

# Debt and reserves management report 2009-10

---

April 2009



HM TREASURY





HM TREASURY

---

Debt and reserves management  
report 2009-10

April 2009

© Crown copyright 2009

The text in this document (excluding the Royal Arms and other departmental or agency logos) may be reproduced free of charge in any format or medium providing it is reproduced accurately and not used in a misleading context. The material must be acknowledged as Crown copyright and the title of the document specified.

Where we have identified any third party copyright material you will need to obtain permission from the copyright holders concerned.

For any other use of this material please write to:

Office of Public Sector Information  
Information Policy Team  
Kew, Richmond  
Surrey  
TW9 4DU

e-mail: [licensing@ospi.gov.uk](mailto:licensing@ospi.gov.uk)

All enquiries about this document should be addressed to:

#### **HM Treasury**

Peter Symons  
Debt and Reserves Management Team  
Floor 3/E2  
HM Treasury  
1 Horse Guards Road  
London SW1A 2HQ  
Email: [peter.symons@hm-treasury.x.gsi.gov.uk](mailto:peter.symons@hm-treasury.x.gsi.gov.uk)  
Tel: +44 (0)20 7270 5329

#### **UK Debt Management Office**

Tim Riddington  
UK Debt Management Office  
Eastcheap Court  
11 Philpot Lane  
London  
EC3M 8UD  
Email: [tim.riddington@dmo.gsi.gov.uk](mailto:tim.riddington@dmo.gsi.gov.uk)  
Tel: +44 (0)20 7862 6623

#### **HM Treasury contacts**

This document can be found in full on our website at:  
[hm-treasury.gov.uk](http://hm-treasury.gov.uk)

If you require this information in another language, format or have general enquiries about HM Treasury and its work, contact:

Correspondence and Enquiry Unit  
HM Treasury  
1 Horse Guards Road  
London  
SW1A 2HQ  
Tel: 020 7270 4558  
Fax: 020 7270 4861  
E-mail: [public.enquiries@hm-treasury.gov.uk](mailto:public.enquiries@hm-treasury.gov.uk)

Printed on 100% recycled paper.  
When you have finished with it please recycle it again.

ISBN 978-1-84532-595-4

# Contents

---

	Page	
Foreword	3	
Chapter 1	Introduction	5
Chapter 2	Size and structure of UK Government debt in 2008-09	7
Chapter 3	UK Government's debt management policy	13
Chapter 4	UK Government's financing programme for 2009-10	19
Chapter 5	The Debt Management Office's financing remit for 2009-10	23
Chapter 6	The Debt Management Office's cash management remit for 2009-10	30
Chapter 7	National Savings & Investments' activities in 2008-09	35
Chapter 8	National Savings & Investments' financing remit for 2009-10	37
Chapter 9	Management of the Official Reserves in 2008-09	39
Chapter 10	The Bank of England's Service Level Agreement for management of the Official Reserves	43
Chapter 11	Central Government's financial asset and liability risk monitor	49
Annex A	Key developments in the gilt market in 2008-09	54
Annex B	The Strategic Debt Analysis model and a comparison of debt issuance strategies	59



# Foreword

---

This is the seventeenth report outlining the Government's debt management activities. It also includes details of the management of the Official Reserves by the Bank of England.

58 gilt auctions were held in 2008-09. Gross gilt issuance was £146.5 billion and net gilt issuance was £128.2 billion. It is testimony to the efficiency of the Debt Management Office (DMO) and the primary market dealers that the gilt sales programme has been delivered so effectively.

Our annual consultation held in January 2009 with dealers and investors showed continued high demand for gilts of all maturities and particularly for long maturity and index-linked gilts. The Government has listened carefully to the feedback from the dealers and investors and responded accordingly. Planned issuance of long maturity and index-linked gilts in 2009-10 will therefore be further increased, enabling the Government to respond to ongoing structural demand and thereby contributing to minimising cost over the long term.

The Government remains committed to gilt auctions as the primary mechanism to issue gilts but has also taken into account the views of market participants on additional distribution methods. Following consultation by the DMO with the dealers and investors in the latter part of 2008-09, the Government has decided to use two supplementary methods to issue gilts in order to facilitate the effective delivery of the remit and meet investor needs. These methods are: syndication and continued use of mini-tenders. It has also decided to introduce a post auction top up facility for successful bidders to increase their allocation of gilts.

Net gilt issuance in 2009-10 is projected to be £203.4 billion and gross gilt issuance is projected to be £220.0 billion. Demand for gilts, particularly from pension funds and insurance companies, is strong and sustained. The decisions that we have announced today on supplementary methods for issuing gilts will enhance the Government's ability to meet that demand and continue to issue gilts that deliver value for money for the Exchequer. I am confident that the DMO will be able successfully to deliver its remit in 2009-10.

For National Savings and Investments (NS&I) in 2008-09, net financing outturn was significantly above its original target. The target for NS&I in 2009-10 will be to maintain broadly the existing level of stock, while offering reasonable rates to savers and by maintaining an appropriate competitive position. This assumes gross inflows (i.e. sales and deposits including accrued interest) of £13.9 billion.

22 April 2009



Ian Pearson  
Economic Secretary



# 1

## Introduction

---

**1.1** This is the seventeenth report outlining the Government's debt management activities.

**1.2** The Debt and reserves management report (DRMR) is published in compliance with the *Code for Fiscal Stability*<sup>1</sup> which requires that a debt management report be published every year covering the following areas:

- the overall size of the gilt issuance programme for the coming financial year;
- the planned maturity structure and the proportion of index-linked and conventional gilts;
- the gilt auction calendar; and
- a forecast of net financing through National Savings & Investments (NS&I).

**1.3** The Debt Management Office (DMO) publishes detailed information in its Annual Reviews on developments in debt management and the gilt market over the previous year. To avoid duplication, only a summary of developments in the gilt market during 2008-09 is set out in Annex A of this report.

**1.4** A provisional debt management report was published on 18 March 2009 as required under the *Code for Fiscal Stability* which set out a provisional report of the Government's debt management activities for 2009-10 and which included a financing remit using the forecast Central Government Net Cash Requirement (CGNCR), as published in the 2008 Pre-Budget Report. This remit has been revised in this Debt and reserves management report 2009-10.

---

<sup>1</sup> The Code for Fiscal Stability can be found on HM Treasury's website at:  
[http://www.hm-treasury.gov.uk/documents/uk\\_economy/fiscal\\_policy/ukecon\\_fisc\\_code98.cfm](http://www.hm-treasury.gov.uk/documents/uk_economy/fiscal_policy/ukecon_fisc_code98.cfm)



# 2

## Size and structure of UK Government debt in 2008-09

### Debt stock

**2.1** The total nominal outstanding stock of United Kingdom central government marketable sterling debt (including official holdings by central government) was £854.4 billion at end-March 2009. This debt comprised £543.2 billion of conventional gilts, £170.0 billion of index-linked gilts (including accrued inflation uplift) and £44.0 billion of Treasury bills (see Table 2.A). In addition, there was £97.2 billion invested in NS&I's (non-marketable) instruments.

**Table 2.A: Composition of UK Central Government marketable sterling debt**

	End-March 2008	End-March 2009
(£ billion, nominal value including official holdings)		
Conventional gilts <sup>1</sup>	337.3	543.2
Index-linked gilts <sup>2</sup>	141.5	170.0
Treasury bills <sup>3</sup>	17.6	44.0
<b>Total gilts and Treasury bills</b>	<b>496.4</b>	<b>757.2</b>
National Savings & Investments	84.4	97.2
<b>Total central government sterling debt</b>	<b>580.8</b>	<b>854.4</b>

Source: Debt Management Office/National Savings & Investments

1. Includes undated gilts  
2. Includes accrued inflation uplift  
3. Treasury bill stock in market hands

### Maturity and duration

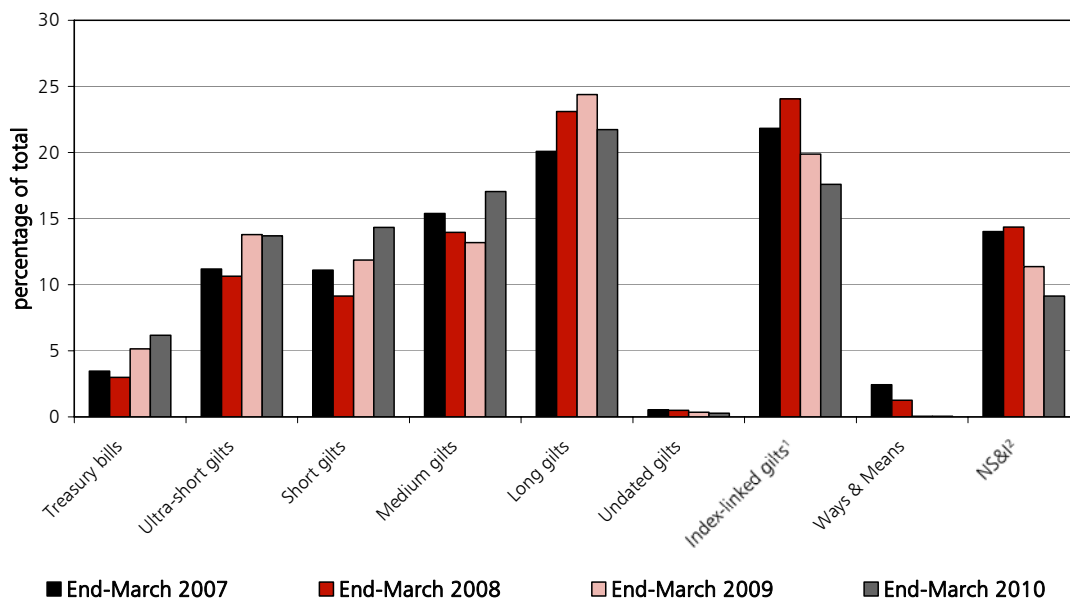
**2.2** The average maturity of the stock of all dated marketable gilts fell from 14.8 years to 14.1 years between end-March 2008 and end-March 2009. Over the same period, the modified duration<sup>2</sup> of the conventional portfolio of marketable gilts fell from 9.0 years to 8.6 years. The maturity and duration of the UK Government's marketable domestic debt continues to be amongst the longest in the OECD.<sup>3</sup>

**2.3** Chart 2.A shows a comparison of the Government's debt portfolio at end-March 2007 through to a projected composition at end-March 2010. It assumes that new debt is issued in accordance with the DMO's and NS&I's financing remits. It also takes into account the ageing of existing debt.

<sup>2</sup> Modified duration is defined in Box 11.1.

<sup>3</sup> According to the OECD Yearbook 2008, comparable portfolio maturities were: France 7.1 years, Italy 6.9 years, Germany 6.35 years, Japan 5.7 years and USA 4.7 years.

**Chart 2.A: The composition of UK central government sterling debt**



Source: Debt Management Office/National Savings & Investments

<sup>1</sup> Includes inflation uplift

<sup>2</sup> Includes accrued interest

## Interest payments

**2.4** Gross central government debt interest payments in 2007-08 were £30.0 billion, equivalent to 5.1 per cent of total managed expenditure (TME). In 2008-09 they were £30.5 billion (forecast to be 4.9 per cent of TME) and in 2009-10 are forecast to be £27.2 billion (4.1 per cent of TME).

## Gilt issuance and the gilt market

**2.5** The DMO was established as part of the Government's reforms to the macroeconomic framework announced in 1997. The DMO took over responsibility for the issuance of gilts from the Bank of England in April 1998. Gross gilt issuance in 2008-09 was £146.5 billion, £88 billion more than in 2007-08.<sup>4</sup>

**2.6** The central government net cash requirement (CGNCR) measures the cash amount that central government needs to borrow for the financial year and is the key fiscal measure from which the volume of gilt issuance is derived. The CGNCR for each of the years in which the DMO has been responsible for gilt issuance and the volume of gilt sales in each of those years is shown in Table 2.B.

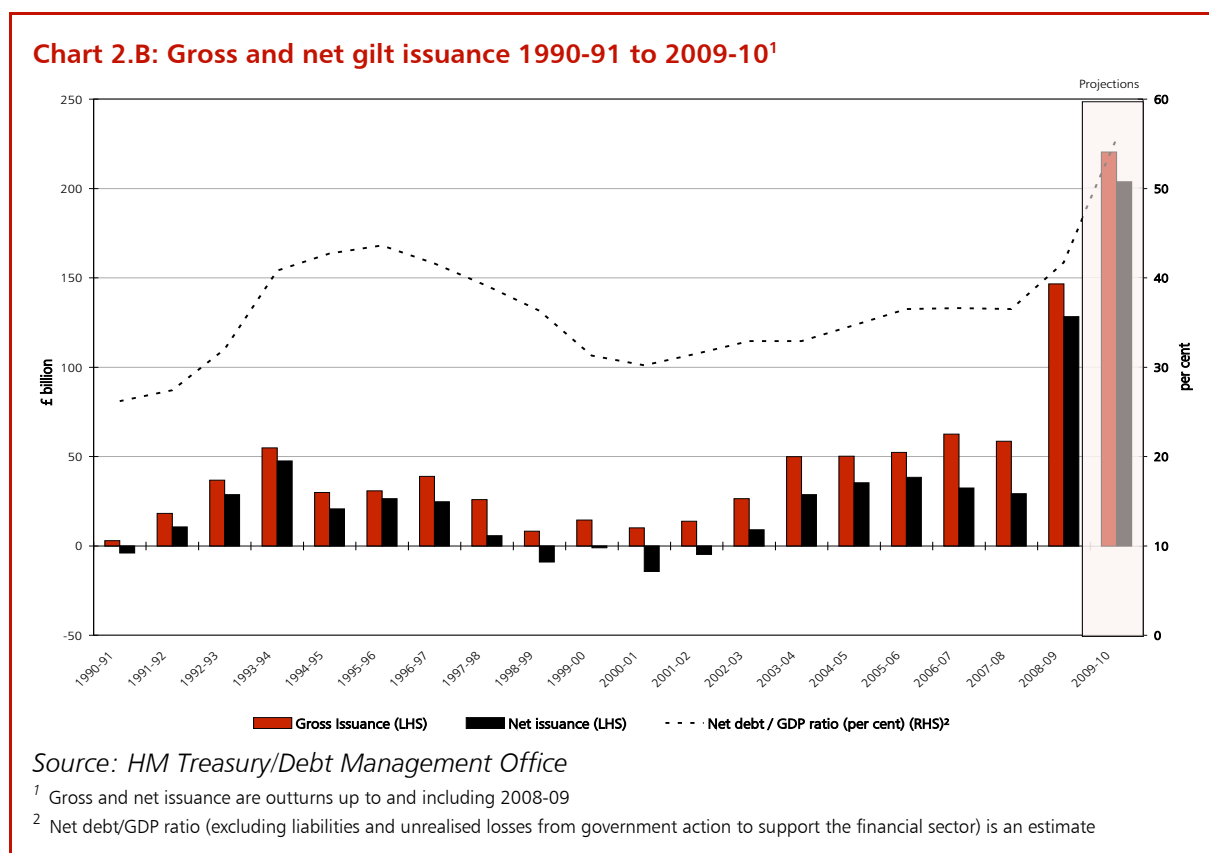
<sup>4</sup> Figures are in cash terms unless otherwise stated.

**Table 2.B: Central Government Net Cash Requirement and gross gilt sales 1998-99 to 2008-09**

Financial year	CGNCR (£ billion)	Gross gilt sales (£ billion)
1998-99	-4.5	8.2
1999-00	-9.1	14.4
2000-01 <sup>1</sup>	-35.6	10.0
2001-02	2.8	13.7
2002-03	21.8	26.3
2003-04	39.4	49.9
2004-05	38.5	50.1
2005-06	40.8	52.3
2006-07	37.1	62.5
2007-08	32.6	58.5
2008-09	162.4	146.5

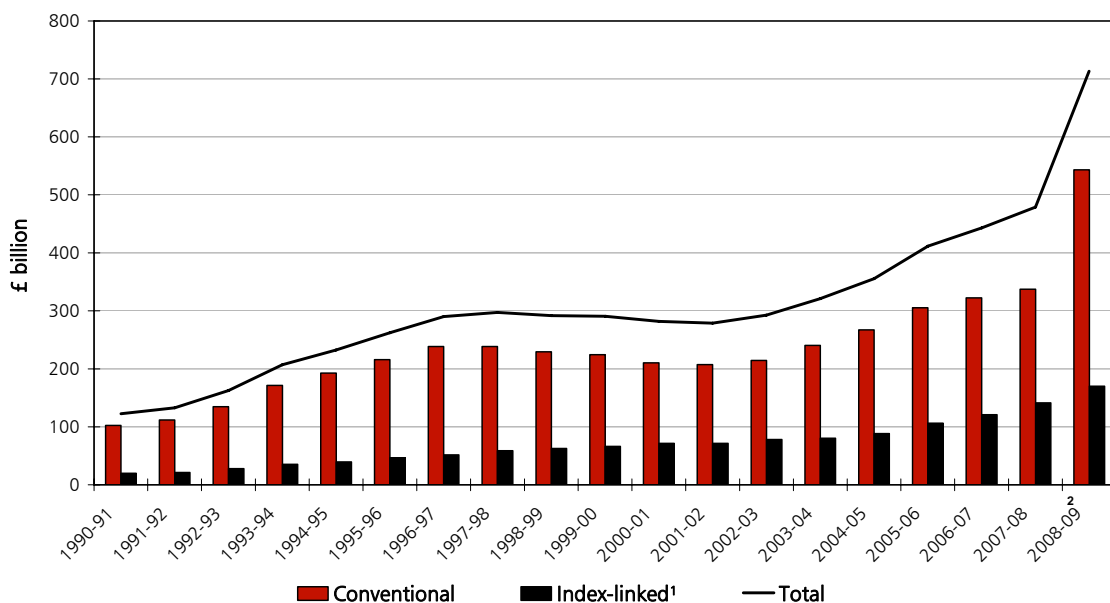
Source: HM Treasury/Debt Management Office  
 1. Reflecting the proceeds from the 3G Spectrum auction

2.7 In the first years of the DMO's operations, the size of the gilt market shrank as net issuance was negative (i.e. gross issuance was exceeded by gilt redemptions). However, net issuance turned positive in 2002-03 as the financing requirement began to rise. Net issuance was £128.2 billion in 2008-09 and is projected at £203.4 billion in 2009-10. Chart 2.B shows the trend in gross and net issuance since 1990-91 with projections in 2009-10.



