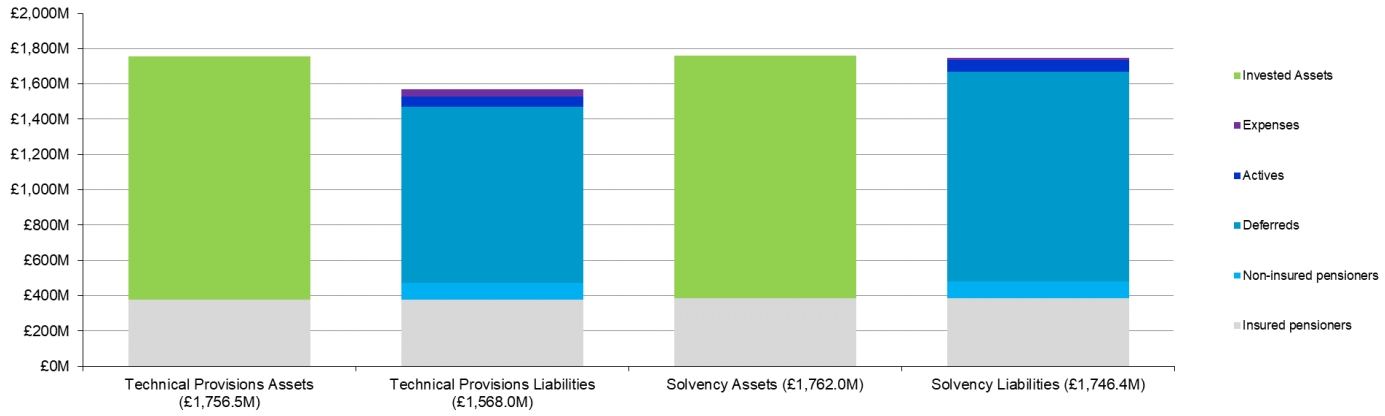
The terms in this report

A summary of any 'shorthand' legal references and a glossary of key valuation terms can be found at the back of this report.

At a glance…

As your Scheme Actuary, I have carried out an actuarial valuation of the Plan at 31 December 2021.

Funding summary



Technical provisions

£189M

Surplus

Solvency estimate

£16M

Surplus

PPF section 179

£481M

Surplus

Contributions

Following discussions, it has been agreed that the Company will pay:

- The agreed contributions to the Money Purchase section of the Plan,
- 0.5% of Plan Salaries for those members of the Plan who are entitled to a spouse's death-in-service pension to cover the expected cost of these pensions,
- The insurance premiums for lump sum death-in-service benefits,
- The Pension Protection Fund levy and other levies collected by The Pensions Regulator directly,
- For the time being, other expenses of operating the Plan directly. Subsequent to finalising the valuation, the Company and the Trustee will discuss and agree the allocation of expenses to be met directly by the Company and those to be met from the Plan's assets.

As required under Rule 3.1 of the Plan's Rules, the agreed contribution rates are at least sufficient, in my opinion, to provide the benefits under the Plan.

Important

The report concentrates on the Plan's financial position at the valuation date. As time moves on, the Plan's finances will fluctuate.

If you are reading this report some time after it was produced, the Plan's financial position could have changed significantly.

Contents

Background to your actuarial valuation

Data and benefits valued

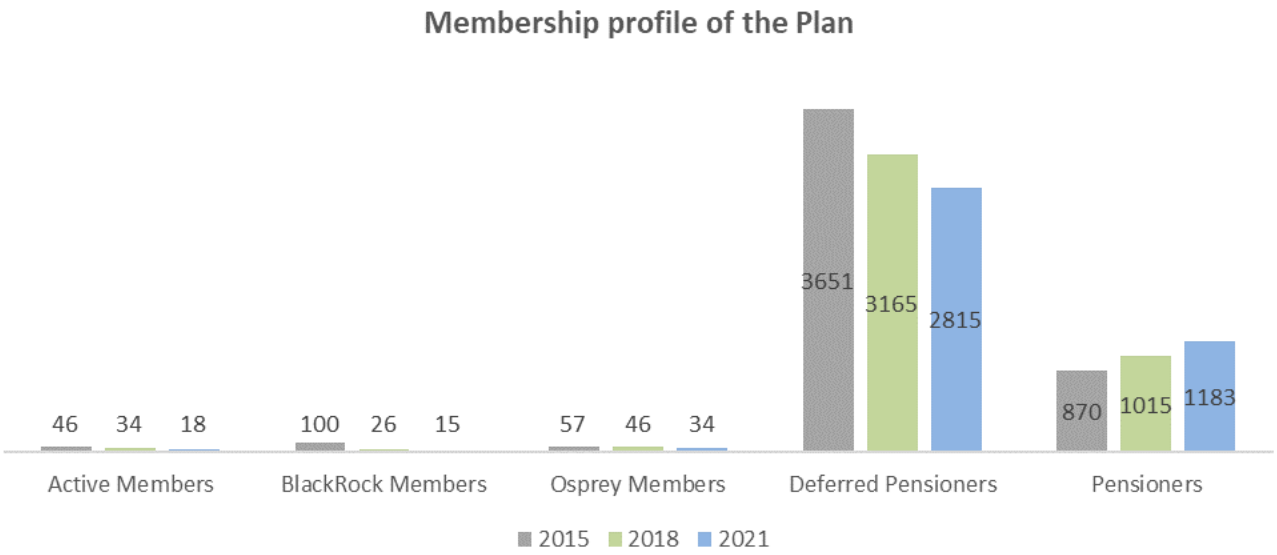
Your actuarial valuation was based on a snapshot of member data and my understanding of the Plan's benefits.

Member data

The Plan has continued to become increasingly mature with the proportion of pensioners increasing.

The membership numbers are shown graphically below.

Further details of the membership data used for the actuarial valuation calculations are provided in an appendix.



Benefits

Members are entitled to the benefits defined in the Rules. A summary of the benefits is included in an appendix.

In valuing these benefits, I have applied some judgment in the following key areas:

GMP equalisation

An approximate allowance for equalising GMPs is made by adding 0.25% to the Plan's liabilities (excluding CIF balances and expenses). This includes approximate allowances for both past and future benefit payments and the additional liabilities in respect of past deaths and transfers out following the High Court ruling in 2020.

This is a change in approach from that adopted at the previous valuation which used an allowance of 0.2% but which was set before the 2020 High Court ruling.

Discretionary benefits

The Plan has a history of granting discretionary pension increases to certain benefits accrued before 1 April 1997 which do not have guaranteed pension increases (aside from GMP).

A discretionary pension increase was granted in 2019, and the Company paid a contribution to the Plan of £1.17M to fund this increase. There were no discretionary pension increases granted in 2020 or 2021.

I have made no allowance for discretionary benefits in the technical provisions (or other bases). This is appropriate since the Company has always paid a lump sum contribution to cover their cost at the time of awarding any such increase.

This is consistent with the approach at the previous valuation.

Insured benefits

Death-in-service lump sum benefits are insured and so are not included in the valuation of the Plan’s liabilities, as the premiums are met directly by the Company.

The Plan holds annuity contracts in respect of some members' benefits. These cover pensions in payment to:

- Former members of the Smith New Court PLC Pension Plan (the SNC Plan) who retired prior to 1 April 1997;
- Former member of the SGH Service Company Pension Scheme (the SGH Scheme) who retired prior to 1 April 1997;
- All other members of the Plan who retired prior to 31 December 2017.

The value of these contracts is included in the Plan's assets and its liabilities.

This is consistent with the approach at the previous valuation.

Funding objectives and investment strategy

The Trustee's funding objective is to hold assets which are at least equal to the technical provisions (i.e. to meet the statutory funding objective).

Your funding target

The Trustee's funding objective is to be fully funded on the technical provisions basis.

Employer covenant

A key factor in setting the level of the technical provisions is the Trustee's assessment of the employer covenant. The Trustee commissioned an independent review of the employer's covenant.

The covenant strength rating was concluded to be at least "Strong". The covenant strength rating is similar to when assessed for the previous valuation and this has been taken into account in setting the assumptions to be adopted for the technical provisions.

Secondary targets

Over time, there is expected to be an increased focus on long-term funding targets and how they interact with the technical provisions measure.

Investment strategy

The assets at the valuation date are described in an appendix.

The Trustee's investment strategy is set out in its statement of investment principles. As at 31 December 2021, the Trustee's strategy was to invest 30-37.5% of the Plan's assets (excluding bulk annuities) in return-seeking assets to generate investment returns. The Plan used a combination of 'Beta' assets whereby performance is expected to be largely determined by market returns and 'cash plus' type assets where performance is largely determined by manager skill.

The Trustee's strategy was to invest the remaining 62.5-70% in protection assets comprised of a liability driven investment ('LDI') portfolio and low volatility 'cash plus' assets. The purpose of the LDI portfolio is to hedge against the impact of interest rates and inflation movements on the uninsured liabilities of the Plan whilst the low volatility 'cash plus' assets are held as an efficient means to seek to generate modest returns on surplus collateral.

