



HM TREASURY

# Debt and reserves management report 2011-12

March 2011





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# 1

## Introduction

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**1.1** This is the nineteenth report outlining the Government's debt management activities. This is the first report outlining the Government's debt management activities since the 2010 General Election and the introduction of the new fiscal framework.

**1.2** The *Debt and reserves management report* (DRMR) is published in accordance with the draft Charter for Budget Responsibility<sup>1</sup>. Following Budget 2011, the Government will publish the final Charter for the approval of the House of Commons. The draft Charter includes updated provisions with respect to the operation of debt management. The draft Charter requires that "the Treasury shall report through its debt management report, published as part of the Budget Report, on its plans for borrowing for each financial year." The Charter sets out that the report shall include:

- 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; 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.

**1.4** Chapters 2 and 3 and Annexes A and B contain information on the Government's wholesale debt management activities. Information about financing from NS&I is set out in Annex C. Annex D sets out financing for the Official Reserves. The remit for the DMO for cash management and the Service Level Agreement for the Bank of England for management of the Official Reserves can be found on HM Treasury's website at [www.hm-treasury.gov.uk](http://www.hm-treasury.gov.uk) from 31 March 2011.

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<sup>1</sup> The Charter for Budget Responsibility is a statutory document established by the *Budget Responsibility & National Audit Bill*. The Charter was published in draft (available at [http://www.hm-treasury.gov.uk/d/charter\\_budget\\_responsibility.pdf](http://www.hm-treasury.gov.uk/d/charter_budget_responsibility.pdf)) on Monday 22 November 2010, to enable the scrutiny of the Charter by Members of Parliament and members of the public. As set out in the Bill, the final Charter will be approved by the House of Commons.



# 2

## Debt management policy

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**2.1** This chapter contains an overview of the Government's macroeconomic policy frameworks and outlines the role played by debt management policy in the context of the fiscal and monetary policy frameworks. It also sets out medium-term considerations for debt management policy during the period of fiscal consolidation.

### Fiscal policy framework

**2.2** June Budget 2010 set out comprehensive policies to bring the public finances back under control demonstrating the Government's determination to reduce public sector borrowing and debt and promote confidence in the sustainability of the public finances. The Government:

- set fiscal plans to restore the public finances to a sustainable position;
- created the new Office for Budget Responsibility (OBR), introducing independence, greater transparency and credibility to the economic and fiscal forecast on which fiscal policy is based; and
- announced a clear forward-looking fiscal mandate to guide fiscal policy decisions over the medium term.

### Fiscal objectives

**2.3** To promote transparent fiscal policy making, the new fiscal policy framework introduces a requirement for the Government to set out its fiscal policy objectives and fiscal mandate before Parliament in the Charter for Budget Responsibility. The Government published the Charter in draft on 22 November 2010. The Government's fiscal policy objectives, included in the Charter for Budget Responsibility, are to:

- ensure sustainable public finances that support confidence in the economy, promote intergenerational fairness, and ensure the effectiveness of wider Government policy; and
- support and improve the effectiveness of monetary policy in stabilising economic fluctuations.

### Fiscal mandate

**2.4** The Government has set a forward-looking fiscal mandate to achieve cyclically-adjusted current balance by the end of the rolling, five-year forecast period. At Budget 2011, the end of the forecast period is 2015-16.

**2.5** June Budget 2010 also announced a supplementary target for debt. This requires public sector net debt (PSND) as a percentage of Gross Domestic Product (GDP) to be falling at a fixed date of 2015-16, ensuring that the public finances are restored to a sustainable path.

### Office for Budget Responsibility

**2.6** The Government has asked the OBR to judge independently whether fiscal policy is consistent with: a greater than 50 per cent chance of achieving the fiscal mandate; and a greater than 50 per cent chance of meeting the target for debt.

**2.7** The OBR has also produced all the official forecasts of the economy and public finances since the General Election, independently of Ministers. The OBR will publish forecasts for Public Sector Net Borrowing (PSNB) and the Central Government Net Cash Requirement (CGNCR) which, among other factors, determine the quantity of government debt to be issued each year.

## **Monetary policy framework**

**2.8** The objectives for monetary policy are set out in the *Bank of England Act 1998*.

**2.9** The Act states that, in relation to monetary policy, the objectives of the Bank of England shall be:

- to maintain price stability; and
- subject to that, to support the economic policy of Her Majesty's Government, including its objectives for growth and employment.

**2.10** In Budget 2011, the Government reaffirms the inflation target of 2 per cent for the 12-month increase in the Consumer Prices Index (CPI), which applies at all times. The Monetary Policy Committee (MPC) of the Bank of England has full operational independence to set policy to meet the inflation target. The MPC has maintained Bank Rate at 0.5 per cent since March 2009, and undertaken a programme of asset purchases, through the Asset Purchase Facility (APF), financed by the issuance of central bank reserves totalling £200 billion. The Government confirms in Budget 2011 that the Asset Purchase Facility will remain in place for the financial year 2011-12.

## **Debt management policy framework**

**2.11** The debt management policy framework includes:

- the debt management policy objective;
- the principles that underpin the debt management policy framework;
- the roles of the DMO and HM Treasury; and
- the full funding rule.

## **Debt management policy objective**

**2.12** The debt management objective was established in 1995 following the *Debt Management Review*. The objective, which is explicitly long term, is:

“to minimise, over the long term, the costs of meeting the Government’s financing needs, taking into account risk, while ensuring that debt management policy is consistent with the aims of monetary policy.”

**2.13** While decisions on debt management policy must take a long-term perspective, specific decisions on funding the Government’s net financing requirement are taken annually. Those decisions are announced in the Budget for the forthcoming year, and are updated during the year consistent with published revisions to the fiscal policy aggregates (which typically takes place once per year in the Autumn). The components of the objective are examined in Box 2.A.

### Box 2.A: Components of the debt management objective

The **long-term cost of meeting the Government's financing needs** arises directly from interest income payable (coupons) and from any difference between the issuance proceeds and redemption payments. Although the accounting treatment may vary for these elements of debt servicing costs, from a debt management perspective, there is no distinction between them and they are treated as one for the purposes of cost minimisation.

**Over the long run** means that the Government expects to borrow in the future over the long-term, that is, beyond the forecast period for fiscal policy. The assumption will be reflected in the choice of debt management strategies. For example, the Government promotes secondary market liquidity because it will be a 'repeat borrower'. In addition, the Government may dismiss strategies offering short-term 'opportunistic' benefits if those strategies adversely affect investors' attitudes towards the debt management programme over the long term.

From the debt management perspective, there is no single definition of **risk**. Rather, a number of risks are taken into account when selecting possible debt management strategies. Five particularly important risks are:

- **interest rate risk** – the risk associated with new issuance each year as an interest rate exposure arises at the time that new debt is issued throughout the year;
- **refinancing risk** – the risk associated with the rollover of maturing debt. An interest rate exposure arises at the time that debt is rolled over and the debt may need to be rolled over at a time when the future CGNCR may also be high, and against a market background that cannot be forecast. In addition, refinancing risk can arise if maturities are concentrated in particular years;
- **inflation risk** – the exposure to inflation arising from both coupons and principal due to the indexation of coupons and principal of index-linked gilts;
- **liquidity risk** – the risk that the Government may not be able to borrow from a particular part of the market in the required size at a particular point in time because that part of the market is insufficiently liquid for it to do so; and
- **execution risk** – the risk that the Government may not be able to sell the required amount of debt at a particular point in time, either in full or only at a particularly deep discount to the market price, that would not yield value for money for the Exchequer.

This list of risks is not exhaustive. However, they are the major risks that have been taken into account in recent years in the determination of the Government's attitude to risk and are expected to be taken into account in future years. The weight placed on each risk could change over time. An explanation of how the risks are taken into account each year and the weight placed on those risks, is set out in Annex B.

## Debt management policy principles

2.14 The debt management policy objective is achieved by:

- meeting the principles of openness, transparency and predictability;
- developing a liquid and efficient gilt market;
- 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; and
- offering cost-effective savings instruments to the retail sector through NS&I.

**2.15** The framework is underpinned by the institutional arrangements for debt management policy established in 1998. In particular, the DMO was established with responsibility for the implementation and operation of debt management policy.

### **Roles of HM Treasury and the DMO**

**2.16** The respective roles of HM Treasury and the DMO are set out in the DMO's *Executive Agency Framework Document*<sup>1</sup>.

**2.17** The Government's approach to debt management policy is based on the principles of openness, predictability and transparency, which is recognised internationally as the most effective way to minimise the long-term costs of debt management. In support of this:

- the DMO will continue to conduct its operations in accordance with the principles of openness, predictability and transparency;
- HM Treasury and the DMO will explain the basis for their decisions about debt issuance as fully as possible to the market in order to allow market participants better to understand the rationale behind the decisions; and
- the DMO will continue to have a responsibility to advise on and promote the liquidity and efficiency of the gilt and Treasury bill markets.

**2.18** HM Treasury sets the annual financing remit using the projected financing requirement which is prepared on the basis of the OBR's forecasts for the fiscal policy aggregates. The DMO has responsibility for pre-announcing the details of its debt issuance plans to the market, including an auction calendar setting out the dates and gilt type for the year ahead, and details on planned average auction sizes. This can be found at [www.dmo.gov.uk](http://www.dmo.gov.uk).

### **The full funding rule**

**2.19** The fiscal policy objective and mandate and debt management policy framework are closely linked. Fiscal policy and debt management policy, as implemented in accordance with their frameworks, mutually reinforce each other.

**2.20** Budget 2011 sets out a path for the fiscal aggregates over the next five years to meet the fiscal mandate and the supplementary target for debt. The net financing requirement is itself partly determined by fiscal policy settings. It is an over-arching requirement of debt management policy that the Government fully finances its projected net financing requirement each year through the sale of debt ('the full funding rule').

**2.21** The projected net financing requirement comprises the CGNCR, maturing debt and any financing required for additional Official Reserves. The Government will issue sufficient wholesale<sup>2</sup> and retail debt instruments to enable it to meet its projected net financing requirement, and meet the full funding rule.

**2.22** The rationale for the full funding rule is:

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<sup>1</sup> This document can be found at

[http://www.dmo.gov.uk/documentview.aspx?docname=publications/corpgovernance/fw040405.pdf&page=corporate\\_governance/Documents](http://www.dmo.gov.uk/documentview.aspx?docname=publications/corpgovernance/fw040405.pdf&page=corporate_governance/Documents)

<sup>2</sup> That is, gilts and Treasury bills. During the 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.

