

United Kingdom
**Debt
Management
Office**

DMO Annual Review

2011-12



The United Kingdom
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Foreword by the DMO Chief Executive

2011-12 was the DMO's fourteenth year of operation and once more we faced a challenging financial market environment, but we again successfully delivered the Government's financing programme. The total amount of financing raised via gilt issuance, £179.4 billion, was the second highest on record, and represented the fourth successive year of elevated financing requirements, which in aggregate has seen the DMO raise over £700 billion via gilt sales.

To help ensure that such significant volumes of sales can be delivered effectively to the market, and in particular to provide larger amounts of long conventional and index-linked gilts than would otherwise be possible, we have continued to use supplementary distribution methods, principally syndicated gilt offerings to support the auction programme and to help target our core domestic investor base more directly.

A programme of eight syndicated offers raised £34.4 billion, around £7 billion more than via syndications in the previous financial year, and was delivered in a more even-flow manner. Sales via syndications were increased from an originally planned £31.6 billion, with some operations being increased in size to capture strong and high quality demand, which emerged on the day. To offset this increase, the mini-tender programme was scaled back accordingly, reflecting its "buffer" role to accommodate in-year variability in syndication proceeds. The syndication programme helped the DMO to sell a record amount¹ of £39.0 billion of index-linked gilts, almost double the level of sales three years ago. In all the DMO held 60 operations (including 49 auctions, which remain the core distribution method to deliver the financing programme), one fewer than last year.

I am pleased with the efficient way in which the gilt market has continued to absorb this high level of issuance. We receive positive feedback from market participants on the increased level of liquidity in the gilt market and market data we receive from the Gilt-edged Market Makers (GEMMs) bears this out, with aggregate daily turnover rising sharply to £28.4 billion per day in 2011-12, an increase of almost one third compared with 2010-11 and a 90% increase relative to four years ago. Overseas interest in the gilt market also remained strong with overseas holdings in gilts rising by £78.8 billion to £380.3 billion in 2011-12².

Alongside gilts, the Treasury bill stock, currently around £70 billion, has quadrupled in size in the past four years, and we have seen strong interest both at our weekly tenders and via bilateral sales, combined with record low yields. Like gilts, Treasury bills are attracting significant overseas investor interest, with around 46% of the market being held abroad at the end of 2011.

Looking forward, the DMO has received a new remit for 2012-13 that will require another high level of gilt sales of £164.4 billion. This is being delivered in a financial environment which continues to be volatile and unpredictable, but on the basis of the DMO's successful track record to date, I am confident that we will rise to the challenge.

Given the strength of achievement in 2011-12, we look forward to 2012-13 with confidence.

Robert Stheeman
August 2012

¹ In absolute terms.

² According to data published by the Office for National Statistics.

Chapter 1: The Economy and Financial Markets

Fiscal and macroeconomic developments

In the first quarter of the financial year the world economy continued to recover steadily but momentum slowed in the second quarter as vulnerabilities in a number of key regions, particularly in the euro area, became increasingly evident. Concerns about the solvency of several euro area countries intensified in the second half of the financial year and global growth slowed further still as household and business confidence waned. In the UK, the economy fell back into recession as it was hit by a series of shocks: households' real incomes were squeezed by elevated inflation driven by high global commodity prices; global demand slowed and credit conditions tightened as the euro area crisis increased instability and uncertainty; and the full scale and persistent impact of the financial crisis became clearer.

Real Gross Domestic Product (GDP) contracted by 0.1% quarter-on-quarter (q-o-q) in the first three months of 2011-12 as UK activity was dampened by the additional bank holiday for the royal wedding, disruption to global supply caused by the Japanese tsunami and domestic weather effects. Activity rebounded in Q2 with GDP growing by 0.6% q-o-q. Construction and manufacturing output fell back, however, in Q3 as the economy contracted by 0.4% q-o-q. In Q4 GDP data revealed a second consecutive quarter of contraction (0.3%) confirming that the UK economy had technically slipped back into recession.

Inflation as measured by the Consumer Prices Index (CPI) was elevated in the first two quarters of the financial year (reaching a peak of 5.2% in September 2011) largely as a result of increasing global commodity prices and the earlier VAT increase. The Office for Budget Responsibility (OBR) considered these inflationary pressures to have been the main drag on growth over the previous 18 months. In the second half of the financial year inflation fell back sharply (falling to 3.5% by March 2012) as the impact of VAT and fuel price increases diminished. During the financial year CPI inflation remained more than one percentage point higher than the Bank of England's target of 2.0% year-on-year (y-o-y), triggering an exchange of letters between the Governor and the Chancellor of the Exchequer every three months in accordance with the remit of the Monetary Policy Committee (MPC).

