

April 2010

# Thales UK Pension Scheme – Section 1

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Actuarial valuation as at  
31 December 2008

**MERCER**



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## Summary

An initial actuarial valuation of Section 1 of the Thales UK Pension Scheme (“the Section”) has been carried out as at 31 December 2008.

The key conclusions from the valuation are:

- The Section showed a deficit of £527m at the valuation date based on the assumptions made for calculating its technical provisions. This measure compares the Section’s assets with the value of the past service benefits at 31 December 2008. It represents a funding level of 65% relative to the Section’s funding target.
- Based on the assumptions used to assess the technical provisions, the cost to the Employer of the CARE benefits accruing for future service was 11.9% of CARE Salaries.
- If the Section had been discontinued at the valuation date, there would have been insufficient Section assets to buy out all the benefits with an insurance company. The estimated wind-up funding level at the valuation date was 42%.
- Thales UK Limited (“the Employer”) and the Trustees have agreed that the Employer will contribute as follows:
  - £300,000 per month until 31 May 2010, plus
  - 6.9% of members’ CARE Salaries increasing to 11.9% of members’ CARE Salaries from 1 June 2010, plus
  - £44 million per annum, payable in monthly instalments for the period 1 April 2010 to 31 December 2022, plus
  - Amounts equal to the PPF levies.
  - No additional contributions are required from the Employer to meet the death benefit insurance costs or expenses since allowance for these is included in the amounts above.

- Contributions will generally be paid monthly in arrears with each payment due by the 19<sup>th</sup> of each month. The PPF levy costs will be paid annually as required.
- In determining the funding target and the above pattern of Employer contributions, the Trustees have taken account of guarantees provided by Thales Holdings UK Plc and Thales SA.
- Member contributions or Employer contributions in respect of the Pay Conversion salary sacrifice arrangement are payable in addition to the above, at the rates set out in the Scheme Rules. Contributions will be paid by the 19<sup>th</sup> of the month following the month of sacrifice or contribution deduction (as appropriate) from members' salaries.
- If the assumptions made for assessing the recovery plan are borne out in practice, these contributions will eliminate the shortfall of £527m against the technical provisions by 31 December 2022 and will improve the wind-up funding position of the Section.
- These contributions are set out in the schedule of contributions and recovery plan enclosed as appendices.
- The recovery plan, the schedule of contributions and a summary of the valuation will be submitted to the Pensions Regulator.

**Signature****Scheme Actuary**

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**Date of signing**

1 April 2010

**Qualification**

Fellow of the Faculty of Actuaries

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This report is addressed to the Thales Pension Trustees Limited (“the Trustees”) and has been prepared in accordance with the version of the Board for Actuarial Standards’ *Guidance Note 9: Funding Defined Benefits – Presentation of Actuarial Advice* current at the date this report is signed.

The calculations in the report use methods and assumptions appropriate for reviewing the financial position of the Section and determining the appropriate contribution rate for the future. Mercer does not accept liability to any third party in respect of this report; nor does Mercer accept liability to the Trustees if the advice is used for any purpose other than that stated (for example for company accounting or corporate mergers/acquisitions).

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.





## Introduction

- 1.1 This report sets out the results of the initial actuarial valuation of Section 1 of the Thales UK Pension Scheme (“the Section”) as at 31 December 2008 and is addressed to Thales Pension Trustees Limited (“the Trustees”).

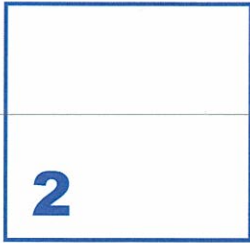
### Purpose of the valuation

- 1.2 The primary aims of the valuation are to review the financial position of the Section and to determine appropriate Employer contributions to the Section for the future. In particular, the valuation aims to:
- Assess the Section’s funding position relative to the statutory funding objective.
  - Assess whether the Section would have sufficient resources were it to discontinue.
  - Determine the appropriate future level of Employer contributions, taking the above into account.
- 1.3 The Thales UK Pension Scheme’s Deed and Rules require the Trustees to agree the contributions with the Employer. In accordance with the Pensions Act 2004, the Trustees and Employer have agreed on the funding policy, assumptions, statement of funding principles, recovery plan and schedule of contributions.
- 1.4 The valuation has been carried out on the instruction of the Trustees, and in accordance with Rule 21.1 of the Second Definitive Deed and Rules and Section 224 of the Pensions Act 2004.
- 1.5 This is the first actuarial valuation of Section 1 of the Thales UK Pension Scheme since it came into effect on 9 January 2008.
- 1.6 Benefit accrual under the Section commenced on 1 July 2008 following the bulk transfer, on 30 June 2008, of all assets and liabilities of the following schemes:

- Racal Group Staff Pension and Life Assurance Scheme
- Racal-Decca Staff Pension and Life Assurance Scheme
- Racal Group Executive Manager and Senior Manager Pension Scheme
- Racal Group Executive Pension Plan
- Thales Optronics Pension Scheme

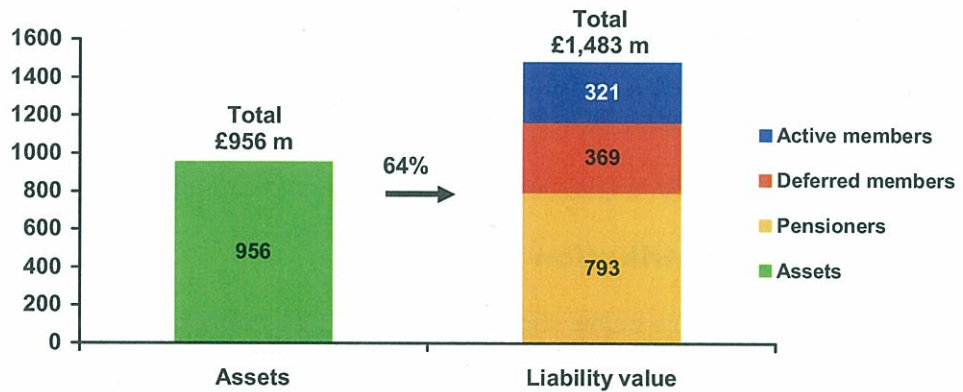
## Funding objective

- 1.7 The Pensions Act 2004 and the Scheme Funding Regulations issued in 2005 require schemes to adopt the statutory funding objective – to have sufficient and appropriate assets to cover their “technical provisions”. The technical provisions are an estimate of the assets needed to make provision for benefits already accrued under a scheme.
- 1.8 The Trustees have decided on a funding objective, and agreed it with the Employer. This is set out in the statement of funding principles, enclosed as Appendix D.
- 1.9 In summary, the agreed funding objective is to reach, and then maintain, assets equal to the technical provisions, assessed on an ongoing basis allowing for future CARE revaluations for active members.
- 1.10 Under legislation, the assumptions underlying the technical provisions are set by the Trustees with the agreement of the Employer. The assumptions include margins for prudence that the Trustees consider appropriate given the Employer’s willingness and ability to support the Section (the “employer covenant”). I have provided advice to the Trustees on margins for prudence. This advice took account of the information on the employer covenant provided separately by the Employer and the Trustees’ advisors.
- 1.11 It has been agreed by the parties that Thales Holdings UK Plc (“Holdings”), the UK parent of Thales UK Limited, will guarantee the deficit contributions payable by the Employer (and any section 75 debt on wind up), subject to a maximum of £527m, reducing from 31 December 2008 by deficit contributions actually paid.
- 1.12 It has also been agreed that Thales SA, the French-listed holding company in France, will extend an existing guarantee up until 31 December 2011, which is the effective date of the next formal valuation of the Section. This guarantee will effectively back up the Holdings guarantee mentioned in 1.11 above such that a failure of Holdings to pay under its guarantee would trigger payment by Thales SA, subject to a maximum of £138.875m, reducing from 31 December 2008 by deficit contributions actually paid.
- 1.13 The above guarantees have been taken into consideration by the Trustees in determining the funding objective and the statement of funding principles.



## Funding results – technical provisions

- 2.1 The market value of the Section’s assets at the valuation date is compared with the Section’s technical provisions below.



- 2.2 The shortfall against the technical provisions at the valuation date was £527m. This represents a funding level of 64% relative to the technical provisions.
- 2.3 The technical provisions are not the same as the cost of securing the benefits on a wind-up. The wind-up position is described in Section 5.



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## Funding results – contribution requirements

- 3.1 The contributions payable by the Employer have been agreed and details are set out in the recovery plan (Appendix E) and the schedule of contributions (Appendix F).
- 3.2 These contributions are made up of the following elements:
- A contribution to cover the cost of the future service accrual (plus life assurance cover, expenses and PPF levies) over the year.
  - An adjustment to address the shortfall against the technical provisions.