- that the Government believes that the principles of transparency and predictability are best met by the full funding of its net financing requirement; and
- to avoid the perception that financial transactions of the public sector could affect monetary conditions, consistent with the institutional separation between monetary policy and debt management policy<sup>3</sup>.

**2.23** There may be a difference between Government’s final projected net cash requirement and the outturn figure. As the outturn net cash requirement is not known until after the end of the financial year, it is not possible to adjust debt sales to meet any gap between the latest projected, and outturn, net cash requirement. As a result, there may be unanticipated outturn ‘over funding’ or ‘under funding’ if debt sales are, respectively, above or below the outturn net financing requirement. The level of the over/under funding is reflected in an unanticipated increase/decrease in the DMO’s cash balance at the end of the financial year.

**2.24** Any unanticipated over/under funding will, in turn, decrease/increase the projected net financing requirement in the following year as the Government aims to return the DMO’s net cash balance to its initially projected level.

### Medium-term projections for the net financing requirement

**2.25** The Government publishes projections for the net financing requirement for each year over the fiscal policy forecast period, consistent with the path for fiscal consolidation. The net financing requirement includes the path for future borrowing during the period of fiscal consolidation and the gilt redemption profile which reflects past gilt issuance decisions. Table 2.A sets out net financing requirement projections from 2012-13 to 2015-16. The projected net financing requirements are a broad indication of future gilt sales on the assumption that the Treasury bill stock is unchanged and NS&I does not make a net contribution to financing.

**Table 2.A: Projections for the net financing requirement, 2012-13 to 2015-16**

	2012-13	2013-14	2014-15	2015-16
CGNCR	105	80	46	33
Redemptions	53	47	60	52
Financing for the Official Reserves	6	6	6	-
Net Financing Requirement	164	133	112	85

*Source: HM Treasury and Debt Management Office*

**2.26** Debt management considerations during the period of fiscal policy consolidation are set out in Box 2.B.

<sup>3</sup> With the exception of a small and stable balance on the Debt Management Account held at the Bank of England and the Ways and Means Advance (the Government’s account at the Bank of England), the short-term net cash position of the Exchequer will be held with market counterparts. This means that, in practice, financial transactions of the public sector would not affect monetary conditions.

### **Box 2.B: Debt management considerations during the period of fiscal consolidation**

Decisions on debt management policy are taken annually, in advance, to achieve the debt management objective which is:

“to minimise, over the long term, the costs of meeting the Government’s financing needs, taking into account risk, while ensuring that debt management policy is consistent with the aims of monetary policy.”

Each year, the Government will assess the costs and risks associated with different possible patterns of debt issuance taking into account the most up-to-date evidence and information about market conditions and demand for debt instruments.

At present, annual debt management decisions are also made in the fiscal context of an elevated level of debt relative to GDP, high - but falling in line with the fiscal projections - government borrowing and fiscal consolidation. Consistent with the long term focus of the debt management objective, the Government takes annual decisions which enhance fiscal resilience by:

- mitigating refinancing risk, that is, the need continuously to roll-over high levels of debt and to avoid debt maturities that are concentrated in particular years, by taking issuance decisions which spread out the redemption profile along the maturity spectrum;
- promoting the liquidity and efficiency of markets; and
- maintaining a diversity of exposure, that is, real and nominal exposure and across the maturity spectrum, reflecting its preference for a balanced portfolio.

As a result, the Government will, subject to cost-effective financing:

- maintain a relatively high proportion of long fixed rate exposure and a relatively long average maturity in the debt portfolio in order to limit exposure to interest rate volatility;
- maintain a significant proportion of real exposure by issuing index-linked gilts;
- continue to issue conventional and index-linked gilts over a range of maturities, taking account of structural demand; and
- maintain the end-year Treasury bill stock at a level that will support market liquidity.

# 3

## The Debt Management Office's financing remit for 2011-12

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### Introduction

**3.1** The financing arithmetic sets out the components of the Government's projected net financing requirement and shows the contributions and sources of the projected net financing requirement.

**3.2** The debt management remit sets out how the DMO, acting as the Government's agent, will fund the projected net financing requirement.

### Financing arithmetic

**3.3** The forecast for the CGNCR in 2011-12 is £120.4 billion.

**3.4** The forecast net financing requirement of £167.4 billion reflects projected gilt redemptions of £49 billion and the decision to provide an additional £6 billion of sterling finance for the Official Reserves.

**3.5** Following the contribution to net financing of £0.3 billion in 2010-11, NS&I is expected to make a net contribution to financing of £2 billion in 2011-12. This projection assumes gross inflows of £14 billion in 2011-12.

**3.6** Gilt issuance is the primary means of funding the net financing requirement. Treasury bills and other cash management instruments may be used, at the margin, to fund the net financing requirement.

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

- gross gilt issuance of £169.0 billion; and
- a reduction in the Treasury bill stock of £1.6 billion to £60.8 billion.

**3.8** Table 3.A sets out details of the financing arithmetic for 2010-11 and 2011-12.

**Table 3.A: Financing arithmetic 2010-11 and 2011-12**

	2010-11	2011-12
£ billion		
<b>Central Government Net Cash Requirement</b>	141.2	120.4
Gilt redemptions	38.6	49.0
Financing for the Official Reserves	6.0	6.0
Buy-backs <sup>1</sup>	0.2	0.0
Planned short-term financing adjustment <sup>2</sup>	-26.3	-6.0
<b>Gross financing requirement</b>	159.7	169.4
<i>less:</i>		
National Savings & Investments	0.3	2.0
<b>Net financing requirement</b>	159.4	167.4
Financed by:		
<b>1. Debt issuance by the Debt Management Office</b>		
<b>a) Treasury bills</b>	-0.9	-1.6
<b>b) Gilts</b>	166.4	169
of which:		
<i>Conventional:</i>		
short	53.2	58.0
medium	38.1	34.9
long	41.1	37.7
<i>Index-linked:</i>	34.0	38.4
<b>2. Other planned changes in net short-term debt<sup>3</sup></b>		
Change in the Ways and Means Advance	0.0	0.0
<b>3. Unanticipated changes in net short-term cash position<sup>4</sup></b>	6.0	0.0
<b>Total financing</b>	165.5	167.4
<b>Short-term debt levels at end of financial year</b>		
Treasury bill stock <sup>5</sup>	62.5	60.8
Ways and Means Advance	0.4	0.4
DMO net cash position	6.5	0.5
<i>Figures may not sum due to rounding</i>		
<sup>1</sup> Purchases of "rump" gilts which are older, for which there is a small outstanding stock, 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.		
<sup>2</sup> To accommodate changes to the current year's financing requirement resulting from: (i) publication of the previous year's outturn CGNCR; (ii) an increase in the DMO's cash position at the Bank of England; and / or (iii) carry over of unanticipated changes to the cash position from the previous year.		
<sup>3</sup> Total planned changes to short-term debt are the sum of: (i) the planned short-term financing adjustment; (ii) net Treasury bill sales; and (iii) changes to the level of the Ways and Means Advance.		
<sup>4</sup> The DMO's net short-term cash position at the end of a year will also include any impact on financing arising from other activities carried out within Government (e.g. issuance of tax instruments, transfers between central government and other sectors, and foreign exchange transactions). A negative (positive) number indicates an addition to (reduction in) the financing requirement for the following year.		
<sup>5</sup> The DMO has operational flexibility to vary the end-financial year stock subject to its operational requirements.		

**3.9** The CGNCR, which is the fiscal aggregate that determines gross debt sales, is derived from PSNB. The relationship between PSNB and the CGNCR is set out in the OBR's *Economic and fiscal outlook*, March 2011.

## Financing for the Official Reserves<sup>1</sup>

**3.10** For the purposes of the financing arithmetic in Table 3.A, it is assumed that swapped sterling will remain the main form of financing of the Official Reserves (as has been the case in recent years) and no new foreign currency debt will be issued in 2011-12. The financing arithmetic provides for an additional £6 billion of sterling finance for this purpose in 2011-12. Annex D provides more detail on the financing of the Official Reserves. If the Government judges that there is a case for doing so, consideration would be given to issuing foreign currency securities to finance partly the Official Reserves in 2011-12. Any decision will be taken and implemented on the basis set out in Annex D. If the Government were to decide to issue a foreign currency bond later in the year, this would be taken into account in subsequent updates to the DMO's financing remit.

### Other short-term debt

**3.11** The projected level of the Ways and Means Advance at the Bank of England at 31 March 2011 is £0.4 billion. No changes to the level of the Ways and Means Advance are planned in 2011-12.

**3.12** The projected level of the DMO's net cash balance at 31 March 2011 is £6.5 billion, £6.0 billion above the level of the projected cash balance in the 2010 Autumn Statement. The level will be reduced during 2011-12 from £6.5 billion to £0.5 billion (as shown by the planned short-term financing adjustment) that will, in turn, reduce the net financing requirement in 2011-12.

### Quantity of gilt sales

**3.13** The DMO, on behalf of the Government, will deliver gilt sales of £169.0 billion (cash)<sup>2</sup> in 2011-12.

**3.14** The planned amount of issuance and maturity mix in 2011-12 is:

- £58.0 billion of short conventional gilts (34.3 per cent of total issuance);
- £34.9 billion of medium conventional gilts (20.7 per cent of total issuance);
- £37.7 billion of long conventional gilts (22.3 per cent of total issuance); and
- £38.4 billion of index-linked gilts (22.7 per cent of total issuance).

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

### Gilt issuance methods

**3.16** Auctions will remain the Government's primary method by which to issue gilts. In addition, the Government has decided to continue the use of supplementary methods to issue gilts. Supplementary methods of issuance will comprise mini-tenders and syndication in 2011-12. The use of supplementary issuance methods adds flexibility to the gilt issuance programme. This additional flexibility is designed to facilitate the effective delivery of the gilt issuance programme

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<sup>1</sup> The Government's official holdings of international reserves, with the exception of the Special Drawing Rights (SDR) assets, are held in the Exchange Equalisation Account (EEA).

<sup>2</sup> Figures in Chapter 3 are in cash terms unless otherwise stated.

while remaining consistent with the debt management principles of openness, transparency and predictability.

**3.17** It is anticipated that:

- £132.8 billion (78.6 per cent of total issuance) will be issued by pre-announced auctions;
- £31.6 billion (18.7 per cent of total issuance) will be issued by syndication; and
- £4.6 billion (2.7 per cent of total issuance) will be issued by mini-tenders.

**3.18** The planning assumption for gilt issuance in 2011-12 by method of issue, type and maturity is shown in Table 3.B.