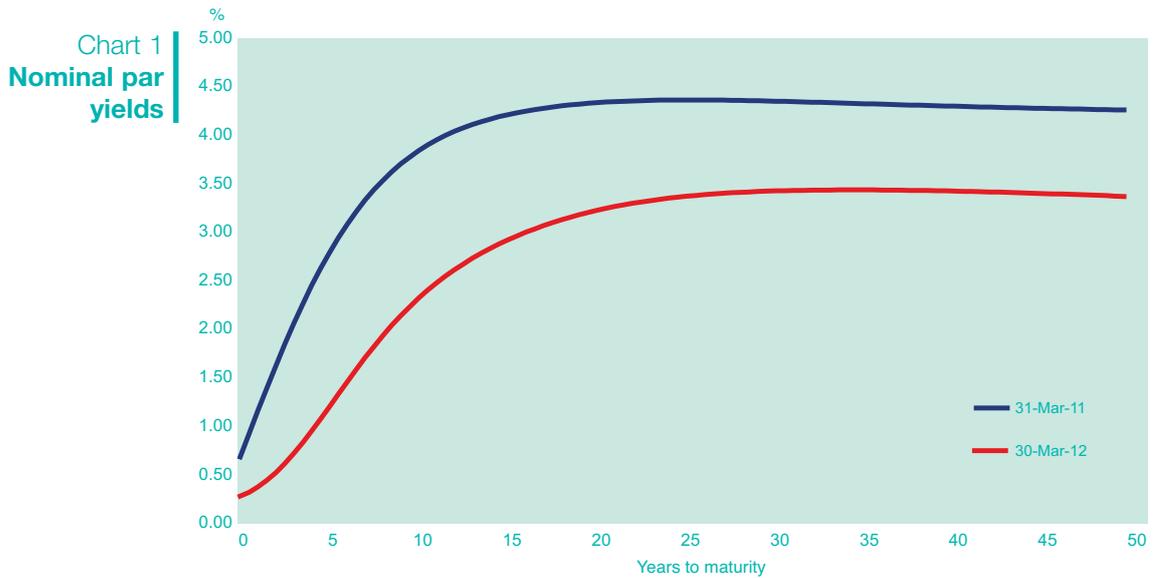
Inflation as measured by the Retail Prices Index (RPI), which is used to set cash flows on index-linked gilts, started the financial year at 5.35% y-o-y and remained highly elevated throughout the period despite significant moderation in Q3 and Q4. By the end of the financial year RPI inflation stood at 3.57%.

The Bank of England's official Bank Rate remained at a historically low level of 0.5% throughout 2011-12. The stock of asset purchases (primarily gilts) by the Bank's Asset Purchase Facility (APF), financed by the creation of central bank reserves (also known as 'quantitative easing'), was maintained at £200 billion until October when the decision was taken to buy a further £75 billion in the period to February 2012. The target was further extended (to £325 billion) following February's MPC meeting, with the planned purchases to be completed before the MPC's meeting in May.