As noted previously, the Plan also held annuity policies designed to meet the benefits of members covered by the policies.

Method & assumptions

The Trustee and the Company agreed the method and assumptions used to calculate the technical provisions.

Method

As for the previous valuation, the technical provisions have been calculated using the projected unit method.

The assets are valued based on the audited value contained in the Trustee Report and Accounts for the year ended 31 December 2021. DC AVCs have been excluded in the main body of this report as the asset exactly matches the liability (an alternative presentation of the results including the DC AVCs is in included as an appendix).

I have not used the value contained in the Trustee Report and Accounts for rights under insurance policies, £374.2M, for the purpose of this valuation. Instead, I have valued them using the same assumptions as for each liability measure (i.e. using the technical provisions assumptions for the technical provisions basis and the solvency assumptions for the solvency basis). This produces a value of £379.1M for these policies using the technical provisions basis at 31 December 2021.

Further information

Your Actuarial valuations handbook contains further information on valuation methods and Aon's approach to assumption setting.

Assumptions

The table below summarises the key assumptions, together with those used for the previous valuation, and the reasons for any change.

Further details of all the assumptions are set out in the statement of funding principles dated 29 March 2023.

Assumption	Previous valuation	This valuation	Rationale for change
Discount rate	Term-dependent rates set by reference to nominal gilt yield curve plus a margin for outperformance of 0.39% p.a.	No change	No change
RPI inflation	Term-dependent rates implied by gilt RPI inflation curve	No change	No change
CPI inflation	RPI inflation less 0.9% p.a. (i.e. 80% of Aon's best estimate for the RPI/CPI gap)	RPI inflation less an adjustment of: 0.7% p.a. up to 2030, and 0.1% p.a. thereafter (i.e. 80% of Aon's best estimate for the RPI/CPI gap)	Difference pre- and post-2030 reflects expected RPI reform
Salary inflation	RPI inflation plus 1.5% p.a. plus promotional increases	No change	No change

Assumption	Previous valuation	This valuation			Rationale for change
Pension Increases	Determined by reference to the gilt RPI inflation curve with allowance for Aon's best estimate of future inflation volatility	No change			No change
Mortality assumption - base table	SAPS S2 'Light' tables	SAPS S3 'Light' tables			Updated for the latest SAPS tables
Mortality assumption – Scaling factors to apply to base table	97% male / 87% female		Male member / their contingent dependant	Female members / their contingent dependant	Updated for the latest Demographic Horizons analysis with allowance for the impact of the pandemic
		Actives	101% / 99%	104% / 108%	
		Deferred	105% / 102%	104% / 112%	
		Non-insured pensioners	103% / 101%	103% / 112%	
		Insured pensioners	102% / 100%	101% / 109%	
Mortality assumption - projection	CMI 2018 (S_k=7.0, A=0.5%) core projections with a long-term improvement rate of 1.5% p.a.	CMI 2021 (S_k=7.0, A=0.5%) core projections with a long-term improvement rate of 1.5% p.a.			Updated for the latest CMI Model
Commutation	Each member is assumed to commute 10% of their pension on retirement, based on the commutation factors in force at the valuation date	No change			No change
Expense reserve	No allowance made	A reserve of £40M			Reserve equal to present value of estimated future ongoing expenses until 2034

Valuation results

Past service results

I have calculated the Plan's technical provisions and resulting funding position at 31 December 2021.

Results

	Technical provisions £M
Value of past service benefits for:	
Actives	16.7
BlackRock members	13.0
Osprey members	26.8
Deferred Pensioners	987.3
Non-insured Pensioners	91.2
Insured Pensioners	379.1
GMP equalisation	3.8
CIF Balance *	10.1
Expense allowance	40.0
Total i.e. technical provisions	**1,568.0**
Non-insured assets	1,377.4
Value of bulk annuities	379.1
Total value of assets	**1,756.5**
Past service surplus/(deficit)	**188.5**
Funding Level	**112.0%**

My formal certificate of your technical provisions is included in this report.

* As for the previous valuation as at 31 December 2018, the value of the CIF balance is included in the assets and liabilities shown in this report. The CIF balance as at 31 December 2021 was supplied by the Plan's administrator.

Sensitivity of the funding level

The key assumptions are the discount and inflation rates and the Plan membership's mortality rates. The sensitivity of the funding level to these key assumptions is as follows:

Discount rate decreases by 0.25%

A 0.25% p.a. decrease in the discount rate would increase the technical provisions by around 5%. However, the Plan's hedging means that the funding level would be broadly unchanged.

RPI inflation increases by 0.25%

A 0.25% p.a. increase in the RPI inflation assumption (and the knock-on impact on the other assumptions derived from it) would increase the technical provisions by around 3%. However, the Plan's hedging means that the funding level would be broadly unchanged.

Members live longer than assumed

If the scaling factor applied to the base mortality assumption is reduced by 10% for all members, this would reduce the funding level to around 110%. For a typical member of the Plan aged 62, this equates to the life expectancy increasing by c.1 year.

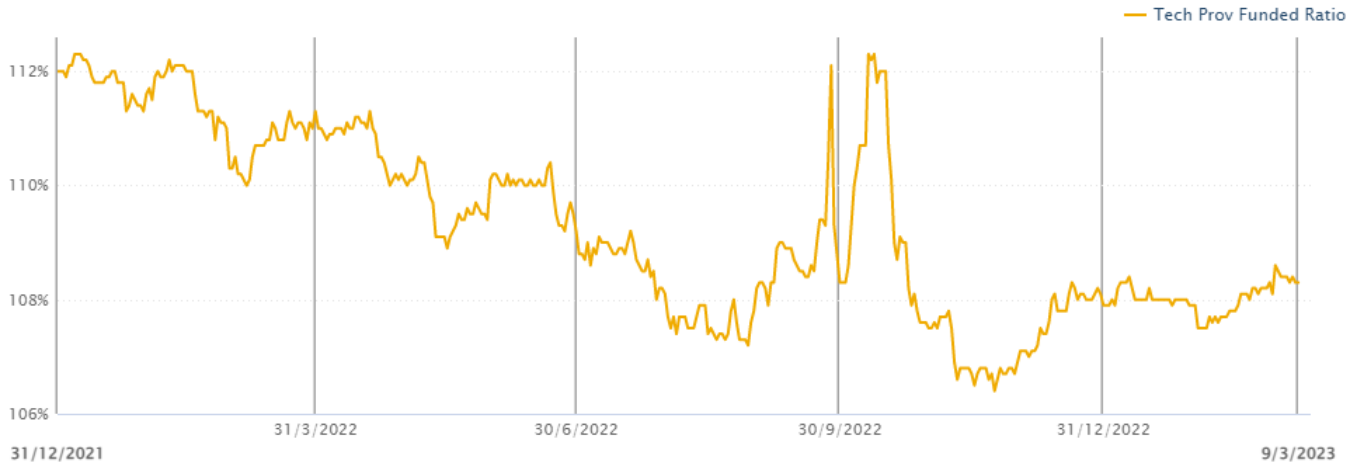
Approximate developments since the valuation date

Since the valuation date, the Plan's funding position is estimated to have changed.

The chart below illustrates how the position has changed over time. It is approximate. For example, investment returns have been assumed to be in line with index returns for the period between quarter ends.

This value of the Plan's liabilities is based on assumptions consistent with those used to calculate the technical provisions, with financial assumptions updated to reflect changes in market conditions.

The main reason for the change in funding position between the valuation date and 9 March 2023 is returns on the Plan's assets having been lower than assumed in the discount rate.



Solvency position

I have estimated the Plan's statutory solvency position.

Results

	Solvency £M
Value of past service benefits for:	
Actives	18.9
BlackRock members	15.2
Osprey members	29.4
Deferred pensioners	1,178.1
Non-insured Pensioners	93.7
Insured Pensioners	384.6
GMP equalisation	4.3
CIF Balance	10.1
Expenses	12.1
Value of liabilities (solvency estimate)	**1,746.4**
Non-insured assets	1,377.4
Value of bulk annuities	384.6
Value of assets (solvency)	**1,762.0**
Deficit (statutory estimate of solvency)	**15.6**
Funding Level	**100.9%**

This solvency estimate represents the estimated cost of purchasing annuities at the valuation date from an insurance company to meet the Plan's benefits.

The assumptions used in the solvency estimate are summarised in an appendix.

In practice

Supply and demand and other factors mean that the actual cost of purchasing annuities may be different to the above solvency estimate.

If the Plan were to be discontinued with no solvent employer and the assets were insufficient to provide the benefits in full, then:

- Benefits corresponding to those covered by the PPF would be met first (either through the PPF or, if there were sufficient funds, by securing these benefits with an insurance company).
- Any remaining assets would be used to secure part of the remaining benefits with an insurance company.

The proportion of full benefits provided would vary from member to member and may be higher or lower than the statutory estimate of solvency quoted above.

Why higher?