**Table 3.B: Planned gilt issuance split by type, maturity and method of issue<sup>1</sup>**

	Auction	Syndication	Mini tender	Total
Short £ billion	58.0	-	-	58.0
per cent				34.3
Medium £ billion	34.9	-	-	34.9
per cent				20.7
Long £ billion	21.3	13.5	2.9	37.7
per cent				22.3
Index-linked £ billion	18.6	18.1	1.7	38.4
per cent				22.7
Total <sup>2</sup>	132.8	31.6	4.6	169.0

<sup>1</sup>As a planning assumption the DMO will use the supplementary issuance programme to sell long-dated and index-linked gilts.  
<sup>2</sup>Totals may not sum due to rounding.

**3.19** There are no plans to introduce additional gilt issuance methods in 2011-12. Before introducing any new issuance methods, the DMO would consult market participants and seek HM Treasury's approval.

## Gilt auction calendar

**3.20** The DMO will publish, alongside the DRMR, a gilt auction calendar consistent with the remit which sets out the expected timing of gilt sales at auction.

## Post auction option facility

**3.21** In 2011-12, the DMO will continue to offer to successful bidders (both primary dealers and investors) at auctions an option to "top up" gilt purchases by up to 10 per cent of the amount allocated to them at auction, at the average accepted price at conventional auctions and the clearing (or strike) price at index-linked auctions. Further details of this facility are available in the DMO's gilt market operational notice<sup>3</sup>.

**3.22** Any additional amounts sold via this facility will count towards the remit sales targets and may be used to 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

<sup>3</sup> Available at [http://www.dmo.gov.uk/documentview.aspx?docname=publications/operationalrules/Opnot20091120.pdf&page=operational\\_rules/Document](http://www.dmo.gov.uk/documentview.aspx?docname=publications/operationalrules/Opnot20091120.pdf&page=operational_rules/Document).

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 2011 Autumn Statement.

### **Taps and reverse taps**

**3.23** The above programme of gilt sales by auction, mini-tenders and syndicated offerings may be supplemented by sales or purchases of gilts by the DMO “on tap”<sup>4</sup>. Taps of gilts will be used only as a market management instrument in exceptional circumstances.

### **The Standing Repo Facility**

**3.24** 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 and most recently revised on 6 August 2009<sup>5</sup>. Any gilts so created will not be sold outright to the market and will be cancelled on return.

### **Other operations**

**3.25** The DMO has no current plans for a programme of reverse or switch auctions or conversion offers in 2011-12.

### **Coupons**

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

### **Buy-ins of short-maturity debt**

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

### **Treasury bill sales**

**3.28** The outstanding stock of Treasury bills is expected to fall by £1.6 billion to £60.8 billion in 2011-12. 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. The 2010-11 outturn for the Treasury bill stock will be reported alongside CGNCR outturn in April 2011; similarly, the outturn for 2011-12 will be reported in April 2012 alongside the outturn for the 2011-12 CGNCR.

### **New instruments**

**3.29** Before introducing any new instruments, the DMO will consult market participants and seek HM Treasury’s approval prior to their introduction.

**3.30** In July 2010, the Government decided to use the CPI as the measure of price inflation for the purposes of the revaluation and indexation of occupational pension schemes. The Government expects to undertake a formal consultation on the issuance of CPI-linked gilts in 2011-12.

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<sup>4</sup> Taps (reverse taps) are sales (purchases) of gilts conducted directly with GEMMs by the DMO as a market management mechanism in circumstances, temporary or otherwise, such that the secondary market has become, or is likely to become, dislocated. See [http://www.dmo.gov.uk/documentview.aspx?docname=publications/operationalrules/Opnot20091120.pdf&page=operational\\_rules/Document](http://www.dmo.gov.uk/documentview.aspx?docname=publications/operationalrules/Opnot20091120.pdf&page=operational_rules/Document).

<sup>5</sup> The announcement of 6 August 2009 is available on the DMO website at: [http://www.dmo.gov.uk/documentview.aspx?docname=publications/operationalrules/RepoTC060809B.pdf&page=operational\\_rules/Document](http://www.dmo.gov.uk/documentview.aspx?docname=publications/operationalrules/RepoTC060809B.pdf&page=operational_rules/Document)

## Revisions to the remit

**3.31** In addition to planned updates to the remit, 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 net financing requirement;
- the level and shape of the gilt yield curve;
- market expectations of future interest and inflation rates; and
- market volatility.

**3.32** Any such unplanned revisions will be announced transparently to the market.

# A Debt portfolio

## Debt stock

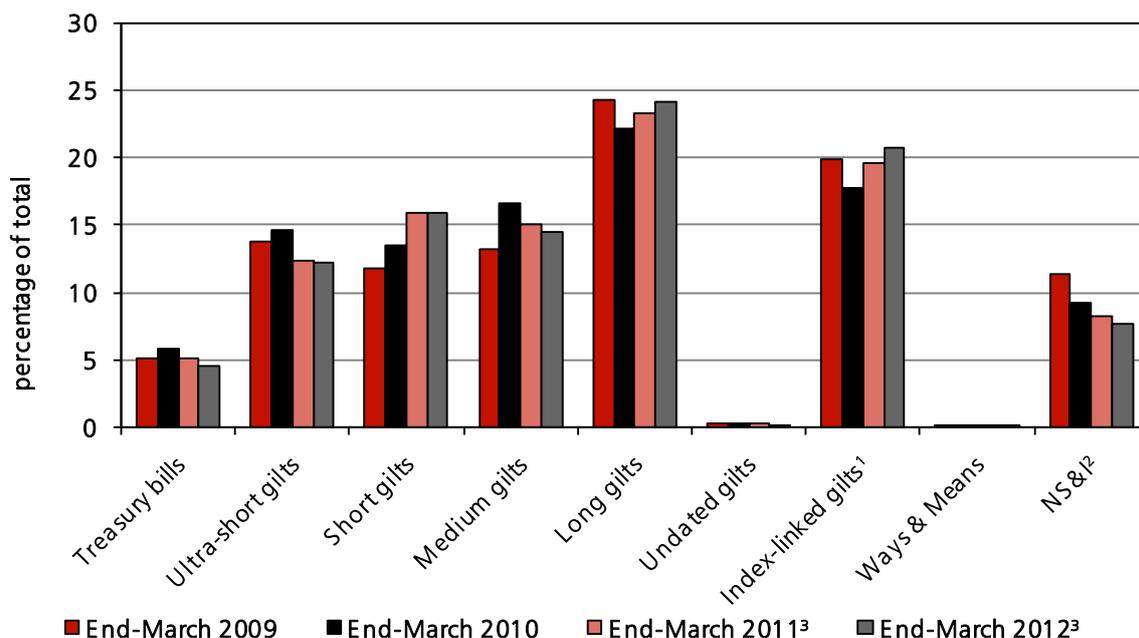
**A.1** The total nominal outstanding stock of central government sterling debt (excluding official holdings by central government) was £1060.1 billion at end-December 2010. The components of this debt are set out in Table A.1.

**Table A.1: Composition of central government sterling debt**

	End-March 2010	End-December 2010
(£ billion, nominal value, excluding official holdings)		
Conventional gilts <sup>1</sup>	608.5	692.5
Index-linked gilts <sup>2</sup>	178.2	211.8
Treasury bills <sup>3</sup>	63.3	55.6
<b>Total gilts and Treasury bills</b>	<b>850.0</b>	<b>959.9</b>
National Savings & Investments	98.8	99.8
Balance on Ways and Means Advance	0.4	0.4
<b>Total central government sterling debt</b>	<b>949.2</b>	<b>1060.1</b>
<small>1 Includes undated and double-dated gilts.</small>		
<small>2 Includes accrued inflation uplift.</small>		
<small>3 Treasury bill stock in market hands.</small>		
<i>Source: Debt Management Office and National Savings &amp; Investments</i>		

**A.2** Chart A.1 shows a comparison of the Government's debt portfolio at end-March 2009 through to a projected composition at end-March 2012. 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.

**Chart A.1: The composition of central government sterling debt**



<sup>1</sup> Includes inflation uplift.

<sup>2</sup> Includes accrued interest.

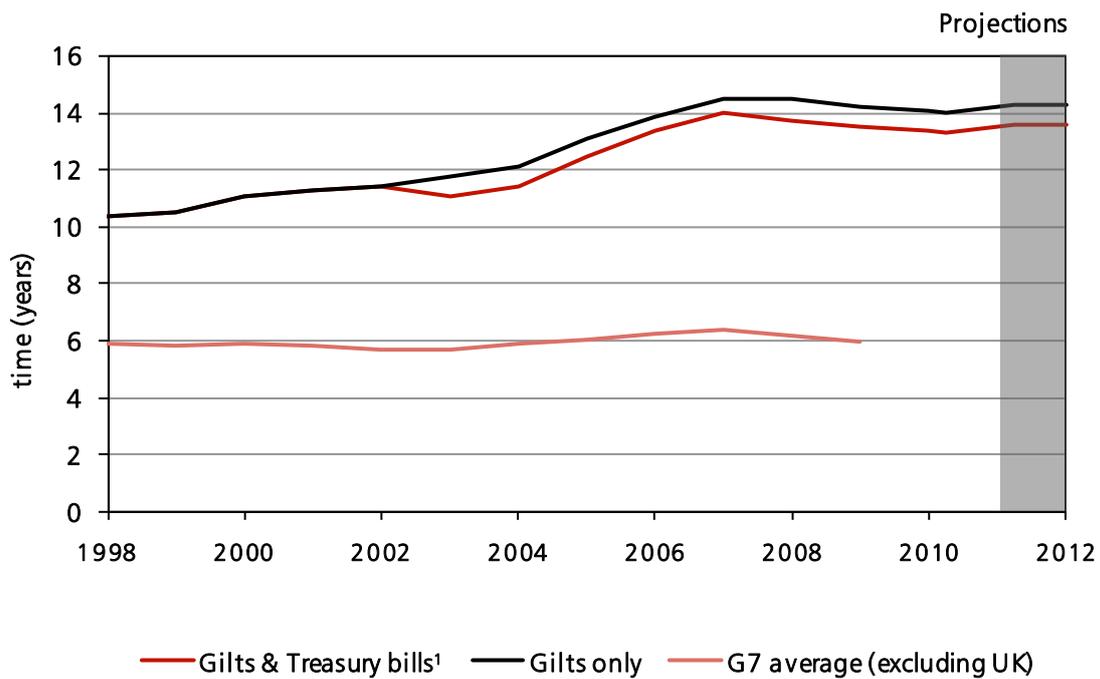
<sup>3</sup> Figures for end March-2011 and end March-2012 are projections.