2.8 Chart 2.C shows the change in the size of the gilt market since 1990-91.

**Chart 2.C: Size of the gilt market since 1990-91**



Source: Debt Management Office

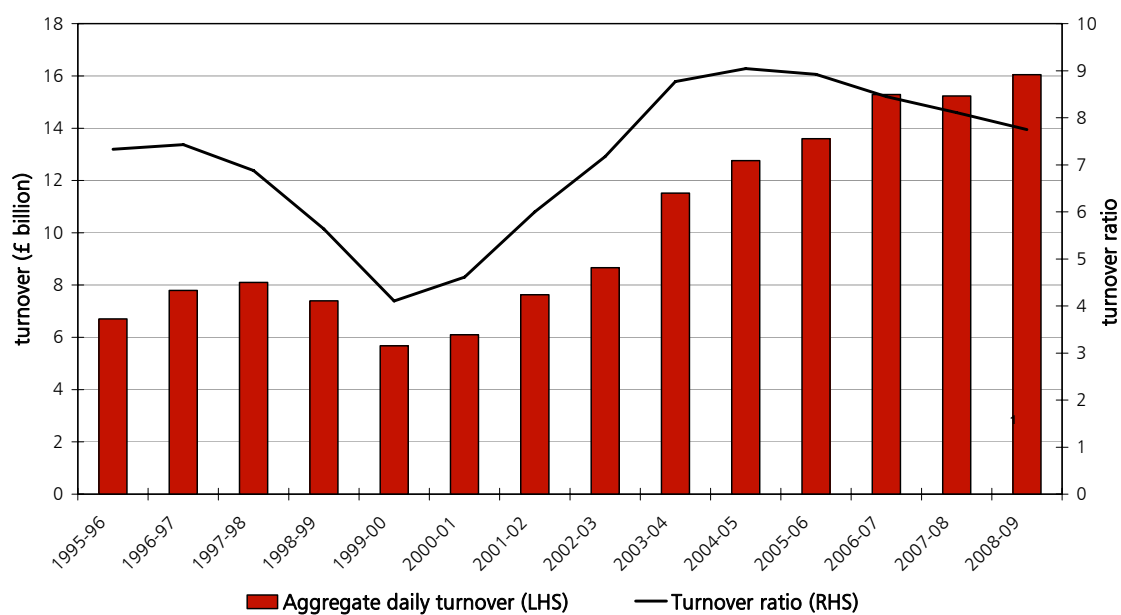
<sup>1</sup> Includes indexation uplift

<sup>2</sup> Outturns up to and including 2008-09

**2.9** Turnover<sup>5</sup> in the gilt market rose steadily from 1999-00 to 2006-07. Average daily turnover increased by 168 per cent between 1999-00 and 2006-07 (from £5.7 billion to £15.3 billion). In 2007-08, this trend abated, with aggregate daily turnover roughly constant at £15.2 billion, perhaps reflecting the ongoing disruption in the financial markets since summer 2007. Average daily turnover has, however, increased again in 2008-09, to £16.1 billion, reflecting the rise in issuance. The turnover ratio has fallen for a fourth consecutive year in 2008-09 (to 7.75), largely as a result of the marked increase in the size of the underlying portfolio. Chart 2.D shows these trends.

<sup>5</sup> Turnover is a measure of the level of trading activity in the secondary market. The turnover ratio is aggregate turnover relative to the market value of the portfolio at the start of the year.

**Chart 2.D: Gilt market turnover<sup>1</sup>**



Source: Debt Management Office

<sup>1</sup> Outturns up to and including 2008-09

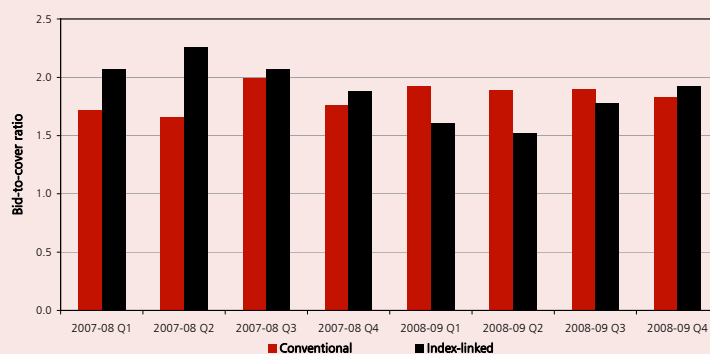
**2.10** 58 gilt auctions were held in 2008-09. Further details of gilt auction performance in 2008-09 can be found in Box 2.A.

### Box 2.A: Auction performance in 2008-09

The Government raised £146.5 billion (cash) in 2008-09 from gilt sales.

The vast majority of Government borrowing is met through the issuance of gilts at auction. Performance at gilt auctions in 2008-09 has remained strong overall. The average strength of performance at conventional auctions, as measured by the bid-to-cover ratio<sup>1</sup>, remained broadly unchanged between 2007-08 and 2008-09 (see Chart A). The average bid-to-cover ratio for index-linked auctions was marginally lower in 2008-09 compared to 2007-08 but, in absolute terms, has not fallen below historical averages.

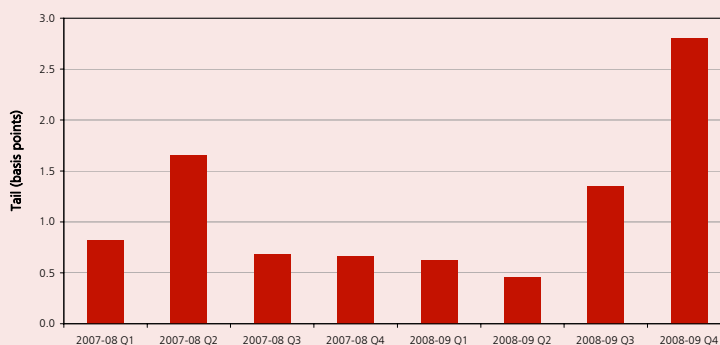
**Chart A: Cover at conventional and index-linked gilt auctions since 2007-08**



Source: Debt Management Office

In 2008-09, the dispersion of bids received at auction, as measured by the auction tail<sup>2</sup> (see Chart B) has remained relatively low over most of the year. Volatile gilt market conditions, particularly towards the end of the financial year, resulted in a number of auctions with larger than average tails, including an uncovered auction on 25 March 2009.

**Chart B: Tail at conventional gilt auctions since 2007-08**



Source: Debt Management Office

In conclusion, as measured by the bid-to-cover and auction tail, gilt auction performance in 2008-09 has remained strong overall.

<sup>1</sup> The bid-to-cover ratio is the number of times bids exceed the amount of gilt on offer.

<sup>2</sup> The tail is the yield at the lowest accepted price less the yield at the average accepted price, (this figure is multiplied by 100 to convert it into basis points).

# 3

## UK Government's debt management policy

---

### Objectives of debt management

**3.1** The Government's debt management objective is:

*"to minimise, over the long term, the costs of meeting the Government's financing needs, taking into account risk, whilst ensuring that debt management policy is consistent with the aims of monetary policy".*

**3.2** The debt management policy objective is achieved by:

- pursuing an issuance policy that is open, transparent and predictable;
- issuing gilts that achieve a benchmark premium;
- adjusting the maturity and nature of the Government's debt portfolio, primarily by means of the maturity and composition of debt issuance and potentially by other market operations including switch auctions, conversion offers and buy-backs;
- developing a liquid and efficient gilt market; and
- offering cost-effective savings instruments to the retail sector through National Savings & Investments.

**3.3** HM Treasury has overall responsibility for meeting the debt management policy objective but has delegated operational responsibility for debt management to its agents: the DMO undertakes borrowing in sterling through issuance of gilts and short-term debt instruments in the wholesale market; NS&I undertakes retail borrowing through sales of retail savings products; and the Bank of England undertakes borrowing in foreign currencies through issuance of foreign currency denominated government bonds.

### The role of the Debt Management Office

**3.4** HM Treasury has two overarching requirements for the DMO in the conduct of its delegated responsibility for wholesale debt financing operations, namely, that it:

- raises the quantum of financing set out in its annual financing remit. This means that the DMO is expected to achieve the sale of inflation-linked ("index-linked") and nominal ("conventional") gilts and Treasury bills within the operational tolerances specified in the financing and Exchequer cash management remits respectively (see Chapters 4, 5 and 6); and
- conducts its operations in accordance with the principles of openness, predictability and transparency, which underpin the Government's approach to debt management policy more generally. The Government judges that, by conducting its operations in accordance with these principles, the DMO will effectively contribute to achieving long-term cost minimisation subject to risk.

**3.5** In practice, this means that HM Treasury expects the DMO to:

- *adopt a predictable approach to debt issuance*, which includes publishing an annual gilt auction calendar before the beginning of each financial year and holding auctions in accordance with its remit;
- *pre-announce the details of its debt issuance plans* to the market to ensure transparency about its activities; and
- *act in a manner consistent with its remit* and explain the basis for its decisions about debt issuance as fully as possible to the market in order to allow market participants better to understand the rationale behind the DMO's decisions.

**3.6** In addition, HM Treasury expects the DMO to:

- *provide advice* in its capacity as the Government's official presence in the gilt market on: (i) the appropriate structure and contents for the financing remit in preparation for publication of the remit each year alongside the Budget; and (ii) how to accommodate revisions to the remit during the course of the year;
- *report during the financial year on progress against the remit*, in particular, progress of gilt sales against the remit targets;
- *monitor developments in the gilt market and the wider economy* and report in a timely manner on changing conditions that might require the terms of the remit to be revisited;
- *maintain open channels of communication with market participants* both formally and informally to solicit their views on gilt issuance and other issues affecting the remit and, as far as possible, to explain the rationale for decisions;
- *advise on any operation to manage the maturity and nature of the Government's debt portfolio and conduct any such operation if so directed by HM Treasury*, through gilt issuance decisions and through use of other market management techniques;
- *develop a liquid and efficient gilt market* primarily through regular issuance of benchmark gilts;
- *provide advice on the introduction of any new financing instrument or debt management technique* as deemed appropriate to fulfil the Government's debt management objective; and
- *ensure the continuing and efficient functioning of the gilt market* by undertaking market management operations as necessary.

**3.7** This approach to debt management policy, based on principles of openness, predictability and transparency, is recognised internationally as the most effective way to minimise the long-term costs of debt management, although there is no recognised way to measure quantitatively whether long-term costs are minimised through this approach.<sup>6</sup> In order to demonstrate that the DMO is taking decisions aimed at fulfilling the objective of long-term cost minimisation subject to risk, HM Treasury expects the DMO to explain publicly, in its Annual Review, the key factors that motivated its decisions on implementation of the remit during the course of the previous financial year. Quantitative reporting of aspects of the DMO's performance is also undertaken against a range of measures and indicators wherever that is possible. A number of these measures are set out in the DMO's annual published Business Plan.<sup>7</sup>

## **Maturity and composition of debt issuance**

**3.8** In order to determine the maturity and composition of debt issuance, the Government needs to take account of a number of factors including:

- investors' demand for gilts;
- the Government's own appetite for risk, both nominal and real;
- the shape of both the nominal and real yield curves and the expected effect of issuance policy; and
- changes to the stock of Treasury bills and other short-term instruments.

## **Medium-term approach to debt issuance**

**3.9** In the medium term, consistent with the debt management policy objective of minimising long-term costs taking into account risk, the Government's annual decisions about gilt issuance will continue to be informed by a number of factors including: the size of the annual financing requirement; supply-side considerations including the Government's risk preferences; investors' demand for gilts; the shape of the yield curve; and other financial market conditions. In the event that strong demand for long maturity and index-linked gilts persists in the medium term, and continues to influence the shape of the yield curve, the Government's policy of skewing issuance towards long maturities would continue as far as practicable, subject to the operational constraints in doing so.

**3.10** In conjunction with sound judgement, formal modelling continues to play a key role in providing analytical support for the formulation of the medium-term debt management strategy. The Strategic Debt Analysis model is a debt strategy simulation model used by the DMO to illustrate the debt service cost and risk of different debt issuance strategies, given assumptions about the shape of both the nominal and real yield curves. It is intended to convey the impact that the different issuance strategies could have on the debt service cost and risk of the Government's debt portfolio. It is based on a number of strong assumptions including those for the nominal and real yield curves. The model is not used to determine a single optimal debt issuance strategy but to illustrate the cost and risk trade-off of different issuance strategies. Simulations using this model are set out in Annex B.

---

<sup>6</sup> The key ways in which the DMO seeks to achieve transparency and predictability in its operations are outlined in Box 3.1, *Debt and reserves management report* 2007-08.

<sup>7</sup> The DMO's latest Business Plan for 2008-09 is available on the DMO's website at: [http://www.dmo.gov.uk/documentview.aspx?docname=publications/corpgovernance/busplan2008.pdf&page=corporate\\_governance/Documents](http://www.dmo.gov.uk/documentview.aspx?docname=publications/corpgovernance/busplan2008.pdf&page=corporate_governance/Documents)

3.11 Table 3.A shows gilt issuance by maturity since 2002-03.

**Table 3.A: Gilt issuance by maturity 2003-04 to 2008-09<sup>1</sup>**

	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
£ billion						
Conventional gilts:						
Short maturity	18.8	17.6	12.2	10.1	10.1	62.8
Medium maturity	13.1	10.1	11.4	9.9	10.0	33.4
Long maturity	11.4	14.5	17.9	25.2	23.4	30.3
Index-linked	6.5	8.0	10.8	17.2	15.0	20.0
Total	49.8	50.2	52.3	62.5	58.5	146.5

*Source: Debt Management Office*

<sup>1</sup> Totals may not sum due to rounding

## Debt management policy in 2008-09

3.12 The considerations underpinning the DMO's financing remit in 2008-09 are set out in Box 3.A.

### Box 3.A: Revisions to the DMO's financing remit in 2008-09

In Budget 2008, projected gilt issuance was £80 billion in 2008-09. Gilt issuance was skewed towards short and long maturity and index-linked gilts (accounting for 31, 30 and 23 per cent of total planned issuance respectively see Table A). The decision was underpinned by an assessment that strong demand for long maturity and index-linked gilts continued and that there was increased demand for short maturity gilts.

Over the course of 2008-09, the volume of gilts that the DMO was required to issue was revised upward in October 2008 and in the 2008 Pre-Budget Report. In October 2008, the Government announced that additional gilt sales of £30 billion were required to finance bank recapitalisation, taking total planned sales to £110 billion. In the 2008 Pre-Budget Report, planned gilt sales were revised upward again to £146.4 billion reflecting an increase in the net financing requirement.

The skew of gilt issuance changed following the announcement of increased gilt issuance for 2008-09 in October 2008 and in the 2008 Pre-Budget Report. In particular, the skew of gilt issuance towards short maturity gilts increased significantly (to 43 per cent at the 2008 Pre-Budget Report). The revision in the 2008 Pre-Budget Report is set out in Table A.

The Government considered that the operational requirement to raise a proportionately large amount of additional finance in a relatively short period of time could be best achieved at the short-end of the gilt market, given the depth of the market in that sector, thereby allowing larger auctions to be scheduled. In addition, the skew to short maturity gilts was also influenced by the short-term nature of some of those items resulting in the increased net financing requirement.

**Table A: Revisions to gilt issuance in 2008-09<sup>1</sup>**

	Budget 2008		Pre-Budget Report 2008	
	£ billion	Per cent	£ billion	Per cent
Conventional gilts:				
Short maturity	25.0	31	62.8	43
Medium maturity	12.8	16	33.4	23
Long maturity	24.2	30	30.3	21
Index-linked	18.0	23	21.0	14
Total	80.0		146.5	

Source: Debt Management Office

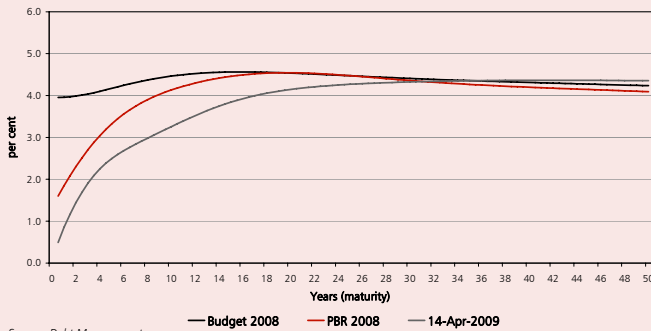
<sup>1</sup> Totals may not sum due to rounding

**3.13** An assessment of the demand for short and long-maturity gilts in 2008-09 and the possible impact on the yield curve of that demand is set out in Box 3.B.

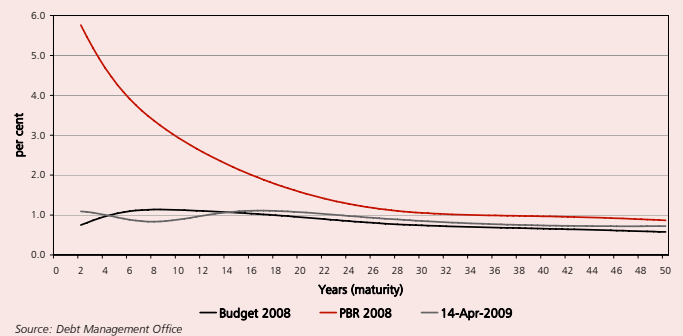
### Box 3.B: Demand at the short and long ends of the nominal yield curve

Developments in the demand for long maturity and index-linked gilts were assessed in Box 3.2 of the *Debt and reserves management report 2008-09*. This included an assessment that a significant determinant of demand for long maturity and index-linked gilts was demand from pension funds and that such demand was strong and structural in nature and likely to persist in the medium term. The strength and depth of this demand exerted downward pressure on long maturity yields of both the nominal and real yield curves.

