Mercer

Scheme Funding Report of the 31 December 2020 Actuarial Valuation

Thales UK Pension Scheme Section 2

30 June 2022

welcome to brighter

Contents

1 Introduction

This report is addressed to Thales Pension Trustees Limited ("the Trustees") as Trustees of Section 2 ("the Section") of the Thales UK Pension Scheme ("the Scheme") and is provided to meet the requirements of Section 224(2)(a) of the Pensions Act 2004.

It describes the factors considered by the Trustees in undertaking the actuarial valuation as at 31 December 2020, and the decisions reached.

The purpose of the actuarial valuation is for the Trustees to determine:

- the expected cost of providing the benefits built up by members at the valuation date (the "liabilities"), and compare this against the funds held by the Section (the "assets");
- an appropriate plan for making up the shortfall if the Section's assets are lower than its liabilities (a "recovery plan"); and
- the contributions needed to cover the cost of the benefits that active members will build up in the future together with other costs incurred in running the Section.

Signature		**Date**	30 June 2022
Scheme Actuary	Christian Hardy	**Qualification**	Fellow of the Institute and Faculty of Actuaries

This report has been prepared in accordance with Technical Actuarial Standards TAS 100: Principles for Technical Actuarial Work and TAS 300: Pensions which are issued by the Financial Reporting Council.

The calculations referred to in the report use methods and assumptions appropriate for reviewing the financial position of the Section and determining a contribution rate for the future. Neither Mercer, nor I, accept liability to any third party in respect of this report; nor do we accept liability to the Trustees if the information provided in this report is used for any purpose other than that stated.

The report may be disclosed to members and others who have a statutory right to see it. It may also be disclosed to any participating employer and, if the Trustees and Mercer consent, it may be disclosed to other third parties.

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Key results of the funding assessment

Past service funding position

The table below compares the assets and liabilities of the Section at 31 December 2020. Figures are also shown for the last valuation as at 31 December 2017.

	£m	
	31 December 2020	31 December 2017
Total Assets	**735**	**645**
Liabilities:		
Active Members	*380*	*280*
Deferred Pensioners	*252*	*191*
Pensioners	*508*	*354*
Total Liabilities	**1,140**	**825**
Past Service Surplus / (Shortfall)	**(405)**	**(180)**
Funding Level	**64%**	**78%**

The table shows that there was a shortfall of £405m at 31 December 2020. The Section's assets were sufficient to cover 64% of its liabilities; this percentage is known as the "funding level" of the Section.

At the previous valuation, at 31 December 2017, the shortfall was £180m (a funding level of 78%). The key reasons for the changes between the two valuations are considered in Section 3 of the report.

The liability value at 31 December 2020 shown in the table above is known as the Section's "technical provisions". The technical provisions are calculated using assumptions that the Trustees have determined are appropriate, based on their assessment of the strength of the Employer covenant and having regard for the direct covenant and additional support provided by Thales SA, the parent company.

The approach has been agreed with the Employer; throughout this report "Employer", means Thales UK Ltd.

Further details of the way in which the technical provisions are calculated are set out in Appendix A.

Correcting the shortfall

The deficit at 31 December 2020 was £405m but the funding position has improved by more than expected over the year to 31 December 2021 as result of positive investment performance. The Trustees have agreed with the Employer to base the recovery plan on the updated position as at 31 December 2021 and a deficit of £316m.

The recovery plan requires the Employer to make the following payments to rectify the shortfall:

Date	Payments
Up to 30 June 2022	£15.3m p.a.
From 1 July 2022 To 31 December 2034	£17.2m p.a.

Future service contributions

The valuation also looks at the cost of the benefits that will be built up over the year after the valuation date. A summary of the assumptions used for this purpose is also provided in Appendix A.

The table below gives a breakdown of the future service cost at 31 December 2020 and also shows the cost at 31 December 2017.