Source: Debt Management Office and National Savings & Investments

## Maturity and duration of the debt stock

**A.3** The average maturity of the stock of all dated marketable debt is projected to increase from 13.1 years on 31 March 2010 to 13.3 years on 31 March 2011 and then increase to 13.6 years by 31 March 2012 as shown in Chart A.2. Over the same period, the modified duration of the conventional portfolio of marketable gilts is projected to remain unchanged at 8.2 years. The average maturity of the UK Government’s wholesale debt is considerably longer than the G7 average as shown in Chart A.2.

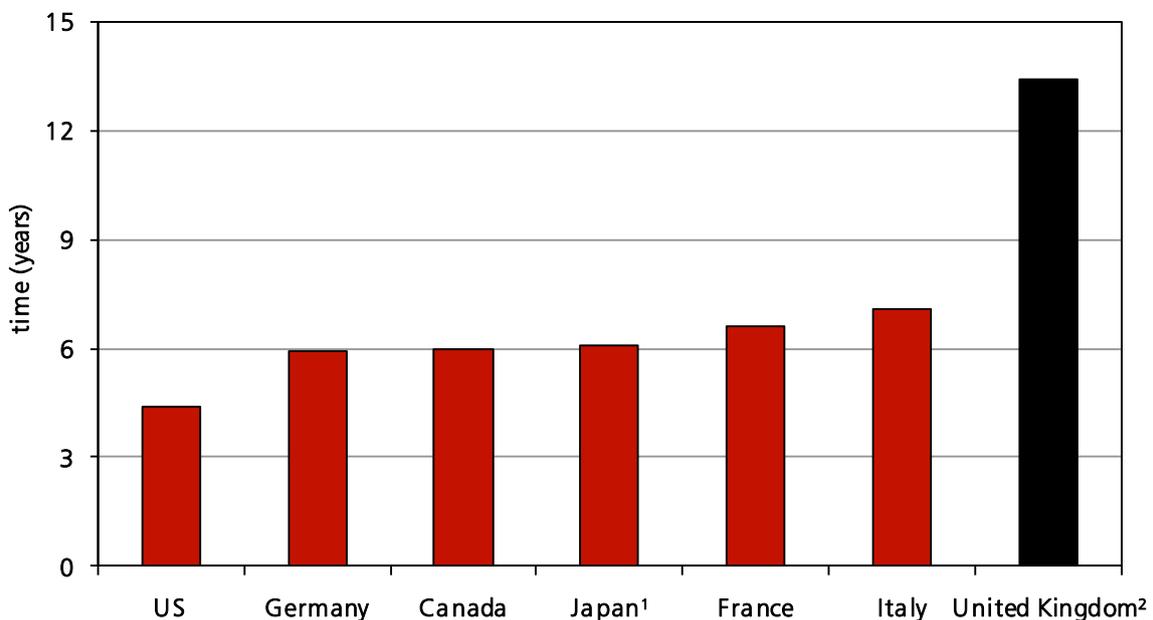
**Chart A.2: Average maturity of wholesale debt**



<sup>1</sup> Data for this series are unavailable prior to September 2003, when the DMO began publishing Treasury bill reference prices.

Source: Debt Management Office and OECD

**Chart A.3: Maturity of the debt stock by country (end-December 2009)**



<sup>1</sup> As at 2008

<sup>2</sup> As at end December 2010

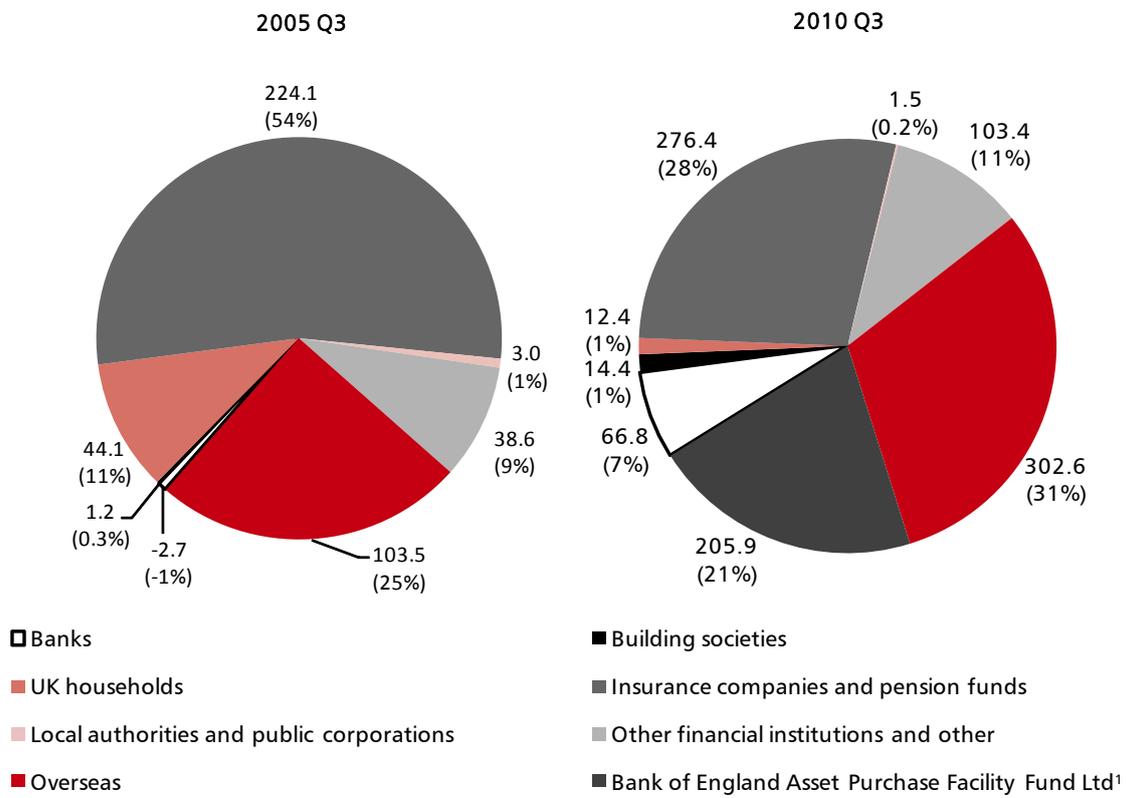
Source: Debt Management Office and OECD

## Gilt holdings by sector

**A.4** Chart A.4 and Table A.2 show gilt holdings by sector. In Q3 2005, the three largest sectors by gilt holding were: insurance companies and pension funds (54 per cent of total gilts outstanding), overseas (25 per cent) and households (11 per cent). There have been significant

shifts in proportionate holdings of gilts since then. In Q3 2010, the three largest sectors were: overseas (31 per cent), insurance companies and pension funds (28 per cent) and the Bank of England (holdings by the Asset Purchase Facility (APF)) (21 per cent).

**Chart A.4: Gilt holdings by sector (£ billion, cash value)**



<sup>1</sup>The Bank of England's holdings of gilts not related to the APF are included in the "Banks" category.

Source: Office for National Statistics

**Table A.2: Gilt holdings by sector (£ billion, cash value)**

	Q3 2005	Q3 2010
Banks	-2.7	66.8
Building societies	1.2	14.4
UK households	44.1	12.4
Insurance companies and pension funds	224.1	276.4
Local authorities and public corporations	3.0	1.5
Other financial institutions and other	38.6	103.4
Overseas	103.5	302.6
Bank of England Asset Purchase Facility Fund Ltd <sup>1</sup>	0	205.9

<sup>1</sup>The Bank of England's holdings of gilts not related to the APF are included in the "Banks" category.

Source: Office for National Statistics

## Gilt issuance

**A.5** The 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 A.2.

**Table A.3: Central Government Net Cash Requirement and gross gilt sales, 1998-99 to 2011-12**

Financial year	CGNCR (£ billion)	Gross gilt sales <sup>1</sup> (£ billion)
1998-99	-4.5	8.2
1999-00	-9.1	14.4
2000-01 <sup>2</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
2009-10	198.8	227.6
2010-11 <sup>3</sup>	141.2	166.4
2011-12 <sup>4</sup>	120.4	169.0

<sup>1</sup> Figures are in cash terms.  
<sup>2</sup> Reflecting the proceeds from the 3G Spectrum auction.  
<sup>3</sup> CGNCR projection at Budget 2011.  
<sup>4</sup> Projections.

Source: HM Treasury and Debt Management Office



# B

## Context for the decisions on the Debt Management Office's financing remit

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**B.1** This annex sets out the context for decisions on gilt and Treasury bill issuance for 2011-12, including both qualitative and quantitative considerations that influenced the Government's decisions. The technical, quantitative modelling reported in this annex has been undertaken by the DMO at the request of HM Treasury.

### Introduction

**B.2** The Government's annual decisions on the structure of the financing remit are determined in accordance with the debt management objective (see Chapter 2) and its policy to fully fund its financing requirement. Hence, an assessment is made of the balance between costs and risks associated with issuance of different types and maturities of debt instrument in order to determine the preferred allocation of issuance. Practical issues are also considered including a review of the supplementary gilt issuance methods used in 2010-11 and the scheduling of operations throughout the year to deliver the remit. Subject to that, the Government's decisions are guided by medium-term considerations as set out in Chapter 2.

**B.3** In reaching its decision on the maturity and composition of debt issuance, the Government takes account of a number of factors including:

- investors' demand for debt instruments;
- the Government's own appetite for risk, both nominal and real; and
- the shape of both the nominal and real yield curves.

### Demand

**B.4** Gilt-Edged Market Makers (GEMMs) and investors report ongoing demand for conventional and index-linked gilts across the maturity spectrum, including at the Government's Annual Consultation Meetings with gilt market participants held in January 2011. This demand comes from a number of investor groups including: UK banks and other financial institutions, pension funds, insurance companies and overseas investors.

**B.5** In some sectors of the market there has been particularly strong demand, including from overseas investors for short conventional gilts, reported to reflect:

- ongoing changes in the size and composition of central bank reserves;
- positive investor reaction to the Government's announcement of its fiscal consolidation plans in the June 2010 Budget; and
- developments in other sovereign debt markets.

**B.6** In addition, there has been significant demand from domestic financial institutions, including banks and building societies, to meet expected regulatory requirements for liquid assets. There has also been continued structural demand for long-dated conventional and index-linked gilts from long-term investors such as pension funds and insurance companies to match their long-term liabilities.

