United Kingdom

Debt

Management

Office

# DMO Annual Review 2010-11



The United Kingdom **Debt Management Office**is an Executive Agency of
HM Treasury

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# Foreword by the DMO Chief Executive

2010-11 was the DMO's thirteenth year of operation and once again we faced a challenging financial market environment. The total amount of gilt financing we delivered,  $\mathfrak{L}166.4$  billion, was some  $\mathfrak{L}60$  billion lower than in 2009-10, but was still some three times higher than in the years immediately preceding the recent financial market turbulence. In all we held 61 gilt market operations. These included 49 auctions which continued to form the core of our gilt financing programme and accounted for 80% of total gilt sales.

We continued to supplement the gilt auction programme with other distribution methods, principally syndicated gilt offerings, to help target the investor base more directly and so to issue larger volumes of long-dated conventional and index-linked gilts than otherwise may have been possible. A programme of five syndicated offers raised £26.9 billion. Auctions and syndications together allowed the DMO to sell a total of £33.9 billion of index-linked gilts, an increase of almost 70% on the level of sales only two years previously. Gilt mini-tenders played a less prominent role in 2010-11, with seven operations raising £6.3 billion (compared with 12 operations raising £10.1 billion in 2009-10). This reflects a change in the rationale for these operations which has increasingly become to support the syndication programme.

We have received positive feedback on the increased level of liquidity in the gilt market. This appears to be borne out by the rise in aggregate daily turnover to some £21 billion per day in the last financial year compared with £16 billion two years ago and represents a four-fold increase in turnover over the past decade. Another factor which may have contributed to increased market liquidity is the rise in the number of primary dealers (Gilt-edged Market Makers ("GEMMs")) from fifteen at the start of 2010 to twenty by the end of 2010-111.

Alongside the DMO's gilt market activity, our highly important though lower profile cash management objectives continued to be delivered effectively, with our dealers operating on a daily basis in the money markets to manage the Exchequer's net cash flows.

The Public Works Loan Board also continued to operate successfully in 2010-11, advancing £5.25 billion to local authorities. The Commissioners for the Reduction of the National Debt (CRND) also continued to manage efficiently the public sector funds under their control.

The DMO's gilt financing requirement for 2011-12, at £167.5 billion is forecast to be at a very similar level to 2010-11. This and our other responsibilities will need to be delivered in a financial market environment which continues to be volatile and unpredictable. Given the strength of achievement in 2010-11, however, we look forward to 2011-12 with confidence.

Robert Stheeman August 2011

<sup>&</sup>lt;sup>1</sup> The five additional GEMMs who joined in this period are Jefferies, Santander, Scotiabank, Société Générale and Toronto-Dominion Bank.

# **Chapter 1: The Economy and Financial Markets**

# Fiscal and macroeconomic developments

The world economy grew strongly for much of the financial year 2010-11 but vulnerabilities persisted in some regions.

In the UK, the recovery in 2010-11 was generally subdued. Real Gross Domestic Product (GDP) grew by a relatively robust 1.1% quarter-on-quarter (q-o-q) in the first three months of the financial year but then slowed to 0.6% q-o-q in the next three months. Weather effects were largely responsible for a 0.5% q-o-q contraction in the third quarter (Q3) but rebounded by a relatively modest 0.5% in Q4. Monetary policy remained expansionary throughout the period (see below), but growth was constrained by the squeeze on household real income from elevated inflation and by weaker demand in the UK's major export markets. In addition, the financial market turbulence affecting a number of euro area countries continued to pose a threat to the UK recovery.

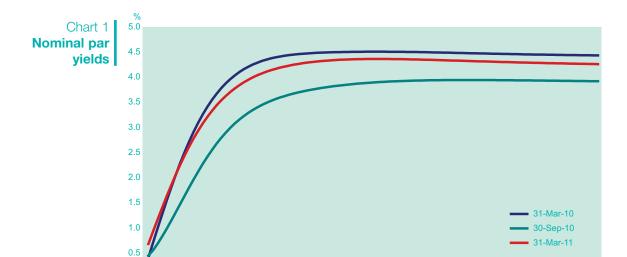
Consumer Prices Index (CPI) inflation significantly exceeded the Bank of England's target rate of 2.0% year-on-year (y-o-y) throughout the financial year. As the rate was persistently more than one percentage point higher than target (ranging between a low of 3.1% y-o-y and a high of 4.4%) Governor King was obliged to write letters of explanation to the Chancellor of the Exchequer every three months during the period. The Governor explained the Monetary Policy Committee's central view that elevated inflation was primarily due to temporary factors, including higher oil and other import prices plus the increase in VAT to 20.0%, and that CPI would likely fall back towards target as these effects waned. The Retail Prices Index (RPI) measure of inflation, used to set the cash flows on index-linked gilts, started and ended the financial year at 5.3% y-o-y, reaching a mid-year low of 4.5%.

The Bank of England (BoE) official Bank Rate remained at an historic low of 0.5% throughout 2010-11 and the stock of assets (primarily gilts), financed by the creation of central bank reserves (also known as 'quantitative easing'), was maintained at £200 billion (nominal).

# **Gilt market developments**

### Par gilt yields

Gilt yields fell significantly along the nominal par yield curve at the start of 2010-11 but began to rise again by the end of the financial year, notably at the ultra-short end, reflecting changing views about the domestic and global economic outlook, see Chart 1. For the year as a whole, 2-year par yields rose by 13bps, 5-year yields fell by 10bps, 10-year yields fell by 26bps, 30-year yields fell by 15bps and 50-year yields fell by 17bps. However, these relatively modest year-on-year moves conceal significant in-year swings (Chart 3).



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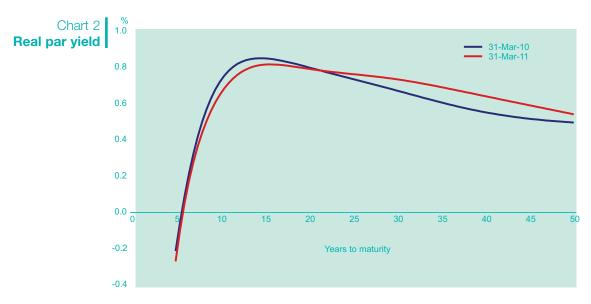
Source: DMO

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Year-on-year, real par yields were also relatively stable, with 10-year yields falling by 7bps, 30-year real par yields rising by 6bps and 50-year yields rising by 5bps. In-year yield changes were considerably larger, however (Chart 4).

Years to maturity

45



Source: DMO

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### **Conventional benchmark gilts**

Government bond markets continued to experience periods of high volatility in 2010-11 against a backdrop of economic uncertainty, sovereign debt concerns, deteriorating market sentiment towards selected euro area countries and growing political instability in a number of regions.

In the lead-up to the UK General Election on 6 May 2010 gilt yields fluctuated reflecting uncertainty over the domestic political outlook and notably the strategy of a new government for addressing the fiscal deficit. However, the swift formation of the coalition government and the strength of its commitment to debt and deficit reduction resulted in a positive reaction from financial markets and gilt prices began to respond positively.

Gilts continued to rally as the Budget on 22 June 2010 expanded the programme of fiscal tightening and resulted in a £20 billion (11%) reduction in planned gilt sales in 2010-11.

Market concerns about bank and sovereign risk appeared to recede somewhat in July following a perceived successful outcome to the stress tests by the European Central Bank (ECB) of the euro area banking sector. Gilt yields rose briefly on the news while equities and riskier financial assets rallied, though ongoing market concerns over the pace of the recovery quickly prevailed, to push gilt yields to 2010 lows in late August.

For the final quarter of 2010 until early February 2011 yields began to trend higher along the curve, to reflect more positive economic data and some concerns about the level of inflation. This trend was reversed again, however, on renewed and growing concerns about debt sustainability in some peripheral euro area economies and volatility stemming from geopolitical events in the Middle East/North Africa. These factors manifested in "flight to quality" flows into gilts and certain other major Government bond markets and were reinforced by weaker US data, global political events, and the effects of the natural disaster in Japan.

The path of benchmark conventional nominal gilt yields over 2010-11 is shown in Chart 3.

Chart 3
Conventional benchmark nominal yields



### **Index-linked real yields**

Chart 4 shows the real yield on selected benchmark index-linked gilts in 2010-11. Year-on-year the real yield on 1%% Index-linked Treasury Gilt 2022 fell by 16bps to 0.62%, whilst the yield on 05% Index-linked Treasury Gilt 2040 rose by 2bps to 0.73% and that of 11/4% Index-linked Treasury Gilt 2055 rose by 5bps to 0.58%.

Chart 4 **Index-linked benchmark** real yields



Source: DMO

### **Break-even inflation rates**

After a relatively poor first half-year, index-linked gilts as measured by break-even inflation rates out-performed their conventional counterparts in the second half of 2010-11. This followed increased concerns about the upside risks to inflation and also reflected ongoing Liability Driven Investment (LDI) interest in index-linked gilts from the UK pension sector. For the full year, however, 10-year, 30-year and 50-year break-even inflation rates fell y-o-y by 24bp (to 2.99%), 21bps (3.63%) and 22 bps (3.71%) respectively. Chart 5 shows the trend across the year.

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# **International comparisons**

Yields on 10-year UK, US and German Government bonds were little changed relative to the start of the financial year, whereas the yield on the 10-year Spanish Government bond rose by 148bps. See Chart 6.

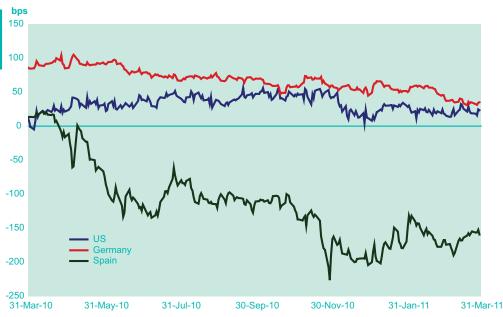




Source: Bloomberg

The spread between 10-year gilt and US Treasury yields began the financial year at +11bps and then widened to +55bps in September before narrowing to +22bps at end-March 2011. In contrast, there was a steady 51bps narrowing of the 10-year yield spread between gilts and bunds over the financial year from +85bps to +34 bps. The 10-year yield spread between UK gilts and Spanish bonos widened over the course of the financial year to a peak of -228bps in November 2010 before finishing at -161bps at end-March 2011. See Chart 7.

Chart 7 | Selected international 10-year benchmark gilt spreads



Source: Bloomberg

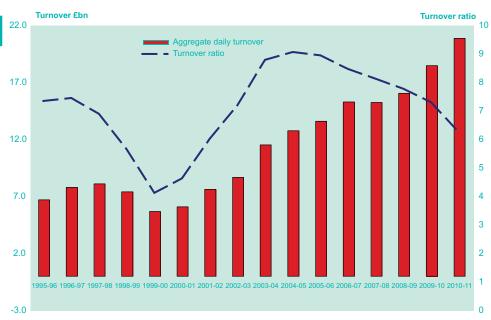
### Gilt market turnover

Aggregate daily turnover by value in the gilt market increased in 2010-11 by 13% compared with the previous financial year (from £18.46 billion to £20.87 billion). Trading intensity in 2010-11 (as measured by the turnover ratio²) fell to 6.23, compared with 7.28 in 2009-10 (this reflected the significantly larger gilt portfolio against which the ratio is calculated). See Chart 8.

<sup>&</sup>lt;sup>2</sup> The turnover ratio for a given financial year is the aggregate turnover in that financial year relative to the market value of the portfolio at the start of that year.

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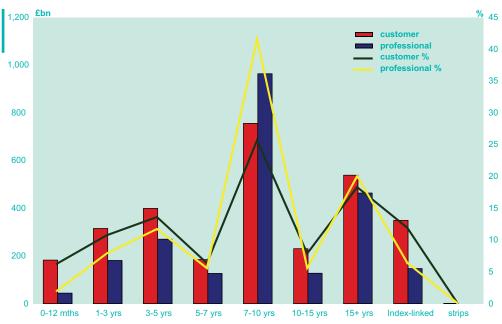
Chart 8 22.0 Gilt market turnover



Source: GEMMs

As in previous years, gilt market turnover was weighted heavily towards the 7-10 year sector with the over 15-year and the 3-5 year maturity sectors the next most actively traded. See Chart 9.

Chart 9 | Gilt market turnover by maturity and type

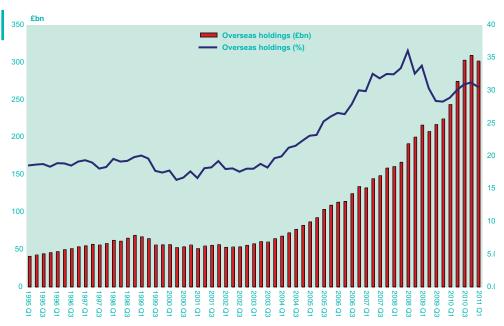


Source: GEMMs

### Overseas holdings of gilts

Chart 10 shows the trend in overseas holdings of gilts in the 16 years to end-March 2011. According to data published by the Office for National Statistics (ONS) since end-2003 there has been a sustained rise (around £237 billion) in the value of gilts held by overseas investors. Despite a small decline in Q4, in the 2010-11 financial year as a whole the value of overseas holdings rose by 24% to £301.5 billion and overseas investors became the largest single ownership class, overtaking the domestic pension and insurance sectors for the first time (see Chart 11). The rising trend in overseas holdings has been attributed to ongoing purchases of (mainly shorter-dated) gilts by central bank reserve managers, sovereign wealth funds and hedge funds.