Active members pay contributions (by salary sacrifice in most cases) to the Section as a condition of membership, at the rate of 9% of CARE Salary up to £40,040 per annum and 12% of CARE Salary in excess of £40,040 per annum; the average rate is 10.0% of CARE Salary at 31 December 2020. These contributions are, therefore, deducted from the total future service rate to calculate the Employer's future service contribution rate, as follows

	% Of CARE salaries	
	31 December 2020	31 December 2017
Cost Of Pension Benefits including insurance costs	38.1	29.3
Less Members' Contributions	(10.0)	(9.7)
Employer Future Service Contribution Rate	28.1	19.6

Certain active members accrue benefits on a limited basis; for these members the Employer pays £7,100 per annum and 3.7% of CARE Salary.

Other contributions

The Trustees have agreed with the Employer that it will pay a further £1m per annum towards the ongoing administration expenses of the Section. The Employer also reimburses the Trustees in full for any levies paid to the Pension Protection Fund.

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Experience since last valuation

Summary of key inter-valuation experience

The last actuarial valuation had an effective date of 31 December 2017; since then the following significant events have occurred.

- Since the last valuation date, the High Court rulings in respect of the Lloyds case (both 2018 and 2020) have confirmed that pension schemes must equalise benefits in order to address the inequalities that arise due to differing GMP (Guaranteed Minimum Pension) entitlements for men and women. This applies for both existing members and members who have previously elected to take a transfer from the Section. The Trustee has considered the potential impact of GMP equalisation on the funding of the Section and has increased the total liabilities by £10.5m in respect of the estimated impact on existing Section members. A further £0.5m has been included in respect of members who have previously taken a transfer value and may be eligible for a further transfer value payment.

- Pensions in payment, pensions in deferment, accrued pensions of active members and CARE salaries were increased / revalued as guaranteed under the rules of the Section.

- During the inter-valuation period, the investment return on the Section's assets has been 5.0% per annum.

- Contributions (in line with the agreed rates) paid over the inter-valuation period were as follows:

Date	Employer contributions*
31 December 2017 To 31 December 2018	£27.6m
31 December 2018 To 31 December 2019	£27.4m
31 December 2019 To 31 December 2020	£27.0m

* Includes deficit reduction contributions and contributions in respect of future service. Excludes PPF levies reimbursements.

Reasons for the change in funding position since the last actuarial valuation

The shortfall at the last valuation date was £180m. The table below sets out the main reasons for the change in the shortfall between 31 December 2017 and 31 December 2020.

	£m
Shortfall at 31 December 2017	**(180)**
Expected interest on the 2017 shortfall	(15)
Deficit Contributions paid by the Employer	46
Impact on the assets of investment returns being higher than expected	46
Effect of inflation & salary experience	6
Membership changes and other experience	(5)
Estimated allowance for GMP equalisation (2018 and 2020 Rulings)	(11)
Effect of updated market conditions (yields and inflation)	(138)
Impact of changing assumptions including:	
- Updated mortality assumptions	7
- Impact of reducing the inflation risk premium	(10)
- Allowance for increasing commutation terms	(11)
- Change to the assumed discount rate	(118)
- Inclusion of mortality prudence reserve (2%)	(22)
Shortfall At 31 December 2020	**(405)**

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Projected future funding level and volatility

Projected funding position at next actuarial valuation

As part of this valuation, the Trustees have agreed with the Employer to put in place a recovery plan to pay off the shortfall by 31 December 2034.

The next actuarial valuation will take place with an effective date no later than 31 December 2023. If experience up to that date is in line with the assumptions made for this current actuarial valuation, contributions are paid at the agreed rates or amounts, and reflecting the known improvement in the funding position to 31 December 2021, the shortfall at 31 December 2023 is expected to be £271m, equivalent to a funding level of 75%.

Material risks faced by the Section

The Section is, however, subject to risks - some potentially material risks - that are, to an extent, outside the Trustees' control and could affect the funding level. Any material worsening of the funding level will lead to more contributions being needed (either at an increased rate or at the same rate over a longer period) to be able to provide the benefits built up in the Section, unless experience acts in other ways to improve the funding level.

Examples of such risks, and how the Trustees manage them, are:

- if the Employer becomes unable to pay contributions or to make good deficits in the future, the Section's assets will be lower than expected and the funding level will be worse than expected.

  To mitigate (but not full remove) the risk:

  - the Trustees regularly monitors the financial strength of the Employer taking professional advice from external covenant advisors;
  - a parent company guarantee from Thales SA has also been agreed. Should the Employer not be able to meet future deficit contributions, these amounts (up to defined limits) will be paid by Thales SA under the terms of the guarantee.