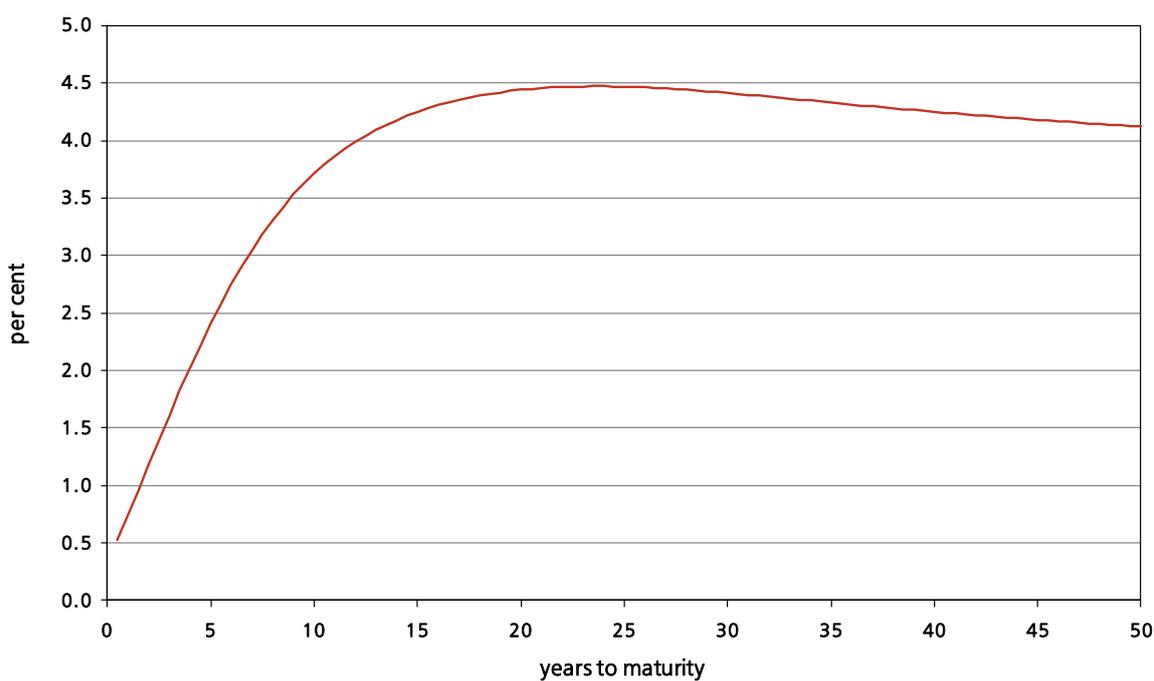
## Cost

**B.7** If the yield curve is formed solely on the basis of unbiased market expectations about the future evolution of interest rates then the Government as issuer would be indifferent on cost grounds between issuance of short, medium and long-dated gilts. However, persistent excess demand for gilts at specific maturities or segments of the curve could mean that yields no longer solely reflect pure interest rate expectations (or if interest rate expectations themselves are biased over time). In that case it may be possible for the Government to benefit from this demand by issuing gilts into those maturities at yields lower than would be expected on the basis of interest rate expectations alone, thereby capturing a 'premium'.

**B.8** The Government believes that a premium may currently exist in nominal yields on short-dated conventional gilts and in real yields on long-dated index-linked gilts, reflecting high demand for these types and maturities of gilts.

**B.9** The steep slope of the spot curve implies a sharp increase in five-year spot rates over a five year period, the size of which would be unusual on the basis of the past evolution of five-year spot rates over a five year period. While the steep upward slope of the yield curve at shorter maturities (Chart B.1) is likely to reflect the path of future interest rates currently anticipated by the market, the Government believes that it could also be explained by the presence of a 'premium' that increases the cost-effectiveness of short-dated conventional gilts relative to medium-dated or long-dated conventional gilts.

**Chart B.1: Nominal spot yield curve (16 March 2011)**



Source: Debt Management Office

**B.10** Chart B.2 shows the current spread between the implied five year gilt yield in five years time<sup>1</sup> and the five-year spot gilt yield. The spread has reached its highest level since 1998.

<sup>1</sup> The five-year five year forward implied by the current five-year and ten-year spot gilt yields.

**B.11** While the components of this spread cannot be disaggregated definitively, and could at least partly reflect other factors, such as uncertainty over the future evolution of monetary policy, the presence of a large spread is consistent with current strong demand for short-dated conventional gilts relative to medium-dated conventional gilts. Such demand could reflect the presence of a more persistent premium for short-dated gilts that has not been arbitrated away.

**Chart B.2: Gap between the five year forward rate in five years time and the equivalent five year spot rate**

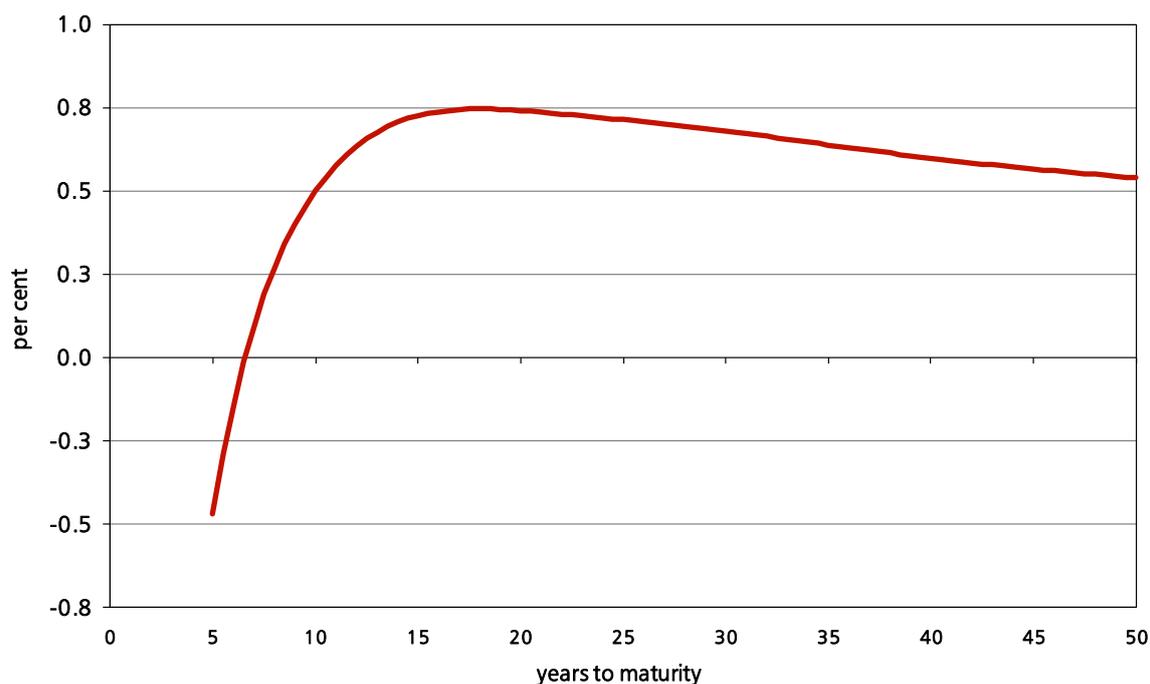


Source: Bank of England and Debt Management Office

**B.12** In terms of demand for long-dated conventional and index-linked gilts, while there is persistent demand for both types of gilt, the Government believes that relative demand for long-dated index-linked gilts is higher than for equivalent maturity conventional gilts.

**B.13** Chart B.3 shows the shape of the real spot curve, which is downward sloping at medium and long maturities while the nominal spot curve is flatter at medium and long maturities (Chart B.1).

**Chart B.3: Real (index-linked) spot yield curve (16 March 2011)**



*Source: Debt Management Office*

**B.14** The persistently inverted shape of the real yield curve supports the assumption that a ‘negative’ term premium exists in long-dated real yields that could be captured by the Exchequer through issuance of long-dated index-linked gilts. On the basis of the OBR’s forecast that inflation returns to target in the medium term, and the neutral assumption that inflation remains at target thereafter, an assessment of the path of long-term inflation relative to that priced in by the market indicates that a cost advantage exists for the Exchequer from issuing long-dated index-linked gilts relative to equivalent maturity conventional gilts.

**B.15** The assumption that a premium exists in long-dated real versus nominal yields is consistent with the qualitative evidence, which indicates there is stronger demand for index-linked gilts than for long-dated conventional gilts from, in particular, pension funds and insurance companies as they seek assets that provide inflation protection with which to match their inflation-linked liabilities.

## **Risk**

**B.16** A further key determinant of the Government’s decision on the allocation of debt issuance between different maturities and types of instrument is its assessment of risk. In reaching a decision about the allocation between instruments, the Government gives consideration to the range of risks to which debt issuance exposes the Exchequer (see Box 2.A) in the context of supporting fiscal resilience while remaining consistent with the long-term focus of the debt management objective (see Box 2.B). Different maturities and types of issuance give rise to different risk exposures and the Government assesses the relative importance of each risk in accordance with its risk appetite.

**B.17** Consistent with the medium-term considerations underpinning debt management decisions, the Government places a relatively high weight on reducing near-term exposure to refinancing risk. One of the key ways in which the Government intends to mitigate refinancing risk is to maintain a high proportion of long-dated exposure in its outstanding debt portfolio.

This will reduce both debt interest volatility and the need to roll over debt frequently. The Government also intends, subject to achieving cost effective financing, to issue debt at a range of maturities thereby smoothing the profile of gilt redemptions and avoiding too great a concentration of redemptions in any one year.

### **Liquidity, market management and portfolio diversification**

**B.18** The Government places importance on maintaining a diverse portfolio and a deep and liquid gilt market in order to retain its ability smoothly to access demand for gilts from a diverse range of investors at all maturities and in all market conditions. The Government intends to continue to issue gilts at key maturities across the real and nominal yield curves and achieve a benchmark premium.

### **Practical and operational issues**

**B.19** The Government has announced a gilt issuance programme in 2011-12 that will be very similar in size to the programme in 2010-11. It will be necessary to access the gilt market frequently and in large size across all maturities and types of gilt instrument.

**B.20** The Government also reviewed the use of supplementary gilt distribution methods (syndication and mini-tenders) and the post auction option facility concluding that all three methods should continue to be deployed in 2011-12 to deliver a minority of the financing programme alongside auctions, which remain the core method of issuance. Use of supplementary gilt distribution methods will facilitate larger programmes of long-dated conventional and index-linked gilt issuance than the Government judges would be deliverable via auctions alone.

**B.21** However, risk and operational constraints remain, which limit the Government's ability to increase the allocation of issuance towards index-linked gilts in any one year, particularly in the context of a large overall financing programme. The DMO typically issues index-linked gilts via auction in smaller size than equivalent maturity conventional gilts reflecting their risk characteristics (including greater price sensitivity to interest rate movements), greater difficulty for market intermediaries to hedge any resulting exposures, relatively lower liquidity and less diversified investor base which means that demand on any particular day may be discrete and uncertain.