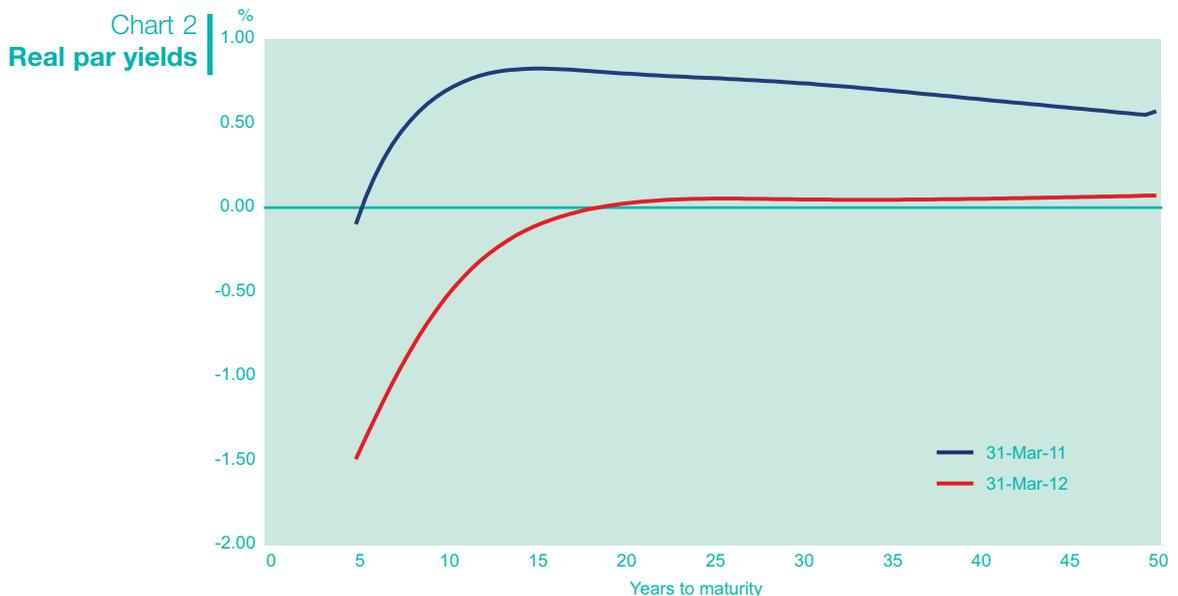
Gilt market developments

Par gilt yields

Yields fell significantly along the nominal yield curve in 2011-12, notably in the 5-10 year maturity area, against a back-drop of deteriorating domestic and euro area economic prospects and concerns over the euro area sovereign debt and banking sectors. For the year as a whole, 2-year yields fell by 95 basis points to 0.43%, 5-year yields by 155 basis points to 1.06%, 10-year yields by 154 basis points to 2.22%, 30-year yields by 93 basis points to 3.41% and 50-year yields by 89 basis points to 3.35%. See Chart 1.



Real yields also fell to record lows, with 10-year real par yields falling by 119 basis points to -0.55%, 30-year real par yields by 69 basis points to 0.04% and 50-year yields by 50 basis points to 0.06%. By the end of 2011-12 real yields were negative out to the 20-year maturity area. See Chart 2.



Conventional benchmark gilts

The UK Government bond market benefitted from increased flight to safety flows during 2011-12 against a back-drop of rising concerns about sovereign debt levels within the euro area, the strength of the European banking sector and the pace of domestic and global economic recovery.

At the start of the financial year the gilt curve began to steepen as market expectations of near-term policy tightening by the MPC were revised following increased concerns about weaker than expected UK data releases.

Alongside a deterioration in the UK economic outlook, the downward trend in gilt yields continued in the face of an escalation in the euro area sovereign debt crisis during the summer, which resulted in the terms of the Portuguese, Irish and Greek bail-outs being re-negotiated. Focus on risk aversion increased across all financial markets in response to the unprecedented decision by Moody's to downgrade the USA's sovereign rating from AAA to AA+.

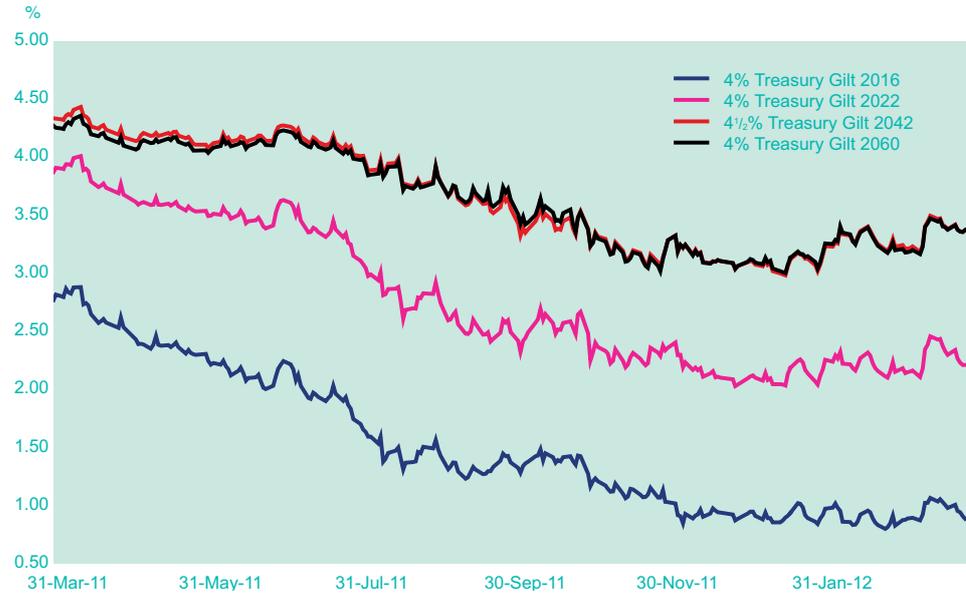
By the autumn the MPC acknowledged that a worsening macroeconomic outlook would necessitate further asset purchases via the APF at some stage, and in October the MPC voted to resume asset purchases in response to a deterioration in economic prospects. An initial plan was announced to purchase £75 billion of gilts during the four month lead up to the MPC in February. The MPC minutes revealed that the level of asset purchases going forward was dependent on the impact on the domestic economy of future developments in the euro area and wider financial markets. Nominal gilt yields continued their downward trend.