- If future investment returns on assets are lower than assumed in the valuation, then the Section's assets will be lower, and the funding level worse, than expected.
  - The Trustees have a process in place to monitor investment performance monthly, and they review the Section's investment strategy at each actuarial valuation.

- If gilt yields change such that the liability values increase by more (or decrease by less) than the assets, the funding level – both measured against the technical provisions and on the wind-up basis (see section 5) - will be worse than expected.

  The Trustees have taken the following actions to mitigate (but not fully remove) the risk:
  - through the 31 December 2020 valuation process the Trustees have implemented a lower risk investment strategy designed to provide cashflows to support the payment of members' benefits;
  - a proportion of the Section's assets is invested in gilts / or suitable derivatives in order to increase the extent to which the asset move in line with the value of the liabilities.

- If improvements in life expectancy are greater than assumed, the cost of benefits will increase because members will live longer than expected and the funding level will be worse than expected.
  - The Trustees regularly review the Section's experience and ensure that the assumptions they make for members' life expectancy take the most recent information available into account.
  - For the 31 December 2020 valuation the Trustees have introduced an explicit reserve for longevity prudence.

- If members make decisions about their options, which increase the Section's liabilities, the funding level will be worse than expected.
  - An example would be if members do not commute the maximum possible pension for cash, as is being assumed. The Trustees review the Section's demographic experience at each valuation to ensure that their treatment of, and assumption relating to, member options remains appropriate.

Sensitivity of funding position to changes in key assumptions

The value placed on the Section's liabilities depends on the assumptions used to carry out the calculations. If future experience differs from the assumptions the Trustees have agreed with the Employer, then the projected future funding level will be different from the level described above.

The table below shows how the valuation results at 31 December 2020 would have differed given small changes in the key assumptions.

Date	Change in shortfall at 31 December 2020 (£m)
Investment return is 0.25% per annum lower than assumed	+50
Long term inflation is 0.25% per annum higher than assumed	+29
Members live one year longer than assumed	+44

Climate Change

Climate change has the potential to be a material financial risk to the Section, whether this is due to the costs of moving to a low carbon economy, the cost of physical damages caused as a result of climate change or even as a result of litigation / regulation to address past practices.

Climate change is expected to affect most, if not all of the risks highlighted above; the extent of, and interaction between, these impacts are, however uncertain.

As part of the valuation the Trustees considered a Climate change "shock" scenario. They also took some actions to understand and manage the risks associated with Climate change including:

- understanding the potential for climate related factors to impact on the Employer covenant;
- understanding the exposure of the Section to changes in asset market prices, yields and inflation rates due to Climate change; and
- recognising that the potential impact on life expectancies is likely to vary significantly between geographies depending upon what action is taken to address (and success is had) dealing with Climate change on a global level.

The Trustee will consider further scenario testing before the next formal valuation as part of the work required for the Taskforce for Climate Related Financial Disclosures.

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Wind-up position

Were the Employer were to become insolvent, or decide not to support the Section, then the Trustees could decide to wind up the Section and secure the benefits built up with an insurance company.

Insurance companies use different assumptions from those adopted for the technical provisions in calculating the value of the Section's liabilities and the price they would charge to provide the benefits.

The table below shows an estimate of the funding level of the Section at 31 December 2020 assuming all benefits were bought out with an insurer on the valuation date. The wind-up position at 31 December 2017 is also shown. The wind-up position is shown for information only, and does not mean that the Trustees or Employer are thinking of winding up the Section.

	£m	
	31 December 2020	31 December 2017
Total Assets	**735**	**645**
Liabilities:		
Active Members	*451*	*456*
Deferred Pensioners	*309*	*323*
Pensioners	*538*	*428*
Expenses	*19*	*18*
Total Liabilities	**1,317**	**1,225**
Past Service Surplus / (Shortfall)	**(582)**	**(580)**
Funding Level	**56%**	**53%**

As the table shows, the Section would have had a shortfall of £582m if it had been wound up at 31 December 2020. This means that, on average, members could only expect to receive 56% of the benefits earned to date (although the percentage coverage would differ between members depending on age and when their benefit was earned).