**B.22** These factors increase risk for both the Government as issuer and for the GEMMs that are charged with distributing the risks. Hence, the DMO manages the amount of risk it offers to the market at each index-linked gilt auction by offering index-linked gilts in relatively small size. The effect is to limit the absolute amount of issuance that can be delivered via any given number of operations. Moreover, the frequency with which index-linked gilt operations can be scheduled also needs to be managed to provide adequate space between sales of similar gilts and to avoid issuing gilts on the same days as significant pre-scheduled market events that might increase volatility in the gilt market.

### **Decisions on the allocation of gilt issuance between maturities and types of gilt**

**B.23** The relatively high weight the Government places on mitigating refinancing risk influenced, in particular, its decision about the allocation of issuance to short-dated conventional gilts. This was weighed against its assessment that short-dated issuance in 2011-12 is likely to be relatively cost-effective versus medium-dated and long-dated conventional gilt issuance. The Government decided, on balance, to increase the allocation towards short-dated conventional gilt issuance relative to 2010-11 but the extent of the increased allocation was tempered by the preference to avoid increasing exposure to refinancing risk in the short-term.

**B.24** Consistent with the requirement of the debt management objective to minimise long-term costs of debt issuance, the Government also decided to increase the allocation of gilt issuance to

index-linked gilts given its assessment of their relative cost-effectiveness. However, the extent of the increase in the allocation to index-linked gilts was tempered by the practical and operational constraints for the market associated with distributing gilts and absorbing a large supply of additional market risk.

**B.25** Given the large size of the overall financing programme, the Government continues to implement large programmes of medium-dated and long-dated conventional gilt issuance in 2011-12. However, given that long-dated and medium-dated conventional gilt issuance is likely to be relatively less cost-effective than short-dated conventional and index-linked gilt issuance, the Government decided to reduce the absolute level of long-dated and medium-dated issuance in comparison with the programmes implemented in 2010-11.

**B.26** The Government also assessed the contribution to financing made by Treasury bill issuance. The Government concluded that, in order to foster liquidity and to serve an increasingly diverse investor base across the entirety of the sterling government yield curve, it would be appropriate to maintain the planned end-March 2012 Treasury bill stock at close to the level planned at end-March 2011.

### Quantitative analysis of debt service cost and risk

**B.27** This technical section sets out the results of a quantitative model that is used to assess the impact of different debt issuance strategies on the cost and risk of debt issuance.

**B.28** The Portfolio Simulation Tool (PST) model – which is described in detail in Chapter 6 of the *DMO Annual Review 2008-09*<sup>2</sup> - is used to illustrate the impact of alternative debt issuance strategies on debt service cost and risk over a five year horizon. Debt service cost is the cost of the coupon payments and redemptions associated with Government debt, measured in terms of the relevant yield.

**B.29** Debt service cost at risk is calculated by deriving a lognormal distribution of nominal yields from 1,000 Monte Carlo simulations and picking the 95th percentile - representing a 5 per cent probability of extreme increases in yields<sup>3</sup>. The yields are translated into an absolute measure of risk in terms of debt service costs by running the PST assuming the same issuance strategies used to calculate debt service costs based on the current yield curve. Debt service cost at risk is only simulated as an absolute measure, that is, the tail risk. It is not currently possible within the modelling framework to calculate the standard deviation of debt service cost, which is a symmetric risk measure.

**B.30** Table B.1 illustrates four issuance strategies. Strategies 1 and 4 represent two extreme issuance programmes with 100 per cent allocation to short-term and long-term gilt issuance respectively. These strategies provide a floor and a ceiling in terms of debt service cost and vice-versa in terms of debt service cost at risk (given the prevailing shape of the yield curve). Strategy 2 has a fairly even allocation across maturity baskets and is based on the outturn skew in 2010-11. Strategy 3 represents a slight variation in the maturity breakdown with respect to Strategy 2, with an increase in short-term conventional issuance and a reduction in medium and long-term conventional issuance. All strategies comprise 80 per cent of issuance in conventional gilts and

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<sup>2</sup> See [http://www.dmo.gov.uk/documentview.aspx?docname=research/PST\\_gar0809.pdf](http://www.dmo.gov.uk/documentview.aspx?docname=research/PST_gar0809.pdf)

<sup>3</sup> The debt service cost at risk is the upper 95th percentile of the distribution of debt service cost, i.e. a measure of tail risk, the extreme debt service cost that may occur with a 5 per cent probability. In this exercise, the distribution of yields is used to calculate the associated debt service cost at risk. In a lognormal distribution the underlying variable that is sampled is the natural logarithm of the variable itself. For example, if "yield" is the variable, the sampling applies to  $\log(\text{yield})$ . Use of this approach ensures that by construction the yield can never be negative. For real yields, a normal distribution (not in logs) is used in order to permit negative values in the simulation. Using a commercial risk management system, Monte Carlo methods are a class of computational algorithms that rely on repeated random sampling to compute their results. In this case, the random sampling is drawn from a distribution of historical data from January 2000 to January 2011. The underlying model used for generating the Monte Carlo scenarios is a Geometric Brownian Motion with mean reverting yields and the mean reversion parameters are estimated through Ordinary Least Squares (OLS) regressions using historical data between 2000 and 2008.

20 per cent in index-linked gilts, except Strategy 3, which slightly increases the proportion of index-linked gilts in the debt portfolio.

**Table B.1: Issuance strategy composition (per cent)**

	1-year CV	5-year CV	10-year CV	30-year CV	50-year CV	10-year IL	30-year IL	50-year IL
Strategy 1	39.8	39.8	0	0	0	20.5	0	0
Strategy 2								
Actual 2010-2011	2.9	29.1	23.0	20.5	4.1	3.2	10.3	7.0
Strategy 3	3.1	30.3	21.6	19.0	3.8	3.5	11.2	7.6
Strategy 4	0	0	0	0	79.5	0	0	20.5

CV stands for conventional; IL for index-linked gilt.  
Source: Debt Management Office

**B.31** The debt service cost-risk trade-off of each of the four issuance strategies has been calculated using the nominal and real yield curves calculated by the PST<sup>4</sup>, as well as the 95<sup>th</sup> percentile of the simulated yield distribution, as explained earlier. The yield curve model used in the PST is the Variable Roughness Penalty (VRP) model developed by the Bank of England and employed by the DMO since 2007<sup>5</sup>. Table B.2 shows the profile of the yield curves used.

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

	PST Nominal	PST Real	Upper 95 <sup>th</sup> percentile of simulated yield distribution	
			Nominal	Real <sup>1</sup>
1-year	0.9	-2.5	3.0	0.2
5-year	2.8	-0.1	4.9	2.1
10-year	4.1	0.8	5.3	2.2
30-year	4.7	0.8	4.9	1.7
50-year	4.4	0.6	4.9	1.7

<sup>1</sup> The missing one and five-year benchmark yields have been estimated assuming an equal wedge to that between nominal and real yield curves at the ten-year point. The simulation of the real curve was affected by problems with negative short-term yields. Thus, simulations of the real curve that exceeded the maximum values of the conventional yield curve minus 2.8 per cent (2 per cent for CPI target plus the historical difference between RPI and CPI) have been discarded. 30 and 50 year points have been assumed to be the same, using linear interpolation between benchmark points.

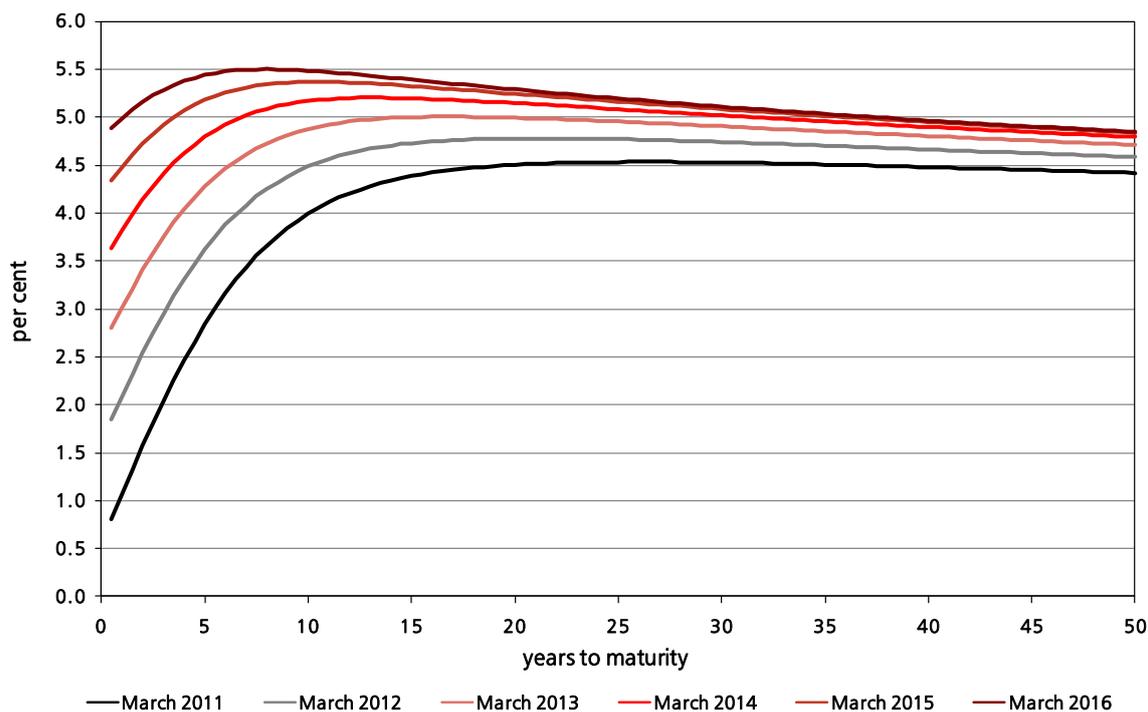
Source: Debt Management Office

**B.32** It is worth noting that the PST uses the implied nominal and real forward par yield curves for setting the coupons of new bonds issued over the five-year simulation horizon. Chart B.4 shows the change in the implied nominal forward curve over the five years of the simulation horizon. In practice, of course, it is unlikely that future rates will coincide with the rates implied from the yield curve used in these simulations.

<sup>4</sup> Ten-working day average as at 15 February 2011.

<sup>5</sup> See <http://www.bankofengland.co.uk/statistics/yieldcurve/index.htm> for more information on the VRP yield curve model.