The Chancellor delivered his Autumn Statement on 29 November alongside the OBR's revised fiscal forecasts; as a consequence planned gilt sales in 2011-12 rose by £11.4 billion to £178.9 billion.

In the final quarter of the financial year, the fall in gilt yields was first reversed marginally as markets took some comfort from the European Central Bank's (ECB's) Long Term Refinancing Operations (LTRO) towards the end of 2011 and expectations of a successful Greek debt restructuring. Nevertheless the MPC voted to increase the APF's asset purchase target by £50 billion to £325 billion at its February meeting as the committee judged that further monetary stimulus was required to support the UK economy. Towards the end of the financial year concerns resurfaced about both the pace of economic growth internationally and the prospects for a number of euro area economies, and the downward trend in gilt yields resumed.

The path of benchmark conventional nominal gilt yields over 2011-12 is shown in Chart 3.

Chart 3
Conventional benchmark
nominal yields

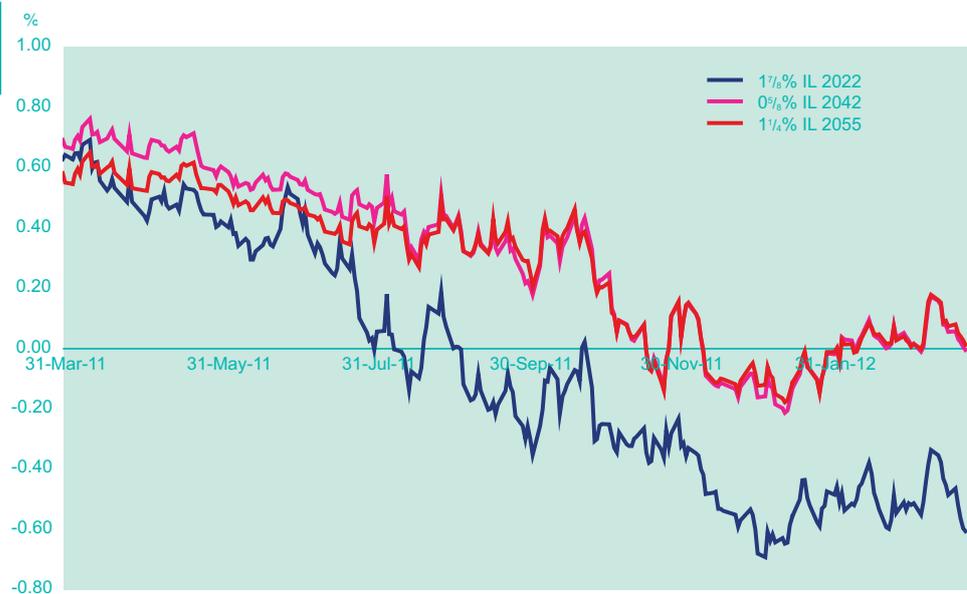


Source: DMO

Index-linked real yields

Chart 4 shows the real yield on selected benchmark index-linked gilts in 2011-12 and shows that by the start of 2012 real yields on all maturities were negative. Year-on-year the real yield on 1½% Index-linked Treasury Gilt 2022 fell by 123 basis points to -0.61%, whilst the yield on 0% Index-linked Treasury Gilt 2042 fell by 70 basis points to -0.01% and that of 1¼% Index-linked Treasury Gilt 2055 fell by 57 basis points to 0.01%.