Chart 10 **Overseas holdings of gilts** 

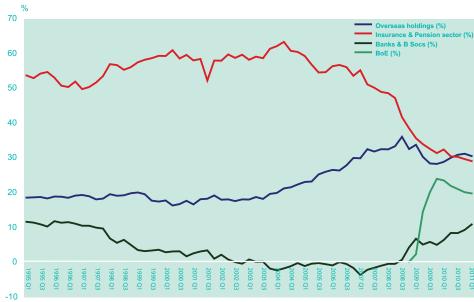


Source: ONS

By contrast, as a proportion of the portfolio, overseas holdings have been on a downward trend for the past three years. These holdings peaked at 35.9% at end-September 2008, but had fallen to 30.4% at end-March 2011. This reflects both the significant increase in the size of the gilt portfolio itself (which doubled in the three years between end-March 2008 and end-March 2011) and also significant purchases of gilts (circa  $\mathfrak{L}$ 200 billion) in the secondary market by the Bank of England via the Asset Purchase Facility (APF). 2010-11 also saw a doubling in the value of gilts held by the UK banking sector to  $\mathfrak{L}$ 106.7 billion. The changing ownership of the gilt portfolio held by sector is shown in Chart 11.

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Source: ONS and Bank of England

### **UK** money market developments

During 2010-11, interest rates in the UK, US and the euro area remained unchanged at 0.50%, 0.25% and 1.00% respectively (see Chart 12). In November 2010, the Federal Open Market Committee (FOMC) decided to purchase an additional \$600 billion in long-dated Treasury bonds by June 2011 and also continued to re-invest principal payments from its holdings of securities. In the UK, the Bank of England maintained the stock of assets financed by the issue of central bank reserves at  $\Sigma$ 200 billion (nominal).

Sterling markets were influenced early in the financial year by the uncertainty associated with the outcome of the UK General Election, but the speed of formation of a coalition government and the announcement of plans for fiscal consolidation in the June 2010 Budget reduced much of this uncertainly by the end of the first quarter.

Concerns about the fiscal positions in some parts of the euro area persisted despite efforts by the EU and IMF to stem contagion and underpin market liquidity. International rescue packages were agreed for Greece, Portugal and Ireland. The European Financial Stability Facility (EFSF) was also created to issue bonds (up to €440 billion) guaranteed by Euro Area Member States for on-lending to those in difficulty.

Despite robust growth in the first half of the year, doubts about the durability and speed of the global economic recovery grew, particularly following the weaker-than-expected US macroeconomic data in the second quarter.

Chart 12 also shows the path of three-month Sterling LIBOR rates in 2010-11. In the UK the spread between three month LIBOR rate and the Bank Rate widened from 15bps at the beginning of the year to 32bps in March 2011.





Source: Bloomberg/British Bankers Association (BBA)

The changing path of future interest rate expectations over the financial year can be seen in the implied yields of short Sterling contracts shown in Chart 13. Interestingly, all the curves show a rise in interest rate expectations over the medium term, although the implied speed at which the market expected rates to rise slowed over the course of the year. Interest rate expectations two years forward, as derived from the implied yields, were stable at 3% at end of both the March 2010 and March 2011 contracts.

Chart 13 | Implied curves from short sterling contracts



Source: Bloomberg

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# **Chapter 2: Government Debt Management**

# Debt management responsibilities and objectives

### **Objectives of debt management**

The UK Government's debt management policy 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."

The 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 (NS&I).

### Maturity and composition of debt issuance

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

- 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;
- investors' demand for gilts; and
- changes to the stock of Treasury bills and other short-term debt instruments.

# The DMO's financing remit for 2010-11

# **Provisional financing remit**

The initial financing remit for 2010-11 was published alongside the Budget on 24 March 2010. The Central Government Net Cash Requirement (CGNCR) forecast for 2010-11 was £166.4 billion, and the DMO's net financing requirement was forecast to be £185.4 billion.

Total debt sales by the DMO of £185.4 billion were planned in 2010-11, split as follows:

Outright gilt sales: £187.3 billion
 Net Treasury bill sales: -£1.9 billion

### The structure of the gilt financing remit

The planned gilt sales programme of £187.3 billion, comprised:

- a core gilt sales programme of £148.1 billion in 52 auctions,
- supplementary gilt sales programmes of £39.2 billion, split as follows:
  - £29.2 billion of gilt sales via up to ten syndicated offerings; and
  - £10.0 billion of gilt sales via mini-tenders, to be held at least monthly.

The planning assumption was that the entire £39.2 billion of the supplementary gilt sales programmes would be of long-dated conventional and index-linked gilt sales.

Overall planned issuance was split as follows:

- £59.0 billion of short-dated conventional gilt sales in 13 auctions;
- £45.0 billion of medium-dated conventional gilt sales in 12 auctions;
- £45.3 billion of long-dated conventional gilt sales via 12 auctions (aiming to raise £26.7 billion) and a combination of syndicated offerings and minitenders (aiming to raise £18.6 billion); and
- £38.0 billion of index-linked gilt sales via 15 auctions (aiming to raise £17.4 billion) and a combination of syndicated offerings and mini-tenders (aiming to raise £20.6 billion).

Overall planned gilt sales fell by  $\pounds 40.3$  billion compared with 2009-10. Short-dated conventional issuance remained the largest single component of the plans in both absolute and proportional terms (despite falling £16.4 billion and 2% compared with 2009-10). Planned medium issuance was reduced most, by £26.3 billion or 7% in relative terms compared with 2009-10, reflecting that sector's lower perceived cost effectiveness compared with short- and long-dated gilts. Planned long-dated conventional sales were reduced by only £6.3 billion, representing an increase in proportional terms of 1.5%.

By contrast, planned sales of index-linked gilts increased in both absolute and proportional terms, rising £8.7 billion (7.3%).

There were no plans to hold any switch auctions, reverse auctions, or conversion offers in 2010-11 (and none were held).

### Post auction option facility (PAOF)

The 2010-11 remit also provided for the continuation of the post auction option facility (PAOF), under which successful bidders (GEMMs and investors) at each auction have the option to purchase additional stock of up to 10% of the amount allocated to them at the auction within a two hour window from noon to 2.00 pm on the day of the auction.

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### Outturn of the 2009-10 CGNCR: April 2010

On 22 April 2010 the outturn CGNCR for 2009-10 was published. At £198.8 billion it was £2.1 billion lower than the forecast in the March 2010 Budget. In addition, the outturn for the sale of bilateral Treasury bills was £0.6 billion higher than the forecast in the March Budget.

Overall, the DMO's forecast net financing requirement for 2010-11 fell by £2.8 billion<sup>3</sup> compared with the position at the March Budget and the financing remit was revised as follows:

- medium-dated conventional gilt sales were reduced by £2.1 billion to £42.9 billion (but no auctions were cancelled); and
- Treasury bill sales were reduced by £0.6 billion (to a stock change of -£2.5 billion).

### **Budget June 2010**

Following the General Election of May 2010, the new Coalition Government published a Budget on 22 June 2010. This included a revised forecast for the CGNCR in 2010-11 of £146.1 billion (a reduction of £20.3 billion compared with the forecast in the March 2010 Budget). This was offset by £0.1 billion of secondary market purchases of "rump" gilts by the DMO, resulting in a net financing requirement for the DMO in 2010-11 of £162.5 billion, £20.1 billion lower than that published at the remit revision in April 2010.

Planned gilt sales were reduced by £20.2 billion to £165.0 billion. Gilt sales at auctions were reduced by £14.0 billion to £132.0 billion with three auctions (one each of short- medium- and long-dated conventionals) being cancelled. Supplementary gilt issuance was reduced by £6.2 billion to £33.0 billion – and three gilt mini tenders were cancelled. The revised split of issuance by type of gilt and distribution method is summarised in Table 1.

Table 1 |
Structure of the 2010-11 gilt financing remit following the June 2010 Budget

Revised planned gilt issuance split by method of issuance, type and maturity 2010-11							
	Auction	Syndication	Mini-tender	Total			
Short-dated conventional							
£ billion	52.6			52.6			
Per cent				31.9			
Medium-dated conventional							
£ billion	38.2			38.2			
Per cent				23.2			
Long-dated conventional							
£ billion	24.2	12.8	3.4	40.4			
Per cent				24.5			
Index-linked							
£ billion	17.0	13.2	3.6	33.8			
Per cent				20.5			
Total	132.0	26.0	7.0	165.0			

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

<sup>&</sup>lt;sup>3</sup> Also reflecting marginal adjustments to the contribution to financing from National Savings & Investments (NS&I) and to the financing of the Bank of England's Asset Purchase Facility.

### **Autumn Forecast 2010**

The Autumn Forecast (AF) was published on 29 November 2010 by the Office for Budget Responsibility (OBR). The AF had only limited implications for the financing remit, with planned gilt sales rising by  $\mathfrak{L}0.2$  billion to  $\mathfrak{L}165.2$  billion, (planned sales of short- and long-dated conventional sales each rose by  $\mathfrak{L}0.1$  billion).

The small change was the net effect of the following factors:

- A reduction of £1.9 billion (to £144.2 billion) in the forecast CGNCR for 2010-11;
- an increase of £2.0 billion (to £6.0 billion) in Sterling financing for the foreign currency reserves; and
- an increase of £0.1 billion in debt buy-backs (purchases of rump gilts).

The main operational impact of the remit revision at the AF was the reduction in required average auction sizes as a result of the allocation of proceeds arising from take-up of the post-auction option facility (PAOF) in the period before the AF. PAOF proceeds in the pre-AF period are shown below:

	Short-dated conventional	£1.61 billion
•	Medium-dated conventional	£1.22 billion
•	Long-dated conventional	£0.23 billion
•	Index-linked	£0.33 billion

In addition a forward looking adjustment was made in accordance with the provisions of the remit announcement in March 2010 which specified that "at [PBR]<sup>4</sup> an assumption will be made that proceeds from the PAOF will continue to accrue for the remainder of the auction programme in the same proportion per type and maturity of operations as before [PBR].

Based on the pre-AF rate of take up of PAOF the sums below were also deducted from the remaining sales targets at AF:

	Short-dated conventional	£0.86 billion
•	Medium-dated conventional	£0.74 billion
	Long-dated conventional	£0.48 billion
	Index-linked	£0.18 billion

The resultant average required auction sizes after the AF were as shown below (pre-AF sizes in brackets):

Short-dated conventional:	£3.42	billion (£4.42bn)
Medium-dated conventional:	£2.70	billion (£3.36bn)
Long-dated conventional:	£2.00	billion (£2.18bn)
Index-linked:	£0.95	billion (£1.08bn)

<sup>&</sup>lt;sup>4</sup> The Pre-Budget Report (PBR), as termed by the previous Government, was succeeded by the Autumn Forecast in 2010.

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### **Budget March 2011**

The Debt and Reserves Management Report 2011-12 published on 23 March 2011 alongside the Budget included a new forecast for the 2010-11 CGNCR of £141.2 billion, a reduction of £3.0 billion since the AF in 2010. The revised net financing requirement for 2010-11 was £159.4 billion (a reduction of £3.3 billion relative to AF 2010).

The other main changes (since the AF 2010) impacting on financing in 2010-11 were  $\mathfrak{L}1.6$  billion higher forecast Treasury bill sales<sup>5</sup> (a reduction of the Tbill stock by only - $\mathfrak{L}0.9$  billion compared with a forecast - $\mathfrak{L}2.5$  billion) and an increase of  $\mathfrak{L}0.3$  billion in the forecast contribution to financing by NS&I (from zero to + $\mathfrak{L}0.3$  billion).

Given that the gilt sales programme had been completed in advance of the publication of the new lower financing forecast, and that, largely as a result of the impact of PAOF proceeds, the gilt sales outturn at £166.4 billion was £1.2 billion above plan, over-financing in 2010-11 of approximately £6.0 billion was forecast (effectively reducing the financing requirement in 2011-12 accordingly).

### Outturn CGNCR for 2010-11 and the financing outturn

An outturn CGNCR for 2010-11 was published on 20 April 2011 and, at £139.6 billion, it was £1.6 billion lower than the forecast at the March Budget. As a result of this, and a number of other minor adjustments since the March Budget<sup>6</sup> the outturn net financing requirement fell by £1.4 billion from £159.4 billion to £158.1 billion<sup>7</sup>.

The developments in the 2009-10 financing arithmetic over the course of the financial year are shown in Table 2.

<sup>&</sup>lt;sup>5</sup> As a result of bilateral Treasury bill sales.