**Chart A: Nominal yield Curve**



**Chart B: Real yield curve**



As can be seen in Chart A, the shape of the nominal yield curve has changed in 2008-09. At the beginning of the year, the yield curve was 'hump shaped', that is, positively sloped between short and medium maturities and negatively sloped between medium and long maturities. The yield curve is currently positively sloped for 1-25 year maturities and broadly flat at maturities beyond 25 years. Yields on 5, 10 and 25 year maturity gilts have fallen by 168, 121 and 20 basis points respectively in 2008-09.

The change in the slope of the nominal yield curve in 2008-09 reflects a number of factors including changes in the stance of monetary policy and continued high demand for short maturity gilts. Structural demand for long maturity gilts continues to exert a downward influence on yields at the ultra-long end of the nominal yield curve, although the extent of this demand is perhaps more difficult to ascertain given the change in the shape of the yield curve. By contrast, the real yield curve continues to retain its negative slope, reflecting the impact of continued strong and structural demand for index-linked gilts from pension funds.

Demand for short maturity gilts remains high reflecting:

- an increase in demand for gilts from overseas investors, attributed by market participants to purchases by central banks, reserve managers, sovereign wealth funds and hedge funds; and
- the ongoing disruption in the financial markets from Autumn 2007 that resulted in increased demand for high quality assets (a 'flight to quality') including short maturity gilts.

The impact of the disruption and increase in risk aversion can be seen in the increased spread between LIBOR and the 3 month Overnight Index Swap (OIS) as shown in Chart C. Although the spread subsequently narrowed, it remains elevated in comparison to the levels preceding summer 2008.

**Chart C: LIBOR 3-month – OIS 3-month spread**



# 4

## UK Government's financing programme for 2009-10

---

### Financing framework

**4.1** The Government intends to continue to finance the central government net cash requirement (CGNCR) using the framework that was established in the 1995 Debt Management Review. The Government aims to finance its net cash requirement plus maturing debt and any financing required for additional net foreign currency reserves through the issuance of debt. All such debt issuance will take place within a set maturity structure. Auctions remain the primary means of issuance for gilts. In 2009-10, the Government has decided, following consultation by the DMO with the primary market dealers and investors, to use mini tenders and syndication to supplement auctions. The planning assumption is that mini tenders and syndication will be used to facilitate the issue of long maturity and index-linked gilts. In addition, the Government may hold conversion offers, switch auctions, and reverse auctions of non benchmark gilts (although there are no current plans to hold such operations in 2009-10).

### Financing arithmetic

**4.2** The new forecast for the CGNCR in 2009-10 is £220.8 billion.

**4.3** The forecast net financing requirement of £237.8 billion reflects expected gilt redemptions of £16.6 billion<sup>8</sup> and the decision to provide an additional £2 billion of sterling financing for the Official Reserves.

**4.4** Following the relatively large contribution to net financing of £12.5 billion in 2008-09, National Savings and Investments is not expected to make a net contribution to financing in 2009-10, reflecting a stabilisation of the high levels of gross financing that underpinned the high contribution to net financing in 2008-09. This projection assumes gross inflows of £13.9 billion in 2009-10.

**4.5** The net financing requirement will be met by:

- gross gilt issuance of £220.0 billion;
- an increase in the Treasury bill stock of £21.6 billion to £65.6 billion; and
- a change in the short-term debt level reflecting the Government's decision to repay £3.8 billion of the remaining balance of the Ways and Means Advance at the Bank of England.

**4.6** Gross debt issuance is expected to be £241.6 billion in 2009-10, with the additional amount (in excess of the net financial requirement of £237.8 billion) required to meet the further planned repayment of £3.8 billion of the Ways and Means Advance.

---

<sup>8</sup> The redemption total for 2009-10 of £16.6 billion does not include the full value of the index-linked uplift on 2½% Index-linked Treasury Stock 2009. The reasons include the rules governing the CGNCR which state that part of the accrued inflation uplift on any redeeming gilt representing the return to investors is included in the CGNCR in the redemption year and the remainder is included in the redemption total for the year in which it redeems. Secondary market purchases of the gilt in 2008-09 have also reduced the redemption total and CGNCR forecast for 2009-10 accordingly.

4.7 Table 4.A gives details of the financing arithmetic for 2009-10. It outlines the proposed debt instruments that the Government intends to use to meet its financing requirement in 2009-10.

**Table 4.A: Financing arithmetic 2009-10**

	2008-09	2009-10
£ billion		
<b>Central Government Net Cash Requirement</b>	<b>162.4</b>	<b>220.8</b>
Gilt redemptions	18.3	16.6
Financing for the Asset Purchase Facility	1.0	-1.0
Financing for the Official Reserves <sup>1</sup>	0.0	2.0
Buy-backs <sup>2</sup>	2.4	0.0
Planned short-term financing adjustment <sup>3</sup>	-2.5	-0.6
<b>Gross financing requirement</b>	<b>181.6</b>	<b>237.8</b>
less:		
National Savings & Investments	12.5	0.0
<b>Net financing requirement</b>	<b>169.1</b>	<b>237.8</b>
<i>Financed by:</i>		
<b>1. Debt Issuance by the Debt Management Office</b>		
a) Treasury bills	26.4	21.6
b) Gilts <sup>4</sup>	146.5	220.0
<i>of which:</i>		
Conventional		
short	62.8	74.0
medium	33.3	70.0
long	30.3	46.0
Index-linked	20.0	30.0
<b>2. Other planned changes in short-term debt<sup>5</sup></b>		
Change in Ways & Means <sup>6</sup>	-3.2	-3.8
<b>3. Unanticipated changes in net short-term cash position<sup>7</sup></b>	<b>0.6</b>	<b>0.0</b>
<b>Total financing</b>	<b>169.7</b>	<b>237.8</b>
<b>Short-term debt levels at end of financial year</b>		
Treasury bill stock <sup>8</sup>	44.0	65.6
Ways & Means	4.2	0.4
DMO net cash position	1.1	0.5
<i>Figures may not sum due to rounding</i>		
1. The total reflects an additional £2 billion of sterling financing for the Official Reserves.		
2. The total primarily reflects purchases of the near maturity index-linked 2009 stock but also purchases of "rump gilts" which are older, smaller gilts, declared as such by the DMO and in which Gilt-edged Market Makers (GEMMs) are not required to make two-way markets. The Government will not sell further amounts of such gilts to the market but the DMO is prepared, when asked by a GEMM, to make a price to purchase such gilts.		
3. To accommodate changes to the current year's financing requirement resulting from: (i) publication of the previous year's outturn CGNCR and/or (ii) carry over of unanticipated changes to the cash position from the previous year.		
4. See paragraphs 5.5, 5.14 and 5.16.		
5. Total planned changes to short-term debt are the sum of: (i) the planned short-term financing adjustment; (ii) Treasury bill sales; and (iii) changes to the level of the Ways & Means Advance.		
6. Reflects the Government's decision to repay £3.8 billion of the remaining balance of the Ways and Means Advance in 2009-10. The Government repaid £3.2 billion of the Advance in 2008-09.		
7. A negative (positive) number indicates an addition to (reduction in) the financing requirement for the following financial year.		
8. The DMO has operational flexibility to vary the end-financial year stock subject to its operational requirements from 2009-10		

## Financing for the Official Reserves

4.8 If the Government judges that there is a value-for-money case for doing so, consideration would be given to issuing foreign currency securities to finance the borrowed reserves in 2009-10. Any decisions will be taken on the basis of the least cost comparison set out in chapter 9.

4.9 If foreign currency bonds are issued in place of swapped sterling liabilities to finance the borrowed reserves then the net sterling financing requirement will decline by the sterling value of the bonds issued. Similarly, when the foreign currency bonds mature (assuming that the level of the borrowed reserves remains unchanged and new foreign currency bonds are not issued) the net sterling financing requirement will rise by the equivalent amount.

4.10 For the purposes of the financing arithmetic in Table 4.A, it is assumed that swapped sterling will remain the main form of financing of the borrowed reserves (as has been the case in recent years) and no new foreign currency debt will be issued in 2009-10. The financing arithmetic provides for an additional £2 billion of sterling finance for this purpose in 2009-10. As no Government foreign currency debt matures in 2009-10 this source has no impact on

financing of the Official Reserves. If the Government were to decide to issue a foreign currency bond later in the year, this would be taken into account in subsequent revisions to the DMO's financing remit, either at the 2009 Pre-Budget Report or in Budget 2010, depending on when the bond was issued.

## Treasury bill sales

**4.11** The financing plans for 2009-10 show that the outstanding stock of Treasury bills is expected to rise by £21.6 billion to £65.6 billion. In addition to the scheduled weekly tenders, the DMO may continue to re-open, on request, existing issues of Treasury bills for sale on a bilateral basis, to raise funds for cash management. Consequently, the DMO will continue to have operational flexibility to vary the end-financial year stock subject to its operational requirements (see Chapter 6 paragraph 6.9). The 2008-09 outturn for the Treasury bill stock was £44.0 billion; similarly, the outturn for 2009-10 will be reported in April 2010 alongside the outturn for the 2009-10 CGNCR.

## Other short-term debt

**4.12** In 2009-10, the level of the Ways & Means Advance at the Bank of England is planned to fall by £3.8 billion to £0.4 billion and is assumed to remain at this level for the remainder of 2009-10. In Budget 2008, the Government announced that it would repay £7.0 billion of the Ways and Means Advance at the Bank of England. The Government repaid £7.0 billion of the Ways and Means Advance on 17 April 2008. It subsequently decided to increase the balance of the Ways and Means Advance temporarily, by £3.8 billion, in order to smooth the impact of the refinancing of part of the Bank of England's loan to the Financial Services Compensation Scheme. The Government will repay the remaining £3.8 billion in 2009-10.

**4.13** The level of the DMO's net cash position at the Bank of England at end-March 2009 was £1.1 billion, £0.6 billion above the level of the forecast cash balance in the 2008 Pre-Budget Report. The average level of the DMO's cash balance at the Bank of England is forecast to be £0.5 billion in 2009-10. The level will be reduced during 2009-10 from £1.1 billion to £0.5 billion (as shown by the planned short-term financing adjustment) that will, in turn, reduce the net financing requirement in 2009-10.

## Quantity of gilt sales

**4.14** The DMO will aim to meet the remainder of the financing requirement by selling gilts to the private sector. It will aim to sell gilts on a broadly even-flow basis throughout the financial year. On the basis of the forecast for the CGNCR, there will be projected gross gilt sales of approximately £220.0 billion (cash) in 2009-10.

## Benchmark gilts

**4.15** Through its gilt issuance programme, the Government aims at regular issuance across the maturity spectrum throughout the financial year and at building up benchmarks at key maturities in both conventional and index-linked gilts.



# 5

## The Debt Management Office's financing remit for 2009-10

---

### Objectives

**5.1** The DMO, an Executive Agency of HM Treasury, has been given the following objectives in respect of Government debt management:

- to meet the annual remit set by HM Treasury Ministers for the sale of gilts, with due regard to long-term cost minimisation taking account of risk;
- to advise Ministers on setting the remit to meet the Government's debt management objectives and to report to Ministers on the DMO's performance against its remit, objectives and targets;
- to develop policy on, and promote advances in, new instruments, issuance techniques and structural changes to the debt markets that will help lower the cost of debt financing, liaising as appropriate with the Bank of England, Financial Services Authority, London Stock Exchange and other bodies and to provide policy advice to Ministers on the DMO's performance against its remit, objectives and targets;
- to conduct its market operations, liaising as necessary with regulatory and other bodies, with a view to maintaining orderly and efficient markets and promoting a liquid market for gilts;
- to provide, including in liaison with Computershare Investor Services plc and Euroclear UK and Ireland, a high quality efficient service to investors in government debt and to deal fairly and professionally with market participants in the gilt and money markets, consistent with achieving low cost issuance;
- to contribute to HM Treasury's work on the development of the medium-term strategy for the debt portfolio; and
- to make information publicly available on the debt markets and DMO policies where that contributes through openness and predictability to efficient markets and lowers costs of debt issuance.

### Quantity of gilt sales

**5.2** The DMO, on behalf of the Government, will aim to deliver gilt sales of £220.0 billion (cash)<sup>9</sup> in 2009-10. Auctions will remain the Government's primary method by which to issue gilts. In addition, the Government has decided to use supplementary methods to issue gilts in 2009-10. In particular, the Government has decided to use syndication, and to extend the use of mini-tenders, which were first introduced in October 2008, to issue gilts.

---

<sup>9</sup> Figures in Chapter 5 are in cash terms unless otherwise stated.

**5.3** Gross gilt issuance is projected at £220.0 billion in 2009-10. It is anticipated that:

- £183.0 billion (83 per cent of total issuance) will be issued by pre-announced auctions;
- £25.0 billion (11 per cent of total issuance) will be issued by syndication; and
- £12.0 billion (6 per cent of total issuance) will be issued by mini-tenders.

**5.4** The planning assumption for gilt issuance in 2009-10 by method of issue, type and maturity is shown in table 5.A.

**Table 5.A: Planned gilt issuance split by method of issue, type and maturity 2009-10**

	Auction	Syndication	Mini tender	Total
Short				
£ billion	74	-	-	74
Per cent				33.7
Medium				
£ billion	70	-	-	70
Per cent				31.8
Long				
£ billion	27	13	6	46
Per cent				20.9
Index-linked				
£ billion	12	12	6	30
Per cent				13.6
<b>Total</b>	<b>183</b>	<b>25</b>	<b>12</b>	<b>220.0</b>

*Source: Debt Management Office*

## Amount and maturity of conventional gilt issuance at auction

**5.5** The planned amount of issuance and maturity mix of conventional gilts in 58 auctions in 2009-10 is:

- 15 auctions in the short (1-7 years) maturity area, aiming to raise £74.0 billion cash;
- 19 auctions in the medium (7-15 years) maturity area, aiming to raise £70.0 billion cash; and
- 12 auctions in the long (15 years and over) maturity area, aiming to raise £27.0 billion cash.

## Amount of index-linked gilt issuance at auction

**5.6** In 2009-10, the DMO aims to sell £12 billion (cash) in index-linked gilts in 12 auctions. These auctions will include frequent issuance at long maturities.

## Size of gilt auctions

5.7 The gilt sales targets in paragraphs 5.4 and 5.5 above are specified in cash terms, but the gilt auctions are sized in nominal terms, typically in £50 million increments for conventional gilts and £25 million increments for index-linked gilts. Therefore, all provisional gilt sales targets are expressed in approximate terms.

## Post auction top up facility

5.8 In 2009-10, the DMO may give an option to successful bidders at auctions (both GEMMs and investors) to top up gilt purchases by up to 10 per cent of the amount allocated to them at the auction, at the average accepted price at conventional auctions and the clearing (or strike) price at index-linked auctions. Further details of this facility will be available in the DMO's gilt market operational notice.

5.9 Any additional amounts sold via this facility will count towards the remit sales targets in paragraphs 5.4 and 5.5 above and may progressively reduce the required average sizes for the remaining auctions of the maturity/type of gilt in question. If exercised consistently, the option may allow the cancellation of future auctions, but any such cancellation would be announced well in advance as part of the regular issuance calendar announcements and/or at the 2009 Pre-Budget Report.

## Method of issuance of gilts

5.10 Auctions will constitute the primary means of issuance of all gilts (conventional and index-linked). All auctions will be single auctions held on the day indicated.

5.11 Each outright auction of conventional gilts is planned to be between £1.5 billion and £6.0 billion (cash) on a competitive bid-price basis. Each outright auction of index-linked gilts will be between £0.5 billion and £2.0 billion (cash) on a uniform price basis.

5.12 The expected timing of gilt sales at auction is set out in the calendar in Table 5.B below. This includes the specific gilts to be sold in April and May 2009, as announced on 31 March 2009. For the rest of 2009-10 the remaining issuance calendar announcements will be made at 3.30pm on Friday 22 May, Friday 28 August and Monday 30 November.<sup>10</sup> Full details of all auctions will normally be announced at 3.30pm on the Tuesday of the week preceding the auction.

5.13 After an auction the DMO will generally refrain from issuing gilts of a similar type or maturity to the auctioned gilt for a reasonable period, unless already pre-announced, or if there is a clear market management case for doing so.

---

<sup>10</sup> The announcement in November is subject to change depending on the date of the 2009 Pre-Budget Report.

**Table 5.B: Gilt auction calendar 2009-10<sup>1</sup>**

Date	Type
<b>2009</b>	
1 April	4¾% Treasury Stock 2015
2 April	4¼% Treasury Gilt 2039
7 April	4½% Treasury Gilt 2019
8 April	1¼% Index-linked Treasury Gilt 2032
16 April	2¼% Treasury Gilt 2014
28 April	4% Treasury Gilt 2022
30 April	17/8% Index-linked Treasury Gilt 2022
6 May	4½% Treasury Gilt 2019
12 May	4¾% Treasury Gilt 2030
14 May	0¾% Index-linked Treasury Gilt 2047
21 May	2¼% Treasury Gilt 2014
28 May	1¼% Index-linked Treasury Gilt 2032
2 June	Conventional
3 June	Conventional
9 June	Conventional
11 June	Index-linked
23 June	Conventional
1 July	Conventional
2 July	Conventional
7 July	Conventional
8 July	Index-linked
21 July	Conventional
29 July	Conventional
4 August	Conventional
11 August	Conventional
20 August	Index-linked
2 September	Conventional
3 September	Conventional
8 September	Conventional
17 September	Conventional
29 September	Conventional
1 October	Conventional
6 October	Conventional
7 October	Index-linked
14 October	Conventional
22 October	Conventional
3 November	Conventional
4 November	Conventional
10 November	Conventional
12 November	Index-linked
24 November	Conventional
1 December	Conventional
2 December	Conventional
8 December	Conventional
9 December	Index-linked
<b>2010</b>	
6 January	Conventional
13 January	Conventional
21 January	Conventional
2 February	Conventional
3 February	Conventional
9 February	Conventional
11 February	Index-linked
24 February	Conventional
2 March	Conventional
3 March	Conventional
9 March	Conventional
11 March	Index-linked
24 March	Conventional

*1. Auctions in Q3 and Q4 are subject to confirmation depending on the dates of the Pre-Budget Report and Budget 2010*

## Syndication

**5.14** The Government has decided to use syndication to issue £25.0 billion of gilts in 2009-10. The planning assumption is that £13.0 billion of long maturity and £12.0 billion of index-linked gilts will be issued by syndication (including new issues). The DMO will discuss plans for syndication in the consultation meetings throughout the year and will announce its intention to hold such operations in its issuance calendar announcements, subject to market conditions. Further details of any planned syndications will be announced around two weeks in advance. There will be no syndications scheduled for April-May 2009.