Chart 4
Index-linked benchmark
real yields

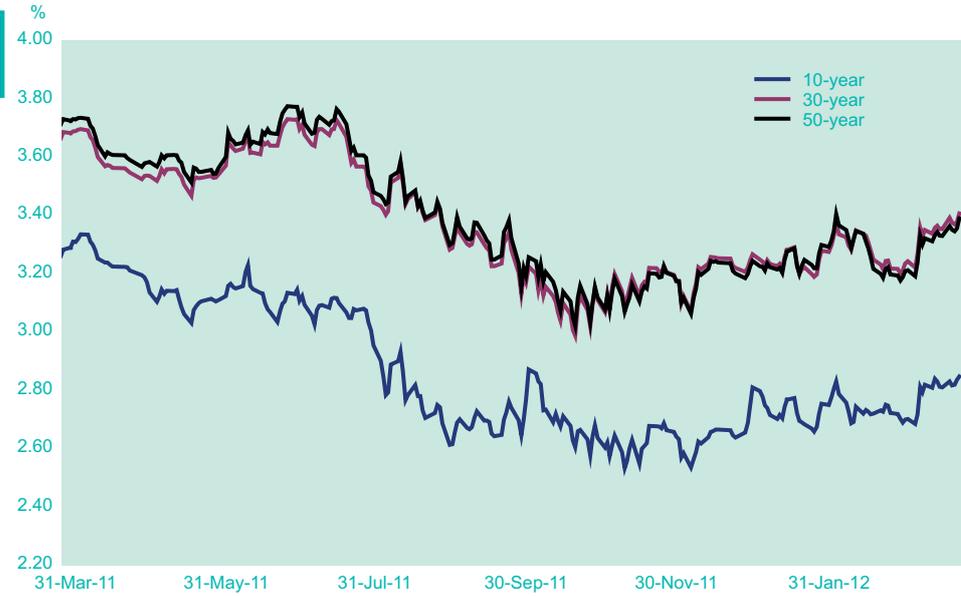


Source: DMO

Break-even inflation rates

Index-linked gilt yields as measured by break-even inflation rates generally underperformed their conventional counterparts in 2011-12, as shown in Chart 5. This reflected changing views about the path of inflation and is also likely to reflect the impact of the exclusion of index-linked gilts from eligibility for purchase via the Bank of England's APF.