<sup>&</sup>lt;sup>6</sup> NS&l's contribution to financing at £0.1 billion was £0.2 billion lower than forecast in March 2011.

<sup>&</sup>lt;sup>7</sup> Unusually a subsequent refinement to the 2010-11 CGNCR resulted in a final outturn of £139.7 billion, £0.1 billion higher that the figure in the 20 April remit revision. As usual following such a de-minimis change the remit has not yet been revised to reflect this – this will occur with the publication of a new forecast for the 2011-12 CGNCR expected at the AF in 2011, but it has been reflected in the table 1.

Table 2 Financing arithmetic 2010-11

	Apr 2010	Jun 2010	Autumn Forecast	Budget 2011	Outturn
CGNCR	166.4	146.1	144.2	141.2	139.7
Redemptions	38.6	38.6	38.6	38.6	38.6
Financing for reserves	4.0	4.0	6.0	6.0	6.0
Buy-backs	0.0	0.1	0.2	0.2	0.2
Planned short-term financing adjustment <sup>1</sup>	-26.3	-26.3	-26.3	-26.3	-26.3
Gross Financing requirement	182.6	162.5	162.7	159.7	158.1
Less					
NS&I	0.0	0.0	0.0	0.3	0.1
Net Financing requirement	182.6	162.5	162.7	159.4	158.1
Financed by					
1. Debt issuance by the DMO					
a) T bills	-2.5	-2.5	-2.5	-0.9	0.3
b) Gilt sales	185.2	165.0	165.2	166.4	166.4
Short conventionals	59.0	52.6	52.7	53.2	53.2
Medium conventionals	42.9	38.2	38.2	38.1	38.1
Long conventional	45.3	40.4	40.5	41.1	41.1
Index-linked	38.0	33.8	33.8	34.0	34.0
2. Other planned change in short term debt <sup>2</sup>					
Ways and Means	0.0	0.0	0.0	0.0	0.0
3. Change in short term cash position <sup>3</sup>	0.0	0.0	0.0	6.0	8.6
Total financing	182.7	162.5	162.7	165.5	166.7
Short-term debt levels at end of financial year					
T bill stock (in market hands)	60.8	60.8	60.8	62.5	63.6
Ways and Means	0.4	0.4	0.4	0.4	0.4
DMO net cash position	0.5	0.5	0.5	6.5	9.1

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# **DMO** gilt financing operations in 2010-11

The DMO issued four new gilts in 2010-11, all conventional gilts, as detailed in Table 3. Three were launched by auction, while the new 30-year gilt was launched by syndication.

# Table 2 **New gilts issued in 2010-11**

Gilt	First issued
334% Treasury Gilt 2020	10 Jun 2010
41/4% Treasury Gilt 2040 (S)	30 Jun 2010
2% Treasury Gilt 2016	03 Nov 2010
3%% Treasury Gilt 2021	18 Mar 2011

# Implementing the 2010-11 remit

### a) Auctions

As usual, auctions comprised the core of the DMO's gilt sales programme in 2010-11 and acounted for 80% of gilt sales. Auction dates for the financial year as a whole are usually announced before the start of each financial year, but the choice of gilts to be sold on each date is made following the regular quarterly cycle of consultation meetings with representatives of the GEMMs and investors. In 2010-11 these meetings also considered the interaction between gilts to be issued at auctions and those at syndicated offerings – see below.

The consultation meetings were held in March 2010 (to discuss issuance in April-June), May 2010 (to discuss issuance in July-September), August 2010 (to discuss issuance in October-December) and November 2010 (to discuss issuance in January-March 2011).

Ahead of the meetings, the DMO published on its screens and website an agenda to steer the discussion. The morning after each meeting, summary minutes were published describing the main areas of discussion. The minutes are intended to promote transparency for those market participants unable to attend the meetings and also pave the way for the announcement of the quarterly operations calendars. The calendars, which specify the particular bonds to be sold at each auction date, are published on the last business day of March, May, August and November respectively.

49 gilt auctions were held, 12 of short-dated conventional gilts, 11 each of mediumand long-dated conventional gilts and 15 of index-linked gilts. The results of gilt auctions are available on the DMO's website at:

http://www.dmo.gov.uk/ceLogon.aspx?page=Auction\_Results&rptCode=D2.1A

The average cover ratio at gilt auctions in 2010-11 was 1.93, marginally down on an average of 2.04 in 2009-10, and the concentration of bidding at conventional gilt auctions, as measured by the tail<sup>8</sup>, was twice as high at 0.4bps. See Table 4.

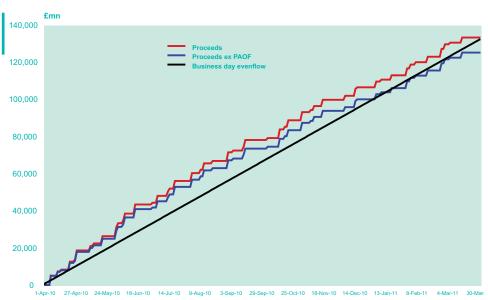
<sup>&</sup>lt;sup>8</sup> The tail is the difference in basis points between the yield at the average and lowest accepted prices at multiple price auctions.

Table 4 | Auction cover and tail | 2009-10 and 2010-11

	2010	D-11	2009-10		
	Cover Tail (bps)		Cover	Tail (bps)	
Short conventional	1.93	0.6	2.23	0.9	
Medium conventional	1.95	0.3	2.02	0.6	
Long conventional	1.82	0.4	1.86	1.2	
Index-linked	2.02	na	2.01	na	
Average	1.93	0.4	2.04	0.8	

Gilt auction proceeds were received on a broadly even-flow basis throughout the year as illustrated in Chart 14, which shows cumulative proceeds including and excluding proceeds from the PAOF. It also shows the impact of the downward adjustment to auction sizes at the AF as previously accumulated PAOF proceeds were factored into the auction sizing calculations (as were anticipated future PAOF proceeds). So in the final quarter of the financial year, because auction sizes were smaller, the contribution to meeting the target from the auctions themselves slipped below the evenflow pace. At the same time the contribution from PAOF proceeds filled the gap so as to meet (and just marginally exceed) the overall auction target. Relative to the target of £132.0 billion the DMO raised £133.15 billion from the combination of auctions and PAOF, a surplus of 0.9%.

Chart 14 **Gilt auction evenflow** 



Source: DMO

### b) Syndicated Offerings

In 2010-11, for the second year in succession, given the ongoing historically high level of the financing requirement, the DMO used syndicated offerings as an integral part of the remit, to complement auctions and facilitate the primary gilt distribution process. In particular, syndicated offerings enabled the Government to issue more long-dated conventional and index-linked gilts, than it judged would have been possible via the auction process alone.

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An outline pattern for the approximate timing of syndications and the scheduling of gilt sales by type in the quarter ahead were discussed at the quarterly consultation meetings in 2010-11 and planning assumptions about the programme were published in the quarterly operations calendar announcements. A greater level of precision is given in the announcement about the type and maturity of those sales by syndication planned closest to the date of the calendar announcement. Around two weeks in advance of the anticipated operation, a series of further DMO announcements began, usually, but not always, starting with the appointment of the Lead Managers who then typically advise on the maturity of the bond to be sold and assist the DMO to refine the timing of the issue.

In total, £26.9 billion was raised through five syndicated offerings in 2010-11, all of long-dated conventional and index-linked gilts. Only one of these saw the launch of a new gilt (the June 2010 sale of  $4\frac{1}{4}$ % Treasury Gilt 2040). The other re-openings were of gilts that had either been issued exclusively by syndication (the IL 2040 and IL 2050 maturities, as well as  $4\frac{1}{4}$ % 2040) or via a combination of syndication and auctions (the IL 2055 maturity). The results of the syndication programme are set out in Table 5.

Table 5
Syndicated gilt
offerings in 2010-11

Date	Gilt Name	Size £mn (nominal)	Issue Price (£)	Issue Yield (%)	Proceeds (£mn)
26-May-2010	01/2% ILTreasury Gilt 2050	4,000	91.146	0.758	3,762
29-Jun-2010	41/4% Treasury Gilt 2040	8,000	100.121	4.243	7,995
27-Jul-2010	05/8% IL Treasury Gilt 2040	6,000	89.914	1.020	5,557
27-Oct-2010	41/4% Treasury Gilt 2040	5,000	100.167	4.240	5,000
27-Jan-2011	01/4% IL Treasury Gilt 2055	3,250	120.825	0.707	4,625
					26,938

As in 2009-10, strong domestic order books were a feature throughout the 2010-11 syndication programme with the domestic investor base taking an average of 95 per cent per issue. This investor base largely comprised asset managers, pension funds and insurance companies, reflecting their structural demand for liability-matching long-dated fixed income assets.

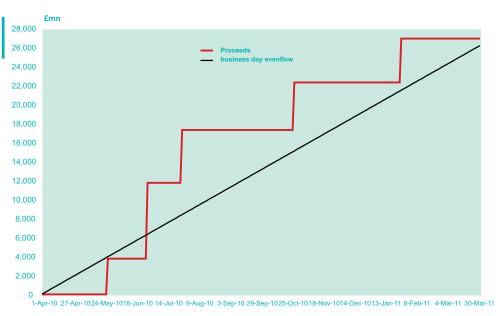
One feature of the syndication programme in 2010-11 was a degree of front loading as the DMO took advantage of the very large and high quality order books generated in particular at the June and July operations. The June transaction, the  $\mathfrak L8$  billion sale of a new 30-year conventional gilt was, and remains to-date, the largest syndicated offer of a sovereign bond.

As a consequence, after the third syndicated offer on 27 July 2010, the DMO had raised £17.3 billion, or 66% of the annual syndication sales target (of £26.2 billion) in only 32% of the financial year. The front loaded pace of funding from the syndication programme in 2010-11 compared with an evenflow comparator is shown in Chart 15 below<sup>9</sup>. It contrasts noticeably with the pattern of funding via the auction programme (see Chart 14).

<sup>&</sup>lt;sup>9</sup> The evenflow comparator assumes that the annual sales target was reached by an equal amount of financing on each business day in 2010-11.

Chart 15

Syndication programme
sales compared with
evenflow 2010-11



Source: DMO

A front-loaded approach to financing could be seen as adding to intra-year financing risk; that is the risk that the Government's financing costs are higher than they would be if it financed on an even-flow basis sampling interest rates across the year. As an issuer moves away from sampling interest rates on average through the year, there is an increased risk that the weighted average issuance yield for the year could be higher than it would be otherwise be (for example, by financing a large amount of the year's issuance programme in one transaction when yields are high). Equally, there is an increased possibility that the weighted average issuance yield for the year could be lower than the average. As such, intra-year financing risk is concerned with the potential volatility of debt servicing payments.

### c) Mini-tenders

The DMO also continued to use mini-tenders to issue long-dated and index-linked gilts in 2010-11, augmenting the regular auction programme with smaller issues of existing gilts with less pre-announcement of the size and identity of the gilt than at auctions.

The quarterly operations calendars specified the week(s) in which the mini-tenders were to be held, with the choice of bond announced just over a week before the operation date (with the choice aided by an informal market consultation regarding prevailing market preferences for specific gilts). Finally, the size of each tender was announced 1-2 days before the operation.

Mini-tenders were originally introduced to access pockets of demand in specific gilts as they emerged, although in 2010-11 their use changed somewhat towards being used to support the syndication programme. In particular, as syndication proceeds came in higher than anticipated the DMO was able to cancel two mini-tenders originally planned for February and March 2010<sup>10</sup>.

In 2010-11, seven mini-tenders were held, raising £6.3 billion. The mini-tender process ran smoothly during the year, and the average bid to cover ratio was 2.34. Table 6 below summarises the results of the 2010-11 mini-tender programme.

<sup>&</sup>lt;sup>10</sup> Three originally planned mini-tenders had previously been cancelled at the remit revision published alongside the June 2010 Budget.

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Table 6

Gilt mini-tenders in

2010-11

Date	Gilt Name	Size £mn (nominal)	Cover	Issue Price (£)	Yield (%)	Proceeds (£mn)
21 Apr 2010	11/4% IL Treasury Gilt 2017	600	3.69	107.39	0.265	727.6
17 May 2010	41/4% Treasury Stock 2032	1,000	1.93	98.23	4.376	982.2
16 Jun 2010	11/4% IL Treasury Gilt 2017	550	2.53	106.76	0.328	672.2
01 Sep 2010	43/4% Treasury Stock 2038	1,000	1.56	115.66	3.837	1,156.6
23 Sep 2010	11/4% IL Treasury Gilt 2027	550	2.23	109.35	0.672	693.2
13 Oct 2010	41/4% Treasury Gilt 2027	1,200	2.15	107.43	3.662	1,288.8
23 Nov 2010	11/4% IL Treasury Gilt 2027	600	2.31	107.41	0.783	747.6
						6,268.2

The outturn for gilt sales versus the different remit targets in 2010-11 is shown in Table 7. Overall, the DMO exceeded its gilt sales target by £1.15 billion (0.7%), predominantly via higher proceeds from the auction programme (and also reflecting take-up of the PAOF). In aggregate, sales from the supplementary programmes were on target, although the mix by issuance method was slightly different than anticipated, with proceeds from syndicated offers exceeding the remit planning assumption by £0.7 billion and proceeds from the mini-tenders falling short by a corresponding amount. This reflects the fact that some mini-tenders were cancelled after some larger than anticipated syndicated offers.