**5.15** The Government's decision to use syndication and other supplementary distribution methods is outlined in Box 5.A.

### **Box 5.A: Composition of gilt issuance and use of supplementary methods by which to issue gilts**

In December 2008, the Debt Management Office (DMO) launched a public consultation on whether supplementary distribution methods might be introduced as a supplement to auctions. Respondents to the consultation, while noting that the auction system was working well and should remain the primary method by which the DMO should issue gilts, voiced support for the use of syndication and the extended use of mini-tenders. On 18 March 2009, the DMO published its response to the consultation along with its provisional conclusions.

In the light of the conditions in financial markets – from which gilt markets are not immune – and support revealed in the responses to the DMO's consultation, the Government has decided to use supplementary distribution methods to facilitate the primary market distribution process.

The use of supplementary distribution methods is particularly valuable to facilitate the issuance of long maturity and index-linked gilts. Such gilts are in particular demand by pension funds as they seek assets with similar characteristics to their liabilities. However, the risk characteristics associated with such gilts, in particular, their 'duration risk' – the sensitivity of the value of the gilt to a given change in yields – and the 'lumpy' nature of demand for such gilts, which means that demand may not materialise on a particular day, are also relevant considerations.

The Government believes that the use of supplementary distribution methods to issue gilts – namely syndication and the extended use of mini tenders - can facilitate the issue of long maturity and index-linked gilts in particular. The use of supplementary distribution methods would enable greater issuance of these types of gilts than would be possible via the auction system alone.

The Government's planning assumption is that all gilts issued by way of syndication and mini tenders will be long maturity and index-linked gilts. In 2009-10, in total, the Government is projected to issue £46 billion and £30 billion of long maturity and index-linked gilts respectively, of which £13 billion and £12 billion of long maturity and index-linked gilts respectively will be issued by syndication and £6 billion each of long maturity and index-linked gilts will be issued by mini tender.

## Mini tenders

**5.16** The DMO plans to issue £12.0 billion (cash) of gilts via a series of mini-tenders in 2009-10. The planning assumption is that the £12.0 billion of issuance will be split equally between long maturity and index-linked gilts. The DMO envisages holding at least one mini-tender per month and will announce the weeks in which tenders are to be held in its quarterly issuance calendar announcements. Mini-tenders will be no larger than half the size of outright auctions of the same maturity/type.

**5.17** The above programme of long maturity and index-linked gilt auctions (and any others that may be added during the year) and mini-tenders and syndications may be supplemented between auctions by official sales of gilts by the DMO "on tap". Taps of gilts will be used only as a market management instrument in exceptional circumstances.

**5.18** For the purposes of market management, the DMO may create and repo out gilts in accordance with the provisions of its Standing Repo Facility launched on 1 June 2000 as most recently revised on 5 March 2009.<sup>11</sup> Any gilts so created will not be sold to the market and will be cancelled on return.

## Reverse auctions

**5.19** The DMO has no current plans for a programme of reverse auctions in 2009-10.

## Conversions and switch auctions

**5.20** The DMO has no current plans for a programme of conversion or switch auctions in 2009-10.

## Coupons

**5.21** As far as possible, coupons on new issues will be set to price the gilt close to par at the time of issue.

## Buy-ins of short-maturity debt

**5.22** The DMO will have responsibility for buying in gilts close to maturity to help manage Exchequer cash flows.

## Revisions to the remit

**5.23** Any aspect of this remit may be revised during the year, in the light of exceptional circumstances and/or substantial changes in the following:

- the Government's forecast of the gilt sales requirement;
- the level and shape of the gilt yield curve;
- market expectations of future interest and inflation rates; and
- market volatility.

**5.24** Any revisions to the remit will be announced.

---

<sup>11</sup> The announcement of 5 March 2009 is available on the DMO website at: <http://www.dmo.gov.uk/documentview.aspx?docname=giltspres/sa050309.pdf>

**5.25** In March 2009, the Bank of England commenced a programme of asset purchases as part of its implementation of monetary policy including the purchase of gilts in the secondary market (see Box 2.2 in chapter 2 Budget 2009). The potential interaction between monetary policy by way of purchase of gilts and debt management policy is discussed in Box 5.B.

#### **Box 5.B: Quantitative easing of monetary policy and debt management policy**

On 19 January 2009, the Government established the Asset Purchase Facility (APF) to enable the Bank of England to ease credit conditions in corporate debt markets by making purchases of private sector assets. On 5 March 2009, the Monetary Policy Committee of the Bank of England (MPC) announced its decision to use the APF for monetary policy purposes by purchasing £75 billion of assets (the majority of which would be gilts) in the following three months financed by the provision of central bank reserves. The asset purchases are designed to influence the quantity of broad money as a supplement to setting the level of the Base Rate.

The Bank is purchasing gilts in the secondary market. As at 21 April 2009 the Bank had purchased £38 billion of gilts.

There are potential linkages between the implementation of monetary policy by the purchase of gilts financed by the provision of central bank money and debt management policy.

On 17 February 2009, the Governor of the Bank of England wrote to the Chancellor setting out his proposals to use the APF for monetary policy purposes. The Governor sought assurances that:

'If the facility were to be used to purchase gilts, it would be important that the Government's debt management policy remain consistent with the aims of monetary policy. It should not alter its issuance strategy as a result of the transactions that are undertaken through the Asset Purchase Facility for monetary policy purposes. I should be grateful if you could confirm that this will be the case.'

On 3 March 2009, the Chancellor responded to the Governor providing the assurance that debt management policy would not change, stating that "the Government would not alter its (gilt) issuance strategy as a result of the asset transactions undertaken by the Bank".

The Chancellor also reiterated the Government's debt management objective:

*"The debt management objective remains 'to minimise, over the long-term, the costs of meeting the Government's financing needs, taking into account risk, whilst ensuring that debt management policy is consistent with the aims of monetary policy'."*

Consistent with the debt management objective, the gilt issuance strategy announced in this Report for 2009-10 has not been altered as a result of the asset transactions undertaken by the Bank.

# 6

## The Debt Management Office's Exchequer cash management remit for 2009-10

---

### Exchequer cash management objective

**6.1** The Government's cash management objective is to ensure that sufficient funds are always available to meet any net daily central government cash shortfall and, on any day when there is a net cash surplus, to ensure this is used to best advantage. HM Treasury and the DMO work together to achieve this.

**6.2** HM Treasury's role in this regard is to make arrangements for a forecast of the daily net flows into or out of the National Loans Fund (NLF); and its objective in so doing is to provide the DMO with timely and accurate forecasts of the expected net cash position over time.

**6.3** The DMO's role is to make arrangements for funding and for placing the net cash positions, primarily by carrying out market transactions in the light of the forecast; and its objective in so doing is to minimise the costs of cash management while operating within the risk appetite approved by Ministers.

**6.4** The Government's preferences in relation to the different types of risk taking inherent in cash management are defined by a set of explicit limits covering four types of risks, which taken together represent the Government's overall risk appetite.<sup>12</sup> The risk appetite defines objectively the bounds of appropriate Government cash management in accordance with the Government's ethos for cash management as a cost minimising rather than profit maximising activity and playing no role in the determination of interest rates. The DMO may not exceed this boundary, but within it the DMO will have discretion to take the actions that it judges will best achieve the cost minimisation objective.

### The DMO's cash management objective

**6.5** The DMO's cash management objective is to minimise the cost of offsetting the Government's net cash flows over time, while operating to a risk appetite approved by Ministers. In so doing, the DMO will seek to avoid actions or arrangements that would:

- undermine the efficient functioning of the sterling money markets; or
- conflict with the operational requirements of the Bank of England for monetary policy implementation.

---

<sup>12</sup> The four types of risks are liquidity risk, interest rate risk, foreign exchange risk and credit risk. An explanation of these risks and the Government's cash management operations more generally is set out in Chapter 5 of the DMO's Annual Review 2004-05, which is available on the DMO's website: [www.dmo.gov.uk/gilts/public/annual/gar0405.pdf](http://www.dmo.gov.uk/gilts/public/annual/gar0405.pdf)

## Instruments and operations used in Exchequer cash management

**6.6** The range of instruments and operations that the DMO may use for cash management purposes is set out in its Operational Notice.<sup>13</sup> The arrangements for the issuance of Treasury bills, and the management of the Treasury bill stock in market hands, is set out in, and operated according to, the DMO's Operational Notice.

**6.7** As part of its cash management, the DMO uses weekly and ad hoc tenders. In November 2007, the DMO introduced a facility that allowed it to reopen existing Treasury Bills upon request from its counterparties (see Box 6.A).

---

<sup>13</sup> The current edition of Exchequer Cash Management Operational Notice and Treasury Bill Information Memorandum is available on the DMO's website at [www.dmo.gov.uk/cash/cashops110903.pdf](http://www.dmo.gov.uk/cash/cashops110903.pdf)

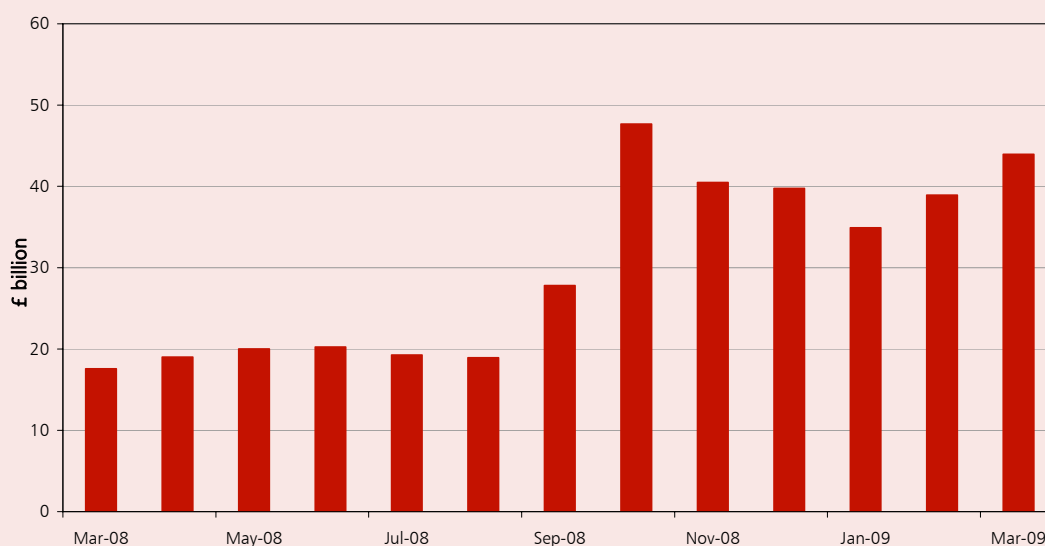
### Box 6.A: Treasury bills for cash management operations

The context in which government cash management operated in 2008-09 was particularly challenging. Money markets in sterling and all major currencies were extremely volatile and experienced protracted periods of low liquidity, particularly for transactions other than at very short maturities. Exchequer cash flow forecasts were also unusually volatile in the light of exceptional government payments, notably, relating to government action in support of the financial sector.

Government cash management met these challenges through increasing the size and frequency of its operations and concentrating bilateral transactions in the most liquid parts of the secured sterling money markets, principally through sale and repurchase agreements (repos and reverse repos). It also was able to meet the strong investor demand for short-term government assets that materialised over the second half of 2008-09 by increasing the size of Treasury bill sales (see Chart A below). The size of the weekly tenders rose from a total of £1.6 billion, split across 1 month, 3 month and 6 month maturity Treasury bills, at the start of 2008-09, to £3.3 billion by the end of the year. Further, the complementary bilateral Treasury bill facility, which was introduced in the 2007-08 cash management remit and implemented by the DMO in November 2007, developed into a particularly useful cash management tool in 2008-09. This facility permits the reopening of existing Treasury bills at the request of market participants, provided that, in so doing, it contributes to achieving the DMO's cash management objective. Bilateral bills issued by the end of the financial year totalled £9.7 billion.

The DMO announced, on 19 January 2009, that finance to support the purchase of up to £50 billion of high quality private sector assets by the Bank of England's Asset Purchase Facility (APF) would be raised through a combination of Treasury bill sales and DMO cash management operations. These arrangements were suspended on 26 February 2009 with a total of £984 million of purchases of assets having been financed in this way. This financing will fall as the relevant assets mature. The option of using Treasury bills to finance such asset purchases will remain open.

**Chart A: Treasury bill stock (Mar 2008 – Mar 2009)**



Source: Debt Management Office

**6.8** One component of the debt sales planned to meet the Government's annual financing requirement is the year-on-year change in the outstanding stock of Treasury Bills (excluding bills issued solely for collateral purposes). In addition to the bills issued at weekly tenders, the DMO is able to reopen, on request from its counterparties, existing issues of Treasury bills on a bilateral basis to raise funds for cash management. This change was announced as part of the financing remit given by HM Treasury to the DMO in 2007-08.<sup>14</sup>

**6.9** During the financial year, the DMO will manage the level of the Treasury bill stock and may increase or reduce the stock vis-à-vis the end year target level, in order to support the implementation of Government cash management. The DMO will announce the dates of Treasury bill tenders on a quarterly basis. The precise details of the maturity and the amount of the Treasury bills on offer at specific tenders will be announced one week in advance.

**6.10** As a contingency measure, the DMO may issue Treasury bills to the market at the request of the Bank of England, and in agreement with HM Treasury, to assist the Bank of England's operations in the sterling money market for the purpose of implementing monetary policy while meeting liquidity needs of the banking sector as a whole. In response to such a request, the DMO may add a specified amount to the size(s) of the next bill tender(s) and deposit the proceeds with the Bank, remunerated at the weighted average yield(s) of the respective tenders. The amount being offered to accommodate the Bank's request will be identified in the DMO's weekly Treasury bill tender announcement. Treasury bill issues made at the request of the Bank will be identical in all respects to Treasury bills issued in the normal course of DMO business. The DMO may also raise funds to finance advances to the Bank of England and would, in conjunction with HM Treasury, determine the appropriate instruments through which to raise those funds (see Box 6.A).

## **DMO Collateral Pool**

**6.11** To assist the DMO in the efficient execution of its cash management operations an amount of gilts, which shall be chosen to have a negligible effect on relevant indices, may be issued to the DMO on the third Wednesday of July and October 2009 and January 2010. Any such issues to the DMO will only be used as collateral in the DMO's cash management operations and will not be available for outright sale. The precise details of any such issues to the DMO will be announced in advance. If no issue is to take place in a particular quarter, the DMO will announce that this is the case in advance.

**6.12** In the event that the DMO requires collateral to manage short-term requirements, the DMO may create additional Treasury bill collateral. Any such issues to the DMO will only be used as collateral and will not be available for outright sale.

**6.13** The DMO's collateral pool may also be used to support HM Treasury's agreement to provide gilt collateral for the Bank of England's Discount Window Facility (DWF).<sup>15</sup> In addition, on 22 October 2008, an approximate £50 billion of gilt collateral was created and issued to the DMO in connection with the DWF. The gilt collateral will be held by the DMO and lent to the Bank of England on an 'as needed' basis; gilts created for this purpose will not be sold or issued outright into the market.

---

<sup>14</sup> See Chapter 4 (paragraph 4.8) of the *Debt and reserves management report 2007-08*.

<sup>15</sup> More information about the Discount Window Facility can be found on the Bank of England's website at: <http://www.bankofengland.co.uk/markets/money/discount/index.htm>

## Active cash management

**6.14** The combination of HM Treasury's cash flow forecasts and the DMO's market operations characterises the active approach to Exchequer cash management. In 2007-08, a new performance measurement framework for active cash management in which discretionary decisions, that are informed by forecast cash flows, are evaluated against a range of indicators was introduced. These include quantifying excess returns to active management by measuring the net cost of cash management after deducting interest changes equivalent to the Government's marginal cost of funds. Performance against key indicators, including quantitative measures for years 2006-07 and 2007-08, was reported in DMO's Annual Review 2007-08.<sup>16</sup>

---

<sup>16</sup> [http://www.dmo.gov.uk/documentview.aspx?docname=publications/annualreviews/gar0708.pdf&page=Annual\\_Review](http://www.dmo.gov.uk/documentview.aspx?docname=publications/annualreviews/gar0708.pdf&page=Annual_Review)

# 7

## National Savings & Investments' activities in 2008-09

### Introduction

**7.1** National Savings and Investments (NS&I) is both a government department and an executive agency of the Chancellor of the Exchequer. It is one of the largest savings institutions in the UK and is an integral part of the Government's debt management strategy. NS&I contributes to reducing the cost of Government borrowing by raising cost-effective financing from the retail sector. NS&I meets this primary objective by offering customers secure savings and investment products that are both attractive and competitive.

**7.2** 2008-09 was the second year of NS&I's five year strategy "Adding Value", which does not aim to achieve market growth but aims to deliver sustainable long-term value to stakeholders by simplifying, modernising and diversifying the business. Originally, the intent for "Adding Value" was to increase net financing by around £13 billion and deliver at least £1.6 billion value add over five years. However, conditions in the retail savings market have meant that the outcomes for the first two years of the strategy have exceeded expectations. In the first two years of the strategy, NS&I has delivered some £18.3 billion of net financing despite having stopped discretionary marketing post September 2008.

**7.3** The net contribution to financing in 2008-09 was £12.5 billion (unaudited) with gross inflows (including reinvestments and gross accrued interest) of £26.0 billion. Table 7.A below shows changes in NS&I's product stock during 2008-09.