The solvency estimate of the liabilities is higher than the technical provisions.

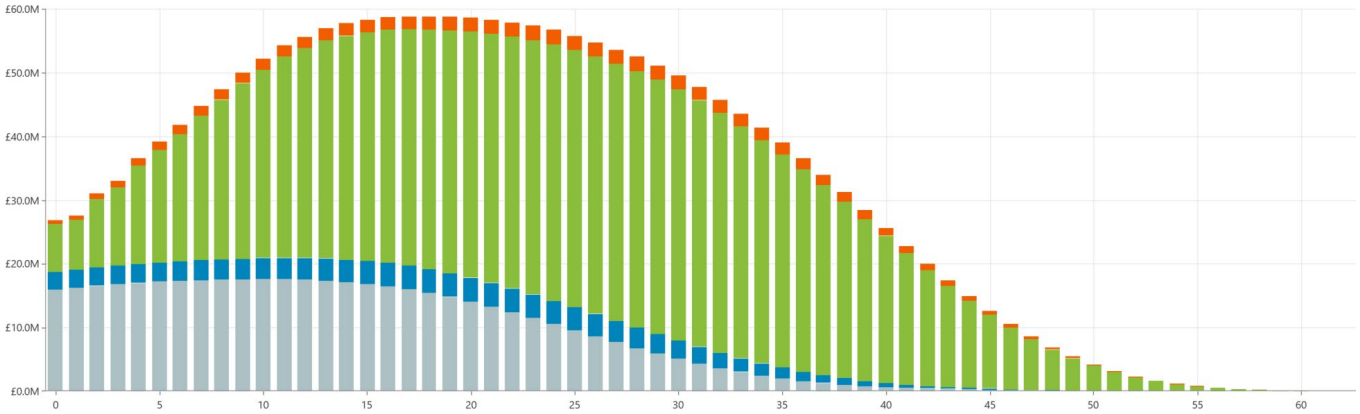
Broadly, this is for the following reasons:

- Insurers will typically hold less risky assets which provide **lower investment returns** than are expected to be achieved on the Plan's assets
- Insurers typically hold **larger margins**, for example by assuming that members will live longer than is assumed in calculating the technical provisions
- Insurers need to cover **costs**, including administering the benefits, and also make a **profit**, and
- Allowance is made for the **cost of winding up** the Plan.

Funding and investment risks

The Plan's funding level is likely to exhibit volatility.

The benefit payments from the Plan are expected to be made for a very long period. The chart below shows the projected cashflows on the technical provisions basis for the Plan.



Key risks

The Plan faces a number of key risks which could affect its future cashflows and funding position, including:

Funding risk

The risk that the technical provisions are set too low and prove insufficient to meet the liabilities (e.g. in the event of unexpected discontinuance).

Investment risk

The risk that investment returns are lower than assumed in the valuation, and also that the assets are volatile and move out of line with the liabilities, so the funding position is volatile.

Liquidity risk

The risk that cashflows are higher than expected as members commute more than is assumed or take transfer values, possibly leading to the sale of assets at inopportune times.

Longevity risk

The risk that Plan members live for longer than assumed and that pensions would therefore need to be paid for longer.

Inflation risk

The risk that the relevant inflation metric is higher than assumed, increasing the pensions that need to be paid.

Sponsor risk

This is the risk that the sponsor is no longer willing or able to support the Plan to fund any future losses that arise.

Other risks

The Plan is exposed to other risks too, which may also impact on the funding, investments and sponsor covenant:

- **Member options risk**: The risk that members exercise options resulting in unanticipated extra costs. For example, members could swap less of their pension for cash at retirement than assumed.
- **Other risks:** For example, those relating to climate change and other environmental issues as well as long-term uncertainty around geopolitical, societal and technological shifts.

Risk mitigation

The Trustee takes an integrated approach to managing the Plan's risks. The key actions taken to mitigate the risks include:

Investment

- Adopting a diversified investment strategy
- Investing in liability-driven investments, so that changes in the value of the liabilities will be partially matched by changes in the asset values, thus reducing the funding volatility

Covenant

- As well as obtaining a covenant review at the time of a triennial valuation, the Trustee monitors the covenant position between valuations

Funding

- Setting a funding and investment strategy under which the Plan aims to reduce its dependence on the sponsor's continuing financial support.
- Purchasing a bulk annuity policy to eliminate investment and mortality risk in relation to the liabilities of the corresponding members.
- Making prudent assumptions in the technical provisions.

Recovery plan and future contributions

Recovery plan

Based on the position of the Plan at the valuation date, no recovery plan is needed.

No recovery plan required

As the Plan is in surplus (relative to the technical provisions), a recovery plan is not required.

Agreed contributions

As a result of this valuation, the Trustee and the Company have agreed a new contribution schedule.

Company contributions

Following discussions, the Company will pay:

- The agreed contributions for members of the Money Purchase section of the Plan. These contributions are payable monthly with the contributions due in respect of a particular calendar month payable within 19 days of the end of the calendar month to which they relate;
- 0.5% of Plan Salaries of those members of the Plan who are entitled to a spouse's death-in-service pension to cover the expected cost of these pensions;
- The insurance premiums for lump sum death-in-service benefits;
- Any levies due to the Pension Protection Fund and other levies collected by the Pensions Regulator directly; and
- For the time being, other expenses of operating the Plan directly. Subsequent to finalising the valuation, the Company and the Trustee will discuss and agree the allocation of expenses to be met directly by the Company and those to be met from the Plan's assets

Member contributions

Members are not required to contribute to the Plan.

Schedule of contributions

These contributions are set out in the schedule of contributions.

As agreed, my certification of the schedule is based on the position at the valuation date.

A full review of the Company's contributions will be completed no later than following the next valuation, which is due to take place at 31 December 2024.

Projections

I have illustrated below how I expect the Plan's funding position to develop over the future.

Projected future funding levels

I estimate that, by the next valuation, which will be due with an effective date of 31 December 2024:

- The **technical provisions** funding level will have improved to about 114%, and
- The **solvency** position will have improved to about 105%.

Assumptions

These estimates assume that:

- The experience of the Plan between the two valuation dates is in line with the assumptions underlying the technical provisions.
- The assumptions underlying the technical provisions and solvency bases remain unchanged.
- The contributions on the previous page are received as agreed.

Rationale

The main reason for the expected improvement in the technical provisions funding level is the investment growth on the surplus.

Although not illustrated, it is also reasonable to expect that actual experience will lead to further improvements in the funding position to the extent that the assumptions underlying the technical provisions are prudent.

Section 179 valuation

Background and method

I have carried out a section 179 valuation of the Bank of America UK Retirement Plan at 31 December 2021, at the request of the Trustee.

By law, pension schemes must submit a section 179 valuation to the Pension Protection Fund (PPF) at least once every 3 years. The PPF uses the information to calculate the Pension Protection Levy.

The section 179 valuation has been conducted in line with:

- The Pension Protection Fund (Valuation) Regulations 2005;
- Section 179 of the Pensions Act 2004; and
- Version number G9 of the section 179 guidance and version number A10 of the section 179 assumptions issued by the Board of the PPF.

For PPF purposes only

This section 179 valuation should not be used for other purposes, such as determining future contribution levels, assessing the overall solvency position of the Plan or deriving pension costs for company accounting.

Benefits valued

The benefits that are protected under the PPF are restricted below the full Plan benefit levels, and the section 179 valuation requires a proxy of the PPF benefits to be valued. The details are described in an appendix.

The section 179 valuation results are therefore not representative of the cost of buying out the full benefits of the Plan with annuity providers.

Valuation date

The valuation date of 31 December 2021 reflects the date of the Plan's latest audited Trustee Report & Accounts.

Assets

I have used the same value of the assets (with the exception of the value of the insurance policies held) as in the rest of this report.

In accordance with Regulation 7(2) of the Pension Protection Fund (Valuation) Regulations 2005, I have adjusted the asset value because I have applied a different value to the insurance policies held, compared to that shown in the audited accounts.

When valuing the insurance policies held as assets I have allowed for the benefits actually secured under the policies, valued using the section 179 assumptions, and this gives a value of £360.6M.

After the adjustment, the net asset figure for the section 179 valuation is **£1,738.0M**.

This asset value does not reflect any reduction to allow for potential sale costs of assets on discontinuance.

Gilt yields vs assets held

For a section 179 valuation, the Plan's liabilities are valued with reference to gilt yields.

Because the Plan holds non-gilt assets too, the section 179 funding position may be volatile. For example, equity and property asset values are not directly affected by bond yield movements.

Approximations

It is common to make some approximations in a section 179 valuation to avoid disproportionate calculation complexity. The approximations used for this valuation are described in an appendix.

Please note that the PPF require that any approximations should be expected to **overstate** the liabilities. Accordingly, the PPF levies based on the results of this valuation are likely to be higher than if no approximations were made.

These approximations do not prevent me from certifying the valuation results for the PPF, as I am only required to confirm that the PPF liabilities have not, in my opinion, been understated.