Table 7

Gilt sales outturn relative to remit targets

Total sales split type/maturity	£mn	Split %	Remit plan	Relative to plan
Short-dated conventional	53,177	32.0%	52,700	477
Medium-dated conventional	38,146	22.9%	38,200	-54
Long-dated conventional	41,077	24.7%	40,500	577
Index-linked	33,953	20.4%	33,800	153
Total	166,353		165,200	1,153
Sales at auctions (including PAOF)	£mn	Split (%)	Remit plan	Relative to plan
Short-dated conventional	53,177	39.9%	52,700	477
Medium-dated conventional	38,146	28.6%	38,200	-54
Long-dated conventional	24,655	18.5%	24,100	555
Index-linked	17,168	12.9%	17,000	168
Total	133,146		132,000	1,146
Total proceeds from PAOF in FY	£mn	% auction total		
Short-dated conventional	3,254	6.5%		
Medium-dated conventional	2,514	7.1%		
Long-dated conventional	1,628	7.1%		
Index-linked	699	4.2%		
Total	8,095	6.5%		
Supplementary Gilt Issuance	£mn	% of total sales	Remit plan	Relative to plan
Syndications	26,938	16.2%	26,200	738
Tenders	6,268	3.8%	7,000	-732
	33,207	% by maturity/type	33,200	7
Long conventional	16,422	49.5%	16,400	22
Index-linked	16,785	50.5%	16,800	-15
	33,207		33,200	7

# Quantitative analysis of debt service cost and risk

In the Annual Review 2008-09 the DMO published details of the Portfolio Simulation Tool (PST)<sup>11</sup>, a model developed to analyse the impact of annual issuance decisions on the characteristics of the Government's outstanding debt portfolio. As part of the DMO's remit analysis for 2011-12<sup>12</sup>, the use of the PST was extended to illustrate the impact of alternative debt issuance strategies on the debt service cost and risk of the debt portfolio over a five year horizon<sup>13</sup>.

- Debt service cost is the cost of gilt coupon payments (measured in terms of the relevant yield) and redemptions associated with Government debt,
- Debt service cost at risk has been calculated by deriving a lognormal distribution of nominal yields from 1,000 Monte Carlo simulations<sup>14</sup> and picking the 95th percentile representing a 5 per cent probability of extreme increases in yields, i.e. the tail risk. The yields are input into the PST to calculate what the debt service cost would be at those extreme yields.
- It is not currently possible within the modelling framework to calculate the standard deviation of debt service cost, i.e. a symmetric risk measure.

Table 8 below illustrates four issuance strategies for which the above mentioned cost and risk were calculated:

	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	2.9	29.1	23.0	20.5	4.1	3.2	10.3	7.0
2010-11								
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.

<sup>11</sup> See Chapter 6, http://www.dmo.gov.uk/documentview.aspx?docname=research/PST\_gar0809.pdf.

<sup>&</sup>lt;sup>12</sup> Published in the Debt and Reserves Management Report 2011-12 on 23 March 2011 alongside the Budget.

<sup>&</sup>lt;sup>13</sup> This is the horizon of the Central Government Net Cash Requirement (CGNCR) forecast.

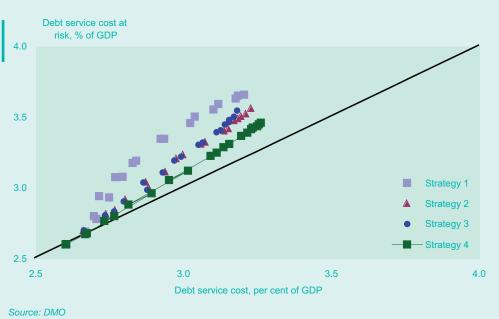
<sup>&</sup>lt;sup>14</sup> The lognormal distribution used for nominal yields ensures that yields can never be negative. For real yields, a normal distribution (not in logs) is used in order to permit negative values in the simulation. The Monte Carlo simulations' random sampling is drawn from a distribution 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.

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Strategies 1 and 4 represent two extreme issuance programmes with 100 per cent allocation to short-dated and long-dated 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 upward sloping shape of the yield curve). Strategy 2 has a fairly even skew across maturity baskets and is based on the outturn allocation in 2010-11. Strategy 3 represents a slight variation in the maturity breakdown with respect to Strategy 2, with an increase in short-dated conventional issuance and a reduction in medium and long-dated conventional issuance. All strategies comprise 80% of issuance in conventional gilts and 20% in index-linked gilts, except Strategy 3, which slightly increases the proportion of index-linked gilts in the debt portfolio.

For each strategy, the debt service cost has been calculated using the nominal and real yield curves calculated by the PST<sup>15</sup>, while debt service cost at risk has been arrived at by using the upper 95th percentile of the simulated yield distribution, as explained earlier. For example, while 5-year PST nominal yields stood at 2.8%, the upper 95th percentile of the simulated yield curve distribution at the 5-year point was 4.9%<sup>16</sup>. That can be thought of as the shock to 5-year yields that would take place with a 5% probability<sup>17</sup>. Chart 16 shows the scatter plot of the resulting tradeoffs. The 45 degree line represents a world in which debt service cost and risk are equal, i.e. there is no risk that yields would change.

Chart 16
Syndication
programme sales
compared
with evenflow
2010-11



<sup>&</sup>lt;sup>15</sup> Ten-working day average as at 15 February 2011. 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, see http://www.bankofengland.co.uk/statistics/yieldcurve/index.htm.

<sup>&</sup>lt;sup>16</sup> The PST uses the implied nominal and real forward par yield curves for setting the coupons on new bonds issued over the five-year simulation horizon.

<sup>&</sup>lt;sup>17</sup> The 95th percentile of the simulated distribution of yields does not represent an overall parallel upward shift from the baseline yield curve. Instead, the largest increase in yields takes place in the short to medium-dated maturity areas, with the long end remaining at a broadly similar level. 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-dated yields than in long-dated yields.

The following results can be highlighted from Chart 16:

- The general upward trend in the debt service cost of all strategies reflects the fact that the forecast stock of debt continues to grow over this time horizon.
- Debt service cost and risk under Strategy 2 (based on the actual strategy followed in 2010-11) and Strategy 3 (a slight increase in short-dated issuance relative to strategy 2) are very similar. Given the large size of the existing debt portfolio, small changes in issuance strategies do not have a sizeable impact on the overall maturity profile of the portfolio and therefore its cost and risk characteristics. Changes need to be more extreme, such as Strategies 1 and 4, to result in a notably different picture.
- Reflecting the upward sloping yield curve, Strategy 1 depicts the cheapest strategy (see corresponding cost of the last data point at the end of the 5-year simulation horizon<sup>18</sup>), but the largest risk level for a given cost (overall highest path of data points). This reflects, on the one hand, historically low short-term yields, and on the other hand, the fact that short-term issuance carries the largest amount of re-financing risk. The opposite is true for Strategy 4.
- The four strategies seem to converge towards the end of the simulation horizon. This reflects the shape of the implied forward curve which flattens considerably during the simulation horizon.

Overall, this analysis 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 (given the current yield curve) 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 (given the current yield curve). This analysis is only part of a broad range of factors<sup>19</sup> to be considered when forming the debt management strategy, including: relative cost-effectiveness, management of the range of risks to which issuance exposes the Exchequer, demand, operational constraints and practical considerations.

<sup>&</sup>lt;sup>18</sup> In order to depict completely 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>&</sup>lt;sup>19</sup> See Annex B, Context for the decisions on the Debt Management Office's financing remit, in the Debt and Reserves Management Report 2011-12,

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# The DMO remit 2011-12 and future financing projections

### March 2011 Budget

The DMO remit for 2011-12 was published in the Debt and Reserves Management Report 2011-12 on 23 March 2011 alongside the Budget.

Total debt sales by the DMO of £167.4 billion were planned in 2011-12, split as follows:

Outright gilt sales £169.0 billion

Net Treasury bill sales -£1.6 billion

#### The gilt financing remit structure

It was intended that the gilt sales plans be met through a combination of:

- £132.8 billion sales in 47 outright auctions; and
- £36.2 billion sales via supplementary distribution methods split as follows:
  - £31.6 billion in a programme of up to eight syndicated offerings; and
  - £4.6 billion in a programme of sales by mini-tender

The planning assumption is that the entire £36.2 billion of the supplementary gilts sales programmes would be directed at long conventional and index-linked gilt sales.

The overall planned split of issuance is as follows:

- £58.0 billion of short-dated conventional gilt sales in 12 auctions;
- £34.9 billion of medium-dated conventional gilt sales in 10 auctions;
- £37.7 billion of long-dated conventional gilts (£21.3 billion of sales in 10 auctions and £16.4 billion in a combination of syndicated offerings and mini-tenders); and
- £38.0 billion of index-linked gilt sales (£18.6 billion in 15 auctions; and £19.8 billion in a combination of syndicated offerings and mini-tenders).

In terms of delivering the remit, priority is given by the DMO to meeting the individual target cash amounts for different types and maturities of gilts. The composition of issuance methods to deliver these targets are, however, planning assumptions. Total financing by supplementary methods (and the split between methods) will be dependant on market and demand conditions at the time the operations are conducted.

# The supplementary distribution programme

A modification of approach was announced regarding the implementation of the 2011-12 supplementary distribution programme. In its announcement accompanying the publication of the 2011-12 remit the DMO announced that it intended to implement the programme of syndicated offerings in 2011-12 more evenly across the year than in 2010-11 via smaller and more regular operations. The initial planning assumption was for a programme of up to eight syndicated offerings (five of index-linked gilts with an average size of £3.62 billion (cash) and three of

long-dated conventional gilts with an average size of £4.50 billion (cash)). This decision took into account mitigation of intra-year financing risk associated with a heavily front (or back) loaded programme.

The DMO also announced a change of emphasis for the mini-tender programme the size of which was scaled back from 2010-11 to 2.7% of initially planned gilt sales compared with 5.3% in 2010-11. In 2011-12 mini-tenders were seen as being used primarily to support the syndication programme<sup>20</sup> by providing additional operational flexibility to accommodate unexpected variations in proceeds from the syndication programme, i.e. implying the removal or addition of tenders to the programme as required, in accordance with the terms of the financing remit.

The remit also provided for the continued application of the PAOF in 2011-12.

### Other operations

The remit specified that the DMO has no current plans to hold any switch auctions, reverse auctions or conversion offers in 2011-12.

### New gilt instruments/issuance techniques

The remit also specified that prior to introducing any new types of gilt instrument the DMO would consult market participants and seek HM Treasury's approval.

In particular, it was noted that the Government expected to undertake a formal consultation on the issuance of Consumer Price Index (CPI) - linked gilts (following the outcome of the Department for Work and Pensions' (DWP) consultation exercise on Government's earlier decision to move to CPI (from RPI) as the statutory minimum for regulating occupational pension schemes.

<sup>&</sup>lt;sup>20</sup> At the time of their incorporation into the annual remit structure in 2009-10, mini-tenders were primarily seen as a means of accessing emerging pockets of demand for gilts as they emerged in the course of the financial year.

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# **Consultation on CPI-linked gilts**

The DMO launched a consultation on 29 June 2011 to help build an evidence base to inform a decision by Government on whether to issue gilts whose cash flows would be linked to the Consumer Prices Index (CPI). The formal period of consultation will close on 22 September 2011.

In building an evidence base on the case to issue a new type of instrument, the expected benefits, costs and risks of issuing CPI-linked gilts for both the Government as issuer and the gilt market will be taken into account. In particular the Government will assess the case for CPI- linked gilts with reference to:

- consistency with meeting the debt management objective and the principles on which UK debt management is based;
- the impact on liquidity and the good functioning of the gilt market;
- the likely scale of demand for a new type of gilt; and
- the cost and resource commitment needed for implementation in comparison with the size of potential demand.

Other factors which will need to be taken into account in reaching a decision on whether to launch of CPI-linked gilts include:

- the depth of investor demand for such instruments both in an absolute context and also relative to RPI-linked gilts and the extent to which potential investors would be prepared to pay a premium for such gilts. In particular, given that the UK pensions sector represents a key investor group for index-linked gilts, it will be important to understand the extent to which the shift to CPI as the statutory minimum for regulating occupational pension schemes will affect the preferred choice for pension fund Liability Driven Investment (LDI) purposes;
- the Government's assessment of the impact of any CPI-linked issuance on the smooth functioning of the market in inflation-linked UK Government debt: for example the Government is not inclined to issue a new type of debt instrument that is likely to appeal only to a very limited group of investors (or for a temporary period); and
- the potential risks associated with the introduction of CPI-linked gilts, including risks of market fragmentation and liquidity (and how these risks might be managed). The DMO's consultation document can be accessed at:
  - http://www.dmo.gov.uk/documentview.aspx?docname=publications/giltmarket/consultationpapers/cons20110629.pdf&page-Gilts/Consultation

# **Treasury bill financing**

The stock of Treasury bills in market hands was scheduled at the Budget to fall by £1.6 billion in 2011-12, implying a projected stock of Treasury bills at end-March 2012 of £60.8 billion.