**Table 7.A: Changes in National Savings & Investments' product stock in 2008-09**

	End-March 2008 (£ billion)	End-March 2009 (£ billion)
Variable rate	56.4	63.9
Fixed rate	14.9	17.2
Index-linked	13.5	16.1
Total <sup>1</sup>	<b>84.8</b>	<b>97.2</b>

Source: Debt Management Office/National Savings & Investments  
1. These figures are unaudited

### NS&I's net financing target

**7.4** The target for NS&I's net contribution to financing the Government's gross financing requirement published at Budget 2008 was £4.2 billion. The estimate for NS&I's contribution was revised upwards at the 2008 Pre-Budget Report to £11 billion. This was a result of prevailing market conditions and changes to interest rates beyond those originally forecast which led to an unplanned increase in demand for NS&I products due to the 'flight to safety'. The outturn of £12.5 billion reflects a continued trend since the 2008 Pre-Budget Report of higher than expected deposits.

**7.5** As a result of the low interest rate environment and conditions in financial markets, the value added target was suspended in 2008-09. While current financial market conditions prevail, NS&I's focus is on offering fair rates to savers and delivering net financing while maintaining an appropriate competitive position. NS&I remains committed to its five-year modernisation strategy and giving positive value added over the longer term.

## Operational performance

**7.6** NS&I's customer service operation successfully met the challenge of managing the exceptional and unsolicited inflows in 2008-09. Increased call volumes and customer transactions were robustly managed and a high level of customer service was maintained throughout the period.

**7.7** NS&I has continued to modernise and simplify its product range. It announced in February 2009 that it would close its Cash ISA to new customers and would change its Direct ISA's minimum transaction and deposit levels to make it more accessible to consumers.

## Marketing Activities

**7.8** NS&I took the decision to cease discretionary marketing activity in October 2008 following increased inflows in September and early October.

**7.9** NS&I, in partnership with the British Bankers' Association (BBA) and Building Societies Association (BSA), launched an online customer-tracing portal<sup>17</sup> in January 2008. The site is intended to be a tool to help reunite customers to lost deposit accounts. At the site's first anniversary in January 2009, it had recorded 246,000 search requests. In 2008, NS&I reunited its customers with over £85 million of lost assets.

**7.10** NS&I also launched a financial information site<sup>18</sup> in May 2008. The site provides straightforward, impartial financial information, helping people to make more informed financial decisions. NS&I intend to develop this site further in 2009.

## Conclusion

**7.11** NS&I had a year of unsolicited stronger than expected sales in 2008-09. In line with the "Adding Value" strategy it has been taking steps to simplify and modernise its business and product range to the benefit of customers, to help ensure it continues to deliver its strategic intent in the future. It has maintained its values of offering a secure, straightforward and trusted service to its customers.

---

<sup>17</sup> <http://www.mylostaccount.org.uk>

<sup>18</sup> <http://www.youandyourmoney.info>

# 8

## National Savings & Investments' financing remit for 2009-10

---

### Introduction

**8.1** NS&I's aim is to help reduce the cost to the taxpayer of government borrowing now and in the future. To achieve this, NS&I's strategic objective is to provide retail funds for the Government that are cost-effective in relation to funds raised on the wholesale market.

**8.2** The key business objectives for NS&I to deliver its strategic objective are:

- to ensure levels of customer service which meet standards of best practice in the retail financial services sector; and
- to develop a more flexible and responsive business that can deliver a range of net financing requirements to HM Treasury.

**8.3** In pursuit of its strategic objectives, NS&I will operate fairly, transparently and competitively, engendering customer loyalty and securing new business by offering attractive products on fair terms.

### Responsibility for setting product terms

**8.4** HM Treasury is ultimately responsible, under the National Loans Act 1968, for setting the terms of NS&I's products.

**8.5** NS&I will normally take the lead in bringing forward proposals to HM Treasury Ministers on product development (including proposals for new products) or on product terms (including interest rates). If the proposals are consistent with NS&I's objectives, wider government policy and this remit, Ministers would expect to endorse them.

### Volume of financing in 2009-10

**8.6** Gross inflows (including reinvestments and gross accrued interest) of NS&I products are projected to be £13.9 billion in 2009-10. In 2008-09, prevailing market conditions resulted in NS&I's net financing outturn being significantly above its original target. The target for NS&I in 2009-10 will be to maintain broadly the existing level of stock, while offering reasonable rates to savers and by maintaining an appropriate competitive position. The value added target will continue to be suspended in 2009-10 in the continuing market conditions and low interest rate environment.

### Cost of financing

**8.7** The average cost of NS&I products should lie on average below the cost of equivalent gilts or other short-term comparators.

**8.8** NS&I or HM Treasury can initiate a review of product terms at any time. NS&I will carry out each review. Any proposed changes will take account of the cost of NS&I's financing, the achievement of this remit and the need for NS&I to retain the capability and market presence to contribute to Government financing over the medium term.



# 9

## Management of the Official Reserves in 2008-09

---

### Introduction

**9.1** The Government's official holdings of international reserves comprise gold, foreign currency assets and International Monetary Fund (IMF) Special Drawing Rights (SDRs).<sup>19</sup> With the exception of the SDR assets that constitute the UK's Reserve Tranche Position (RTP) at the IMF, these assets are held in the Exchange Equalisation Account (EEA).

### Origin and purpose

**9.2** The EEA was established in 1932 to provide a fund that could be used, when necessary, to regulate the exchange value of sterling and, therefore, is the mechanism through which any government exchange rate intervention would be conducted.

**9.3** The Government's macroeconomic framework is designed to maintain long-term economic stability. This is achieved by maintaining low inflation, sustainable economic growth and sound public finances. The framework does not entail management of the exchange rate and the Government has not intervened for the purposes of influencing the sterling exchange rate since 1992. Against this background, foreign exchange reserves are held on a precautionary basis - to meet any change in exchange rate policy in the future, if required, or in the event of any unexpected shocks. The reserves are also used to provide foreign currency services for government departments and agencies to provide foreign exchange for making payments abroad and to buy, sell and hold Special Drawing Rights (SDRs) as required by the UK's membership of the IMF. The way the reserve assets are invested, financed and managed is primarily designed to meet these policy objectives.

**9.4** The Bank of England may also hold foreign currency reserves on its own balance sheet, including for intervention purposes, in pursuit of the Monetary Policy Committee's monetary policy objective. This is set out in the Chancellor's letter to the Governor of the Bank of England of May 1997.<sup>20</sup>

### Management of the Exchange Equalisation Account

**9.5** The EEA is under the control of HM Treasury, which appoints the Bank of England as its agent to carry out the day-to-day management of the international reserves ('the reserves'). An annual Service Level Agreement (SLA) between HM Treasury and the Bank of England specifies the parameters under which the reserves are managed. This SLA includes investment benchmarks and limits for controlling credit, market and other risks. The SLA specifies:

- benchmarks<sup>21</sup> for investing the reserves, with limits to the Bank of England's discretion to take currency or interest rate positions relative to these benchmarks;

---

<sup>19</sup> The SDR is an international reserve asset created by the IMF. Its value is defined in terms of a basket of the US dollar, the euro, the yen and sterling. More information on the SDR can be found at: <http://www.imf.org/external/np/exr/facts/sdr.HTM>

<sup>20</sup> This letter is available on the HM Treasury website at: [http://www.hm-treasury.gov.uk/newsroom\\_and\\_speeches/press/1997/press\\_40\\_97letter.cfm](http://www.hm-treasury.gov.uk/newsroom_and_speeches/press/1997/press_40_97letter.cfm)

<sup>21</sup> The benchmark is the neutral or passive investment strategy for the reserves portfolio. Active management performance is measured against a target return over the benchmark.

- the framework for controlling credit, market, liquidity and other risks;
- a target return for active management compared to benchmark positions; and
- the programme for financing the reserves, covering the EEA's foreign currency borrowing and currency swaps out of sterling.

**9.6** A summary of the current Service Level Agreement (SLA) which excludes market-sensitive risk limits is set out in Chapter 10.

## Financing of the reserves

**9.7** The reserve assets are partly financed either by issuing securities denominated in foreign currency or, alternatively, sterling financing from issuing gilts; these funds are used to acquire foreign currency assets. The Government retains a flexible approach to determining which method to adopt depending upon least cost. Least cost can be determined by comparing, on a swapped basis, the cost of issuing bonds in foreign currency of a given maturity and nominal amount with the cost of issuing in sterling. The Government last issued a US\$3.0 billion five year Eurobond in 2003. The remaining part of the reserves are financed by retained earnings, historic sales of sterling for foreign currency and the EEA's net SDR position.

**9.8** The reserve assets are divided between those that are currency-hedged and those that are unhedged for currency risk. The currency-hedged reserves are also largely hedged against interest rate risk, through the use of swaps. The unhedged reserves are, in effect, the net asset position in foreign currency (because the rest of the reserves are hedged with matching foreign currency liabilities): they comprise dollar and euro-denominated bonds, gold, the Reserve Tranche Position (which is part of the National Loans Fund) and yen exposure obtained largely through forward yen purchases. Movements in the value of the reserves largely arise from changes in the value of these assets.

## Composition and size of the Reserves

**9.9** EEA assets need to be highly liquid so that they can be made available quickly for intervention purposes (or other permitted uses) if necessary. Inevitably, these assets (other than gold) carry some element of credit risk. In order to keep this risk at a low level and to ensure a high level of liquidity, the funds of the EEA are predominantly invested in securities issued or guaranteed by the national governments of the United States, euro-area countries and Japan.

**9.10** Table 9.A sets out developments in UK official holdings of international reserves. The value of the gross foreign exchange reserves fell over the year, from US\$57.9 billion at end-December 2007 to US\$53.9 billion at end-December 2008. This was because of valuation effects resulting from the depreciation of the euro against the US dollar, the maturing of the dollar bond and also difficult market conditions for reserve transactions. There was also a slight compositional shift from foreign currency assets to SDR-denominated assets, reflecting borrowing from the IMF by some countries. The level of the UK's unhedged reserves rose over the year, from US\$24.7 billion at end-December 2007 to US\$28 billion at end-December 2008, also because of revaluation effects.

**Table 9.A: UK Official Holdings of International Reserves**

Currency breakdown Assets	US\$ million - Market Value	
	End-December 2007	End-December 2008
\$US	14,831	13,398
Euro	28,885	23,985
Yen	4,402	5,090
Other currencies	17	6
SDR	1,459	2,798
Gold	8,344	8,628
Gross Reserves (Total Assets) <sup>1</sup>	57,939	53,906
Liabilities	End-December 2007	End-December 2008
\$US	-7,682	-5,536
Euro	-21,735	-16,210
Yen	-823	-1,187
Other currencies	-13	-4
SDR	-3,020	-2,947
Gold	-	-
Total Liabilities	-33,272	-25,884
Net Reserves (Asset – Liabilities)	24,667	28,022

Source: HM Treasury/Bank of England  
1. Totals and net figures may not sum due to rounding

## Performance evaluation

**9.11** In accordance with the SLA, the Bank of England manages the Official Reserves consistently with the Government's policy aims. A key objective in that context is to maintain their liquidity and security and, subject to that, to minimise the cost of holding the reserves. HM Treasury sets a target active management return as part of the annual SLA. This target, along with other aspects of management of the reserves, makes up the basket of indicators that were agreed for 2008-09 between HM Treasury and the Bank of England. These key performance indicators are explained further alongside the SLA in chapter 10. HM Treasury will report formally against these measures in the 2008-09 EEA accounts.

## Disclosure of financial data

**9.12** Since April 2000, the UK has published reserves data in accordance with the IMF/G10's Special Data Dissemination Standard (SDDS). These monthly releases set out the value and composition of the UK's foreign currency and gold assets, liabilities and derivatives on a marked-to-market basis (that is, using current market valuations).<sup>22</sup>

<sup>22</sup> Reserves data from July 1999 onwards are available on the Bank of England's website at: [http://www.Bank of Englandofengland.co.uk/statistics/reserves/index.htm](http://www.BankofEnglandofengland.co.uk/statistics/reserves/index.htm)

**9.13** HM Treasury publishes the financial accounts for the EEA as part of the statutory obligations set out in the Exchange Equalisation Account Act 1979 (as amended by the Finance Act 2000). The financial accounts for 2007-08, audited by the National Audit Office, were accordingly published and laid before both Houses of Parliament on 21 July 2008.

## **Intervention**

**9.14** The Government announced in September 1997, as part of its commitment to openness and transparency with respect to the reserves, that it would publish details of any intervention undertaken to influence exchange rates in the subsequent monthly press release. Since September 1997, the UK authorities have only intervened on one occasion, when the Government joined a concerted intervention by the G7 to support the euro in September 2000.

# 10 The Bank of England's Service Level Agreement for management of the Official Reserves

---

## Introduction

**10.1** The Service Level Agreement ('SLA') sets out the arrangements for the Bank of England acting as HM Treasury's agent in managing the Exchange Equalisation Account ('EEA'). It will remain in force indefinitely and be reviewed annually.

**10.2** The SLA provides both parties with an understanding of what constitutes an acceptable level of service in managing the EEA.

**10.3** The SLA should be read in conjunction with all relevant legislation, particularly the Exchange Equalisation Account Act 1979, as amended by the Finance Act 2000, which provides that the EEA shall be used:

- for checking undue fluctuations in the exchange value of sterling;
- for securing the conservation or disposition in the national interest of the means of making payments abroad;
- for the purpose specified in Section 1(3) of the International Monetary Fund Act 1979 (payment of charges under Section 8 of Article V of the Articles of Agreement of the International Monetary Fund); and
- for carrying out any of the functions of the Government of the United Kingdom under those of the said Articles of Agreement which relate to Special Drawing Rights (SDRs).

## Objectives

**10.4** The Bank of England will at all times:

- carry out efficiently and cost effectively in a legal and proper form foreign currency and gold transactions on behalf of HM Treasury and other government departments, including the issuance of foreign currency debt on behalf of HM Treasury;
- manage the reserves so as to maintain their liquidity and security within limits agreed with HM Treasury and ensure that the public funds entrusted to the Bank of England in the EEA are properly and well managed and safeguarded. Subject to these limits, the Bank of England will manage the reserves to maximise their return;
- advise HM Treasury on the financing of the reserves, including, as necessary, the management of foreign currency borrowing (covering new borrowing, hedging and repayments);

- monitor and report to HM Treasury on the level of risk and return on holding the reserves and provide accurate and timely accounting and management information and statistical analysis pertaining to the reserves as requested by HM Treasury;
- ensure that effective management systems, including financial monitoring and control systems, are in operation and that proper financial procedures are followed and that accounting records are maintained in a form suited to the requirements of management as well as in the form prescribed for the published accounts; and
- advise HM Treasury as to how to ensure that the EEA assets have the fullest possible protection of sovereign immunity and that the EEA enters into appropriate legal agreements with counterparties, nominees, delegates and agents that provide the fullest possible protection for EEA assets, subject to commercial feasibility.

**10.5** To help gauge the effectiveness of the Bank of England's management of the reserves, HM Treasury and the Bank of England have introduced a set of key performance indicators. Performance against these indicators will be published in the EEA accounts for 2008-09. These performance measures are explained in Box 10.A.

#### Box 10.A: Key performance indicators in 2008-09

HM Treasury and the Bank of England agreed a set of performance measures that were monitored throughout 2008-09. The intent of the performance measures is to provide a basket of indicators that can be used to assess the effectiveness of the management of the EEA.

The Government's prime objective in managing the EEA is to ensure that the reserves are fit for purpose in order to meet current policy objectives and any potential future changes in policy.

In support of that, the Government's objective is to preserve the liquidity and security of the reserves and to ensure that the Government maintains its capability to intervene in the foreign exchange market if required. Subject to this, the aim is to minimise the overall cost of holding the reserves, while ensuring exposure to financial risk is limited through the appropriate choice of portfolio and risk management practices.

HM Treasury's role is to:

- ensure that its choice for the strategic composition for the benchmark asset allocation of the reserves, including gold, meets the policy objectives set out above. Subject to meeting those objectives, HM Treasury will make that benchmark asset allocation choice to trade off risk, return and liquidity in line with its risk preferences. The performance of the reserves, including financial outturns, will be reported in the annual accounts; and
- set an active management return target for the Bank in managing the reserves against the benchmark, subject to the limits detailed in the SLA. This target will be set to at least cover the costs of the Bank in managing the EEA.

The foreign currency reserves will be invested in assets that are liquid and secure. Specifically;

- a minimum of 90 per cent will be held in tradable debt securities and cash;
- a minimum of 90 per cent will be invested in assets that are rated at least AA-; and
- all assets must be investment grade.

The Bank will observe the limits as set out in the SLA. In line with the SLA, any substantive breaches of the limits and/or any operational errors will be reported to HM Treasury as soon as possible, along with advice, if necessary, as to how best to deal with them. Any significant breach will be reported publicly (e.g. in the annual accounts).

In order to aim to at least cover costs, and to ensure that the Bank maintains its capability to intervene in the foreign exchange market if required, the Bank will actively manage the EEA portfolio against the benchmark to meet the active management return target set by HM Treasury, whilst ensuring compliance with the limits as detailed in the SLA.

The Bank will ensure that all transactions that relate to the Government and the IMF shall be handled efficiently, accurately and in a timely fashion. In carrying out its services, the Bank will as far as possible ensure that:

- its management and staff are of high repute and integrity;
- staff training and experience are appropriate for the tasks they are expected to undertake and consistent with the amount of risk that they are authorised to take;

- its internal systems and controls are adequate for the size, nature and complexity of EEA operations and comply with best market practice so far as possible; and
- appropriate preparations are made for possible policy deployment of the reserves (e.g. foreign exchange intervention).

These performance measures have been monitored throughout 2008-09 and HM Treasury and the Bank will report formally against them in the 2008-09 EEA financial accounts.

## Authorised financial instruments

**10.6** The reserves can be invested in a specified range of financial instruments:

- bonds and commercial paper issued by other national governments, supranational organisations and selected official sector agencies;
- foreign currency spot, forward and swap transactions;
- interest rate and currency swaps;
- bond and interest rate futures, swap notes and swap futures;
- sale and repurchase, and buy-sell back, agreements;
- gold deposits;
- forward rate agreements;
- SDRs;
- Bank of England deposits; and
- certificates of deposit and corporate commercial paper.

## Active management

**10.7** The Bank of England will actively manage the reserves against a number of benchmarks. The benchmarks will be reviewed regularly and constructed so that they are replicable and represent HM Treasury's long-term investment strategy. They are split into benchmarks for the currency-hedged reserves (on which currency and interest rate exposures are hedged) and the unhedged reserves which are not hedged against exchange rate and interest rate risk. The Bank of England's scope to deviate from the benchmarks through active management will be constrained by agreed risk limits.