In practice, were the Section to be wound up due to the Employer (and Group) becoming insolvent, the members could become eligible for compensation from the Pension Protection Fund (PPF) in the event that the Section's assets are less than needed to buy that compensation from an insurance company. In this scenario, members could receive a higher proportion of the benefits they have earned to date. Further details of the compensation payable from the PPF are given in Appendix E.

If experience is in line with the assumptions underpinning the agreed recovery plan, and contributions are paid at the agreed rates or amounts, the shortfall at 31 December 2023 on a wind-up basis would be £492m, equivalent to a funding level of 65%.

Appendix A

Assumptions

How the benefits are valued

In order to calculate the liabilities, the Trustees need to make assumptions about various factors that affect the cost of the benefits provided by the Section; these include, for example, how long members will live, or the future level of inflation. The table below explains the key assumptions being made in the valuation.

Assumption	Why it is important and how it impacts on the liabilities
Discount rate	The majority of benefits in a pension scheme are paid many years in the future. In the period before the benefits are paid, the Trustees invests the funds held by the Section with the aim of achieving a return on those funds. When calculating how much money is needed now to make these benefit payments, it is appropriate to make allowance for the investment return that is expected to be earned on these funds. This is known as “discounting”. The higher the investment return achieved, the less money needs to be set aside now to pay for benefits. The calculation reflects this by placing a lower value on the liabilities if the “discount rate” is increased.
Inflation	Pensions in payment typically increase in line with price inflation, subject to a cap. Salary growth is also normally linked to price inflation. A higher inflation assumption will, all other things being equal, lead to a higher value being placed on the liabilities.
Life expectancy	Pensions are paid while the member (and potentially their spouse or partner) is alive. The longer people live, the greater is the cost of providing a pension. Allowing for longer life expectancy therefore increases the liabilities.

The liabilities of the Scheme are calculated projecting forward all of the future benefit cash flows (i.e. expected benefits) and discounting them back to the effective date of the valuation, using these assumptions. For example, the liability for a single pensioner is calculated by:

a) estimating the amount of each pension payment they will receive in the future;
b) multiplying by the probability that the member will still be alive by the date of each payment;
c) discounting each payment back to the effective date of the valuation; and
d) summing up all of these discounted amounts.

The liability for the whole Scheme is the sum of the liability of each members.

Funding objective and investment strategy

The assumptions for the technical provisions have been selected by the Trustees to reflect their funding objective, after reaching agreement with the Employer. The Trustees' stated funding objective (which has also been agreed with the Employer) is to reach a position where the assets are sufficient to fully cover the technical provisions by 31 December 2034.

Further details are available in the Section's Statement of Funding Principles ("SFP") dated 30 June 2022.

In addition, as part of their process for choosing the assumptions and determining the size of the margins to include, the Trustees have taken into account their objective assessment of the Employer's covenant and the level of risk present in the investment strategy of the Section.

The Trustee's current investment strategy is set out in Appendix C and further details are available in the Section's Statement of Investment Principles dated 8 December 2021.

Assumptions used to calculate technical provisions

The tables below summarise the key assumptions used in the calculation of the technical provisions and those used for the 31 December 2017 actuarial valuation.

Financial assumptions	31 December 2020	31 December 2017
Discount Rate	1.13% p.a.*	2.80% p.a.
Price Inflation (RPI)	3.10% p.a.	3.20% p.a.
Price Inflation (CPI)	2.40% p.a.	2.50% p.a.
Salary Increases	3.60% p.a.	3.70% p.a.
Pension Increases In Payment:		
RPI (5% Maximum)	2.98% p.a.	3.00% p.a.
RPI (2.5% Maximum)	2.08% p.a.	2.05% p.a.

*A discount rate of 1.86% p.a. was used to calculate the cost of future pension benefits.

Demographic assumptions	31 December 2020	31 December 2017
Retirement	Benefit accrual prior to 1 January 2008 has been valued at the Normal Retirement Age under the member's former scheme. Benefit accrual after 31 December 2007 has been valued using a Normal Retirement Age of 65.	