### CGNCR outturn 2009-10 revision to the 2010-11 financing remit

The publication of the CGNCR outturn for 2010-11 on 21 April 2011 resulted in a reduction in planned gilt sales in 2011-12 of  $\mathfrak{L}1.5$  billion to  $\mathfrak{L}167.5$  billion. The remit adjustment was accommodated by reducing sales broadly in line with the planned split of issuance announced at Budget 2011, as follows:

<ul> <li>Short-dated conventional</li> </ul>	-£0.6 billion (to £57.4 billion).
<ul> <li>Medium-dated conventional</li> </ul>	-£0.2 billion (to £34.7 billion).
<ul> <li>Long-dated conventional</li> </ul>	-£0.3 billion (to £37.4 billion).
<ul><li>Index-linked gilts</li></ul>	-£0.4 billion (to £38.0 billion).

All reductions were to planned sales at auctions, but there were no changes to the auction calendar, with reductions achieved by lowering required average auction sizes, as shown below.

Average auction sizes (cash)	April revision	March Budget
<ul> <li>Short-dated conventional</li> <li>Medium-dated conventional</li> <li>Long-dated conventional</li> <li>Index-linked</li> </ul>	£4.78 billion £3.47 billion £2.10 billion £1.21 billion	(£4.83 billion). (£3.49 billion). (£2.13 billion). (£1.24 billion).

The gilt remit structure following the April 2011 revision is summarised in Table 9.

Table 9
Structure of the 2011-12 gilt |
financing remit following the
April 2011 CGNCR outturn

	Auction	Syndication	Mini-tender	Total
Short-dated conventional				
£ billion	57.4			57.4
Per cent				34.3%
Medium-dated conventional				
£ billion	34.7			34.7
Per cent				20.7%
Long-dated conventional				
£ billion	21.0	13.5	2.9	37.4
Per cent				22.3%
Index-linked				
£ billion	18.2	18.1	1.7	38.0
Per cent				22.7%
Total	131.3	31.6	4.6	167.5

Principally as a result of the sales of bilateral bills in the period after the Budget, the planned rundown of the stock of bills in 2011-12 rose to £2.8 billion, but the target stock for end-March 2012 remained at £60.8 billion.

### **Future remit revisions**

There are two main events which may trigger revisions to the remit in any financial year:

- the publication, usually in the third week of April, of an outturn to the CGNCR for the previous financial year if the outturn differs from the forecast published in the Budget; and/or
- the publication, in the Autumn Forecast (usually in November-December period), of a significantly different forecast financing requirement for the current financial year.

### **Future financing projections**

The Budget in March 2011 also included projections for the CGNCR as a percentage of GDP out to 2015-16. Table 10 sets out the resulting CGNCR projections in cash terms together with redemption totals to produce illustrative financing projections. Note that these are not gilt sales forecasts - they take no account of possible contributions to financing by NS&I or Treasury bill sales.

Table 10 | March 2011 Budget: | illustrative financing projections

(£bn)				
	2012-13	2013-14	2014-15	2015-16
CGNCR projections	105	80	46	33
Gilt redemptions	53	47	60	52
Financing for the reserves	6	6	6	0
Financing requirement	164	133	112	85
CGNCR change since Autumn Forecast (AF) 2010	14	10	7	6
Financing for the reserves change since AF 2010	6	6	6	na
Redemption change since AF 2010	0	0	0	12
Figures may not sum due to rounding.				

# **Chapter 3: Exchequer Cash Management**

# Exchequer cash management remit 2010-11

The DMO's cash management remit for 2010-11, published alongside the Budget on 24 April 2010, specified that the <u>Government's</u> 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 cash surplus, to ensure this is used to best advantage".

HM Treasury and the DMO work together to achieve this, with HM Treasury providing information to the DMO about flows into and out of the National Loans Fund (NLF) and the DMO making arrangements for funding and for placing net cash positions, primarily by carrying out market operations on the basis of HM Treasury forecasts.

### The DMO's cash management objective

The remit specifies that the <u>DMO's</u> cash management objective is to:

"minimise the cost of offsetting the Government's net cash flows over time, while operating within 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."

### Instruments and operations used in Exchequer cash management

In 2010-11 the DMO carried out its cash management objective primarily through a combination of:

- bilateral market operations with DMO counterparties; and
- bilateral Treasury bill sales.

The average yields achieved compared with prevailing General Collateral (GC) reporates are reported in Annex B. Variations in the stock of Treasury bills in market hands serve as a financing instrument within short-term debt sales. In 2010-11, Treasury bill sales contributed £0.3 billion to financing. Treasury bill tender sizes are determined with a view to meeting the end financial year target stock. Table 11 shows the split of issuance in Treasury bills by maturity at tenders over the course of the financial year.

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# **Bilateral Treasury bill facility**

Since November 2007 the DMO has had access to a facility which allows it to reopen existing Treasury bills and issue them on a bilateral basis, on request from its cash management counterparties (provided that such issuance is consistent with the DMO's cash management operational requirements). In particular, bills sold through the facility can contribute to smoothing cumulative cash positions. Monthly issuance of bilateral bills is shown in the "Other issuance" category in Table 11. At end-March 2011, £5.147 billion of bilateral bills were in issue and these formed part of the £63.647 billion stock in market hands on that date.

Table 11 **Treasury bill issuance 2010-11** 

Month End	One Month (£ million)	Three Month (£ million)	Six Month (£ million)	Other Issuance (£ million)	Total Issuance (£ million)	Total Stock Outstanding (£ million)
Apr 2010	4,000	6,000	6,000	785	16,785	61,619
May 2010	4,000	6,000	6,000	1,160	17,160	62,419
Jun 2010	5,000	7,500	7,500	2,898	22,898	64,832
Jul 2010	4,000	6,000	6,000	2,238	18,238	64,835
Aug 2010	5,000	7,500	7,500	1,206	21,206	63,775
Sep 2010	4,000	6,000	6,000	3,003	19,003	65,426
Oct 2010	4,000	6,000	6,000	339	16,339	64,484
Nov 2010	2,500	5,000	7,500	1,307	16,307	60,026
Dec 2010	1,500	3,000	4,500	1,566	10,566	55,599
Jan 2011	2,500	5,000	7,500	3,037	18,037	55,556
Feb 2011	2,500	4,000	6,000	2,927	15,427	55,752
Mar 2011	6,000	6,000	6,000	4,475	22,475	63,647

The breakdown of the Treasury bill portfolio (including amounts issued bilaterally) at end-March 2011 is shown in Table 12.

Table 12

Treasury bills outstanding
at 31 March 2011

Bill maturity date	Amount in issue (£mn)
04 Apr 2011	4,578
11 Apr 2011	4,820
18 Apr 2011	4,723
26 Apr 2011	5,116
03 May 2011	2,561
09 May 2011	3,250
16 May 2011	2,518
23 May 2011	2,508
31 May 2011	2,629
06 Jun 2011	3,024
13 Jun 2011	3,338
20 Jun 2011	3,228
27 Jun 2011	1,500
04 Jul 2011	1,502
11 Jul 2011	1,838
18 Jul 2011	1,509
25 Jul 2011	1,504
01 Aug 2011	1,500
08 Aug 2011	1,500
15 Aug 2011	1,500
22 Aug 2011	1,501
30 Aug 2011	1,500
5 Sep 2011	1,500
12 Sep 2011	1,500
19 Sep 2011	1,501
26 Sep 2011	1,500
TOTAL	63,647

### Bilateral cash management operations

In practice, a large majority of cash management operations in 2010-11, as in previous years, were negotiated bilaterally by the DMO with market counterparties. To ensure competitive pricing, the DMO maintains relations with a wide range of money market counterparties with whom it transacts both directly and via voice and electronic brokers.

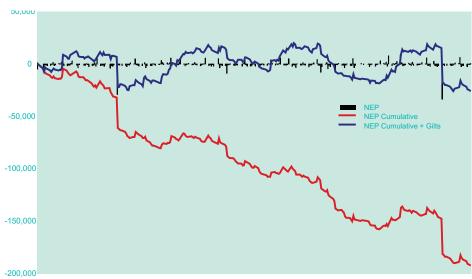
Cash management is conducted through a diversified set of money market instruments in order to minimise cost whilst operating within agreed risk limits. Sterling-denominated repo and reverse repo instruments play a particularly important role, though short-dated cash bonds, Certificates of Deposit, Commercial Paper, reverse repo of foreign currency bonds swapped into Sterling and unsecured loans and deposits are also used.

The DMO's money market dealers borrow from or lend to the market on each business day to balance the position in the NLF. In order to do so the DMO receives from HM Treasury forecasts of each business day's significant cash flows into and out of central government. Additionally, the DMO obtains up-to-date intra-day monitoring of cash flows as they occur. The DMO trades only with the purpose of offsetting current and forecast future government cash flows, subject to the agreed risk limits. The DMO does not take interest rate positions, except in so far as that is necessary to offset forecast future cash flows.

Over the course of a financial year, the Exchequer's cash flow has typically had a fairly regular and predictable pattern associated with the tax receipts and expenditure cycles. Outflows associated with gilt coupons and redemptions are also known in advance.

Chart 17 shows the scale of daily cash flows measured in terms of the Net Exchequer Position (NEP) in 2010-11. It excludes the effects of Treasury bill issuance and NS&I's overall net contribution to Government financing, but highlights the major contribution of gilt sales to reducing the cumulative deficit in year.





1-Apr-10 2-May-10 2-Jun-10 3-Jul-10 3-Aug-10 3-Sep-10 4-Oct-10 4-Nov-10 5-Dec-10 5-Jan-11 5-Feb-11 8-Mar-11

Source: HM Treasury/DMO

### Active cash management performance framework

Since 2000 the in-year cash needs of the Government have been managed actively by HM Treasury and the DMO with the Treasury providing short and medium-term forecasts of daily net cash surpluses and deficits and the DMO transacting with its market counterparties in a range of instruments at a range of different maturities to offset the current and forecast future cumulative net cash position.

This active cash management framework allows the exercise of considerable discretion by specialist cash managers in selecting the appropriate counterparties, instruments and maturities with which to deliver the cash management remit at minimum cost subject to the agreed risk limits. The Cash Management Review of 2004-05<sup>21</sup> recommended this discretion be captured through a quantifiable measure of net interest saving as a means of enhancing effectiveness and ensuring accountability. In 2006-07 HM Treasury and the DMO announced their intention to begin formal performance reporting, commencing with the 2007-08 outturn. The results for 2010-11 are presented in Annex B under key performance indicator (KPI) 1.4.

HM Treasury and the DMO equally recognise that to measure performance solely in terms of net interest savings is a somewhat narrow interpretation that does not fully capture the ethos or the wider policy objectives the Government sets the DMO as its cash manager. Exchequer cash management differs from that of a commercial entity in that it does not seek to maximise profits, but rather to minimise costs subject to risk while playing no role in the determination of Sterling interest rates. Consequently the DMO and HM Treasury monitor and assess overall performance in meeting the Government's objectives using a number of quantitative and qualitative KPIs and controls. A full report on performance in 2010-11 appears in Annex B.

<sup>&</sup>lt;sup>21</sup> See Chapter 5 Annual Review 2004-05 published in July 2005.

# Chapter 4: Fund management and local authority lending for Central Government

# **Fund management**

The origins of the Commissioners for the Reduction of the National Debt (CRND) date back to the passing of the National Debt Reduction Act of 1786. From their earliest days the Commissioners had associations with the stock market and this led to a diversification of CRND operations, including in particular the responsibility for the investment of major Government funds. This now constitutes the main function of CRND, which had around £49.7 billion under its control at end March 2011, representing the assets of the various investment accounts.

The investment powers differ to some extent from fund to fund, depending upon the provisions of the relevant Acts of Parliament, but essentially investments are restricted to cash deposits or government and government guaranteed securities. Currently, the largest funds are the National Insurance Fund Investment Account, the Court Funds Investment Account and the National Lottery Distribution Fund Investment Account. The main funds under management at end-March 2011 was as follows:

- Court Funds Investment Account
- Insolvency Services Investment Account
- National Endowment for Science, Technology and the Arts
- National Insurance Fund Investment Account
- National Lottery Distribution Fund Investment Account
- Northern Ireland Court Service Investment Account
- Northern Ireland National Insurance Fund Investment Account
- Olympic Lottery Distribution Fund Investment Account

CRND continues to provide an efficient, value for money service, with the main investment objectives being to maintain sufficient liquidity to meet withdrawals and to protect the capital value of the funds under management.