## Risk management

**10.8** The Bank of England will:

- ensure that the risks associated with its management of the EEA are properly identified, evaluated and mitigated and that exposures comply with the detailed credit risk, market risk and operational risk framework and limits agreed with HM Treasury at the start of the year;

- monitor the EEA’s credit exposures on a daily basis, applying the credit risk framework agreed with HM Treasury. The Bank of England will review this framework and the credit limits it provides in the light of market or institutional developments, and changes in the nature of the EEA’s activities. The Bank of England will assess the credit rating of each counterparty, issuer and banking sector;
- monitor the exposure of the EEA to market risk and ensure that it complies with the limits agreed with HM Treasury using Value at Risk (VaR) which provides a means of aggregating risk consistently across the components of the portfolio, and stress tests to quantify the potential loss from particular scenarios; and
- confirm to HM Treasury, on a quarterly basis, that sufficient controls were in place to mitigate the operational risks affecting the EEA during that quarter, that appropriate mechanisms were in place to identify and address new risks and that the processes and framework in place adequately meet the “Turnbull” requirements<sup>23</sup> relating to the Bank of England’s management of the EEA. If appropriate, exceptions to such confirmation will be listed.

## Audit arrangements and accounting requirements

**10.9** The Bank of England will agree the annual programme of work of the Bank of England’s Internal Audit Division pertaining to the EEA with HM Treasury by the beginning of the year. The Bank of England’s internal audit arrangements will follow the standards set by the Institute of Internal Auditors UK and Ireland and will accord with the objectives, standards and practices set out in HM Treasury’s “Government Internal Audit Standards”. The Bank of England will maintain the EEA’s accounts drawn up in accordance with UK GAAP as far as appropriate and in accordance with the relevant Accounts Directions.

## National Audit Office access

**10.10** For the purposes of:

- the examination and certification of the EEA accounts; or
- any examination pursuant to Section 6(1) of the National Audit Act 1983 or any re-enactment thereof of the economy, efficiency and effectiveness with which the Bank of England has managed the EEA;

the National Audit Office (NAO) may examine such documents as it may reasonably require which are owned, held, or are otherwise within the control of the Bank of England, have access to Bank of England buildings, and may require the Bank of England to produce such oral or written factual explanations as it considers necessary. However, the NAO will address substantive questions on the management of the reserves to HM Treasury and not the Bank of England.

## HM Treasury’s responsibilities

**10.11** HM Treasury is responsible for monitoring the risk environment and performance of the Bank of England in managing the reserves. To support this process, the Bank of England provides the following management information:

- monthly financial reporting, detailing the returns made with respect to the management of the EEA and the market and credit risks incurred;

---

<sup>23</sup> Internal Control: Guidance for Directors on the Combined Code issued by the Institute of Chartered Accountants in England and Wales.

- quarterly management reports on operational risk issues and the Bank of England's compliance with the guidance issued by the Turnbull Report (Internal Control: Guidance for Directors on the Combined Code issued by the Institute of Chartered Accountants in England and Wales). These reports highlight the Bank of England's role in identifying, assessing, managing and monitoring the risks relating to its management of the EEA;
- quarterly reports from the Bank of England's Internal Audit Division on the internal audit programme agreed for the EEA; and
- Bank of England and HM Treasury officials meet at regular reserves meetings to review the performance against the parameters set out in the SLA and to consider wider operational and policy issues. The EEA Accounting Officer and the Bank of England's Executive Director for Markets meet twice each year to discuss overall strategy and governance issues.

## Financing the reserves

**10.12** The Bank of England will provide HM Treasury with relevant market intelligence and advice on options for financing the reserves with a view to minimising the costs and risks to the Government. An annual financing programme for the currency-hedged reserves will be agreed between the Bank of England and HM Treasury at the beginning of the financial year. The Bank of England will undertake this programme in accordance with the timetable and guidelines agreed, as well as any changes subsequently agreed with HM Treasury.

**10.13** The Bank of England will act as HM Treasury's agent in issuing and managing any foreign currency liabilities associated with the reserves. The Bank of England will provide regular information on the pricing of foreign currency debt and, if agreed with HM Treasury, will appoint managers to undertake an issuance in accordance with HM Treasury's instructions.

## Sterling cash management

**10.14** The Bank of England will liaise closely with the DMO with respect to managing sterling flows relating to EEA operations. The Bank of England will, so far as is possible, aim to manage the EEA so as to avoid conflict with the DMO's sterling cash management operations while in no way disadvantaging the EEA.

## Publication requirements

**10.15** The Bank of England will provide the figures for the United Kingdom's official holdings of international reserves monthly Press Notice, by no later than 2pm on the second working day of every month, to be published on the third working day of every month. The format for this Press Notice will be in accordance with the requirements of the IMF's Special Data Dissemination Standard and will be aligned with the conventions of the G10/IMF reserves template published on the Bank of England's web site. The monthly Press Notice will provide details of the amount and date of any official intervention during the month and an explanation of why it was undertaken.

## Intervention

**10.16** Specific prior authority from Treasury Ministers is required for intervention designed to influence sterling exchange rates using the EEA, or for EEA participation in concerted intervention in support of any other currency. The Bank of England will subsequently report on the extent to which any such authority was used, and to what effect, by letter.

# 11

# Central Government's financial asset and liability risk monitor

---

## Introduction

**11.1** The central government's asset and liability monitor ('the monitor') is produced in order to aid quantification of the risks faced by central government on its balance sheet and forms part of an ongoing HM Treasury work programme. It should be regarded as a 'work in progress' because it records only current financial assets and liabilities of central government and some of the calculations involve approximating assumptions. Therefore, it cannot be reconciled with other central government accounting publications and is not subject to audit.

**11.2** The monitor is a precursor to the publication of 'Whole of Government Accounts'<sup>24</sup> and is in accordance with the transparency and accountability recommendations published in the International Monetary Fund's 'Guidelines on Public Debt Management' 2003.<sup>25</sup>

**11.3** It should be noted that the monitor records only one aspect of the Government's wider financial position as it currently covers only financial assets and liabilities of central government. For example, it does not take account of other significant public sector assets and liabilities such as local authorities' assets or non financial assets and liabilities such as contingent liabilities or future tax revenue streams.

## Description of table 11.A

**11.4** Table 11.A below shows total assets and liabilities by type and by managing institution. In addition to nominal and market values of the assets and liabilities, some other key variables are reported, which help to provide greater insight into the characteristics of central government's balance sheet thereby facilitating a better evaluation of the risks that the balance sheet is exposed to. These key variables are explained in Box 11.A.

---

<sup>24</sup> From 2009-10 onwards, Government Accounts will be prepared using International Financial Reporting Standards, as adapted in the public sector context. The whole of Government Accounts will be presented on the same basis from 2009-10.

<sup>25</sup> The latest version of the Guidelines on Public Debt Management can be found on the IMF website at: <http://www.imf.org/external/np/mfd/pdebt/2003/eng/am/index.htm>

### Box 11.A: Description of variables in the Central Government Financial Asset and Liability Risk Monitor

- **Nominal value and market value<sup>1</sup>** – the nominal value of assets or liabilities is the value at which they would be repaid. The market value is the value of assets or liabilities if they were purchased in the market. For example, the nominal value of central government's gilt liabilities represents the amount that the Government would pay on redemption of these liabilities whereas the market value of the gilt liabilities is their tradable value in the secondary market.
- **Maturities of less than one year** – the nominal value of the assets or liabilities that have less than one year before they are redeemed.
- **Average modified duration** – this is a measure of the sensitivity of the value of assets or liabilities to interest rate movements. In the context of the asset and liability monitor, duration offers some indication of how great an impact small interest rate changes might have on the present value of the central government's balance sheet. Other things equal, longer duration suggests a greater degree of sensitivity to small interest rates changes.
- **Average maturity** – indicates the market value weighted average length of time (in years) before assets and liabilities are due to be redeemed.
- **Floating rate composition** – the value of those assets and liabilities that are indexed to a short-term money market interest rate.

<sup>1</sup> Nominal Value of index-linked gilts includes inflation uplift.

## Key facts – central government's financial assets

**11.5** The nominal value of the central government's total financial assets was £555.7 billion at end-December 2008. This compares with £175.6 billion at end-December 2007. This increase was primarily due to the creation of collateral that has been lent to the Bank of England to use in its Special Liquidity Scheme and Discount Window Facility.

**11.6** The market value of central government's total financial assets was £591.4 billion at end-December 2008 compared with £188.0 billion at end-December 2007, an increase of £403.4 billion.

**11.7** The average modified duration, which excludes the duration for index-linked gilts, decreased to 3.5 years at end-December 2008 from 5.8 years at end-December 2007. The average maturity over the period decreased to 6.3 years from 11.7 years.

**11.8** The largest contribution to central government's financial assets is Treasury bills held on the Debt Management Account (£275.4 billion), which make up 50 per cent of the total nominal value. These Treasury bills have been created solely to lend to the Bank of England for use in its Special Liquidity Scheme. Other significant contributors include gilt collateral (£97.3 billion or 18 per cent (of which £50 billion was created for the Discount Window Facility)), loans to local authorities from the Public Works Loans Board (£52.3 billion or 10 per cent of total) and foreign currency assets managed by the Bank of England (£37.0 billion or 7 per cent of total).

## Key facts – central government's financial liabilities

**11.9** The nominal value of central government's total financial liabilities was £844.9 billion at end-December 2008. This is an increase of £167.5 billion compared with end-December 2007 (£677.4 billion). This change is attributable primarily to an increase of £162.7 billion in gross gilts in issue by the DMO to £637.1 billion, an increase in Treasury bills managed by the DMO of £23.6 billion to £40.1 billion, and an increase of £11.1 billion in NS&I products to £94.9 billion.

**11.10** The market value of the central government's total financial liabilities at end-December 2008 was £927.9 billion compared with £718.4 billion at end-December 2007, an increase of £209.5 billion.

**11.11** The average modified duration of the financial liabilities at end-December 2008 was 10.3 years, a increase of 3.9 years from December 2007 (at 6.4 years) and the average maturity of the financial liabilities was also higher at 11.5 years compared with 11.0 years at end-December 2007, reflecting increases in marketable gilts in issue. There was an increase of 2 per cent in the nominal value of liabilities with a maturity of less than one year from £114.8 billion to £117.3 billion.

**11.12** Gross gilts issued represent the highest proportion of central government financial liabilities (£637.1 billion), accounting for 75 per cent of the nominal value of total financial liabilities. Other significant liabilities include those managed by NS&I (£94.9 billion) accounting for 11 per cent of the nominal value of total liabilities, Treasury bills (£40.1 billion), and the DMO's repos-outstanding (£14.6 billion).

**Table 11.A: Central government's financial asset and liability risk monitor at 31 December 2008**

Central Government financial assets	Nominal Value <sup>1</sup> (£ billion)	Market Value (£ billion)	Maturities of less than 1 year (£ billion)	Modified duration <sup>2</sup> (years)	Average maturity (years)	Floating rate composition (£ billion)
<i>Managed by:</i>						
<b>Public Works Loan Board (loans to local authorities)</b>	52.3	66.1	1.3	14.9	28.8	0.2
<b>Debt Management Office</b>						
<i>Gilts held by DMO</i>						
Marketable conventionals	81.7	93.1	11.9	8.3	13.0	-
Marketable index-linked	15.6	17.1	3.1	9.0	10.8	-
<b>Total</b>	<b>97.3</b>	<b>110.2</b>	<b>15.0</b>	<b>8.4</b>	<b>12.7</b>	<b>-</b>
<i>Gilts held in Central Government funds by the Commissioners for the Reduction of the National Debt (CRND)</i>						
Marketable conventionals	0.1	0.1	0.0	14.1	22.1	-
Non-marketable conventionals	0.3	0.3	0.2	0.0	1.6	-
Non-marketable index-linked	-	-	-	-	-	-
<b>Total</b>	<b>0.4</b>	<b>0.5</b>	<b>0.2</b>	<b>3.4</b>	<b>6.6</b>	<b>-</b>
<i>CRND loans to local authorities</i>	-	-	-	-	-	-
<i>Other short-term bills held by CRND in Central Government funds</i>						
Treasury bills	-	-	-	-	-	-
Deposits given to DMO by CRND	58.7	58.8	58.7	0.0	0.1	-
<b>Total</b>	<b>58.7</b>	<b>58.8</b>	<b>58.7</b>	<b>0.0</b>	<b>0.1</b>	<b>-</b>
<i>Other short-term assets</i>						
Reverse repos - outstanding	18.8	19.0	18.8	0.1	0.1	-
Deposits at commercial banks	0.0	0.0	0.0	0.0	0.0	-
Cash deposits at the Bank of England	0.6	0.6	0.6	0.0	0.0	-
Bonds <sup>3</sup>	-	-	-	-	-	-
Sterling Certificates of Deposit	2.6	2.6	2.6	0.0	0.3	-
Bank of England bills	7.9	7.9	7.9	0.0	0.0	-
Treasury bills	275.4	274.1	275.4	0.0	0.5	-
Sterling Commercial Paper	-	-	-	-	-	-
FX Commercial Paper	-	-	-	-	-	-
<b>Total</b>	<b>305.4</b>	<b>304.3</b>	<b>305.4</b>	<b>0.0</b>	<b>0.5</b>	<b>-</b>
<b>Bank of England</b>						
<i>Sterling assets</i>						
Sterling leg of swaps and FX liabilities <sup>4</sup>	8.3	8.3	3.3	0.3	1.3	8.3
<i>Foreign currency assets</i>						
Bonds	23.0	24.5	3.8	2.3	2.4	23.0
Money Market Instruments	3.1	3.1	3.1	0.2	0.2	-
Short-term assets <sup>5</sup>	1.9	1.9	1.9	0.0	0.0	-
Gold	6.0	6.0	-	-	-	-
IMF Special Drawing Rights	3.1	3.1	-	0.0	-	3.1
<b>Total</b>	<b>37.0</b>	<b>38.5</b>	<b>8.8</b>	<b>1.5</b>	<b>2.0</b>	<b>26.1</b>
<b>HM Treasury</b>						
<i>Sterling assets</i>						
National Loans Fund loans <sup>6</sup>	2.9	3.5	0.0	9.0	14.8	-
<i>Foreign currency assets</i>						
IMF Reserve Tranche Position	1.6	1.6	0.0	0.0	-	1.6
<b>Total<sup>7,8</sup></b>	<b>555.7</b>	<b>591.4</b>	<b>392.5</b>	<b>3.5</b>	<b>6.3</b>	<b>13.2</b>

**Table 11.B: Central government's financial asset and liability risk monitor at 31 December 2008**

Central Government financial liabilities	Nominal Value <sup>1</sup> (£ billion)	Market Value (£ billion)	Maturities of less than 1 year (£ billion)	Modified duration <sup>2</sup> (years)	Average maturity (years)	Floating rate composition (£ billion)
<i>Managed by:</i>						
<b>National Savings &amp; Investments</b>	94.9	94.9	12.9	5.2	5.1	63.3
<b>Debt Management Office</b>						
<i>Gross gilts in issue<sup>9</sup></i>						
Marketable conventionals	472.3	537.0	27.4	9.0	13.6	-
Non-marketable conventionals	0.32	0.34	0.17	0.0	1.6	-
Marketable index-linked	164.5	182.3	0.0	12.9	15.4	-
Non-marketable index-linked	-	-	-	-	-	-
<b>Total</b>	<b>637.1</b>	<b>719.7</b>	<b>27.5</b>	<b>10.0</b>	<b>14.0</b>	<b>-</b>
Treasury bills <sup>10</sup>	40.1	40.0	40.1	0.0	-6.5	-
Other short-term bills	5.0	5.0	5.0	0.0	0.1	-
<b>Total</b>	<b>45.1</b>	<b>45.1</b>	<b>45.1</b>	<b>0.0</b>	<b>-5.8</b>	<b>-</b>
<i>Other short-term liabilities</i>						
Repos - outstanding	14.6	14.7	14.6	0.1	0.1	-
Deposits made by local authorities and commercial banks	8.3	8.3	8.3	0.0	0.0	-
<b>Total</b>	<b>22.9</b>	<b>22.9</b>	<b>22.9</b>	<b>0.1</b>	<b>0.1</b>	<b>-</b>
<b>Bank of England</b>						
<i>Sterling liabilities</i>						
Ways and Means Advance	19.9	19.9	-	0.0	-	19.9
<i>Foreign currency liabilities</i>						
HMG Bonds	0.0	0.0	0.0	0.0	0.0	-
Loans	0.0	0.0	0.0	0.0	0.0	-
Repos	4.1	4.1	4.1	0.1	0.1	-
Swaps & FX Liabilities (excludes £ leg) <sup>11</sup>	11.4	11.8	4.7	0.3	1.1	11.4
IMF Special Drawing Rights allocation	2.0	2.0	-	0.0	-	2.0
<b>Total</b>	<b>17.5</b>	<b>17.9</b>	<b>8.8</b>	<b>0.2</b>	<b>0.8</b>	<b>13.4</b>
<b>HM Treasury</b>						
<i>Sterling liabilities</i>						
IMF non-interest bearing securities	7.5	7.5	-	0.0	-	7.5
<b>Total<sup>7,8</sup></b>	<b>844.9</b>	<b>927.9</b>	<b>117.3</b>	<b>10.3</b>	<b>11.5</b>	<b>104.1</b>

Figures may not sum due to rounding

Source: Bank of England / Debt Management Office / HM Treasury / National Savings & Investments

1 Nominal value of index-linked gilts includes inflation uplift.

2 Modified duration of index-linked gilts is calculated with respect to changes in real yield.

3 Sterling denominated supranational bonds.

4 Modified duration covers swaps only.

5 Short-term assets = deposits + reverse repos.

6 NLF loans are composed of loans to nationalised industries and public corporations.

Market value is approximated by the nominal value.

7 Totals for modified duration are weighted by market value. Duration for index-linked gilts are excluded from this calculation.