Demographic assumptions	31 December 2020	31 December 2017
Mortality – Base Table	SAPS S3 (all pensioner) tables, Middle for females, and adjusted by a loading of 94% (males) and 95% (females)	SAPS S2 (all pensioner) tables adjusted by a loading of 93% (males) and 96% (females)
Mortality – Future Improvements:	CMI 2019 projections model with a 1.5% p.a. long term improvement rate; a smoothing parameter of 7.5; initial improvement parameter of nil.	CMI 2017 projection model (CORE) with a 1.5% p.a. long term trend
Mortality prudence	2% of liabilities	N/A
Commutation	65% of HMRC maximum cash based on current commutation factors including an allowance for an improvement to those set by the Trustee.	65% of HMRC maximum cash based on current commutation factors
Proportion married	Pensioner: 102% (males) and 92% (females) of ONS 2010 tables Non-pensioners: 108% (males) and 94% (females) of ONS 2010 tables	Pensioner: 102% (males) and 92% (females) of ONS 2010 tables Non-pensioners: 108% (males) and 94% (females) of ONS 2010 tables
Spouse's age	Husbands/partners in the Section are assumed to be 3 years older than their wives/partners. Wives/partners in the Section are assumed to be 2 years younger than their husbands/partners.	Husbands/partners in the Section are assumed to be 3 years older than their wives/partners. Wives/partners in the Section are assumed to be 2 years younger than their husbands/partners.

The mortality assumptions used for the 31 December 2020 valuation result in the following life expectancies. This information may be useful to the Trustees when completing the annual scheme return.

	COHORT	PERIOD
Life expectancy for a male aged 65 now	22.7	21.6
Life expectancy at 65 for a male aged 45 now	24.4	n/a
Life expectancy for a female aged 65 now	24.4	23.0
Life expectancy at 65 for a female aged 45 now	26.2	n/a

In setting the assumptions, the Trustees have assumed that the Section is ongoing (it is not in the process of being wound up).

Assumptions used to calculate the recovery plan

To determine the recovery plan contributions the liabilities (including allowance for future service) have been projected forward in with the assumptions set out in the SFP (Statement of Funding Principles). The asset have been projected forward in line with the same assumptions, but by making allowance for investment returns to be higher than the technical provisions discount rate at an average rate of 1.25% per annum over the period to 31 December 2034, after allowing for the improvement to 31 December 2021.

Assumptions used to calculate the wind-up position

The wind-up position (Section 5) looks at the Section's funding on the assumption that it had been discontinued on the valuation date and the benefits bought out with an insurance company.

It is assumed that no further benefits accrue, no further contributions are paid and active members are entitled to benefits on the basis they had left service on the valuation date. There is no allowance for any discretionary benefits being paid in the future.

The wind-up position has been estimated using Mercer's experience of recent buyout quotations and our understanding of the factors affecting this market.

Detailed analysis of the reserves that would need to be held by an insurance company has not been carried out. Consideration has been given to the market terms for the financial instruments in which insurance companies would be expected to invest. An approximate allowance has been made for the reserves an insurance company would maintain to cover the risks involved and the statutory reserving requirements. The results are, therefore, only a guide to the wind-up position and should not be taken as a quotation. Market changes, both in interest rates and in supply and demand for buyout business, mean that if a buyout ultimately proceeds, actual quotations may differ. The wind-up funding level is only an estimate since it is not based on an actual quotation. The true position could only be established by completing a buyout.

Financial assumptions	31 December 2020	31 December 2017
Discount Rate:		
Non-pensioners (pre-retirement)	0.34% p.a.	1.30% p.a.
Non-pensioners (post- retirement)	0.64% p.a.	1.40% p.a.
Pensioners	0.62% p.a.	1.60% p.a.
Revaluation in deferment	2.81% p.a.	3.20% p.a.
Pension Increases:		
RPI (5% Maximum) Non pensioners/ Pensioners	3.01% p.a. /3.09% p.a.	3.80% p.a. /3.40% p.a.
RPI (2.5% Maximum) Non pensioners/ Pensioners	2.06% p.a. / 2.13% p.a.	2.40% p.a. /2.40% p.a.