# Lending to local authorities

#### Public Works Loan Board (PWLB) responsibilities and objectives

The PWLB is an independent statutory body, headed by Commissioners, which can be traced back to 1793. Since 2002, the Board has operated as a unit of the DMO, sharing common services while retaining its statutory identity. The Board's Secretary and staff are employees of the DMO.

The PWLB's function is to consider loan applications from local authorities and other prescribed bodies and, where loans are made, to collect the repayments. Nearly all borrowers are local authorities requiring loans for capital purposes. Loans, which are automatically secured by statute on the revenue stream of the authority, are sourced from the National Loans Fund (NLF). Rates of interest are determined by the DMO in accordance with methodologies agreed with HM Treasury.

The Board's accounts are audited by the Comptroller and Auditor General, whose reports on them are laid before Parliament, to which the Board makes its own Annual Report.

## **PWLB** operations in 2010-11

New loans of  $\mathfrak{L}5.25$  billion (cash) were made to local authorities during 2010-11. After taking account of loan repayments, the PWLB's portfolio of loans grew by  $\mathfrak{L}1.91$  billion so that by end-March 2011, the outstanding balance of principal was  $\mathfrak{L}53.13$  billion, with a market value of  $\mathfrak{L}61.06$  billion.

# Chapter 5: The DMO

The DMO was established on 1 April 1998. In institutional terms, the DMO is legally and constitutionally part of HM Treasury, but, as an Executive Agency, it operates at arm's length from Ministers. The Chancellor of the Exchequer determines the policy and operational framework within which the DMO operates, but delegates to the Chief Executive operational decisions on debt and cash management, and day-to-day management of the office.

The separate responsibilities of the Chancellor and other Treasury Ministers, the Permanent Secretary to the Treasury and the DMO's Chief Executive are set out in a published Framework Document (available on the DMO website), which also sets out the DMO's objectives and its Chief Executive's lines of accountability. The Chief Executive is accountable to Parliament for the DMO's performance and operations, both in respect of its administrative expenditure and the Debt Management Account.

# **Business planning**

The DMO publishes an annual Business Plan. The plan sets out the DMO's targets and objectives for the year ahead, and the strategies for achieving them. It also reviews the preceding year. The starting point of the DMO's business plan is the strategic objectives given by the Chancellor of the Exchequer to the DMO and set out in the Framework Document.

#### **Organisation and resources**

The DMO is organised flexibly to ensure that resources are available as necessary for the respective requirements of the business areas. There are two main business areas in the DMO: Policy/Markets and Operations/Resources. These areas are in turn split into a number of teams across which there is substantial cross-team working to ensure that both policy and operational concerns are adequately met; that the relevant skills are applied to tasks or problems; and that essential operations are adequately resourced.

The DMO's Managing Board (MB) considers all major strategic decisions and comprises the Chief Executive, the Joint Heads of Policy and Markets (one of whom is the Deputy Chief Executive) and the Chief Operating Officer. The other members in 2010-11 were Brian Larkman and Brian Duffin (non-executive directors) and Samantha Beckett from HM Treasury (non-executive director).

Within the DMO most business issues are considered by internal committees: in particular those on debt management, cash management, and fund management; they are supported by a credit and market risk committee, an operational risk committee and a business delivery committee.

### **Managing risk**

The processes the DMO employs to manage its risks are subject to continual review and development to ensure their continued effectiveness. Of particular note this year was the development of a comprehensive risk management framework to address all risks the DMO faces. This included the introduction of an Operational Risk Committee and redefinition of the responsibilities of the Credit and Market Risk Committee.

#### Financial performance

The DMO is financed through HM Treasury and operates under net cost arrangements, meaning that the control total for the DMO's annual expenditure is agreed by Parliament and comprises an aggregate of target expenditure and income.

# **Operating costs**

The DMO's net operating cost for 2010-11 was £14.7 million, a reduction of £1.0 million from 2009-10. The reduction largely related to the DMO's trading and debt issuance activities, which include settlement and custodial charges, brokerages fees and the cost of acting as an agent for the National Loans Fund (NLF) in issuing government backed securities. The reduced net cost was principally due to the DMO's lower level of trading activity over the course of the financial year compared with 2009-10.

The DMO successfully managed its operations within the expenditure limits agreed with HM Treasury and voted by Parliament.

# The DMO's contribution to the Government's activities to support financial markets and the UK banking sector

In 2010-11 the DMO continued to undertake a range of activities at the request of HM Treasury that had been put in place to help stabilise financial markets and support the UK banking sector. This involved participation in a number of schemes (as listed below) with HM Treasury and the Bank of England.

#### i) Special Liquidity Scheme

On 21 April 2008 the Bank of England launched a scheme to allow banks to swap temporarily their high quality mortgage-backed and other securities for UK Treasury bills. The DMO facilitates this scheme by lending Treasury bills to the Bank (for a fee) when required.

The DMO established, and subsequently refreshed on a monthly basis, the stock of bills available for this scheme by purchasing specially created Treasury bills from the NLF in quantities informed by the Bank of England's estimates of future demand. The Treasury bills are held by the Debt Management Account (DMA) and earn interest from the NLF.

The drawdown window to access the SLS closed on 30 January 2009, but existing swaps may be extended up to 30 January 2012. At 31 March 2011, the nominal value of Treasury bills created by the DMA under the SLS was £123.2 billion (2010: £176.4 billion).

# ii) Credit Guarantee Scheme (CGS)

The operational elements of the 2008 Credit Guarantee Scheme are administered by the DMO acting as an agent for HM Treasury. The DMO's role has involved assessing applications to the scheme, issuing guarantees for eligible instruments and collecting the fees payable from participating institutions.

The scheme closed to new applicants and new issuances on 28 February 2010. However, after 9 April 2012, and subject to the agreement of HM Treasury, some guaranteed liabilities may be rolled over for an additional two years up to the scheme end date of 9 April 2014. Further information about the CGS is available from a dedicated part of the DMO website at:

http://www.dmo.gov.uk/index.aspx?page=CGS/CGS\_about

# **European Union Emissions Trading Scheme: DMO involvement**

The DMO, on behalf of the Department of Energy and Climate Change (DECC), continued to conduct auctions of EU Allowances in the UK for Phase II of the EU Emissions Trading System (EU ETS).

In 2010-11 the Government auctioned a total of 35.2 million allowances across eight auctions (4.4 million allowances per auction). All auctions were successfully covered with an average bid to cover ratio of over six times the amount offered. The DMO is continuing to run the UK's EU ETS auctions in Phase II and has a further five auctions (of 3.5 million allowances each) scheduled up to December 2011. All EU ETS auction results and a report by the Independent Observer from each auction are published on the DMO's website at:

http://www.dmo.gov.uk/index.aspx?page=ETS/AuctionInfo

# **Annexes:**

- A) List of GEMMs and Inter Dealer Brokers (IDBs) at 31 March 2011
- B) Debt and cash management performance
- C) The gilt portfolio

# A: List of GEMMs and IDBs at 31 March 2011

(All are market-makers in both conventional and index-linked gilts)

**GEMM** Website

Bank of America Merrill Lynch www.baml.com

Merrill Lynch Financial Centre 2 King Edward Street London EC1A 1HQ

Barclays Capital <u>www.barcap.com</u>

5 The North Colonnade

Canary Wharf London E14 4BB

BNP Paribas (London Branch) www.bnpparibas.com

10 Harewood Avenue London NW1 6AA

Citigroup Global Markets Limited www.citigroup.com

Citigroup Centre 33 Canada Square London E14 5LB

Credit Suisse Securities www.credit-suisse.com

One Cabot Square London E14 4QJ

Deutsche Bank AG (London Branch) www.db.com

Winchester House
1 Great Winchester Street

London EC2N 2DB

Goldman Sachs International Limited www.gs.com

Peterborough Court 133 Fleet Street London EC4A 2BB

HSBC Bank PLC www.hsbcgroup.com

8 Canada Square London E14 5HQ

Jefferies International Limited <u>www.jefferies.com</u>

Vintners Place 68 Upper Thames Street London EC4V 3BJ

**JP Morgan Securities Limited** 

www.jpmorgan.com

125 London Wall London EC2Y 5AJ

Morgan Stanley & Co. International Limited

www.morganstanley.com

20 Cabot Square Canary Wharf London E14 4QW

**Nomura International plc** 

www.nomura.com

Nomura House 1 St Martin's-le-Grand London EC1A 4NP

**Royal Bank of Canada Europe Limited** 

www.rbccm.com

Thames Court
One Queenhithe
London EC4V 4DE

**Royal Bank of Scotland** 

www.rbsmarkets.com

135 Bishopsgate London EC2M 3UR

**Santander Global Banking & Markets UK** 

www.santander.com

2 Triton Square Regents Place London NW1 3AN

**Scotiabank Europe plc** 

www.scotiabank.com

201 Bishopsgate London EC2M 3NS

**Societe General Corporate & Investment Banking** 

www.socgen.com/

SG House 41 Tower Hill London EC3M 4SG

The Toronto-Dominion Bank (London Branch)\*

www.tordom.com/

60 Threadneedle Street London EC2R 8AP

**UBS Limited** 

www.ubs.com/investmentbank/

1 Finsbury Avenue London EC2M 2PP

Winterflood Securities Limited\*

www.wins.co.uk

The Atrium Building Cannon Bridge 25 Dowgate Hill London EC4R 2GA

<sup>\*</sup> Retail GEMM

# **Inter Dealer Brokers**

BGC International www.bgcpartners.com

One Churchill Place Canary Wharf London E14 5RD

**Dowgate** www.ksbb.com

6th Floor Candlewick House 120 Cannon Street London EC4N 6AS

ICAP Electronic Broking Limited www.icap.com

2 Broadgate London EC2M 7UR

ICAP WCLK Limited www.icap.com

2 Broadgate London EC2M 7UR

Tullet Prebon Gilts <u>www.tulletprebon.com</u>

155 Bishopsgate London EC2N 3DA

# B: Debt and cash management performance

### Gilt issuance counterfactuals

The DMO has published the results of its measurement of relative performance of outright issuance against counterfactuals in its Annual Reviews since 2001. The intention in doing so is to illustrate whether different non-discretionary issuance patterns during the year would have resulted in higher or lower costs of financing (as represented by the cash weighted average yield of issuance). The calculations compare the cash weighted yield of actual issuance with the yield on various counterfactual issuance patterns but on the basis of a key assumption that the different issuance patterns modelled would not have impacted the levels of yields relative to those achieved in practice (see below).

The underlying rationale for considering issuance performance against counterfactuals is that it provides one means by which to analyse the performance of the debt management authorities in achieving the debt management objective in particular regarding the split of maturities/types of gilt sold. It is worth noting in this context that measuring performance against the primary debt management objective is not straightforward, a fact widely acknowledged by many other sovereign debt managers. Hence, presentation of counterfactuals should not be interpreted as a complete or authoritative means by which to test achievement against the debt management objective.

It is also important to recognise the limitations of the analysis. In particular, a major and unlikely assumption is that the shape of the yield curve remains fixed over time. This is particularly relevant when considering the refinancing timeframes associated with different maturities of debt (i.e. short-dated issuance needs to be refinanced much more frequently than long-dated) so this analysis is not comparing like-for-like in this regard. In principle therefore, if yields evolve as reflected by the forward yield curve, it is too simplistic to say that in any one year one issuance pattern has outperformed another.

Another relevant assumption is that the counterfactual issuance patterns would not have had any impact on yields. This is unlikely to hold in practice particularly where the gilt issuance pattern under the counterfactual is significantly different from actual issuance (e.g. a heavy skew to a certain maturity). Whilst it is likely, certainly over the medium to longer-term, that the greatest influences on the level of yields will be macroeconomic conditions, market expectations of interest rates, and other external factors over which the debt manager has no control, establishing the extent to which changes in volumes and patterns of supply might affect yields is more difficult.

For these reasons, caution is required when interpreting the cost of counterfactual issuance patterns set out in this annex in comparison with actual issuance. The cash weighted average yield of actual issuance at the gilt auctions, syndicated offerings and mini-tenders in 2010-11 was 3.329%<sup>22</sup>.

The cash weighted average yield of issuance by type of gilt and maturity is shown in Table B1.

<sup>&</sup>lt;sup>22</sup> Index-linked real yields have been converted to nominal equivalents, assuming 3% RPI inflation.

Table B1

Average issuance yield
by type and maturity of gilt
2010-11

	Cash	%		
All issuance	166,353	3.329		
By maturity				
Short (conventional)	53,177	2.140		
Medium (conventional and index-linked)	43,732	3.595		
Long (conventional and index-linked)	69,445	4.071		
Conventional				
Short	53,177	2.140		
Medium	38,146	3.580		
Long	41,077	4.270		
Total conventional	132,400	3.216		
Index-linked				
Medium	5,586	3.698		
Long	28,368	3.783		
Total Index-linked	33,953	3.769		

This yield of 3.329% can be compared with yields derived by applying the actual annual cash weighted yield of different maturities/types of gilt to different gilt issuance patterns. Table B2 contrasts the actual average issuance yield in 2010-11 with three counterfactuals which assume:

- a) an even-distribution approach to financing;
- b) a significantly greater skew towards long-dated issuance;
- c) a significantly greater skew towards short-dated issuance.