### Normal contribution

- 3.3 The table below shows the first of these elements. This cost is calculated as the value of benefits expected to accrue to the membership in respect of one year's service based on revalued CARE salaries. To this are added the cost of insured death benefits and expenses. The figures are expressed as percentages of CARE Salaries and apply for the period to the next formal actuarial valuation.

	<b>31 December 2008</b>
Pension benefits	15.0
Death benefits	1.7
Expenses	1.5
Total	18.2
Less members' contributions	(6.3)
Employer's normal contribution	11.9



- 3.4 Until 31 May 2010 agreed payments of £300,000 per month are due to the Section in respect of the Thales Research section 75 debt triggered under the former Racal Group Executive Pension Plan. The Trustees and the Employer have agreed that, to reflect these payments, the above normal contribution rate will be adjusted to 6.9% of CARE Salaries until 31 May 2010.
- 3.5 In addition, the Employer will reimburse the Trustees for PPF levies paid.

### Contributions to address shortfall

- 3.6 The recovery plan and the schedule of contributions set out the overall contribution rates agreed, including those to meet the shortfall against the Section's technical provisions over the recovery period of 14 years. Details of the timing and frequency of contributions are given, together with the date on which the revised contributions commence.
- 3.7 The contributions agreed for the period to the next formal actuarial valuation include the following amounts towards the shortfall against the Section's technical provisions:
- £49.5 million per annum to 31 March 2010;
  - £44 million per annum from 1 April 2010 to 31 December 2011.
- 3.8 Over the longer term (i.e. beyond the next formal actuarial valuation) and on the assumptions set out in the statement of funding principles, the contributions required to meet the Section's funding objective are as follows:
- £44 million per annum until 31 December 2022.

### Limitations on advice

- 3.9 I have drawn the Trustees' attention to the issues they should consider when setting the recovery plan and contribution rate under paragraphs 75, 79 and 102 of the Pensions Regulator's Code of Practice No. 3 (Funding defined benefits). Having informed the Trustees in advance, I have not provided advice on the following matters:
- The Employer's business plans and the likely effect any potential recovery plan would have on the future viability of the Employer.
  - The ability of the Trustees to pursue an employer to make good a deficiency in the event of a Section wind-up. If the Trustees might have difficulty pursuing an employer to recover a debt (for example, if the employer or its parent is based overseas), they should usually seek a shorter recovery period.
  - The Employer's expenditure commitments. For example, some "back-end loading" might be acceptable when the Employer's payments towards redeeming a commercial mortgage are due to end in the near future or a vital one-off investment in new equipment is being made in the next year.

- The value of any contingent security provided by the Employer bearing in mind both the term and enforceability. A longer recovery period or one structured with a degree of back-end loading may be appropriate where security has been provided in the event of insolvency.
- Whether there are any impending member movements which would have a potentially significant effect on funding, such as major retirements or bulk transfers (in or out).
- The anticipated level of the risk-based element of the Pension Protection Fund levy, year on year, over the course of the recovery period and how this is met by the Employer.

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## Method and assumptions

### Funding method

- 4.1 The funding method adopted is known as the projected unit method, under which the salary increases and the revaluation increases to salary assumed for each member are projected until the member is assumed to leave active service.
- 4.2 If the membership profile remains stable in terms of age and sex, and the assumptions are borne out, then the normal contribution rate (as a percentage of salaries) will remain stable. The method therefore implicitly allows for new entrants replacing leavers.
- 4.3 Since the Section is closed to new entrants, over time the normal contribution rate would be expected to rise. However, the membership is expected to reduce so that the total Employer contributions in monetary terms will gradually reduce.

### Assumptions

- 4.4 The financial and demographic assumptions used to assess the technical provisions, the normal contribution and the recovery plan are set out in the statement of funding principles (Appendix D).



4.5 The table below sets out a summary of the market yields at the valuation date:

	<b>31 December 2008</b>
Long-dated gilt yield	3.8% p.a
Long-dated index-linked gilt yield	0.9% p.a
Market expectation for inflation (long-term)	2.9% p.a
Long-dated corporate bond yield	5.8% p.a

4.6 The assumptions to which the valuation results are particularly sensitive are shown below.

	<b>31 December 2008 technical provisions</b>
Investment return	
Pre-retirement	5.8% p.a.
Post-retirement	4.8% p.a.
Price inflation (RPI)	2.7% p.a.
Salary increases	3.7% p.a.
Pension increases in payment	
LPI (5% maximum)	2.6% p.a.
LPI (2.5% maximum)	2.1% p.a.