8 Total for average maturity are weighed by market value.

9 Non-marketable gilts are held by the Commissioners for the Reduction of the National Debt (CRND).

10 Nominal value is different from Table 2.A because Table 11.B includes transactions up to end-December 2008.

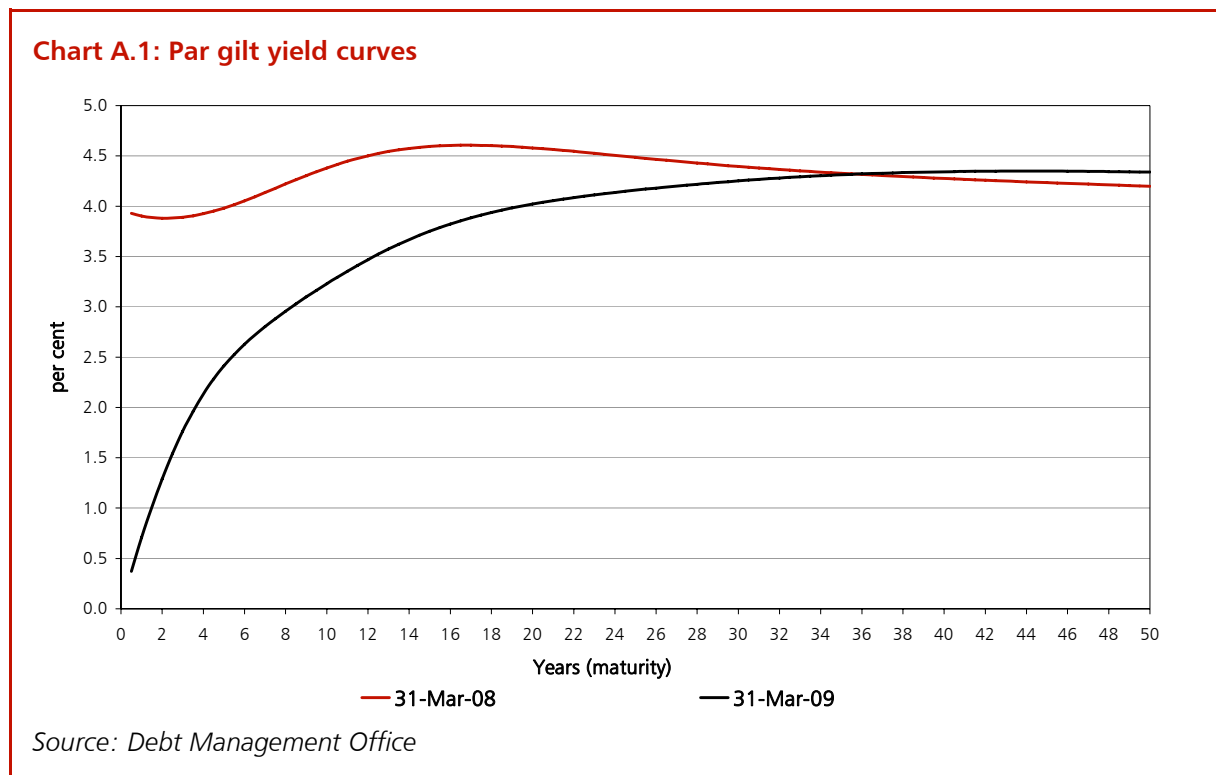
11 Modified duration covers swaps only.

# A

## Key developments in the gilt market in 2008-09

**A.1** This annex summarises the key developments in the gilt market in 2008-09. A more comprehensive review of the year as a whole, in the context of developments in other major international bond markets, will be published in the DMO Annual Review 2008-09.

### Nominal par gilt yield curves



**A.2** Gilt yields fell significantly at the short-end of the nominal par curve and rose at the long-end in 2008-09 as shown in Chart A.1. This reflected primarily the loosening in the stance of monetary policy in response to macroeconomic conditions. Yields fell at all maturities up to 25 years and rose slightly thereafter. 2-year par yields fell by 258 basis points to 1.29 per cent, 5-year yields fell by 154 basis points to 2.44 per cent and 10-year yields fell by 111 basis points to 3.36 per cent. In contrast, 30- and 50-year par yields rose by 31 basis points to 4.62 per cent and 71 basis points to 4.65 per cent respectively.

### Conventional benchmark gilts

**A.3** The first quarter of 2008-09 was characterised by increased volatility in gilt yields, particularly at the short-end of the curve.

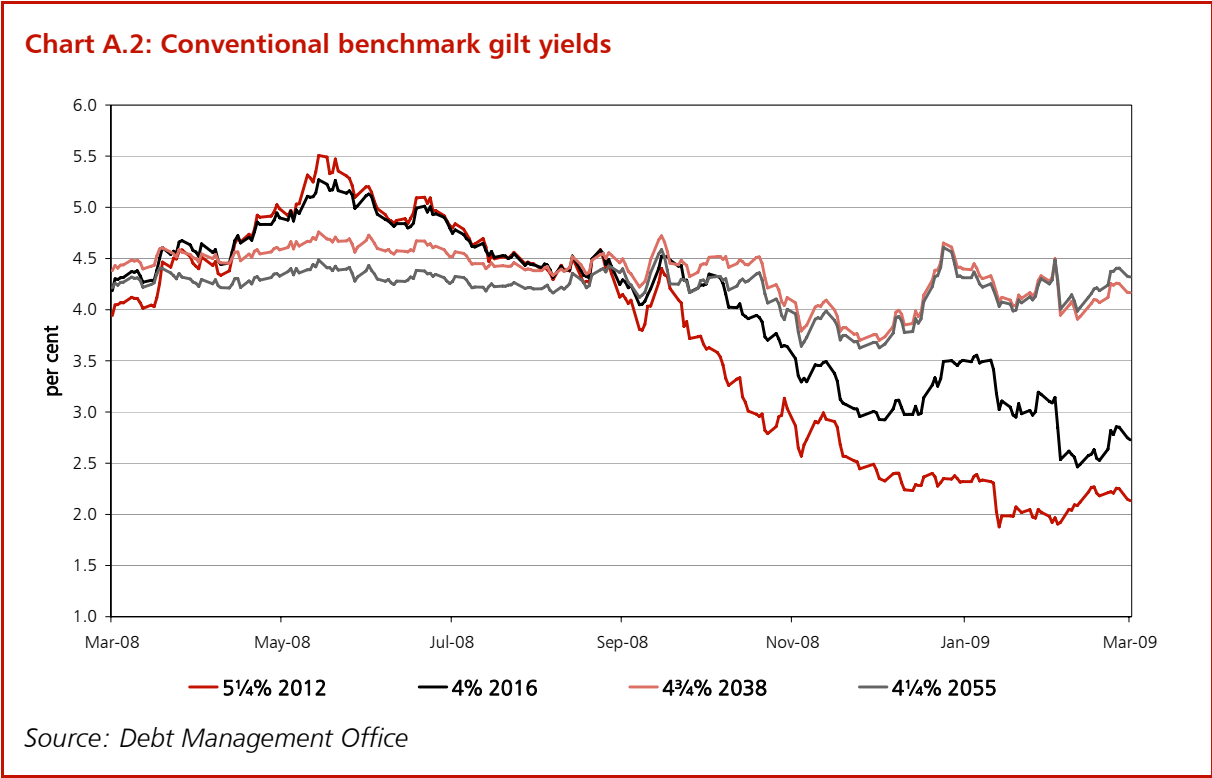
**A.4** Yields rose from May onwards. In April 2008, the Bank Rate was cut by 25 basis points to 5 per cent (where it remained for the remainder of the quarter). As rising commodity prices contributed to an increase in CPI inflation, rising to 3.3 per cent in May 2008, markets increasingly priced in the possibility that interest rates might be increased. Yields at the long-end of the curve remained relatively stable over the same period.

**A.5** Volatility in financial markets increased in late September 2008 as Lehman Brothers filed for bankruptcy and AIG received support from the US Government. This was followed by public sector support for a number of banks in US, UK and Europe. The demand for government bonds, reflecting “flight-to-quality”, led to a fall in yields at the short-end. Other factors such as the unwillingness of stock lenders to lend gilts, also contributed to the downward trend in maturity gilt yields through the quarter.

**A.6** These trends continued to dominate global financial markets throughout the third quarter of 2008-09. GDP data showed the economy had contracted for the first time since 1992 and, although CPI inflation rose to 5.2 per cent in September, sharp falls in oil and other commodity prices meant that the market increasingly expected inflation to begin to fall. As the global financial conditions continued, and global trade and output contracted, monetary policy was eased further. The Bank Rate was reduced by 50 basis points in October, by 150 basis points in November and by a further 100 basis points in December, finishing 2008 at 2 per cent. Yields at the short-end of the curve continued their sharp falls – to record lows.

**A.7** In the final quarter of 2008-09, the global recession and increased international government bond supply became the dominant themes in bond markets. In January 2009, the Government announced the second phase of support for the UK banking sector including the Asset Purchase Facility (APF). The Bank of England continued to reduce Bank Rate through the quarter, with three consecutive cuts of 50 basis points taking the rate from 2 per cent to 0.5 per cent. On 5 March 2009, the Bank of England announced its plans to purchase financial assets using central bank reserves. Gilt yields fell in the 5-25 year maturity range, by close to 50 basis points in the case of the ten-year gilt yield.

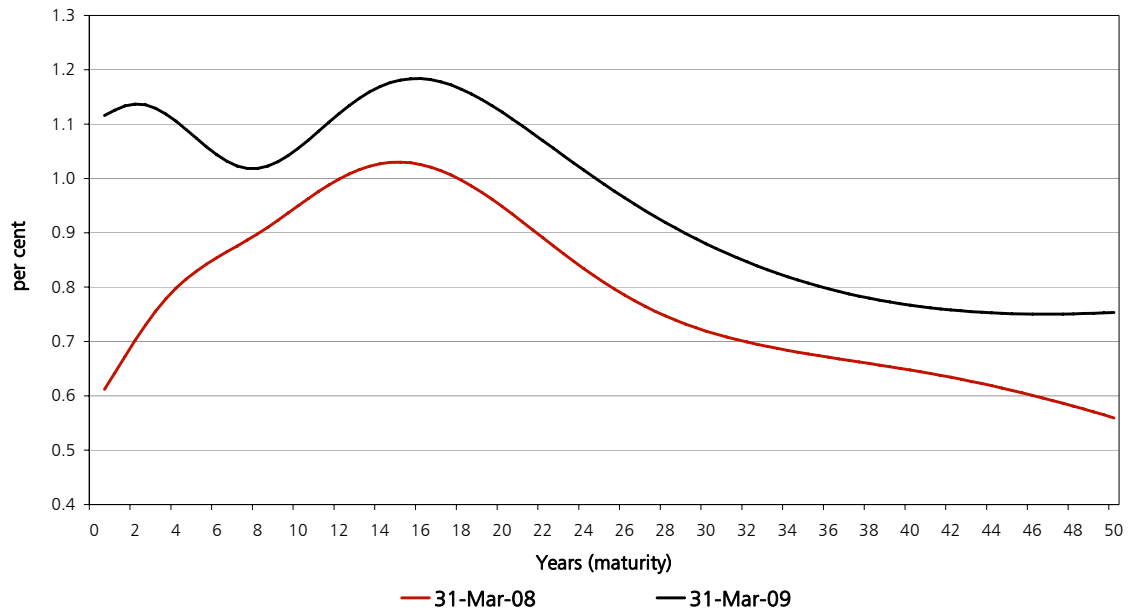
**A.8** The path of benchmark conventional gilt yields over the last year is shown in Chart A.2.



## Real par gilt yield curves

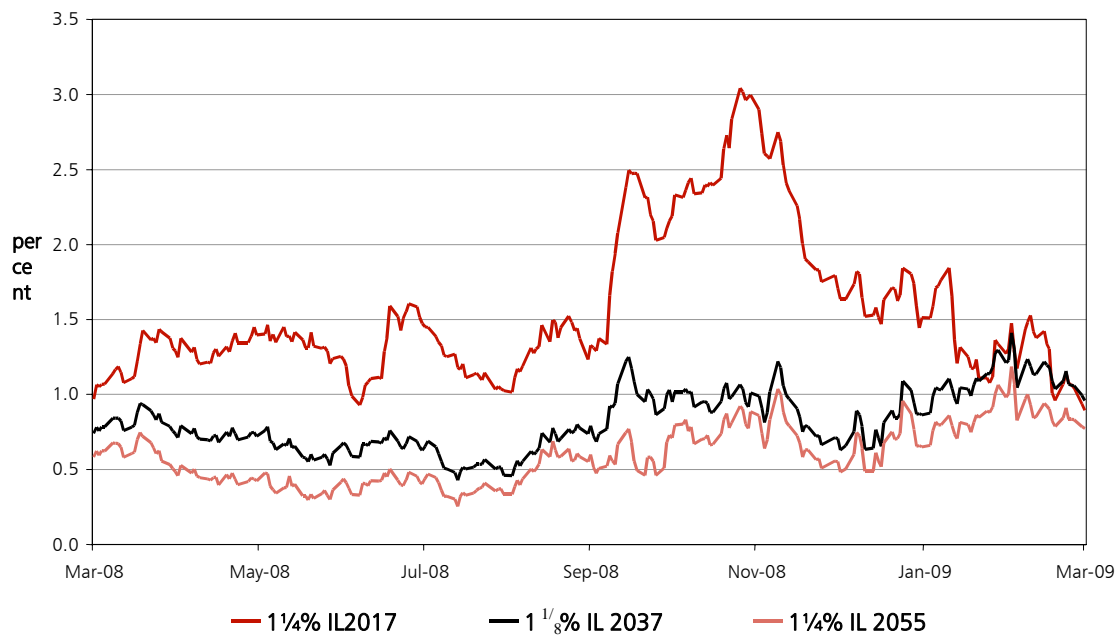
**A.9** In contrast to nominal yields, the real par yield curve rose in 2008-09. In 2008-09, the 10-year real par yield increased by 11 basis points to 1.05 per cent and 50-year yields increased by 19 basis points to 0.75 per cent. Chart A.4 shows the real yields on selected benchmark index-linked gilts over the same period. The market yield on the 1¼ per cent Index-linked Treasury Gilt 2017 fell by 7 basis points to 0.89 per cent, following a late end year rally (intra-year it had traded as high as 3.04 per cent) whilst 30-year and 50-year index-linked gilt yields increased by 21 and 18 basis points respectively. The yield on the 1⅞ per cent Index-linked Treasury Gilt 2037 was 0.96 per cent on 31 March 2009. The 1¼ per cent Index-linked Treasury Gilt 2055 yielded 0.77 per cent on same day.

**Chart A.3: Real par gilt yield curves**



Source: Debt Management Office

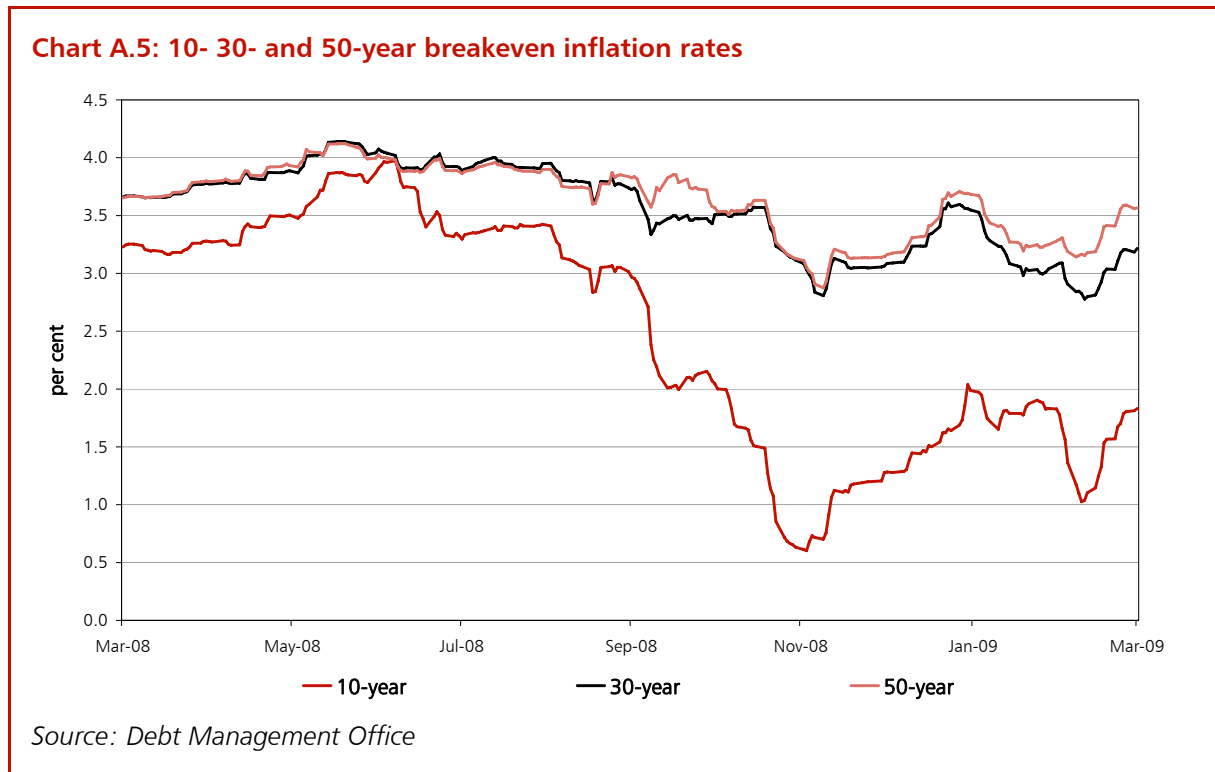
**Chart A.4: 10- 30- and 50-year index-linked gilts**



Source: Debt Management Office

## Breakeven inflation rates<sup>26</sup>

**A.10** In 2008-09, index-linked gilt yields moved differently to their conventional counterparts. As expectations for inflation fell, the incentive to hold index-linked gilts as protection against future inflation fell. The 10-year, 30-year and 50-year breakeven inflation rate fell by 140 basis points (to 1.83 per cent), 44 basis points (to 3.21 per cent) and 8 basis points (to 3.56 per cent) respectively (see Chart A.5).



<sup>26</sup> The breakeven inflation rate is the difference between the yield on a conventional gilt of a particular maturity and the yield on an index-linked gilt of the same maturity.