Assumptions

The assumptions adopted for a section 179 valuation are prescribed by the PPF and the assumptions used for this valuation are provided in an appendix.

The key assumptions used are the discount rates (which are derived based on prevailing gilt yields) and the mortality rates.

Legal requirements

Legislation requires the liabilities to be valued as the estimated cost of securing the PPF level of benefits by means of an annuity purchased at the market rate at the valuation date.

Results and next steps

Results

	PPF section 179 valuation £M
Value of past service benefits for	
Active members (excluding expenses)	33.3
Deferred members (excluding expenses)	867.9
Pensioner members (excluding expenses)	349.0
Estimated expenses of winding up	3.0
Estimated expenses of benefit installation/payment	3.5
External liabilities	0
Total protected liabilities	**1,256.7**
Non-insured assets	1,377.4
Value of bulk annuities	360.6
Total assets	**1,738.0**
PPF surplus/deficit	**481.3**
PPF funding ratio (%)	**138.3%**

Compared with last valuation date

The Plan's PPF section 179 funding ratio has increased from 126%.

BlackRock employees are included within the deferred member liability for the presentation of the section 179 results. For the presentation of all other results in this report, BlackRock employees are included within the active member liabilities.

I am not aware of any 'external liabilities' of the Plan. (These are liabilities which 'do not fall due to the members of the scheme'.)

Key date for the Trustee

The Trustee must take action by certain key deadlines. These are highlighted in the right-hand margin.

Please let us know if you require any assistance in entering the results onto Exchange.

31 March 2023

The Trustee should ensure that the information shown on the section 179 valuation certificate is submitted to the PPF, using the Scheme Return section of The Pensions Regulator's Exchange system, within 15 months of the valuation date, i.e. by 31 March 2023.

Certificates

Certificate of technical provisions

Actuarial certificate given for the purposes of Regulation 7(4)(a) of the Occupational Pension Schemes (Scheme Funding) Regulations 2005

Name of scheme: Bank of America UK Retirement Plan (the Plan)

Calculation of technical provisions

I certify that, in my opinion, the calculation of the Plan's technical provisions as at 31 December 2021 is made in accordance with regulations under section 222 of the Pensions Act 2004.

The calculation uses a method and assumptions determined by the Trustees of the Plan and set out in the statement of funding principles dated 29 March 2023.

Jonathan Wicks

Signature

29 March 2023

Date

Name	Jonathan Wicks FIA
Employer	Aon Solutions UK Limited
Qualification	Fellow of the Institute & Faculty of Actuaries
Address	The Aon Centre
	The Leadenhall Building
	122 Leadenhall Street
	London
	EC3V 4AN

Section 179 valuation certificate

Scheme / Section details

Full name of scheme	Bank of America UK Retirement Plan
Name of section, if applicable	Not applicable
Pension Scheme Registration Number	10136490
Address of scheme (or section, where applicable)	Bank of America Merrill Lynch Financial Centre 2 King Edward Street London
Postcode	EC1A 1HQ

Section 179 valuation

Effective date of this valuation (dd/mm/yyyy)	31/12/2021

Guidance and assumptions

s179 guidance used for this valuation	G9
s179 assumptions used for this valuation	A10

Assets

Total assets (this figure should not be reduced by the amount of any external liabilities and should include the insurance policies referred to below)	£1,738,000,000
Date of relevant accounts (dd/mm/yyyy)	31/12/2021
Percentage of the assets shown above held in the form of a contract of insurance where this is not included in the asset value recorded in the relevant scheme accounts	-0.8%

NOTE: This entry should reflect any difference between the value placed on contracts of insurance within the overall asset value above, and the value placed on them within the relevant scheme accounts. The entry will be positive if the value of the contracts within the overall asset value above is greater than the value shown in the relevant scheme accounts, and negative if the converse applies.

Liabilities

Please show liabilities for:

Active members (excluding expenses)	£33,300,000
Deferred members (excluding expenses)	£867,900,000
Pensioner members (excluding expenses)	£349,000,000
Estimated expenses of winding up	£3,000,000
Estimated expenses of benefit installation/payment	£3,500,000
External liabilities	£0
Total protected liabilities	£1,256,700,000

Please provide the percentage of the liabilities shown above that are fully matched by insured annuity contracts for:

Active members	0%
Deferred members	0%
Pensioner members	80%

Proportion of liabilities

Please show the percentage of liabilities which relate to each period of service for:

	Before 6 April 1997	6 April 1997 to 5 April 2009 (inclusive)	After 5 April 2009
Active members	24%	76%	0%
Deferred members	41%	59%	0%
	Before 6 April 1997	After 5 April 1997	
Pensioner members	68%	32%	

Number of members and average ages

For each member type, please show the number of members and the average age (weighted by protected liabilities) as at the effective date of this valuation. Average ages should be rounded to the nearest whole year.

	Number	Average age
Active members	52	56
Deferred members	2,830	56
Pensioner members	1,183	68

I certify that this valuation has been carried out in accordance with the Pension Protection Fund (Valuation) Regulations 2005 and with the appropriate section 179 guidance and assumptions issued by the Board of the Pension Protection Fund. I also certify that the calculated value of the protected liabilities is, in my opinion, unlikely to have been understated.

Signature: Jonathan Wicks

Date: 29 March 2023

Name: Jonathan Wicks FIA

Employer: Aon Solutions UK Limited

Qualification: Fellow of the Institute and Faculty of Actuaries

Further information

Reference appendices and glossary

Membership data

The results in this report are based on the membership data summarised below.

I have conducted high level checks on the membership data provided and I am satisfied with its adequacy for the purpose of this actuarial valuation. I have set out details of the adjustments and approximations I have made to the data below.

The average ages shown in these tables are unweighted.

Final Salary active employees	Number	Average age	Total basic salaries (£000 p.a.)	Average basic salaries (£ p.a.)	Average Pensionable Service (years)
2018	34	52	7,607	223,740	11
2021	18	56	3,094	171,889	11

Note: The salaries in the table above are basic salaries whereas previous valuation reports showed Plan Salaries.

Osprey members are certain deferred members who were formerly employed by Merrill Lynch Europe Limited and are now employed by a different part of the Bank. These members receive an annual uplift to their deferred benefits to reflect the salary link they would have retained if their current employer participated in the Final Salary Section of the Plan.

Final Salary Osprey employees	Number	Average age	Total basic salaries (£000 p.a.)	Average basic salaries (£ p.a.)	Average Pensionable Service (years)
2018	46	54	5,011	108,927	12
2021	34	56	3,509	103,216	11

Note: The salaries in the table above are basic salaries whereas previous valuation reports showed Plan Salaries.

BlackRock members are certain deferred members who were promised, as part of the merger of BlackRock and Merrill Lynch Investment Managers in 2006, a form of enhanced revaluation as long as they continue employment with BlackRock.

Final Salary BlackRock employees	Number	Average age	Total basic salaries (£000 p.a.)	Average basic salaries (£ p.a.)	Average Pensionable Service (years)
2018	26	55	2,464	94,755	11
2021	15	57	1,560	103,975	10

Note: The salaries in the table above are basic salaries whereas previous valuation reports showed Plan Salaries.

Deferred members	Number	Average age	Total pension (£000 p.a.)	Average pension (£ p.a.)
2018	3,165	53	19,500	6,161
2021	2,815	56	16,620	5,904

Note: The deferred pension amounts are at date of leaving service.

Pensioners	Number	Average age	Total pension (£000 p.a.)	Average pension (£ p.a.)
2018	880	69	14,466	16,438
2021	1,050	70	16,549	15,761

Dependants	Number	Average age	Total pension (£000 p.a.)	Average pension (£ p.a.)
2018	118	71	1,447	12,264
2021	116	71	1,848	15,935

Note Children have been excluded from the above summary. They have though been included in the valuation results.

Included within the pensioner and dependant data are 894 pensioners and dependants (excluding children) with pensions totalling £15,732,000 p.a. (average age of 72) in respect of whom the Trustee has purchased a matching annuity.

My high-level checks on the membership data supplied by Willis Towers Watson (WTW) as at 31 December 2021 identified a number of incomplete or missing data items. I have therefore made a number of adjustments and approximations to the data, as follows:

1. Osprey data: The data provided does not identify the Osprey members as at 31 December 2021. For the purpose of the valuation results, I have used the Osprey indicators provided by Capita for the 2020 Annual Actuarial Report.
2. Ex-MAM deferred pension split: The data provided does not split the post-97 pension between 97-99 pension and post-99 pension. The normal retirement age differs for these two periods of service. For the purpose of the valuation results, I have calculated this pension split using the member service dates.
3. Fixed transfer-in pension: Fixed transfer-in pension has been provided for some non-Merrill Lynch members but it is my understanding that only Merrill Lynch members should have this type of transfer-in. It is therefore unclear how this pension should be valued. For the purpose of the valuation results I have ignored this data item for the non-Merrill Lynch members whilst this is investigated by Willis Towers Watson.