Table B2

Illustrative yields assuming different issuance patterns

Conventional		Remit	Even-flow	Greater skew long	Greater skew short		
	%	(£bn)	(£bn)	(£bn)	(£bn)		
Short	2.140	53.2	44.1	10.0	112.4		
Medium	3.580	38.1	44.1	10.0	10.0		
Long	4.270	41.1	44.1	112.4	10.0		
		132.4	132.4	132.4	132.4		
Index linked							
Medium	ledium 3.698		17.0	0.0	34.0		
Long 3.783		28.4	17.0	34.0	0.0		
		34.0	34.0	34.0	34.0		
		400.4	400.4	400.4	400.4		
Total gilt sales		166.4	166.4	166.4	166.4		
Average yield %		3.329	3.414	4.001	2.673		
Difference (basis points)			8.5	67.3	-65.6		

An even-split approach to financing by maturity produces a marginally higher average yield of issuance (up 8.5bps or 2.6%) whereas the skews much longer and shorter produce significantly larger under- and over-performances respectively compared with the actual remit (the strong bias to long-dated issuance is 67.3bps or 20.2% higher and the strong bias to short-dated issuance is 65.6bps or 19.7% lower), primarily this reflects the current steep upward slope of the conventional gilt yield curve.

The outcomes from counterfactual modelling of this kind need to be considered in the context of an objective that requires the DMO (and many other sovereign issuers with similar objectives) to pursue policies designed to minimise long-term cost whilst taking account of the risks to which debt issuance exposes the Exchequer – i.e. the DMO does not seek exclusively to minimise yield at the expense of other considerations. In order to determine the maturity and composition of debt issuance, the Government takes into account a number of factors including:

- 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
- investors' demand for gilts.

## **Auction concession analysis**

There are a number of ways to measure auction concessions. The one presented in Table B3 uses the same methodology as in 2008-09 and 2009-10 and shows the extent of any concession/premium in the immediate run ups to auctions by measuring the difference between the actual proceeds received and those that would have been generated had each auction been priced at the close of business reference price on the previous day.

In 26 of the 49 auctions in 2010-11 prices at the auctions were lower than at the close on the previous day. The average concession across all auctions was £1.8 million, implying an aggregate concession of £86.8 million (by contrast the corresponding figures in 2009-10 were £0.4 million and £23.9 million).

On average, small premia were evident at short-dated conventional and index-linked auctions (£0.2 million and £0.5 million respectively). Average concessions of £2.8 million and £6.1 million were seen at medium- and long-dated conventional auctions respectively.

Applying the same methodology to mini-tenders results in an average concession of  $\mathfrak{L}1.2$  million and an aggregate concession of  $\mathfrak{L}8.4$  million. The average concession at long conventional mini-tenders was  $\mathfrak{L}2.4$  million while index-linked tenders cleared at an average premium of  $\mathfrak{L}0.3$  million. See Table B4.

Table B3
Concessions (-) and premia
ahead of gilt auctions
in 2010-11

Operation Date	Gilt	concession (-)/
07-Apr-2010	4¾% Treasury Stock 2015	<b>premium (£mn)</b> 2.70
13-Apr-2010	41/4% Treasury Gilt 2039	4.50
15-Apr-2010	05% Index-linked Treasury Gilt 2042	-7.74
22-Apr-2010	434% Treasury Gilt 2020	1.13
23-Apr-2010	11/4% Index-linked Treasury Gilt 2032	-1.50
28-Apr-2010	4½% Treasury Gilt 2013	7.20
11-May-2010	41/4% Treasury Gilt 2027	-22.05
13-May-2010	17/8% Index-linked Treasury Gilt 2022	6.98
20-May-2010	434% Treasury Stock 2020	-4.88
02-Jun-2010	234% Treasury Gilt 2015	4.67
03-Jun-2010	4½% Treasury Gilt 2034	-14.20
08-Jun-2010	11/4% Index-linked Treasury Gilt 2027	-3.08
09-Jun-2010	334% Treasury Gilt 2020	-11.25
17-Jun-2010	5% Treasury Stock 2014	0.80
01-Jul-2010	034% Index-linked Treasury Gilt 2047	5.04
06-Jul-2010	334% Treasury Gilt 2020	-6.83
14-Jul-2010	41/4% Treasury Gilt 2046	0.22
15-Jul-2010	17/8% Index-linked Treasury Gilt 2022	-3.36
20-Jul-2010	4% Treasury Gilt 2016	0.75
03-Aug-2010	234% Treasury Gilt 2015	3.75
10-Aug-2010	4½% Treasury Gilt 2034	1.23
12-Aug-2010	4% Treasury Gilt 2022	-5.70
19-Aug-2010	11/4% Index-linked Treasury Gilt 2027	5.00
02-Sep-2010	5% Treasury Stock 2014	-6.75
07-Sep-2010	034% Index-linked Treasury Gilt 2047	-1.84
15-Sep-2010	434% Treasury Gilt 2030	3.80
16-Sep-2010	334% Treasury Gilt 2020	9.30
05-Oct-2010	05/8% Index-linked Treasury Gilt 2042	2.03
14-Oct-2010	434% Treasury Gilt 2015	-1.02
19-Oct-2010	11/4% Index-linked Treasury Gilt 2032	-5.75
21-Oct-2010	334% Treasury Gilt 2020	9.30
02-Nov-2010	2% Treasury Gilt 2016	2.40
09-Nov-2010	11/4% Index-linked Treasury Gilt 2055	8.16
11-Nov-2010	4½% Treasury Gilt 2034	-0.60
18-Nov-2010	33/4% Treasury Gilt 2020	-17.55
07-Dec-2010	41/4% Treasury Gilt 2049	-32.80
15-Dec-2010	2% Treasury Gilt 2016	-4.55
16-Dec-2010	05% Index-linked Treasury Gilt 2042	-3.46
06-Jan-2011	3%% Treasury Gilt 2020	-2.40
11-Jan-2011	11/4% Index-linked Treasury Gilt 2032	3.78
19-Jan-2011	41/4% Treasury Stock 2036	-0.20
01-Feb-2011	2% Treasury Gilt 2016	-5.50
03-Feb-2011	41/4% Treasury Gilt 2040	-2.10
08-Feb-2011	17/8% Index-linked Treasury Gilt 2022	0.27
17-Feb-2011	334% Treasury Gilt 2020	2.50
01-Mar-2011	2% Treasury Gilt 2016	-1.60
03-Mar-2011	41/4% Treasury Gilt 2055	-4.30
08-Mar-2011	05/8% Index-linked Treasury Gilt 2042	3.60
17-Mar-2011	3%% Treasury Gilt 2021	-4.90
	Aggregate (auctions)	-86.80
	Average (auctions)	-1.77
Averages	Short-dated auctions	0.24
	Medium-dated auctions	-2.84
	Long-dated auctions	-6.05
	Index-linked auctions	0.54

Table B4
Concession and premium in basis point terms at gilt mini-tenders

Date	Gilt	Concession (-) Premium (+)
21 Apr 2010	11/4% Index-linked Treasury Gilt 2017	3.30
17 May 2010	41/4% Treasury Stock 2032	-2.10
16 Jun 2010	11/4% Index-linked Treasury Gilt 2017	1.21
01 Sep 2010	43/4% Treasury Stock 2038	-6.45
23 Sep 2010	11/4% Index-linked Treasury Gilt 2027	-1.87
13 Oct 2010	41/4% Treasury Gilt 2027	1.44
23 Nov 2010	11/4% Index-linked Treasury Gilt 2027	-3.90
	Aggregate	-8.37
	Average	-1.20
	Average (long-dated conventional)	-2.37
	Average (index-linked)	-0.32

# The DMO's cash management objective: performance report

The DMO's high level cash management objective as set out in Chapter 3 has been subdivided into a series of objectives, to each of which has been attached a Key Performance Indicator (KPI). The following section explains how performance has been delivered against these objectives in 2010-11.

Objective 1.1: DMO must supply sufficient cash each day to enable government to meet its payment obligations. This is fundamental and unconditional.

The core requirement of Exchequer cash management is to secure the day to day funding of Exchequer cash needs. This objective is supported by HM Treasury's daily net cash flow forecasts for 19 weeks ahead and intraday updates of same-day scheduled expenditure and revenue flows. The DMO cash dealers raise and place current and future anticipated net daily balances in the Debt Management Account (DMA) with counterparties in the Sterling money markets, transacting in a range of instruments and at a range of different maturities to smooth the profile of the forecast cumulative net cash position.

#### Table B5

### **CASH MANAGEMENT OBJECTIVE**

# **KEY PERFORMANCE INDICATORS & CONTROLS**

The Debt Management Office (DMO) must supply sufficient cash each day to enable government to meet its payment obligations. This is fundamental and unconditional.

Way and Means transfers must be avoided for cash management purposes by ensuring that there is always a positive Debt Management Account (DMA) balance.

Cash management operations and arrangements should be conducted in a way that does not interfere with monetary policy operations.

(NB: HM Treasury is responsible for monitoring and reporting performance of the forecasting function against outturns).

The DMO will conduct market operations with a view to achieving, within a very small range, the weekly cumulative target balance for the DMA at the Bank of England. The DMO will maintain formal and informal channels of communication with the Bank on conditions in the Sterling money markets.

The DMO will seek to avoid holding weekly or ad hoc Treasury bill tenders when the Bank conducts its weekly open market operations.

Cash management operations and arrangements should be conducted without impeding the efficient working of the Sterling money markets

The DMO will advise HM Treasury as appropriate on the impact of Exchequer cash flows on liquidity conditions in the sterling money markets.

The DMO should maintain a system in which the costs and risks are transparent, measured and monitored and the performance of government cash management is assessed. The DMO maintains an ethos of cost minimisation rather than profit maximisation.

The DMO will report to HM Treasury on a quarterly basis the details of its cash management activity, its active management performance against the Government's marginal cost of funds and the market and credit risks incurred. Performance may also be reported in the DMO Annual Review.

The DMO should maintain a credible reputation in the market that leads to lower costs in the long term and a cash management system that is sustainable.

The DMO should maintain channels of communication with money market participants and Treasury bill counterparties both formally and informally to explain, as far as possible, the nature and intent of its operations in the money markets.

The DMO should monitor compliance with its operational notices; provide complete, accurate and timely instructions to counterparties, agents, external systems and operators; and achieve the successful settlement of agreed trades on the due date.

The DMA is used to manage the Exchequer's net cash position. Balances in central government accounts contained within the Exchequer pyramid are swept on a daily basis into the NLF and the DMA is required to offset the resultant NLF balance through its borrowing and lending in the money markets. The DMA is held at the Bank of England and a positive end of day balance must be maintained at all times; it cannot be overdrawn. Automatic transfers from a Government Ways and Means (II) account at the Bank of England would offset any negative end of day balances, though it is an objective to minimise such transfers. Thus, evidence of meeting this objective is provided by reference to the number of occasions the DMA goes overdrawn.

KPI 1.1: Way and Means end-of-day transfers for cash management purposes must be avoided by ensuring that there is always a positive DMA balance.

• The DMO ensured a positive end-of-day DMA balance for the majority of 2010-11. The DMA did exceptionally end the day with a negative balance on 1 April 2010, as a result of an incident outside the DMO's control, thereby requiring temporary Ways and Means (II) transfers from the Bank of England.

Objective 1.2: Cash management operations and arrangements should be conducted in a way that does not conflict with the operational requirements of the Bank of England for monetary policy implementation.

The DMA target balance at the Bank of England serves solely as a buffer against unexpected payments that occur after the wholesale money markets have closed for same-day settlement. It serves to mitigate the risk of going overdrawn. All changes to the daily net cash forecast that occur before markets are closed should be transacted by DMO cash dealers with market counterparties. The DMO cash forecasters are required to notify the Bank of England, in advance of its weekly round of open market operations, of the target cumulative weekly balance on the DMA for the week ahead. This contributes to the forecast money market shortage and hence it is important that actual cumulative end-of-day balances do not differ significantly from target.

KPI 1.2: The DMO will conduct market operations with a view to achieving, within a very small range, the weekly cumulative target balance for the DMA at the Bank of England. The DMO will maintain formal and informal channels of communication with the Bank on conditions in the sterling money markets. The DMO will seek to avoid holding weekly or ad hoc Treasury bill tenders when the Bank conducts its weekly open market operations.

• The DMO achieved its target weekly cumulative balance for the DMA within a very small range (+/-2% of its weekly cumulative target) on 41 out of 52 occasions in 2010-11. In all cases, balances outside this range related to events beyond the DMO's control, largely unexpected late cash flows on the final day of the week or over long weekends. All significant known daily and forecast cumulative weekly variations from target were notified to the Bank of England in a timely fashion. The DMO and the Bank held regular meetings to review the operation of these arrangements.

 No cash management operations were undertaken that by their nature or timing could be perceived as clashing with the Bank's open market operations.

Objective 1.3: Cash management operations and arrangements should be conducted to avoid undermining the efficient functioning of the sterling money markets.