<b>Demographic</b>	<b>31 December 2008 technical provisions</b>
Retirement	Benefit accrual prior to 1 January 2008 has been valued at the Normal Retirement Age under the member's former scheme except for former members of the Thales Optronics Pension Scheme whose benefits have been based on retirement at age 62. An allowance has been made for enhanced redundancy early retirement benefits of certain former Racal Group Pension Scheme members.
	Benefit accrual after 31 December 2007 has been valued using a Normal Retirement Age of 65.
Mortality – base table	93% (male) and 102% (female) SAPS Normal tables using year of birth except former members of the Racal Group Executive Pension Plan and the Racal Group Executive Manager and Senior Manager Pension Scheme where 97% (male) and 84% (female) of the SAPS Light (year of birth) tables have been used
Future improvements to Mortality	Medium cohort projections with 0.75% minimum improvement per annum (starting from 2003)
Commutation	The maximum permissible under HMRC Rules based on current commutation factors.

The contributions payable under the recovery plan are calculated using the same assumptions as those used to calculate the technical provisions except for equity-type investments where the assumed returns are 1% p.a in excess of the pre-retirement investment return assumption.

- 4.7 As an illustration of the mortality rates assumed for the majority of the membership, the further life expectancies at 65 for male and female members currently aged 45 and 65 are shown below:

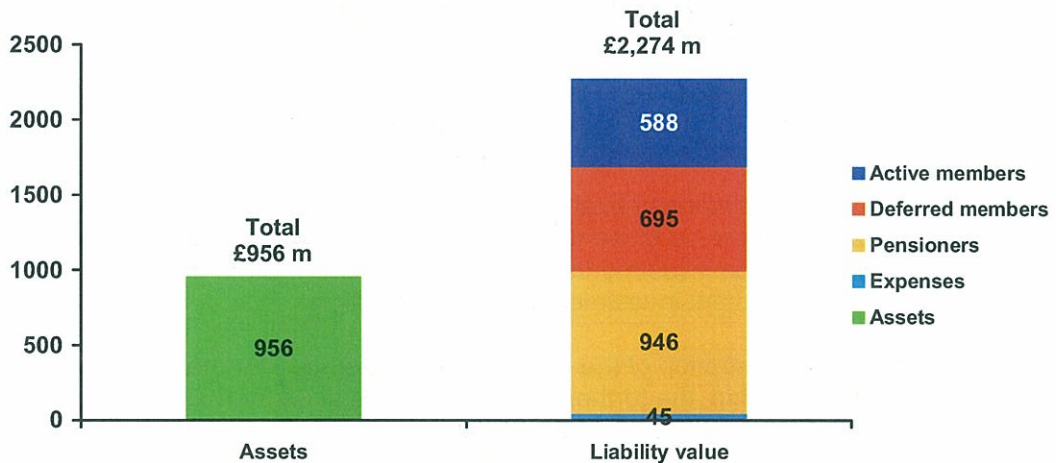
	<b>Males</b>	<b>Females</b>
	<b>93% SAPS Normal</b>	<b>102% SAPS Normal</b>
Non-retired member (age 45 currently)	22.8 years	24.9 years
Retired member (age 65 currently)	21.2 years	23.4 years

- 4.8 The basis of valuing the assets (market value) is consistent with that of valuing the liabilities.



## Wind-up funding results

5.1 The wind-up funding level of the Section at the valuation date has been estimated as 42%.



5.2 Had the statutory funding objective been exactly met on the valuation date (i.e. assets equal to technical provisions), the wind-up funding level would have been 65%.

5.3 As the Section is less than 100% funded on the wind-up basis at 31 December 2008, not all members could have received their full benefits from the assets had the Section wound up on that date.

5.4 If the Section had been wound up on the valuation date, the priority order currently applicable would have had the following approximate impact on the different categories of benefit.