Historic buy-in data: The data provided does not include the data for members insured with Friends Life. For the purpose of the valuation results, I have taken the most recent data provided by Capita (the previous administrator) and increased the pensions as required. This ignores any deaths or new spouses since the previous data and would therefore slightly over-value the liabilities. As the value of the associated insured asset is set equal to the value of the liability, the impact on the overall funding position would be minimal.

Benefits valued

A summary of the key details of the Plan benefits considered in this valuation is set out below.

Introduction	The Final Salary section is divided into the following main categories of member: Merrill Lynch, Mercury Asset Management, SNC and SGH. The benefits given by these sections are set out in the legal documentation of the Plan. For illustration only, this section includes an overview of the benefits of the Merrill Lynch section.
Date Final Salary section closed to future accrual	The Final Salary section of the Plan closed to future accrual on 30 June 2004.
Normal Retirement Age	62
Pensionable Service	The number of years and complete months during which a member has been in the Plan (up to the date of closure to future accrual).
Normal Retirement Pension	1/60 x Final Pensionable Salary for each year of Pensionable Service.
Plan Salary	For members joining before 1 June 1989, the lesser of: a) Basic salary plus bonus b) The greater of 1½ times basic salary and the earnings cap For members joining after 31 May 1989, the lesser of: a) Basic salary plus bonus b) The earnings cap For former members of the Mercury Asset Management Scheme, Plan Salary is subject to a minimum guaranteed amount calculated as at 1 July 1999 and then increased each year at the lower of the increase in the basic salary and the increase in RPI.
Pensionable Salary	Plan Salary less 1½ times the Lower Earnings Limit at the previous 1 January. For former members of the SNC Plan and the SGH Scheme, Pensionable Salary is guaranteed to be no less than basic salary at 1 April 1997.
Final Pensionable Salary	The greater of: ▪ Pensionable Salary for the 12 months before exit, and; ▪ Highest average yearly amount of Pensionable Salary for any 36 consecutive months in the five years immediately before exit.
Early Retirement Pension	A pension is provided on retirement after the age of 55. This is calculated using completed service and is adjusted to allow for early payment.

Pension Increases	Guaranteed LPI increases are provided to pensions in payment accrued from 1 April 1997. For pensions accrued before 1 April 1997, there are no guaranteed increases to pensions in payment in excess of the GMP. GMPs in payment are increased in accordance with statutory requirements.
Tax-free lump sum	Part of the member's pension may be commuted for a lump sum which is currently tax free.
Death after retirement	A spouse's pension of one-half of the member's pension (before any commutation for lump sum); plus If the member dies within five years of retiring, the spouse's pension is equal to the member's pension for the balance of the five-year period before reducing to the spouse's pension described above; plus Children's pension of 10% of the member's pension (before commutation) (subject to an overall maximum of 50% of the member's pension).
Death in service	A lump sum of four times Plan Salary; plus A spouse's pension of one-third of Plan Salary; plus Children's pensions of 5% of Plan Salary (subject to an overall maximum of 25% of Plan Salary).
Leaving service options	A deferred pension payable from Normal Pension Age; or A transfer payment to either a new employer's scheme or a suitable insurance policy, equivalent in value to the preserved pension.
Notes	Former members of the SNC Plan and SGH Scheme are entitled to different benefits in respect of their service prior to 1 April 1997; Former members of the Mercury Asset Management Scheme are entitled to different benefits in respect of their service prior to 1 July 1999.

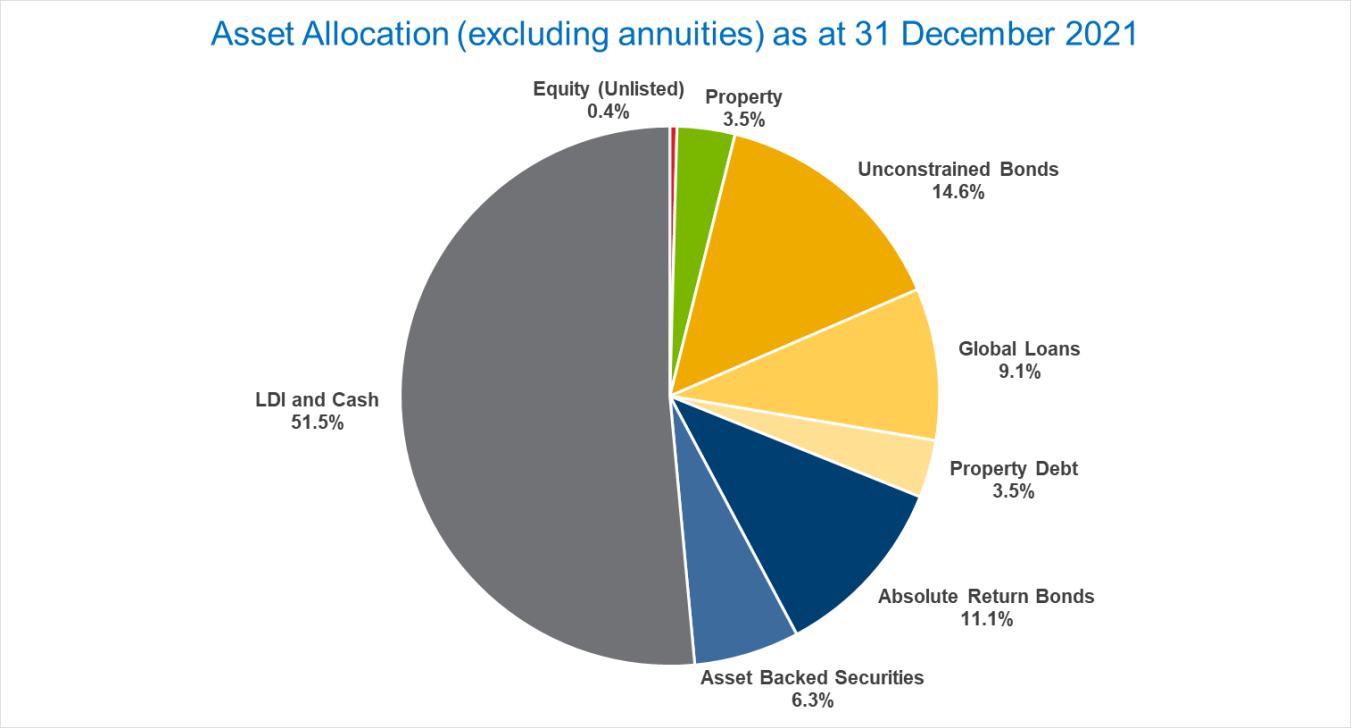
Assets

Information on the assets used in this valuation is covered here.

The audited accounts for the Plan for the year ended 31 December 2021 show the assets were £4,089.3M of which £2,337.8M relate to DC and AVC assets and £374.2M related to insurance policies purchased by the Trustees to match certain pensions in payment.

The rights under the insurance policies have been valued as £379.2M on the technical provisions basis, which I believe is appropriate in this circumstance.

The chart shows how the balance of the assets (excluding the insurance policies) of £1,377.4M is broadly invested.



If DC benefits were included…

The results shown in this report **exclude** DC benefits. On this page, I present the results if they had been **included**.

Defined contribution benefits (including DC AVCs) amounted to £2,337.8M at the valuation date. If these benefits are included in the valuation:

- The value of the assets on the technical provisions basis is £4,094.3M.
- The technical provisions are £3,905.8M (funding level of 105%).
- The value of the assets on the solvency basis is £4,099.8M.
- The value of the solvency liabilities is £4,084.2M (solvency ratio 100%).

Previous valuation results

This page sets out the results and conclusions of the previous actuarial valuation of the Plan at 31 December 2018.

Key results

The key results from the previous valuation at 31 December 2018 were:

- There was a surplus of £113M relative to the **technical provisions**, which corresponded to a funding level of 108%.
- There was an estimated deficit of £198M relative to the **solvency** liabilities.

Recovery plan

There was no recovery plan as the Plan was in surplus at the valuation date.

It was agreed that the Company would pay the following contributions:

- The agreed contributions to the Money Purchase section of the Plan;
- 0.5% of Plan Salaries for those members of the Plan who are entitled to a spouse's death-in-service pension to cover the expected cost of these pensions;
- The insurance premiums for lump sum death-in-service benefits;
- Any levies due to the Pension Protection Fund and other levies collected by the Pensions Regulator; and
- Other expenses of operating the Plan.

Notable changes since the previous valuation

Changes to the Plan since the previous valuation are summarised below.

Discretionary pension increases

In 2019, a discretionary pension increase was granted for certain pensions in payment accrued before 1 April 1997 which do not receive guaranteed pension increases. The Company paid a contribution to the Plan of £1.17M to fund this increase. There were no discretionary pension increases granted in 2020 or 2021.

State Pension Deduction methodology

Members who transferred into the Plan from the Mercury Asset Management Group plc Pension and Life Assurance Scheme (the MAM Scheme) are referred to as ex-MAM members. Ex-MAM members accrued a State Pension Deduction during their service in the MAM Scheme (up to 1 July 1999).