Chart 5
10- 30- and 50-year
break-even inflation rates

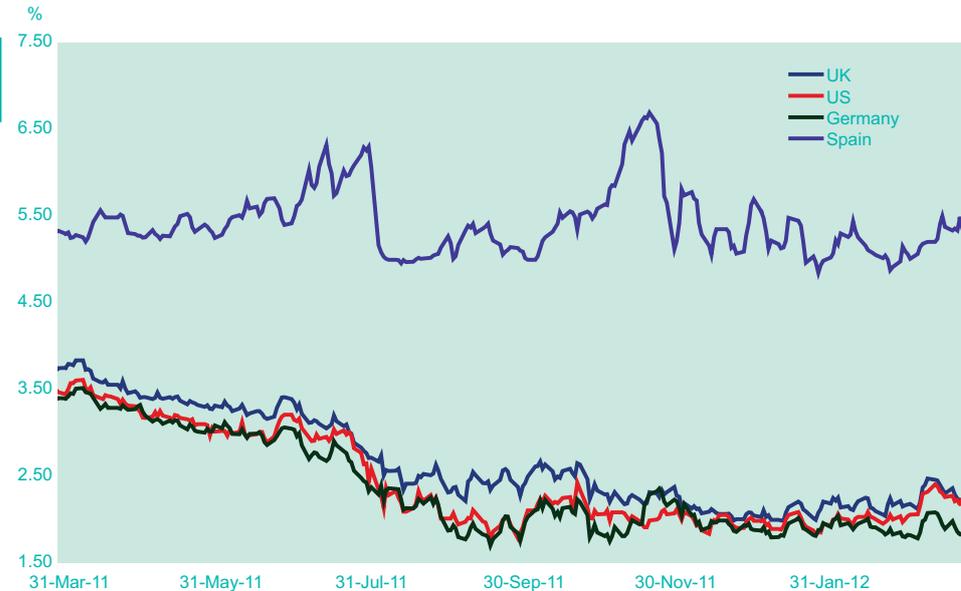


Source: DMO

International comparisons

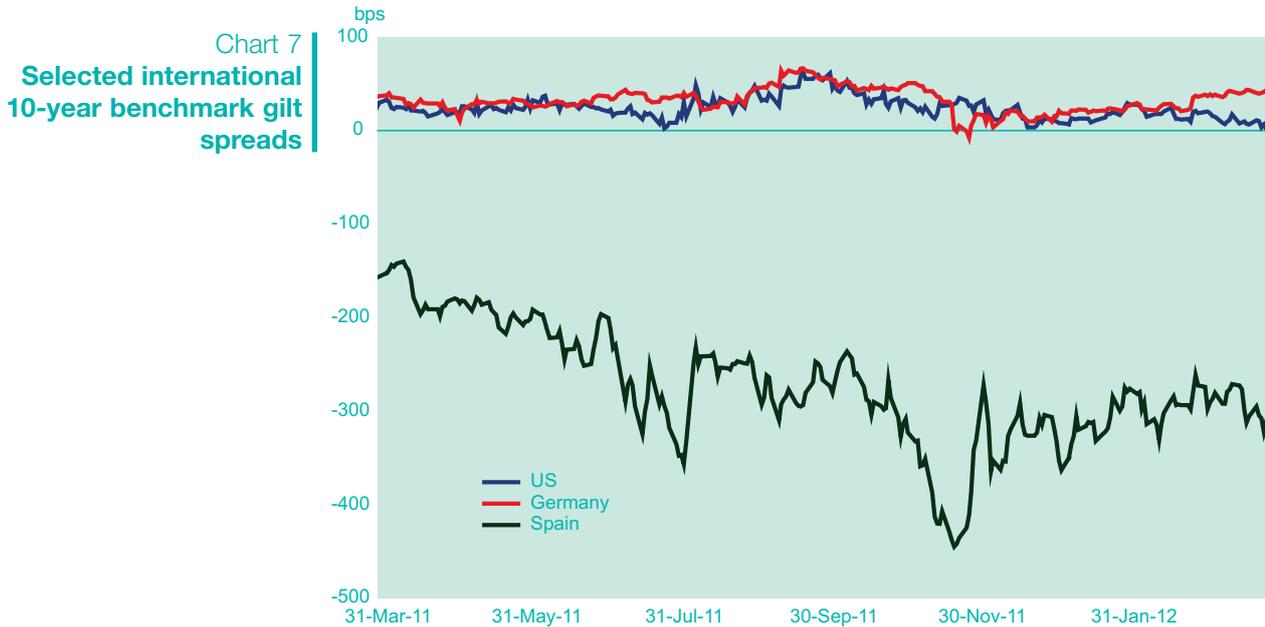
Yields on 10-year UK, US and German government bonds all fell significantly (by 149, 126 and 156 basis points respectively), relative to the start of the financial year, whereas the yield on the 10-year Spanish Government bond ended the financial year relatively unchanged, rising by just 6 basis points from its starting point despite significant and occasionally extreme intra-year volatility (trading in a 185 basis point range). See Chart 6.

Chart 6
Selected international 10-year
benchmark bond yields



Source: Bloomberg

The spread between 10-year gilt and US Treasury yields began the financial year at +22 basis points and then widened to +60 basis points in September before narrowing to -0.5 basis points at end-March 2012. Over the course of the financial year the 10-year spread between gilts and German government bonds (Bunds) also widened from +34 basis points to +64 basis points in September, but then narrowed significantly to such an extent that gilts briefly traded through Bunds in late November. The spread ended the financial year at +41 basis points. The 10-year spread between UK gilts and Spanish government bonds (Obligaciones) widened considerably over the course of the financial year from -160 basis points to a trough of -450 basis points in November before finishing the financial year at -315 basis points (end-March 2012). See Chart 7.



Gilt market turnover

Aggregate daily turnover by value in the gilt market in 2011-12 increased by 36% compared with the previous financial year (from £20.87 billion to £28.41 billion). Trading intensity (as measured by the turnover ratio³) also rose relative to 2010-11, from 6.23 to 7.20, despite the significantly larger portfolio against which the ratio was calculated. 2011-12 was the first financial year since 2004-05 in which the turnover ratio rose relative to the previous financial year. See Chart 8.

³ The turnover ratio for a given year is the aggregate turnover in that financial year relative to the market value of the gilt portfolio at the start of that year.