# B

## The Strategic Debt Analysis model and a comparison of debt issuance strategies

---

**B.1** The Strategic Debt Analysis (SDA) model – which is described in detail in Chapter 6 of the *DMO Annual Review 2005-06* and in a DMO discussion paper<sup>27</sup> - is a debt strategy simulation model used by the DMO to illustrate the debt service cost and risk of different debt issuance strategies, given assumptions about the shape of both the nominal and real yield curves. The model is not used to determine a single optimal debt issuance strategy but to illustrate the cost and risk trade-off of different issuance strategies. Simulations using this model are set out below.

### Design of simulation exercises - debt service cost and risk measures

**B.2** The cost of the debt in any given period is defined as the sum, in cash flow terms, of all nominal coupon payments.<sup>28</sup> The debt service cost is measured as a ratio with respect to nominal GDP as this provides a clearer indication of the debt cost burden to the Government than does the nominal cost of debt on its own.<sup>29</sup>

**B.3** The risk measures capture the concept of financing risk, that is, the uncertainty in the financing or cash flow cost related to a given borrowing strategy. The financing risk associated with a given debt strategy is evaluated by:

- the standard deviation of the debt cost ratio, which measures its volatility in terms of deviations around the average (i.e. a symmetric measure); and
- the debt service cost ratio-at-risk, which is the largest debt cost ratio only exceeded by five per cent of possible realisations according to the probability distribution of the debt cost ratio.<sup>30</sup> The debt service cost ratio-at-risk is a useful risk measure especially when the Government is concerned about avoiding extremely high debt costs (i.e. a tail measure).

### Initial conditions for the simulation

**B.4** The initial conditions for the simulation exercises in the SDA model are the:

- initial portfolio - gilt portfolio as at 31 March 2009 (excluding all undated gilts). This includes not only the outstanding amounts of gilts issued, but also their coupons (in previous versions of this analysis, coupons were estimated from the yield curve model and were lower than actual coupons);

---

<sup>27</sup> Pick, A and ML Anthony (2006), "A simulation model for the analysis of the UK's sovereign debt strategy", UK DMO working paper. This paper can be found on the DMO's website at: [http://www.dmo.gov.uk/index.aspx?page=Research/DMO\\_research](http://www.dmo.gov.uk/index.aspx?page=Research/DMO_research)

<sup>28</sup> The sum of interest payments on nominal bonds, inflation compensated interest payments on inflation-linked bonds and the realised inflation compensation effects on maturing inflation-linked bonds.

<sup>29</sup> The model assumes the debt-to-GDP ratio converges towards 40 per cent.

<sup>30</sup> Or the upper 95th percentile of the debt service cost ratio distribution.

- initial values for the macroeconomic variables,<sup>31</sup> which are their respective long-run average values; and
- initial nominal and real yield curves, which are generated from the long-run average values of those macroeconomic variables that are used to explain how the yield curves vary through time.<sup>32</sup> The yield curves now extend to the 50-year maturity.

**B.5** The simulation horizon is 50 years (200 quarters) and 10,000 replications for each simulation exercise are completed.

## Issuance strategies

**B.6** Table B.1 contains five issuance strategies. Strategies 1 and 4 comprise around 75 per cent conventional gilts and 25 per cent index-linked gilts. Strategies 2 and 3 comprise around 85 per cent conventional gilts and 15 per cent index-linked gilts. Ultra-short (1-year maturity) and ultra-long (50-year maturity) issuance categories have been included.<sup>33</sup> In terms of the maturity breakdown, Strategy 1 has a fairly even allocation across buckets while Strategies 2 and 3 are skewed towards short-term issuance. The skew is more pronounced for Strategy 3, which has the highest proportion of short maturity gilts. On the contrary, strategy 4 is skewed towards long-term issuance. Finally, strategy 5 represents an extreme issuance programme with 100 per cent allocation to long conventional gilts. It is useful to include this last strategy as it provides a floor in terms of debt service cost and a ceiling in terms of cost at risk given the prevailing downward sloping yield curve.<sup>34</sup>

**Table B.1: Composition of issuance strategies (per cent)**

	1-year conv <sup>1</sup>	5-year conv	10-year conv	30-year conv	50-year conv	10-year I-L <sup>2</sup>	30-year I-L	50-year I-L	Total I-L
Strategy 1	7.5	17.5	25.0	12.5	12.5	12.5	10.0	2.5	25
Strategy 2	2.0	31.0	33.0	9.5	9.5	4.0	5.5	5.5	15
Strategy 3	15.0	28.0	23.0	11.0	9.0	3.0	8.0	3.0	14.0
Strategy 4	8.8	8.8	17.5	20.0	20.0	12.5	10.0	2.5	25
Strategy 5	0	0	0	50.0	50.0	0	0	0	0
Actual 2008-09	15.6	28.0	23.2	11.0	9.0	2.6	7.6	2.9	13.1

*Source: Debt Management Office*

1. Conventional gilts  
2. Index-linked gilts

<sup>31</sup> The macroeconomic variables in the SDA model are the output gap, the net primary financing requirement (CGNCR, excluding interest payments), the short interest rate, CPI inflation and RPI inflation.

<sup>32</sup> The macroeconomic variables used to explain the behaviour of the yield curves are the output gap, the short interest rate, CPI inflation and RPI inflation. The yield curve has been re-estimated and re-calibrated to include the last four and a half years of data up to the second quarter of 2008.

<sup>33</sup> In order to split short 5-year issuance into ultra-short and short categories, historical proportions of 30 per cent ultra-short and 70 per cent short have been applied (these represent actual issuance in the years 2003 and 2004 when ultra-short issuance was used). Similarly, in order to split long 30-year issuance into long and ultra-long categories, historical proportions of 50 per cent long and 50 per cent ultra-long have been applied (these represent actual issuance in the last 4 years since 2005 when ultra-long issuance started).

<sup>34</sup> As discussed in Chapter 6: Strategic Debt Analysis (SDA), DMO Annual Review 2005-06.

## Simulation results

**B.7** The debt service cost-risk trade-off of each of the five issuance strategies has been calculated assuming that the nominal and real yield curves are downward sloping at the long end of the curve. Specifically, the simulated average shape and slope of the nominal yield curve have similar properties to the average nominal yield curve from 1998 to 2008 - as the SDA model has been recently re-calibrated on the basis of this dataset (previously, it included data up to 2004 only). This can be seen in Table B.2 when comparing the mean and standard deviation of selected maturity points on the actual nominal yield curve with those on the simulated yield curve.

**Table B.2: Actual and simulated nominal interest rates (per cent)**

	Actual (1998 Q1 – 2004 Q4)		Simulated (1998 Q1 – 2004 Q4)		Actual (1998 Q1 – 2008 Q2)		Simulated (1998 Q1 – 2008 Q2)	
	Mean	Standard deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
1-year	4.7	0.9	4.6	0.7	4.9	0.9	4.5	0.9
5-year	4.9	0.7	4.6	0.6	4.9	0.6	4.8	0.7
10-year	4.8	0.4	4.5	0.4	4.8	0.4	4.7	0.6
30-year	4.5	0.2	4.3	0.2	4.5	0.3	4.4	0.3

*Source: Debt Management Office*

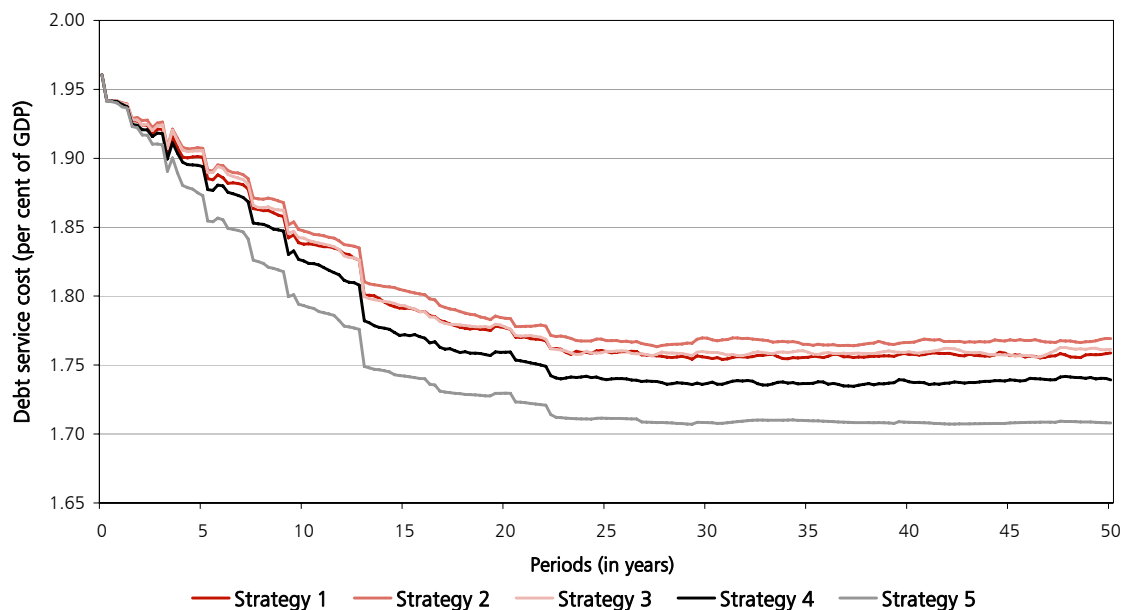
**B.8** As explained in Box 3.B, short maturity gilt yields have fallen significantly during the last year, resulting in an upward sloping average nominal yield curve in that maturity segment. In this context, it should be emphasized that the SDA models what the yield curve has been, on average, from 1998 to 2008. Within that average, its 10,000 replications include many different shapes of the yield curve, some of which will be upward sloping as a result of different economic outcomes. Overall, actual mean yields over the updated period continue to be consistent with an underlying downward sloping yield curve, in line with the SDA's calibration approach.

**B.9** The results for the average debt service cost (see Chart B.1) show that all the issuance strategies which are skewed to long maturity gilts have lower average debt service cost than Strategy 2, which is the most expensive. Strategy 5 is the cheapest strategy as it contains the largest share of the relatively cheaper long maturity gilts than the other strategies. Strategies 1 and 3 exhibit almost identical costs and are slightly cheaper than strategy 4, despite the larger proportion of long maturity gilts in strategy 4. It should be noted that the starting point of the chart is around 8 per cent higher than it would have been if the estimated coupons had been used rather than the actual ones (see paragraph B.4).

**B.10** The downward trend in the average debt service cost of strategies 2 to 5 in Chart B.1 reflects two factors. First, and as a result of using actual coupons for the starting portfolio, maturing old gilt issues with high coupons are gradually being replaced by new gilt issues with estimated coupons, which are comparatively lower, for historical reasons. Second, over time, the maturity mix of the starting portfolio is being altered towards a composition as defined by the issuance strategies, for example, introducing new cheaper gilts if the issuance strategy increases the long-term skew.

**B.11** It should be noted that although strategy 2 appears to be the most expensive, this is due to the assumption of a downward sloping yield curve. Under different assumptions (such as the current scenario of low short-term nominal yields) the same strategy would become cheaper.

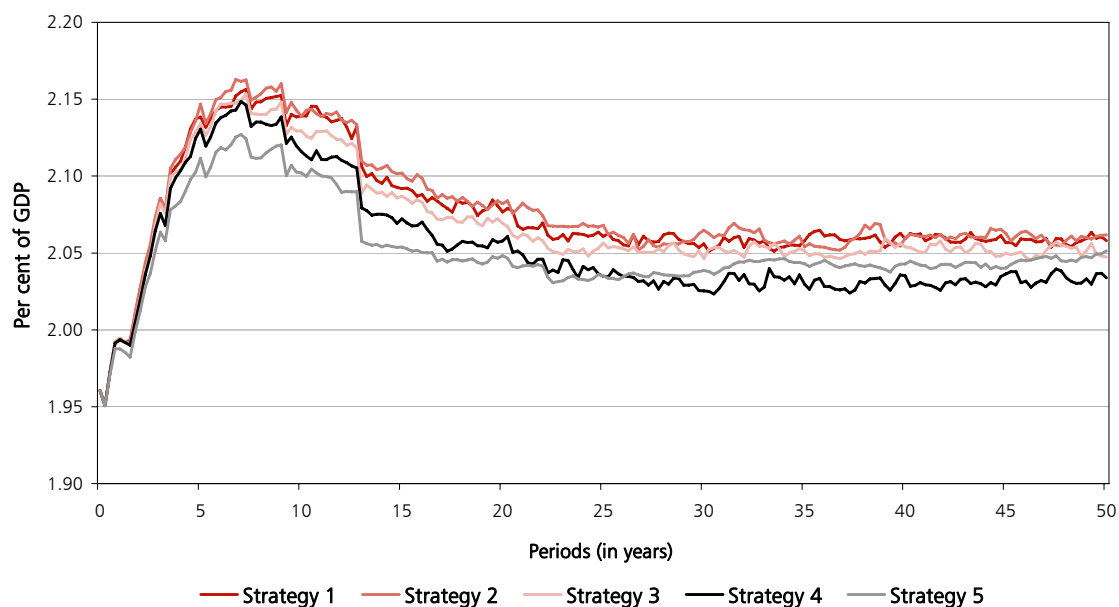
**Chart B.1: Average debt service cost**



Source: Debt Management Office

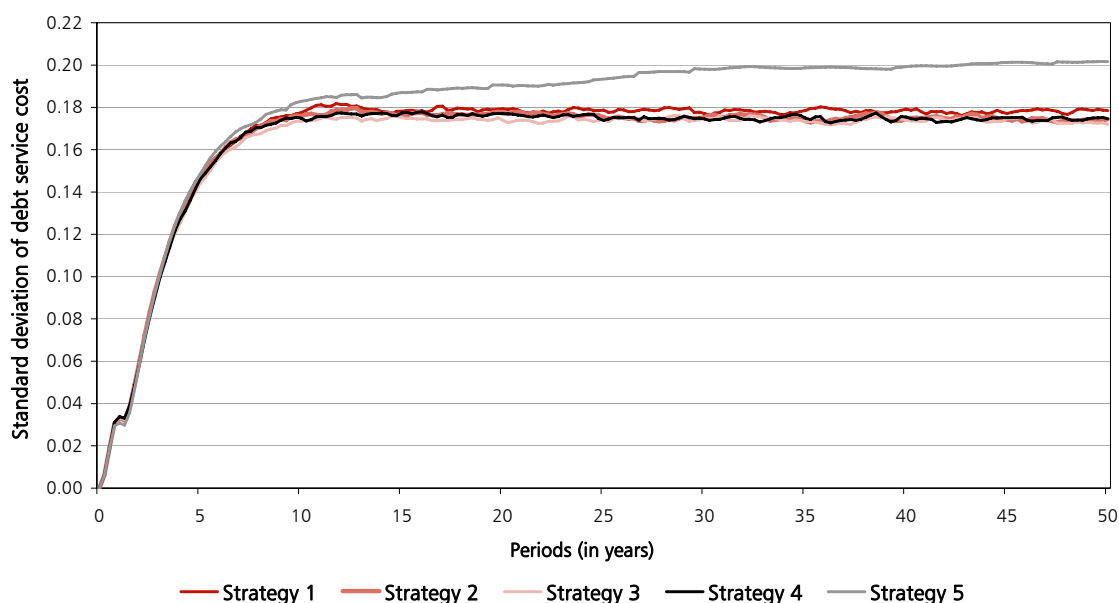
**B.12** The results for risk show that overall strategies 1 and 2, closely followed by 3, are less risky than the other issuance strategies (see Charts B.2 and B.3 below). This reflects the larger shares of long maturity gilts compared to strategy 1. Strategy 5 seems to be less risky than strategy 4 during the first half of the simulation horizon but later becomes increasingly riskier. This is because, as time progresses and more of the existing portfolio consists of longer-term gilts, strategy 5 only samples long-term yields and, although these yields vary across replications and time periods, they are highly correlated affecting negatively the risk measures.

**Chart B.2: Debt service cost at risk**



Source: Debt Management Office

**Chart B.3: Standard deviation of debt service cost**



Source: Debt Management Office

**B.13** The general profile for both measures of risk is somewhat similar. In the first 5 to 10 years of the simulation, there is a sharp increase in the risk measures, followed by a reduction thereafter (albeit more evident in Chart B.2 than Chart B.3) before settling. This reflects mainly two effects. On the one hand, at the start of the simulation the range of the debt service cost widens as the economic outcomes vary, while over time their distribution and volatility settles. On the other hand, existing high coupon gilts are unwinding and being replaced by new gilts with lower, more stable, coupons, reducing cost volatility gradually.

**B.14** Simulation results from the SDA model confirm its initial finding that the Government could achieve a better debt service cost - risk trade-off by skewing issuance towards long maturity gilts in circumstances in which the average yield curve is downward sloping. Issuance strategies that display a larger proportion of long maturity gilts tend to be cheaper and less risky than issuance strategies with a smaller allocation of these gilts. This result is robust to a re-calibration of the yield curve extending the dataset considered to mid-2008. However, a strategy such as strategy 3, in which the short-term skew is pronounced, still achieves similar cost but lower risk than strategy 1, which has an even allocation of issuance across maturity buckets. This might be due to the impact of the 2008-09 data on the model, which influences the results by allowing for lower yields in the short end of the curve while maintaining a downward sloping yield curve in the medium and long end.

**B.15** It is worth bearing in mind that the highly stylised simulation modelling only captures one risk to which the Government's gilt issuance plans expose the Exchequer (i.e., the variability in debt servicing costs over time reflecting different economic scenarios, which affect the yield curve, the amount of financing needed and the resulting cost of refinancing at those yields). In practice, debt issuance exposes the Exchequer to other risks that lie outside the scope of the model, such as, for example, execution risk. In light of volatile financial market conditions, in which gilt yields can move sharply, the market value of gilts held by dealers can change. This risk is higher for long maturity and index-linked gilts because the market value of these gilts is particularly sensitive to a given change in yields. This may translate into increased execution risk for the DMO and the markets. The Government considers all of these risks when making its gilt issuance decisions.









ISBN 978-1-84532-595-4



9 781845 325954