Financial assumptions	31 December 2020	31 December 2017
Expense allowance	1.3% of liabilities	1.3% of liabilities

Demographic assumptions	31 December 2020	31 December 2017
Retirement	Earliest age at which member can elect to take each tranche of benefits without actuarial reduction.	
Mortality – Base Table	SAPS S3 (all pensioner) tables, Middle for females, and adjusted by a loading of 94% (males) and 95% (females)	SAPS S2 (all pensioner) tables adjusted by a loading of 93% (males) and 96% (females)
Mortality – Future Improvements:	CMI 2019 projections model with a 1.75% p.a. long term improvement rate; a smoothing parameter of 7.5; initial improvement parameter of nil.	CMI 2016 projections with a long term improvement trend of 2.0% p.a. and 1.5% p.a. for males and females respectively
Commutation	No explicit allowance	
Proportion Married	Pensioner: 102% (males) and 92% (females) of ONS 2010 tables Non-pensioners: 108% (males) and 94% (females) of ONS 2010 tables	
Spouse's Age	Husbands/partners in the Section are 3 years older than their wives/partners. Wives/partners in the Section are 2 years younger than their husbands/partners	

As the Trustees' current investment policy includes investment in different assets than would typically be held by an insurer, the wind-up position on a given date may be significantly different from the position estimated at the valuation date.

Appendix B

Summary Membership Data

The membership data is summarised in the table, with figures at the previous valuation shown for comparison.

Data in relation to members of the Section were supplied by the Trustees, via the Section's administrator. The accuracy of the data provided has been relied on. While reasonableness checks on the data have been carried out, they do not guarantee the completeness or the accuracy of the data. Consequently Mercer does not accept any liability in respect of its advice where it has relied on data that is incomplete or inaccurate.

Actives members detailed below exclude some in service members who do not accrue post 31 December 2007 CARE benefits but receive active member revaluations on their accrued pensions as long as they remain in service.

	31 December 2020	31 December 2017
Active members		
Number	693	887
Total Pensionable Salaries (£000s p.a.)	36,877	43,662
Average Pensionable Salary (£ p.a.)	53,214	49,225
Average Age	56.4	55.0
Average Past Service	19.9	17.4
Deferred pensioners		
Number	1,410	1,662
Total Deferred Pensions Revalued To Valuation Date (£000s p.a.)	7,543	8,454
Average Deferred Pension (£ p.a.)	5,350	5,086
Average Age	57.6	55.9
Pensioners		
Number	3,107	2,905
Total Pensions Payable (£000s p.a.)	21,778	18,055
Average Pension (£ p.a.)	7,009	6,215
Average Age	73.8	72.5

Appendix C

Assets

The market value of the Section's assets was £734,761,000 on the valuation date (excluding AVCs).

The Trustees' investment strategy at 31 December 2020 is shown in the table below. The actual distribution of assets will vary over time due to changes in financial markets. The table also shows the distribution of assets at the valuation date.

Asset Category	Actual market value of assets at 31 December 2020	
	£m	%
Equity	188.5	25.6
Alternative Growth Fund	201.8	27.5
Gilts and cash	280.2	38.1
Investment Grade Credit	216.4	29.5
Derivatives	6.9	0.9
Other Assets/(Liabilities)	(159)	(21.6)
Total	734.8	100

The Trustees also hold additional voluntary contributions (AVCs), which are separately invested, and group life insurance policy with insurer which insures the lump sum death benefit and spouses'/dependants' death-in-service pensions. All these assets have been excluded from the market value shown as they exactly match the value of the benefits they cover.

The details of the assets at the valuation date and the financial transactions during the inter-valuation period have been obtained from the audited accounts for the Section.

Appendix D

Benefit summary

The benefits valued are as set out in the benefit summary provided to the Trustees dated 3 July 2020.

This broadly reflects the benefits communicated to members via membership booklets, announcements and correspondence outlining special terms where applicable.

The benefits that will emerge from AVCs paid by members have been excluded from the valuation, as have the corresponding assets, since the value of these liabilities is exactly matched by these assets.

Appendix E

Certificate of Technical Provisions

Name of the Scheme and name of section	Thales UK Pension Scheme (Section 2)

Calculation of technical provisions

I certify that, in my opinion, the calculation of the Section's technical provisions as at 31 December 2020 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 Section and set out in the statement of funding principles dated 30 June 2022.

Signature	
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Qualification	Fellow of the Institute and Faculty of Actuaries

welcome to

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