<b>Benefit category</b>	<b>Coverage of benefits</b>
Benefits up to level covered by PPF	64%
Any other benefits above those covered by PPF	0%

- 5.5 There is now a liability on employers on wind-up of a scheme based on the cost of meeting benefits in full. The estimated shortfall at the valuation date amounted to £1,318 million.
- 5.6 The above measures look 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.
- 5.7 In doing this, 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.
- 5.8 Given the Trustees' current investment policy, the wind-up position on a given date may be significantly different from the position estimated at the valuation date.
- 5.9 The 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 buy-out.
- 5.10 The assessments above have been carried out using experience of recent buy-out quotations and understanding of the factors affecting this market. A detailed analysis of the reserves that would need to be held has not been carried out. Consideration has been given to the market terms for the financial instruments in which providers would be expected to invest, and an approximate allowance has been made for the reserves a provider would maintain to cover the risks involved and the statutory reserving requirements. These 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 buy-out business, mean that if a buy-out ultimately proceeds, actual quotations may differ. The assumptions used are as follows:

<b>Financial</b>	
Investment return	
Non-pensioners (pre retirement)	3.7% p.a.
Non-pensioners (post retirement)	3.8% p.a.
Pensioners	4.0% p.a.
Pension increases	
LPI (5% maximum) Non pensioners / pensioners	3.2%/2.9% p.a.
LPI (2.5% maximum) Non pensioners / pensioners	2.3%/2.0% p.a.

<b>Demographic</b>	
Retirement	Earliest age at which member can elect to take each tranche of benefits without actuarial reduction
Mortality – base table	PA92 tables using year of birth
Mortality – future improvements	
Males	Medium cohort projections with 1.5% minimum improvement per annum starting from 2007
Females	Medium cohort projections with 1% minimum improvement per annum starting from 2007
Commutation	No allowance
Proportion married	90% (males) 80% (females)
Spouse's age	Wives are 3 years younger than their husbands

- 5.11 An allowance for wind-up expenses of 2% of the liabilities of the Section has been made.
- 5.12 If the assumptions used for the recovery plan are borne out over the next three years, the agreed contributions are paid and there are no changes to the wind-up assumptions, the wind-up funding level at the next formal actuarial valuation (as at 31 December 2011) is estimated to be 47%. It is expected that the proportion of benefits in each priority class will have changed to the figures shown below.

<b>Benefit category</b>	<b>Coverage of benefits</b>
Benefits up to level covered by PPF	71%
Any other benefits above those covered by PPF	0%

**6****Pension Protection Fund (PPF)**

- 6.1 If the Section winds up when the Employer is insolvent, it may be eligible for the PPF. The Section's assets and liabilities would only transfer to the PPF if the assets were insufficient to buy out the benefits provided by the PPF.
- 6.2 The benefits that the PPF could provide would be broadly 100% of pension for members over pension age and 90% of a capped amount of pension for members under pension age. Under the current PPF provisions:
- Pensions in payment will be increased annually, at the lower of 2.5% and the change in the retail prices index (RPI), in respect of service after 5 April 1997 only. Pensions accrued before April 1997 are not increased.
  - All deferred pensions will be revalued over the period to retirement in line with the increase in the RPI over the same period, or 5% per annum if less.
  - Spouses' pensions will be 50% of members' PPF benefits.
  - The pensions of members aged less than their scheme's normal pension age when the scheme enters the PPF will be capped. The cap depends on the member's age and will increase in line with earnings. For example, in 2009/10 the cap is £31,936 at age 65 so that the maximum amount of compensation for members retiring at age 65 will be 90% of this, i.e. £28,742.
- 6.3 Based on the PPF benefits, and the financial and demographic assumptions prescribed by the PPF, the Section is estimated to be 67% funded at the valuation date.
- 6.4 In this case, had an insolvency event occurred (and no employer debt payment been recovered), it is likely that the PPF would have been required to assume responsibility for the Section.



**7****Variability and risks**

- 7.1 The Employer contributions set out in the recovery plan and schedule of contributions are based on the valuation results set out in sections 3 and 4 of this report. These in turn depend on the financial and demographic assumptions set out in the statement of funding principles.
- 7.2 It is likely, especially in the short term, that these assumptions will not be borne out in practice. It is therefore important to consider the potential impact on the funding position and the Employer contribution rate of actual experience differing from what has been assumed.

**Sensitivity to key assumptions**

- 7.3 Investment return, inflation and life expectancy assumptions impact significantly on both the funding position and the cost of the benefits accruing over the year.
- 7.4 The following table illustrates the sensitivity to variations in these key assumptions over the long term. The starting points are the technical provisions of £1,483m shown in section 2.1 and the Employer normal contribution of 11.9% shown in section 3.3. Each row of the table considers one change in isolation, with all other assumptions being unaltered. An equivalent change in the assumption in the opposite direction would decrease the liability value by the same amount.