The Trustee received legal advice in 2019 which clarified the methodology to calculate the State Pension Deduction for these members which resulted in a change to the calculation approach. I have allowed for this change in methodology when calculating the 2021 valuation results.

GMP equalisation

In October 2018, the Lloyds Bank Court Judgement established that pension schemes cannot provide unequal benefits in respect of post 17 May 1990 service to men and women as a consequence of the Guaranteed Minimum Pension ('GMP') element of the pension being unequal. As a result of this, the Trustee included a GMP equalisation reserve for the 31 December 2018 valuation of 0.2% of the total liabilities.

A subsequent judgement in November 2020 established that the October 2018 ruling extends to the calculation of transfer values paid since 17 May 1990. It has been estimated that the additional liabilities in respect of this ruling is approximately £0.75M. To reflect this, the results of this valuation reflect a slightly higher GMP equalisation expense reserve of 0.25% of the total liabilities.

Administration transition

The administration of the Plan transferred from Capita to Willis Towers Watson (WTW) in 2021.

Investment strategy

Since the valuation date of 31 December 2021, the Trustee has carried out some investment de-risking with the aim of reducing the expected return on the Plan's non-insured assets to around gilts + 1% p.a. This de-risking is part of the Trustee's development of the longer term strategy for the Plan.

Analysis of the change since the previous valuation

I have analysed the change in the past service results from the previous valuation to this new one.

Past service changes

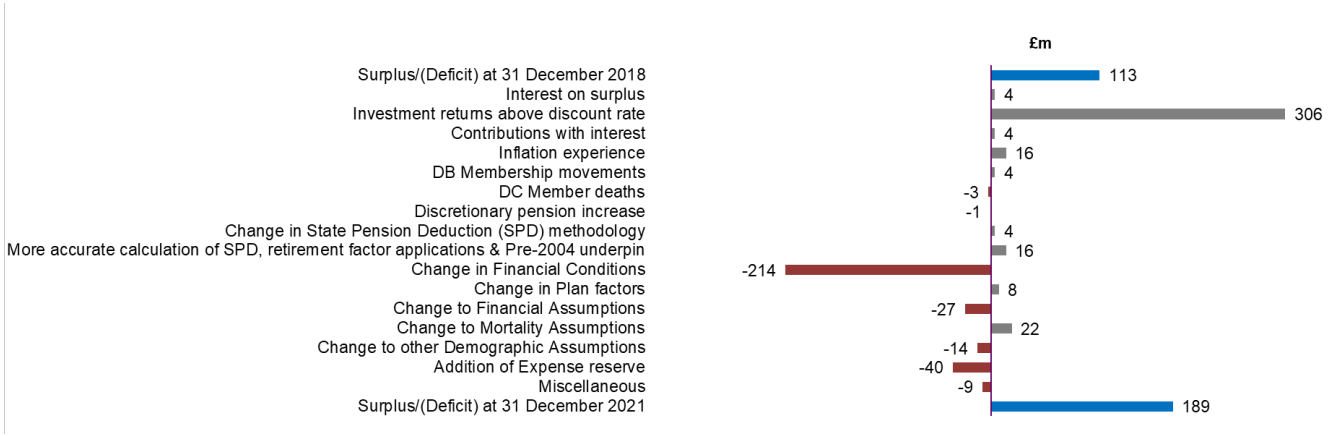
The past service results show that the surplus of £113M in the Plan at the previous valuation has become a surplus of £189M at this valuation.

The chart below quantifies the key reasons for this change.

Key factors

The analysis shows that the main factors affecting the funding position since the previous valuation have been:

- Gilt yields have fallen and RPI yields have increased, both of which have increased the value of the liabilities.
- This has been offset by investment returns having been higher than assumed.
- Updates to the mortality assumption have reduced the liabilities, although this has been offset by the changes in other demographic assumptions and the change in RPI-CPI gap assumption.
- Inclusion of an expense reserve has increased the liabilities.



Solvency estimate: assumptions

The key assumptions used in calculating the solvency estimate are summarised below.

Statutory solvency estimate

The solvency estimate has been calculated in line with statutory requirements. I have taken into account the investment strategies that an insurer is likely to use to back its annuity business and the resulting pricing I would expect to see under the market conditions at the valuation date, taking into account the size of the Plan.

The solvency estimate considers the position if:

- The Plan were discontinued on the valuation date.
- Member benefits were crystallised and, for active members, were based on their Final Pensionable Salary at the valuation date.
- Discretionary benefits were suspended permanently.
- The assets were used to buy immediate and deferred annuities from an insurer.

The solvency estimate is a regulatory requirement and also provides a useful benchmark against which the Trustee and others can assess the relative prudence of other funding measures.

The basis used is described below.

Estimate vs actual cost

This estimate is only a guide. The true position can only be established by conducting a competitive buy-out auction and fully defining the scope and likely cost of a wind-up process for the Plan.

Assumption	Solvency
Discount rate	Aon Bulk Annuity Market Monitor (BAMM) yield curves, which are constructed from swap and UK corporate bond market curves, and differs for pensioners and non-pensioners
RPI inflation	Term dependent rates derived from RPI swap markets
CPI inflation	RPI inflation less an adjustment of: 0.75% p.a. up to 2030, and 0.1% p.a. thereafter
Salary inflation	No allowance
Mortality assumption - base table	SAPS S3 'Light' tables
Mortality assumption – Scaling factors to apply to base table	In line with the scaling factors used for the technical provisions, plus 1%
Mortality assumption - Future improvements	CMI 2020 (S_k=7.0, A=0.5%) core projections with a long-term improvement rate of 1.75% p.a.
Withdrawals	All members are assumed to leave active service immediately
Early Retirements	All members are assumed to retire at their normal retirement age
Commutation	No allowance

Assumption	Solvency
Eligible dependant proportion	Pensioners: varies by age, for illustration at age 62: 92% of male members and 74% of female members are assumed to be married or have an eligible dependant. This is assumed to reduce over time in line with contingent dependant mortality. Non-pensioners: 90% of male members and 77% of female members are assumed to be married or have an eligible dependant at retirement or earlier death. This is assumed to reduce post-retirement in line with contingent dependant mortality.
Age difference	An eligible dependant is assumed to be of the opposite sex and 3 years younger than a male member and 1 year older than a female member
Expenses	A reserve equal to estimated expenses and charges associated with winding up the Plan
Discretionary benefits	No allowance made

Section 179 valuation: benefits, approximations and assumptions

The benefits that are valued in the section 179 valuation are summarised below, along with any approximations made and the assumptions used.

Benefits valued for section 179 purposes

Normal Retirement Pension

I have valued **100%** of pension for members who:

- have reached the Plan's NPA for section 179 purposes (as described on the right), or
- are receiving a dependant's pension, or
- retired due to ill-health.

For other members, I have valued **90%** of the pension payable.

Normal Pension Age

Normal Pension Age (NPA) for section 179 purposes is determined as prescribed in paragraph 34 of Schedule 7 to the Pensions Act 2004, and is broadly the earliest age at which the pension normally becomes payable without actuarial reduction.

Different NPAs may apply to different parts of a member's pension.

Pension increases in payment

I have only allowed for future increases in payment on benefits accrued after 5 April 1997. The allowance reflects increases in line with CPI price inflation capped at 2.5% p.a. Actual past pension increases for pensioners have been allowed for in the benefits valued.

Pension increases in deferment

For members who have not yet retired, I have implicitly allowed for revaluation of benefits between the valuation date and NPA in line with CPI price inflation capped at 5% p.a. Past revaluation (up until the valuation date) has been allowed for at the levels that apply under the provisions of the Plan, which differ in the treatment of GMP and non-GMP pension.

Death after retirement

I have allowed for contingent spouses' pensions on death in retirement based on 50% of the pension in payment for current pensioners, rather than the level of spouses' pensions that would actually be payable under the Plan, which are based on the member's pre-commutation pension.

Death after leaving but before retirement

I have allowed for contingent spouses' pensions on death before retirement based on 50% of the pension revalued with CPI price inflation from 31 December 2021 to the member's date of death, rather than the level of spouses' pensions that would actually be payable under the Plan.

GMP equalisation

I have made an approximate allowance for the additional liabilities that would arise in your Plan as a result of GMP equalisation in line with the PPF's guidance.

GMP step-up

In accordance with the PPF's guidance, I have not valued any GMP step-up or anti-franking uplift.

AVCs and other money purchase benefits in payment

Benefits in respect of the conversion on retirement of AVCs and other money purchase benefits into a pension payable by the Plan have been included in the assets and liabilities.

AVCs and other money purchase benefits not in payment

Assets in respect of money purchase benefits (including AVC funds not yet in payment) are not included within the assets or liabilities for a section 179 valuation.

Insurance policies held

The Trustee holds insurance policies in respect of pensions in payment to certain members of the Plan. For the purpose of the section 179 valuation, I am required to value these as assets and corresponding liabilities.