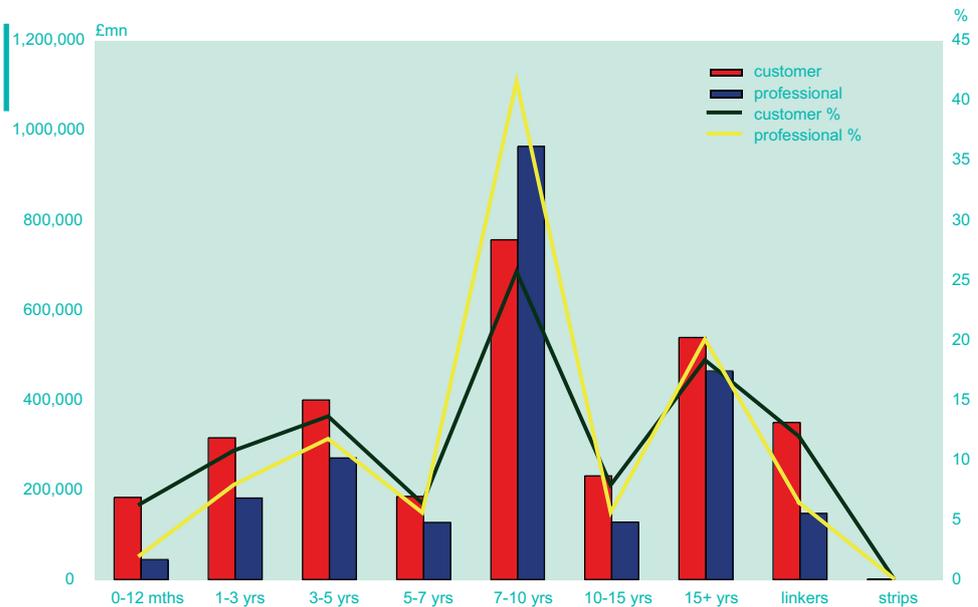
Chart 8
Gilt market turnover



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 9.⁴

Chart 9
Gilt market turnover by maturity and type



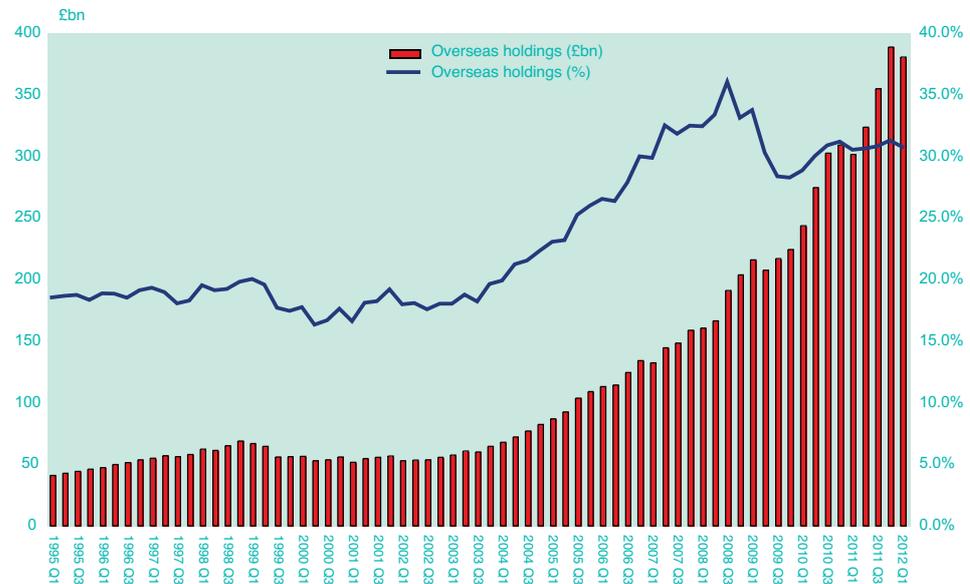
Source: GEMMs

⁴ Customer turnover refers to trade directly with an end investor, professional turnover refers to trade with other official market participants including GEMMs, Brokers, the DMO and the Bank of England.

Overseas holdings of gilts

Chart 10 shows the trend in overseas holdings of gilts in the 17 years to end-March 2012. According to data published by the Office for National Statistics (ONS). Since the end of 2003 there has been a rise (of around £316 billion) in the value of gilts held by overseas investors and in 2010 overseas investors became the largest sectoral holder of gilts, overtaking the domestic pension and insurance sectors for the first time. In 2011-12 the value of overseas holdings rose by £78.8 billion to £380.3 billion, despite falling in the final quarter of the year. The generally rising trend in overseas holdings has been attributed to ongoing purchases of (mainly short, but increasingly also medium and longer) gilts by central bank reserves managers, sovereign funds and hedge funds.