While this objective is difficult to capture in a KPI, the DMO interprets this as a responsibility to seek to minimise the impact of individual daily flows on the Sterling money markets while ensuring it deals at competitive prices. The DMO operates as a customer at the core of the money markets, seeking to ensure the widest possible access to maturities, instruments, trading arrangements and counterparties across which to diversify its cash management operations. Limits have been set on the amount of dealing with individual counterparties and in individual instruments; exposure to Sterling overnight liquidity and Sterling interest rates are also subject to limits. In accordance with objective 2.3, limits and controls are intended to avoid concentration of exposures and are reviewed regularly to ensure consistency with market trends and developments.

KPI 1.3: The DMO will advise HM Treasury as appropriate on the impact of Exchequer cash flows on liquidity conditions in the sterling money markets.

• Throughout 2010-11 the DMO undertook regular formal and informal communication with the Bank of England, money market counterparties, and industry groups to assess liquidity in the Sterling money markets. It also maintained frequent and regular dialogue to update HM Treasury on market liquidity and, working with HM Treasury, reviewed its trading policies and risk controls to respond to significant Sterling liquidity trends and developments.

Objective 1.4: The DMO should maintain a system in which the costs and risks are transparent, measured and monitored and the performance of government cash management is assessed. The DMO maintains an ethos of cost minimisation rather than profit maximisation.

The active cash management framework encompasses a series of quantitative liquidity, interest rate, foreign exchange and credit risk limits that together reflect the government's risk preferences and are designed to be consistent with the wider policy objectives the Government sets its cash manager.

Under the current approach active cash performance is measured and evaluated directly by comparing actual net interest paid and received with cost of funds (i.e. deducting net interest on daily balances at the Bank of England repo rate and deducting transaction and management costs).

KPI 1.4: The DMO will report to HM Treasury on a quarterly basis the details of its cash management activity, including active cash management performance after cost of funds and the liquidity, interest rate, foreign exchange and credit risks incurred. Performance may also be reported in the DMO Annual Review.

- The DMO reports to the Treasury on a quarterly cycle the details of its cash management activity, including active management performance and usage of liquidity, interest rate, foreign exchange and credit risk limits.
- Net returns (over cost of funds) will be affected by market conditions and the size and volatility of the Exchequer's cumulative cash position, both of which will vary significantly over time.
- Results should be interpreted in the context of the Government's ethos of cost minimisation and not profit maximisation: cash transactions are solely intended to smooth a given cash flow profile over time and across products and instruments, within agreed risk parameters, and are not intended to seek opportunities to generate excess return.
- Active cash management earned positive net interest after cost of funds, but before transaction and management costs, of £33.9 million for 2010-11 compared with £24.8 million for 2009-10. The DMO's estimated transaction and management costs during the year were £8.5 million.
- Positive net interest after cost of funds has been earned by virtue of funding the Exchequer's daily cash needs in the wholesale money markets at rates that have been on average below the prevailing Bank of England Bank Rate and from investing surpluses at market rates that were on average above Bank Rate.
- There were no breaches of the credit, interest rate, foreign exchange or liquidity limits in 2010-11.

Objective 1.5: The DMO should maintain a credible reputation in the market that leads to lower costs in the long term and a system that is sustainable.

The DMO seeks to maintain and enhance its reputation in the market by being open, transparent and consistent about the aims and intentions of its operations and transactions. This has allowed it to continue to widen its market and counterparty access and to deal at fair and competitive rates.

In addition, DMO personnel, processes and internal systems have to be capable of complying with market standards and following market practice in respect of speed and accuracy in negotiation, clearing and settlement of trades.

KPI 1.5: The DMO should maintain channels of communication with money market participants and Treasury bill counterparties both formally and informally to explain, as far as possible, the nature and intent of its operations in the money markets. The DMO should monitor compliance with its operational notices; provide complete, accurate and timely instructions to counterparties, agents, external systems and operators; and achieve the successful settlement of agreed trades on the due date.

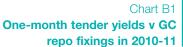
- As stated in KPI 1.3 above, in 2010-11 the DMO maintained an active and open dialogue with cash counterparties and other market stakeholders to explain its cash management approach and strategy and to explain the context for and receive feedback on Treasury bill tenders and other market operations.
- There were no breaches of cash management operational targets for trade settlement (percentage by value on the due date), announcement of Treasury bill tender results (30 minutes) or maximum permitted breaches of cash management operational notices (5).

# Treasury bill tender performance

Table B5 and Charts B1-3 compare the results (in terms of the average yield) of all Treasury bill tenders in 2010-11 with the average fixing of the relevant GC repo rate on the day of the settlement of the tenders. On average over the financial year the yields at tenders of Treasury bills at all maturities out-performed the average of GC repo fixings by 4.4 to 8.7 bps.

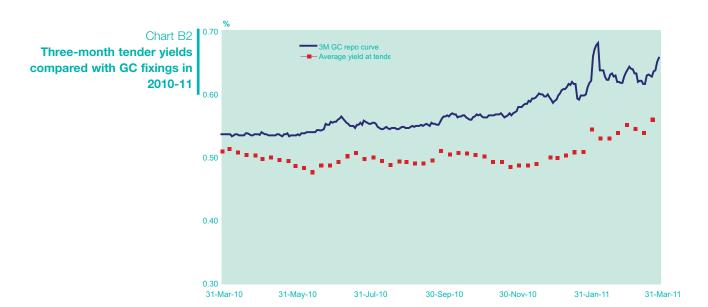
Table B5
Comparison of average tender yields with GC repo fixings in 2010-11

	Average tender yield %	Average GC fixing %	Tender relative performance (bps)
One-month	0.462	0.549	-8.7
Three-month	0.505	0.571	-6.6
Six-month	0.572	0.616	-4.4





Source: DMO/BBA\*



Source: DMO/BBA\*



Source: DMO/BBA\*

# C: The gilt portfolio

# The gilt portfolio

The key statistics of the gilt portfolio at end-March 2011 compared with the position at the end of the previous financial year are shown in Table C1 below. Figures in the net columns next to the nominal and market values of the gilt portfolio are the corresponding totals excluding central government holdings.

Table C1 **Key gilt portfolio statistics** 

		End-Mar	rch 2010	End-March 2011		
١		Gross	Gross Net		Net	
	Nominal value of gilt portfolio - inc TBills (£bn):	976.80	850.01	1096.64	982.24	
	Nominal value of gilt portfolio - exc TBills (£bn):	913.47	786.68	1032.99	918.60	
	- conventional gilts:	722.86	608.51	799.32	697.97	
	- index-linked gilts:	190.61	178.17	233.67	220.63	
	Market value of gilt portfolio - inc Tbills (£bn):	1,050.15	910.87	1182.00	1054.71	
	Market value of gilt portfolio - exc Tbills (£bn):	986.88	847.59	1118.43	991.13	
	- conventional gilts (£bn)	765.45	641.12	850.74	739.09	
	- index-linked gilts (£bn)	221.42	206.47	267.70	252.04	
	Weighted average market yields					
	- conventional gilts:	3.22%		3.11%		
	- index-linked gilts:	0.32%		0.32%		
	Portfolio average maturity - inc Tbills (years)	13.15		13.51		
	Portfolio average maturity - exc Tbills (years)	13.98		14.26		
	- conventional gilts (years)	13.21		13.31		
	- index-linked gilts (years)	16.64		17.29		
	Average modified duration					
	- conventional gilts(years)	8.24		8.29		
	- index-linked gilts (years)	14.33		15.83		

A list of gilts, including first issue and coupon dates and nominal amounts outstanding (updated daily) is available on the DMO website at:

http://www.dmo.gov.uk/ceLogon.aspx?page=D1A&rptCode=D1A

The nominal value of the gilt portfolio rose by 13% to £1,033.0 billion as gross gilt issuance greatly exceeded gilt redemptions. The market value of the portfolio also rose by 13% to £1,118.4 billion.

The numbers are, however, significantly inflated by the creation (in 2008-09) of £115 billion (cash) gilt collateral for the DMO's Exchequer cash management operations and the Bank of England's Discount Window Facility – the net data above exclude these and other government holdings.

Chart C1 shows the nominal and market values of the gilt portfolio at end-March in each year since 1998 and projected to end-March 2012 based on the DMO financing remit for 2011-12. From March 2005 onwards the nominal and market values are also shown net of government holdings.

<sup>&</sup>lt;sup>23</sup> Including inflation uplift on index-linked gilts.

Chart C1
Nominal and market values
of the gilt portfolio
(projected to end-March 2012)

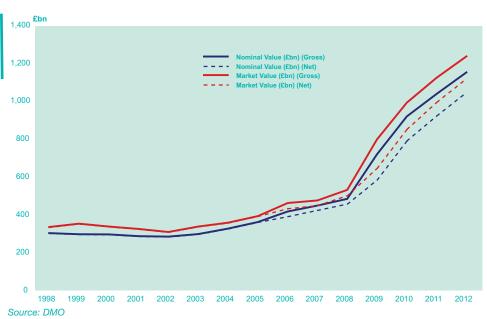


Chart C2 shows the maturity of the gilt portfolio at end-March each year since 1998 and projected to end-March 2012 on the basis of the 2011-12 remit; on this basis, the gradual lengthening trend of the last year is expected to continue, with the average maturity rising from 14.3 to 14.7 years (almost back to the peak of 14.9 years at end-March 2008).

Chart C2

Maturity of the gilt portfolio
(projected to end-March 2012)

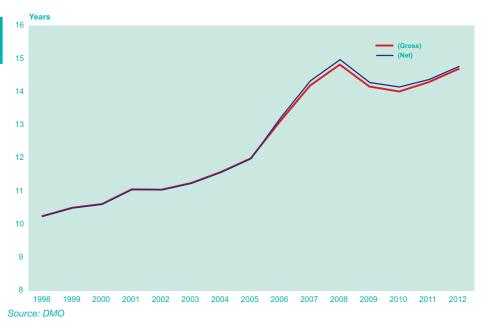
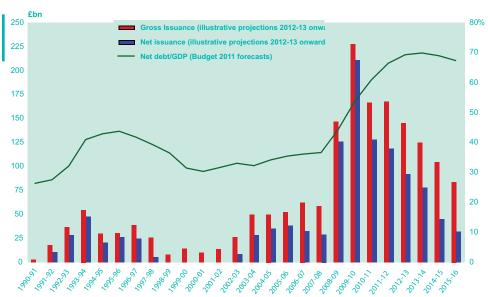


Chart C3 shows past and projected gross and net gilt issuance levels (and net debt/GDP data) as published at the Budget on 23 March 2011.

Chart C3

Gross and net issuance
history and projections



Source: DMO / Office for Budget Responsibility (OBR)

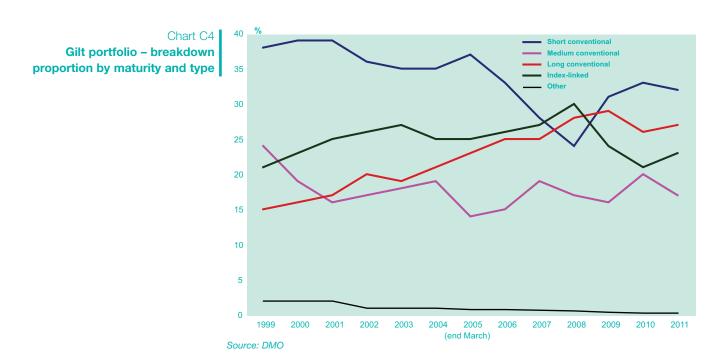
# Breakdown of the gilt portfolio by type and maturity

Table C2 and Chart C4 below show the evolution of the gilt portfolio by type and maturity since March 1999. They show the rising proportion of long-dated conventional gilts from 15% to a peak of 29% of the portfolio (which has subsequently fallen back slightly to 27%). Similarly the proportion of index-linked gilts rose from 21% to a peak of 30% at end-March 2008 – although this has fallen back subsequently in the wake of record gilt issuance levels which necessitated significant increases in sales of shortand medium-dated conventional gilts.

Table C2
Portfolio composition
1999-2010

At end-March (%)	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Conventional													
0-3 years	16	17	17	18	16	16	20	19	14	13	17	17	14
3-7 years	22	22	22	18	19	18	17	14	14	11	14	16	18
7-15 years	24	19	16	17	18	19	14	15	19	17	16	20	17
Over 15 years	15	16	17	20	19	21	23	25	25	28	29	26	27
<b>Total Conventional</b>	76	75	72	73	72	74	74	73	72	70	76	79	77
Index-linked*	21	23	25	26	27	25	25	26	27	30	24	21	23
Undated	1	1	1	1	1	1	0.8	0.8	0.7	0.6	0.4	0.3	0.3
Floating rate	1	1	1	0	0	0	0	0	0	0	0	0	0
*including index-linked up		-P											
(Figures may not sum du	e to roun	ding)											

Chart C4 includes both the 0-3 years and 3-7 years data within the "short conventional" category and undated and floating rate gilts in the "other" category.



# United Kingdom Debt Management Office

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