- When valuing these policies as assets, I have allowed for the benefits actually secured under the policies, and this gives a value of £360.6M.
- When valuing the corresponding liabilities, I have valued the restricted benefits for section 179 purposes, which gives a reduced value of £278.2M.

Approximations

I have allowed for the CIF balances in the liabilities at full asset value (provided by the administrator). If these funds were valued accurately in line with the PPF's guidance, this would lead to significant additional calculations, in particular to convert each fund into a pension. In light of the relatively small size of the CIF balances, I have adopted this simplified approach.

At this valuation, I have not needed to make any approximations in relation to the compensation cap since this no longer applies.

Assumptions

I have summarised below the assumptions used in the section 179 valuation. Further assumptions are also required to allow for the impact of GMP equalisation and these are set out later.

Financial assumptions

Post-retirement discount rate – current pensioners	1.28% p.a., for non-increasing pensions (this is the pension accrued before 6 April 1997). -0.92% p.a. net of increase, for increasing pensions (this is the pension accrued after 5 April 1997, and the assumption allows for increases in payment in line with CPI price inflation limited to 2.5% p.a.).
Post-retirement discount rate – current non-pensioners	1.00% p.a., for non-increasing pensions (this is the pension accrued before 6 April 1997). -1.30% p.a. net of increase, for increasing pensions (this is the pension accrued after 5 April 1997, and the assumption allows for increases in payment in line with CPI price inflation limited to 2.5% p.a.).
Pre-retirement discount rate	-2.61% p.a. net of increases in deferment (this allows for increases in deferment in line with CPI price inflation limited to 5% p.a.).

Demographic assumptions

Mortality before and after retirement	For members: Standard tables S3PMA and S3PFA applicable for the member's year of birth. For contingent lives/dependants: Standard tables S3DMA and S3DFA applicable for the contingent life's assumed year of birth/the dependant's actual year of birth. In all cases: a scaling factor of 100% and an allowance for improvements in mortality from 2013 in line with the CMI_2019 projections with the smoothing parameter S_K=7.5, the A parameter = 0 and a long-term improvement rate of 1.5% p.a. for males and 1.25% p.a. for females.
Family details	Age difference between member and dependant: males are assumed to be three years older than females. 85% of male members and 75% of female members are assumed to be married at retirement or earlier death. Children's pensions in payment are assumed to cease at age 18, or age 23 if currently aged over 17.

Expenses

Estimated wind-up expenses	4% of liabilities (excluding benefit installation / payment expenses) up to £5M; plus 1% of liabilities (excluding benefit installation / payment expenses) between £5M and £25M; plus 0.5% of liabilities (excluding benefit installation / payment expenses) between £25M and £545M. (The estimated wind-up expenses will be no more than £3 million.)

Expenses	
Benefit installation / payment expenses	Non-pensioners: an allowance of £950 per member. Pensioners:

Age	Expense allowance per member
< 60	£800
60-70	£650
70-80	£550
80+	£450

GMP equalisation

As your Plan has not implemented GMP equalisation, I have made an approximate allowance for the additional liabilities that will arise as a result of GMP equalisation, in line with the PPF's guidance.

The additional liabilities are calculated as a percentage uplift to the unequalised section 179 liabilities accrued between 17 May 1990 and 5 April 1997 based on a segmentation of members into groups reflecting factors such as sex, age, date of leaving and proportion of pension that is GMP. I have used the lowest cost method of equalisation which is consistent with other GMP equalisation costings provided to you.

Due to the complexity of equalising for the effect of unequal GMPs, there are a number of uncertainties and so I have to make some assumptions in these calculations. However, **this approach is consistent with the PPF's guidance**.

In order to be prudent, an additional allowance has been included for the impact of the November 2020 Lloyds judgment, in relation to GMP equalisation for past transfers out.

The increase in the total section 179 liabilities as a result of allowing for GMP equalisation is **£3.1M**.

These additional liabilities include an allowance for equalising benefits paid prior to the valuation date as these are not included in the net asset value shown in the audited accounts used for this section 179 valuation.

Legal framework and compliance

Legal framework

This report is produced in compliance with:

- Rule 24.4 of the Plan's Rules.
- Section 224 of the Pensions Act 2004.
- The terms of the Scheme Actuary Agreement between the Trustee and me, on the understanding that it is solely for the benefit of the addressees.

TAS compliance

This document, and the work relating to it, complies with 'Technical Actuarial Standard 100: Principles for Technical Actuarial Work' ('TAS 100') and 'Technical Actuarial Standard 300: Pensions' ('TAS 300').

The compliance is on the basis that the Trustee is the addressee and the only user and that the document is only to be used as a summary of the outcome of the valuation and to submit the section 179 valuation information to the PPF, using the Scheme Return section of the Pensions Regulator's Exchange system. If you intend to make any decisions after reviewing this document, please let me know and I will consider what further information I need to provide to help you make those decisions.

This document should be read in conjunction with:

- The statement of funding principles dated 29 March 2023
- The previous statement of funding principles dated 3 October 2019
- My formal report "Actuarial valuation at 31 December 2018" dated 3 October 2019
- My report "Actuarial valuation at 31 December 2021 – Experience analysis" dated 16 November 2021
- My report "Actuarial valuation at 31 December 2021 – Financial and other assumptions" dated 14 March 2022
- My report "Actuarial valuation at 31 December 2021 – Longevity & Dependant Analysis" dated 14 March 2022
- My report "Actuarial valuation as at 31 December 2021 – Initial Results" dated 15 June 2022
- My report "Actuarial valuation as at 31 December 2021 – Updated Results" dated 25 November 2022
- The Aon report "Actuarial Valuations Handbook" provided in March 2022

If you require further copies of these documents, please let me know.

Shorthand in this report

Plan: Bank of America UK Retirement Plan

Trustee: Bank of America UK Retirement Plan Trustees Limited

Company: The Principal Employer at the valuation date – this was Merrill Lynch International

Rules: The Plan's Rules dated 1 August 2016 (which was the version in force at the valuation date) and amending legal documents

Pensionable Salary: As defined in the Rules

Pensionable Service: As defined in the Rules

Glossary

This glossary explains some common terms from the actuarial valuation process. Not all of them may be used in your report.

Attained age method

This is one of the methods historically used by actuaries to calculate actuarial liabilities and contribution rates. It is similar to using the projected unit method but with a control period equal to the average future working lifetime of the active membership.

Best estimate assumption

It is equally likely that actual experience will be better-than or worse-than such an assumption. Best estimate assumptions are subjective and therefore those referenced in one report may differ from best estimate assumptions derived elsewhere.

Cash transfer sum

This is a benefit available to early leavers who have between three months and two years of pensionable service. It is calculated in the same way as the cash equivalent transfer value payable to longer-serving early leavers and is calculated at the date of leaving pensionable service.

Consumer Prices Index (CPI)

Measure of UK price inflation published monthly by the Office of National Statistics. It is the Government's preferred measure of inflation. It is based on different items and weightings to the Retail Prices Index (RPI) and is also calculated using a different formula.

Control period

This is the period of time from the valuation date that is considered when calculating the future service cost for schemes which are still open to accrual. The control period is commonly set to cover the next year, the 3-year period to the next valuation or the expected future working lifetime of the active membership.

Current unit method

This is one of the possible methods used by actuaries to calculate actuarial liabilities and contribution rates. This method only allows for increases applicable to deferred pensioners beyond the effective valuation date (when calculating liabilities) or the end of the control period (when calculating contribution rates) and so does not allow for any further projected future increases to pay.

Deficit

This is the funding target less the value of assets. If the value of assets is greater than the funding target, then the difference is called the surplus.

Defined accrued benefits method

This is one of the possible methods used by actuaries to calculate actuarial liabilities and contribution rates. This method assumes that the scheme will be discontinued at the effective valuation date (when calculating liabilities) or at the end of the control period (when calculating contribution rates) and so does not allow for any further projected future increases to pay or any other terms applicable to active members. This method may be appropriate for schemes which anticipate winding up.

Discount rate

This is used to place a present value on a future payment. A 'risk-free' discount rate is usually derived from the investment return achievable by investing in government gilt-edged stock. A discount rate higher than the 'risk-free' rate is often used to allow for some of the extra investment return that is expected from investing in assets other than gilts.

Discretionary benefits

These are benefits which are not guaranteed under a scheme's rules and which are only granted to members at the discretion of the trustees and/or the sponsor.

Duration of liabilities

The duration of a scheme's liabilities represents the average term to payment of the liabilities. In broad terms, if a scheme has a duration of 20 years, then it will respond to changes in discount rate in the same way that a single cashflow which is payable in 20 years' time would. In practice, there are several different technical definitions of duration.

Forward rate

A forward rate is a rate which is expected to apply over a future time period. For example, to discount a single payment from one future date (say, five years from now) back to a closer future date (say, three years from now).

Funding target

An assessment of the present value of the benefits that will be paid from the scheme in the future, normally based on pensionable service prior to the valuation date. Often, the funding target is equal to the technical provisions.