**Chart B.4: Implied nominal forward curves each year of the simulation horizon**



Source: Debt Management Office

## Simulation results

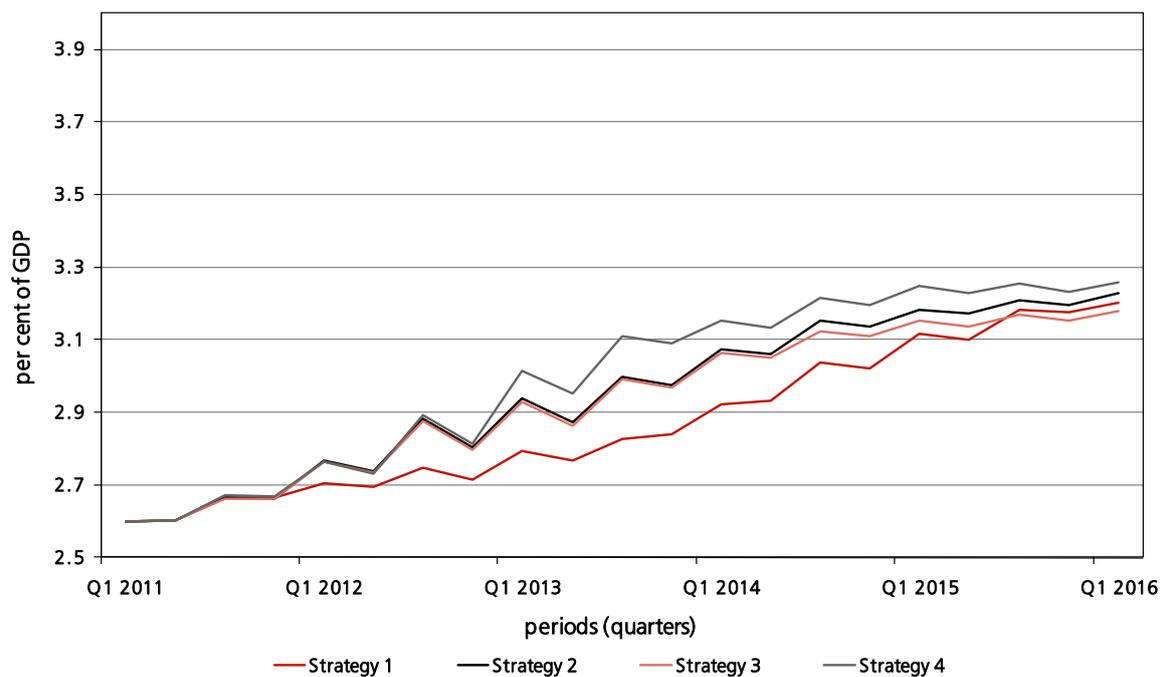
**B.33** The results for debt service cost (see Chart B.5) show that cost under Strategy 2 (which is based on the actual strategy followed in 2010-11) and cost under Strategy 3 (a slight variation in the maturity allocation which results in an increase in short-dated issuance) are very similar. The simulation suggests both strategies are cheaper than Strategy 4, for which all issuance is at long maturities, mainly reflecting the upward sloping shape of the yield curve. In line with historically low short-term yields, Strategy 1 is the least costly of the four strategies.

**B.34** It is worth noting that the debt service costs of all four strategies seem to converge towards the end of the simulation horizon. This reflects the shape of the implied forward curve<sup>6</sup>, see Chart B.4, which flattens considerably during the simulation horizon. The upward trend in the debt service cost of all strategies reflects two factors: the fact that the CGNCR is forecast to be positive in the next five years and redemptions<sup>7</sup> of existing gilts in the debt portfolio that occur each year during the forecast horizon.

<sup>6</sup> Implied forward rates are future one period (i.e. an annualised one-day rate) interest rates that when compounded are consistent with the spot yield curve. They embody a forecast of the future short-term rate but also incorporate risk premia and other factors. Rates shown are six-monthly compounded forward rates. Implied forward nominal rates are calculated from the prices of conventional gilts, whereas implied forward real rates are calculated from prices of index-linked gilts.

<sup>7</sup> In the PST, annual redemptions are added to the CGNCR to calculate the overall financing figure.

**Chart B.5: Debt service cost (4-quarter moving averages<sup>1</sup>)**



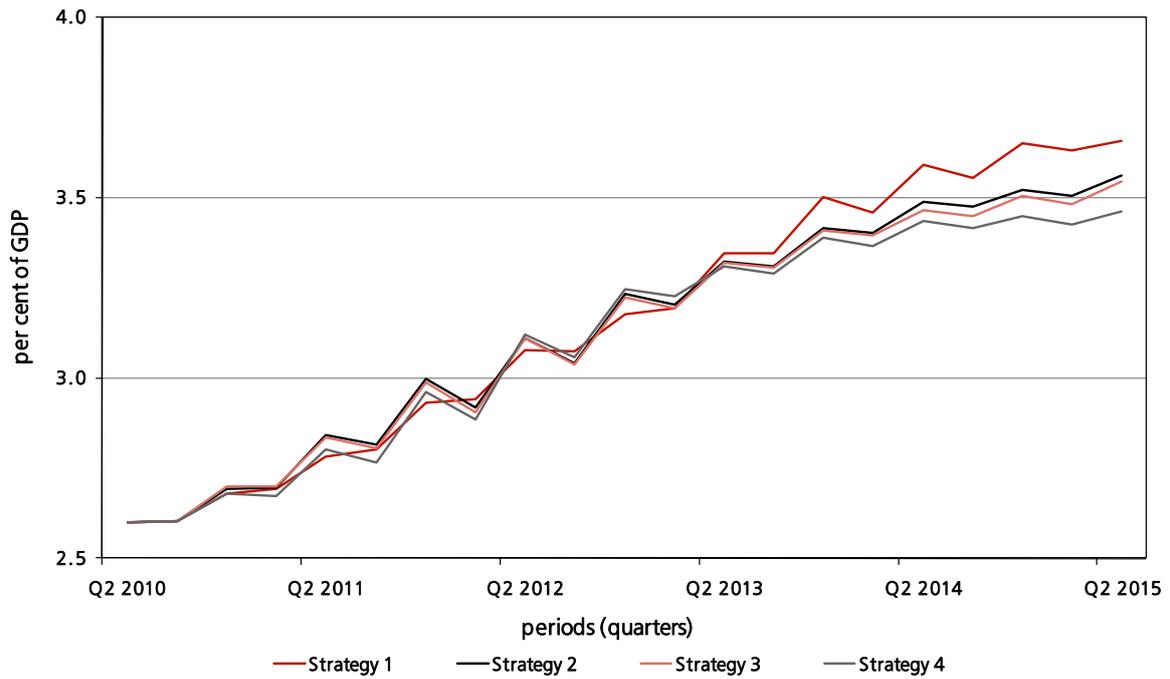
<sup>1</sup> This is an average of 4 quarters which gradually shifts forward by one quarter each quarter, including a new quarter of the dataset and dropping the data for the oldest quarter. A moving average is commonly used to smooth out short-term fluctuations, in this case, the occurrence of quarterly coupon payments.

Source: Debt Management Office

**B.35** Debt service cost at risk is shown in Chart B.6. These higher yields do not take the form of a parallel upward shift in the yield curve as can be seen from Table B.2. Instead, the largest increase in yields from current levels takes place in the short to medium term maturity areas, with the long end remaining at broadly similar levels<sup>8</sup>. This translates into a debt service cost at risk which is at its highest at the end of the simulation horizon for Strategy 1 (all short issuance) and lowest for Strategy 4 (all long issuance).

<sup>8</sup> This results from the fact that a mean reverting model is used to generate the Monte Carlo simulations. The volatility around the mean reverting levels resembles what has been observed, in practice, since 2000, namely, much larger volatility in short-term yields than in long-term yields.

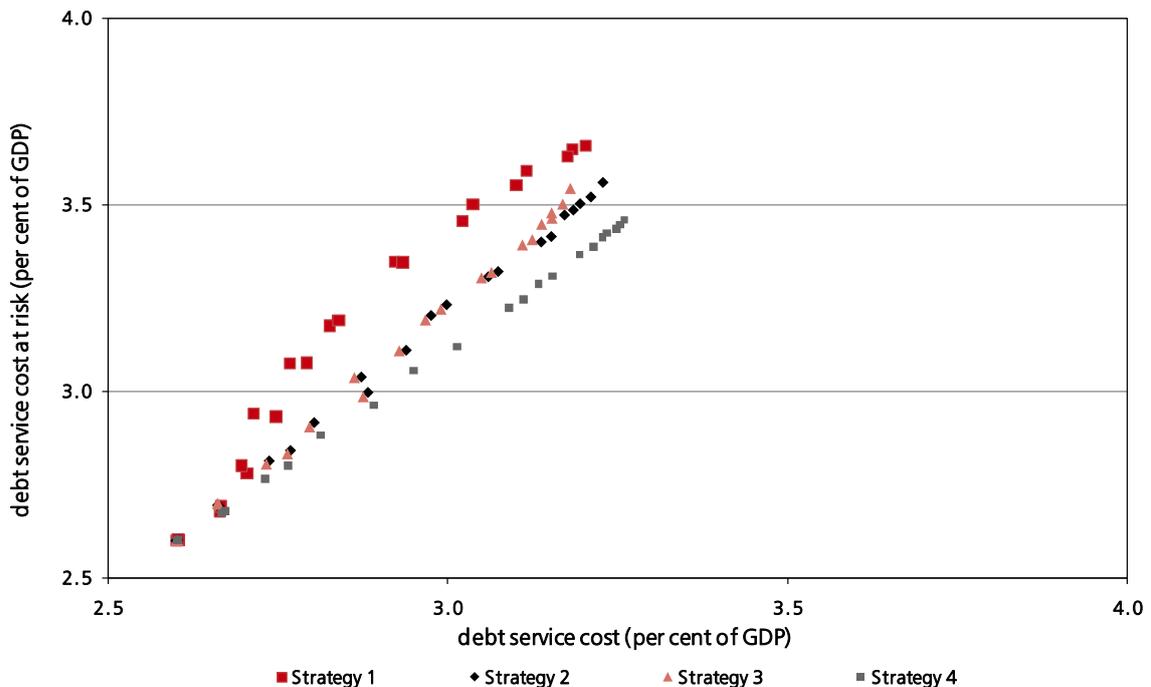
**Chart B.6: Debt service cost at risk (4-quarter moving averages)**



Source: Debt Management Office

**B.36** Chart B.7 shows a form of scatter plot obtained by combining the data from Chart B.5 and Chart B.6 and illustrates the simulated debt service cost and risk trade-off. This indicates how much extra risk would be incurred for every extra unit of cost when following each issuance strategy over the five year horizon. The picture that emerges is broadly as would be expected assuming an upward sloping yield curve.