Gilt yield curve

The term-dependent yields on gilts derived from fixed-interest gilts published by the Bank of England, which are extended by Aon for years beyond those published.

Hedging

A liability is said to be hedged if a scheme holds investments which respond in the same way as it does to changes in the risk being hedged (e.g. interest rates or inflation). Gilts and swaps are examples of investments which are commonly used to hedge liabilities.

Formula effect (in calculation of RPI and CPI)

The difference between measures of inflation arising from the use of different formulae to construct the RPI and CPI indices at the first stage of aggregation – the RPI uses a (simple) arithmetic average whereas the CPI uses a (compound) geometric average.

Funding level (or funding ratio)

This is the ratio of the value of assets to the funding target.

Future service contribution rate (FSCR)

Only relevant for schemes still open to accrual; this is the cost of benefits accruing expressed as a percentage of the members' pensionable pay. It considers the present value of the benefits expected to accrue to members and the pensionable pay expected to be paid to members over a given period (referred to as the control period). Provided that the distribution of members remains stable, with new members joining to take the place of older leavers, and if all the other assumptions are borne out, the calculated contribution rate can be expected to remain stable. If there are no new members, however, the average age will increase and the contribution rate can be expected to rise or fall depending respectively upon whether the discount rate is higher or lower than the salary increase assumption.

Guaranteed Minimum Pension (GMP)

Most schemes that were contracted out of the State Earnings Related Pension Scheme (SERPS) before April 1997 have to provide a pension for service before that date at least equal to the Guaranteed Minimum Pension (GMP). This is approximately equal to the SERPS pension that the member would have earned had the scheme not been contracted out. GMPs ceased to build up on 6 April 1997, when the legislation changed.

Inflation risk premium (IRP)

The difference between the best estimate of future inflation and its market price.

Inflation uncertainty

Whilst, over the medium to long term, inflation is often considered to be reasonably stable, and a simple single assumption is often used for projections, in reality inflation can vary up and down significantly from one year to the next. This variation is sometimes referred to as inflation uncertainty.

Limited Price Indexation (LPI)

The Pensions Act 1995 required schemes to provide a minimum level of annual increase to pensions in payment. The minimum level is the smaller of 5% and the increase in inflation* and applies to the pension earned from 6 April 1997 to 5 April 2005. With effect from 6 April 2005, the cap for statutorily-required LPI for future service was reduced from 5% to 2.5%.

*Until 2010, inflation for the purpose of this minimum was defined with reference to changes in the Retail Prices Index. From 2011, inflation was defined with reference to changes in the Consumer Prices Index.

Longevity risk

This is the risk that life expectancies exceed those assumed and the pension scheme's liabilities are therefore higher than expected.

Mortality future improvements

This is the assumption about how the number of people dying each year will reduce in the future. A higher rate of improvement will lead to a higher life expectancy. Also referred to as future longevity improvements.

Mortality rate

A mortality rate measures the likelihood that an individual will die between one birthday and the next.

Mortality table

Mortality tables summarise mortality rates across all ages.

Ongoing best estimate

This is the present value of the benefits members are entitled to, should the scheme continue without being wound up early, assessed using a set of assumptions whereby the key assumptions are best estimates. Best estimate assumptions are subjective and therefore the figure provided in one report may differ from other best estimate valuations.

Partly projected unit method

This is one of the possible methods used by actuaries to calculate actuarial liabilities and contribution rates. This method allows for some, but not full, projected future increases to pay between the valuation date and retirement or date of leaving service. This method may be appropriate for schemes which anticipate ending the link to future salary increases at a future date.

Pension increase exchange (PIE)

An option that may be offered to members on or after retirement whereby members are granted a higher initial pension but must give up future inflationary increases in return. This can only be done with pension increases that are in excess of statutory minimum increases.

Pension Protection Fund (PPF)

The PPF was established with effect from 6 April 2005. The PPF will normally take over the assets of a pension scheme in the event of its sponsor becoming insolvent and the scheme having insufficient assets to provide the PPF benefits. The PPF will not provide the scheme benefits in full. The PPF is financed by a levy on most defined benefit pension schemes. The PPF benefits are broadly 100% of benefits for pensioners over normal retirement age and 90% of benefits up to a cap for all other members. Pension increases granted on benefits are at lower levels than apply in many schemes, in particular, benefits earned before 6 April 1997 would not be given any pension increases within the PPF.

Present value

Actuarial valuations involve projections of pay, pensions and other benefits into the future. To express the value of the projected benefits in terms of a cash amount at the valuation date, the projected amounts are discounted back to the valuation date by a discount rate. This value is known as the present value. For example, if the discount rate was 6% a year and if we had to pay a lump sum of £1,060 in one year's time the present value would be £1,000.

Projected unit method

This is one of the common methods used by actuaries to calculate actuarial liabilities and contribution rates. This method allows for full projected future increases to pay through to retirement or withdrawal.

Protected Rights

Prior to April 2012, schemes could contract out of SERPS/S2P on a 'Protected Rights' basis. The accumulated National Insurance rebates in respect of each member as a result of being contracted out (known as Protected Rights) must be applied as an underpin to the member's benefits. Schemes that were contracted out on this basis before 6 April 1997 provided this underpin instead of GMPs.

Prudent assumption

It is more likely that actual experience will be better than a prudent assumption than that it will be worse. The value of the liabilities will be higher when measured using prudent assumptions than using best estimate assumptions.

Recovery plan

Where a valuation shows a funding shortfall against the technical provisions, trustees must prepare a recovery plan setting out how they plan to meet the statutory funding objective.

Retail Prices Index (RPI)

Measure of UK price inflation published monthly by the Office of National Statistics. It is no longer the Government's preferred measure of inflation. As well as being based on different items and weightings to the Consumer Prices Index (CPI), it is also calculated using a different formula. However, it is the index that pension benefits have historically tended to be linked to and is the index used to determine increases in index-linked gilt coupons.

RPI inflation curve

The term-dependent RPI inflation expectations derived from fixed-interest and index-linked gilts published by the Bank of England which are extended by Aon for years beyond those published.

Scaling factor

Differences in life expectancy between schemes are typically allowed for by multiplying the chance of dying at each age by a scaling factor. Scaling factors of less than 100% mean that people are assumed to live longer than under the standard tables. For example, a scaling factor of 90% means that a member has a 10% less chance of dying each year than is assumed in the standard mortality tables. Similarly, scaling factors of more than 100% mean that people are assumed to live for less time than under the standard tables.

Schedule of contributions

Trustees of pension schemes must prepare and maintain a schedule of contributions. This shows the dates and amounts of contributions due from the sponsor and members. Under the Pensions Act 2004, the schedule must be put in place within 15 months of the valuation date.

Section 179 valuation

An actuarial valuation of a pension scheme in accordance with section 179 of the Pensions Act 2004. The Pension Protection Fund will take the results of a section 179 valuation into account when calculating a scheme's PPF levy.

Solvency estimate

This represents an estimate of the cost of buying out a scheme’s benefits with an insurance company at the valuation date. Supply and demand factors also mean that no single solvency estimate can be relied on and so this estimate is unlikely to be the same as the actual cost of buying out the benefits. Assumptions are set by the Scheme Actuary.

Solvency ratio

This is the ratio of the market value of a scheme's assets to the estimated cost of securing a scheme's liabilities in the event of the discontinuance of the scheme.

Sponsor covenant

A sponsoring employer's 'covenant' is their legal obligation and financial ability to support the pension scheme, both now and in the future.

Spot rate

A rate which is expected to apply between now and a future date. For example, to discount a single payment at a future date (say, five years from now) all the way back to time 0.

Statement of funding principles

The Pensions Act 2004 requires trustees to prepare (and from time to time review and, if necessary, revise) a written statement of their policy for securing that the statutory funding objective is met. This is referred to as a statement of funding principles.

Statutory funding objective

Under the Pensions Act 2004, every scheme is subject to the statutory funding objective, which is to have sufficient and appropriate assets to cover its technical provisions.

Surplus

This is the value of assets less the funding target. If the funding target is greater than the value of assets, then the difference is called a deficit.

Swap yield curve

The term-dependent yields on fixed-interest swaps derived by Aon from market data.

Technical provisions

This is the present value of the benefits members are entitled to, based on their pensionable service to the valuation date and assessed using the assumptions agreed between a scheme's trustees and the sponsor. It generally allows for projected future increases to pay through to retirement or date of leaving service.

Transfer value

Members generally have a legal right to transfer their benefits to another pension arrangement before they retire. In taking a transfer, members give up their benefits in a scheme, and a sum of money (called the transfer value) is paid into another approved pension scheme; this is used to provide pension benefits on the terms offered in that scheme.

Withdrawal

Members may leave a pension scheme before their normal retirement age (typically because they leave employment with the sponsor). When they do so, their accrued benefits will no longer be linked to future salary increases (where applicable), and will instead be linked to future inflation. Benefits will still be payable at normal retirement age.

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