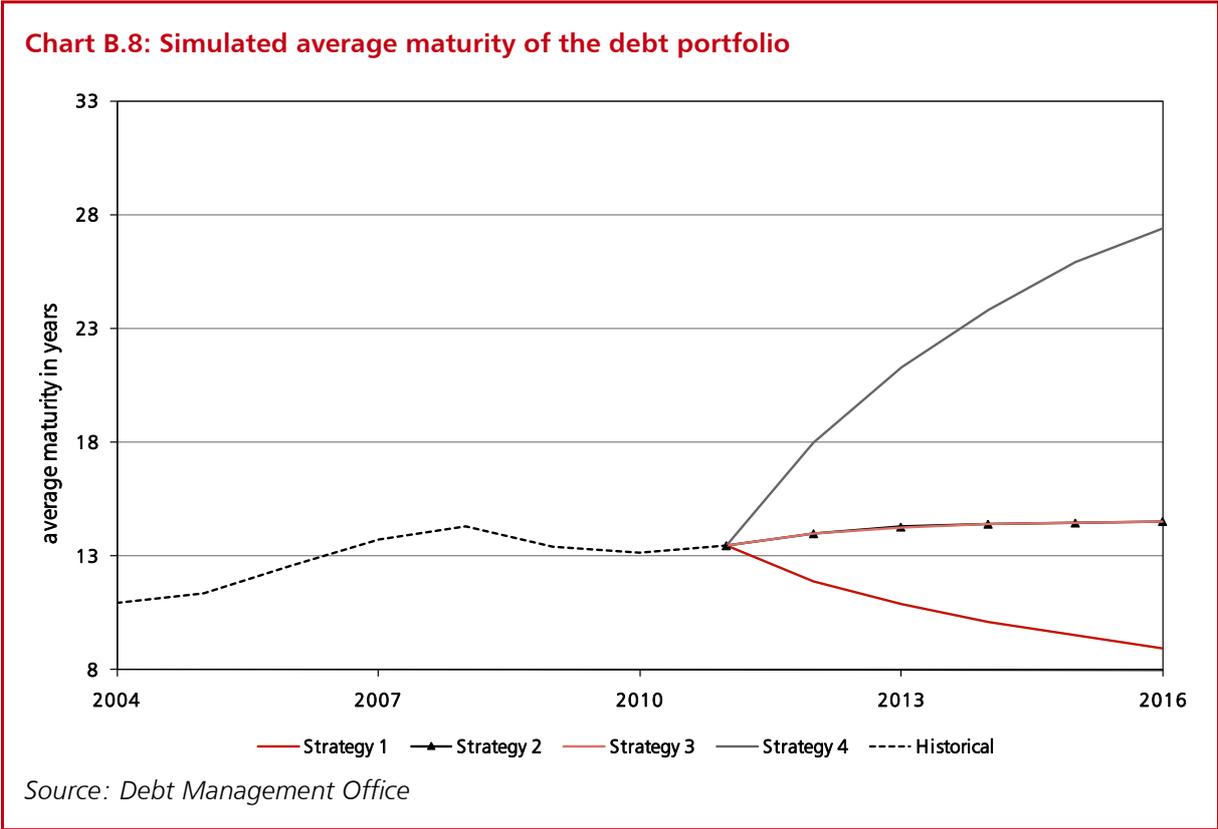
**Chart B.7: Simulated debt service cost and debt service cost at risk trade-offs**



Source: Debt Management Office

**B.37** Strategy 1 is the riskiest strategy, and is also the least costly, relying on short-term issuance which thus needs to be refinanced more often. Strategy 4, which is the most costly, is also the least risky, as it wholly comprises long-term issuance which needs to be rolled over less frequently. Strategy 2 (based on the actual issuance strategy followed in 2010-11) and Strategy 3 incorporate gilt issuance across a range of maturities and thus imply a more even trade-off<sup>9</sup>.

**B.38** It is worth noting that it is several years into the simulation before the cost/risk trade-offs of these strategies start to diverge significantly. This is due to the large size of the existing debt portfolio which induces inertia so that any changes in the structure of the debt portfolio are slow to take effect. This feature can be easily depicted by the average maturity of the debt portfolio, historical and simulated, under the different issuance scenarios, as shown in Chart B.8<sup>10</sup>.



**Conclusions**

**B.39** The quantitative modelling conducted by the DMO shows that a diversified issuance strategy offers a cost and risk trade-off which lies between that of an all short issuance strategy – in which debt service costs are lower but debt service cost at risk is higher – and an all long issuance strategy – in which debt service cost at risk is lower but debt service costs are higher.

**B.40** The results of this model are presented to illustrate the cost and risk implications of pursuing theoretical ‘extreme’ issuance strategies relative to more balanced strategies. However, ‘extreme’ strategies would fail to take into account a broad range of factors as set out in this annex including: relative cost-effectiveness, demand, operational constraints and practical

<sup>9</sup> In order completely to depict the cost and risk characteristics of each issuance strategy, a longer horizon that covers all cash flows up to the maturity of the longest bond should be considered. This is, however, beyond the scope of this analysis.

<sup>10</sup> Includes gilts and Treasury bills.

considerations and, therefore, in reaching its decision the Government has favoured a more balanced strategy that takes into account these factors.



# National Savings & Investments' financing remit for 2011-12

**C.1** This annex sets out information on the financing raised by NS&I in 2010-11 and 2011-12. NS&I is both a government department and an executive agency of the Chancellor of the Exchequer. Its activities are conducted in accordance with its remit, which is to provide cost effective finance for the Government. It does this by raising deposits and investments from retail customers. This will remain the case in 2011-12.

**C.2** NS&I's contribution to financing is agreed with HM Treasury each year, and is based on the Government's gross financing requirement, conditions in the retail financial services market and NS&I's ability to raise the funding without distorting the market.

## Volume of financing in 2010-11

**C.3** NS&I's contribution to financing in 2010-11 is projected to be £250 million with gross inflows (including reinvestments and gross accrued interest) of approximately £13 billion. Table C.1 shows changes in NS&I's product stock during 2010-11.

**Table C.1: Changes in NS&I's product stock in 2010-11**

	End-March 2010 (£ billion)	End-March 2011 <sup>1</sup> (£ billion)
Variable Rate	61.9	63.8
Fixed Rate	20.2	16.1
Index-linked	16.7	19.2
Total <sup>2</sup>	<b>98.8</b>	<b>99.1</b>

<sup>1</sup> Projections  
<sup>2</sup> Total may not sum due to rounding  
Source: National Savings & Investments

**C.4** Using the Value Indicator methodology, NS&I projects a cost saving of £730 million in 2010-11 when compared to the cost of raising wholesale funding of a similar term and value to the product stock under management. Table C.2 shows how the Value Indicator is calculated.

**Table C.2: Calculation of Value Indicator**

Comparator Cost <sup>1</sup>	
Less	Capitalised and accrued interest paid on total NS&I stock
Less	Management costs of NS&I products (net of equivalent DMO costs & leveraging revenue)
Less	Tax foregone on total stock of 'tax free' products
<b>Equals</b>	<b>Value Indicator</b>

<sup>1</sup> This is the cost of raising funds in the wholesale market of an equivalent term. For fixed rate products it is the term of the product while, for variable rate products it is the average length of time the product is held by the customer.  
Source: National Savings & Investments

## Volume of financing in 2011-12

**C.5** Gross inflows (including reinvestments and gross accrued interest) of NS&I's products are projected to be around £14 billion in 2011-12. After allowing for expected maturities and withdrawals, NS&I is expected to make a contribution to financing of £2 billion (within a range of £0 to £4 billion) for 2011-12.

**C.6** Based on current assumptions, NS&I forecasts that it will save the Government between £700 million and £1.2 billion on the stock held in 2011-12 when compared to wholesale funding.

**C.7** Further details of NS&I's activities in 2011-12 will be included in its *Annual Report and Accounts*, which is scheduled to be laid in Parliament on 30 June 2011 and will be available at [www.nsendi.com](http://www.nsendi.com).

# D Financing for the Official Reserves

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**D.1** As set out in paragraph 3.10, the financing arithmetic will include £6 billion of sterling financing for the Official Reserves in 2011-12.

**D.2** The Government envisages sterling financing for the Official Reserves being held at a similar level on average over the three years up to, and including, 2014-15. This sterling financing will be sufficient to meet potential calls on the Official Reserves from the International Monetary Fund (IMF) and ensure the level of foreign currency reserves held is sufficient.

**D.3** The additional sterling financing intended to meet potential calls on the Official Reserves partly arises from commitments to the IMF made over the last few years. These include:

- the expansion of the New Arrangements to Borrow (NAB). The NAB is a source of funding, additional to members' quotas, that can be activated and drawn upon in the event that the IMF requires extra financing. The total UK commitment to the expanded NAB is Special Drawing Rights<sup>1</sup> (SDR) 18.7 billion, an increase of around SDR 16 billion from the UK's contribution to the previous, and much smaller, NAB;
- the UK has also expanded its role in the SDR market. The IMF acts as a broker to enable countries to exchange their SDRs for hard currency with other IMF members, and the UK is one of the members that can be called upon to provide currency in this manner. The 2009 SDR allocation created around \$250 billion in additional SDRs. In view of the expected increase in the number of transactions, the voluntary arrangements for SDR trading have been expanded to ensure continuing liquidity in the SDR market; and
- in Autumn 2010, the G20 reached agreement on the future doubling of IMF quotas, as part of the broader deal on reform to the IMF's governance arrangements. While the impact of this on the UK's overall financial commitments to the IMF has yet to be confirmed, this could potentially result in commitments to financing the IMF increasing over the medium to long term.

## Method of financing

**D.4** It is the Government's intention that the predominant form of financing for the Official Reserves will remain sterling financing raised from the sale of gilts. However, the Government retains the option of issuing foreign currency denominated securities taking into account cost, risk, market conditions and consistency with debt management objectives.

**D.5** The Government anticipates that the maximum quantity of foreign currency security issuance in 2011-12 would be the foreign currency equivalent of around £2 billion. Following any foreign currency security issuance, sterling financing for the Official Reserves would be adjusted accordingly at the subsequent Budget or Autumn Statement. The Bank of England will act as HM Treasury's agent in issuing, and managing, any foreign currency liabilities associated with the Official Reserves.

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<sup>1</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>.





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This document can be found in full on our website at:  
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