Chart 10
Overseas holdings of gilts



Source: ONS

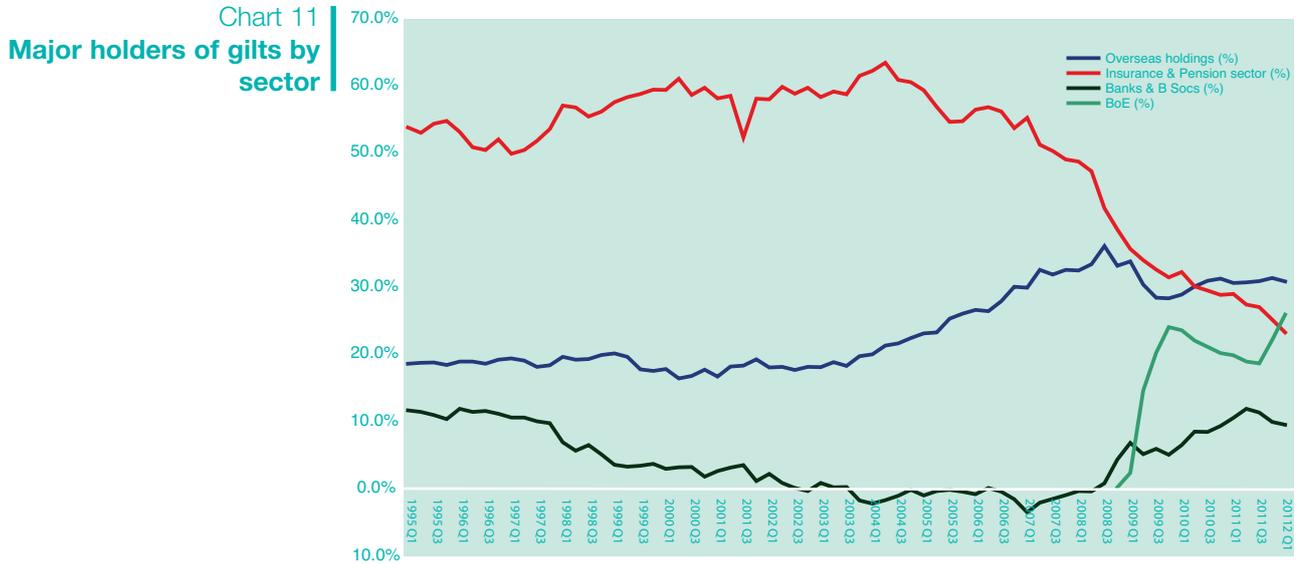
As a proportion of the portfolio, however, overseas holdings have stabilised at around 30%, (having peaked at 35.9% at end-September 2008); overseas holdings stood at 30.7% at end-March 2012 (0.2% higher than the previous year). This reflects both the significant increase in the size of the gilt portfolio itself and also the purchases of gilts in the secondary market by the Bank of England.

The major sectoral holders of gilts

In the final quarter of 2011-12, the Bank of England overtook the UK pension and insurance sector become the second largest sectoral holder of gilts, reflecting the impact of a renewed programme of APF purchases. The Bank had originally purchased £200 billion of gilts via the APF between March 2009 and January 2010. In October 2011 the MPC decided to extend gilt purchases by a further £75 billion and in February 2012 by a further £50 billion (taking planned purchases in aggregate to £325 billion). The market value of the Bank's APF gilt holdings at end-March 2012 was approximately £319 billion.

Separately, the proportion of gilt holdings accounted for by the pension and insurance sector fell from 29% to 23%, continuing the downward trend since 2004 (when they had peaked at 63%), as a result of the impact firstly of rising overseas holdings and subsequently as a result of the impact of purchases via the APF and by the UK banking sector.

The changing proportion of the gilt portfolio held by the major sectoral holders is shown in Chart 11⁵.



Source: ONS and Bank of England

⁵ The negative reported position for Banks and Building Societies in the period before Q3 2008 reflected a net aggregate negative repo position.

Money market developments

Policy interest rates remained unchanged in the UK and US at 0.50% and 0.25% respectively in 2011-12. In the euro area, the Governing Council of the ECB raised its main policy rate twice, in April 2011 and July 2011, by 25 basis points on each occasion to 1.50%. The Governing Council subsequently cut its policy rate twice, in November 2011 and December 2011, by 25 basis points on each occasion to 1.00%. Policy rates in the euro area remained at this level for the rest of the financial year. See Chart 12.

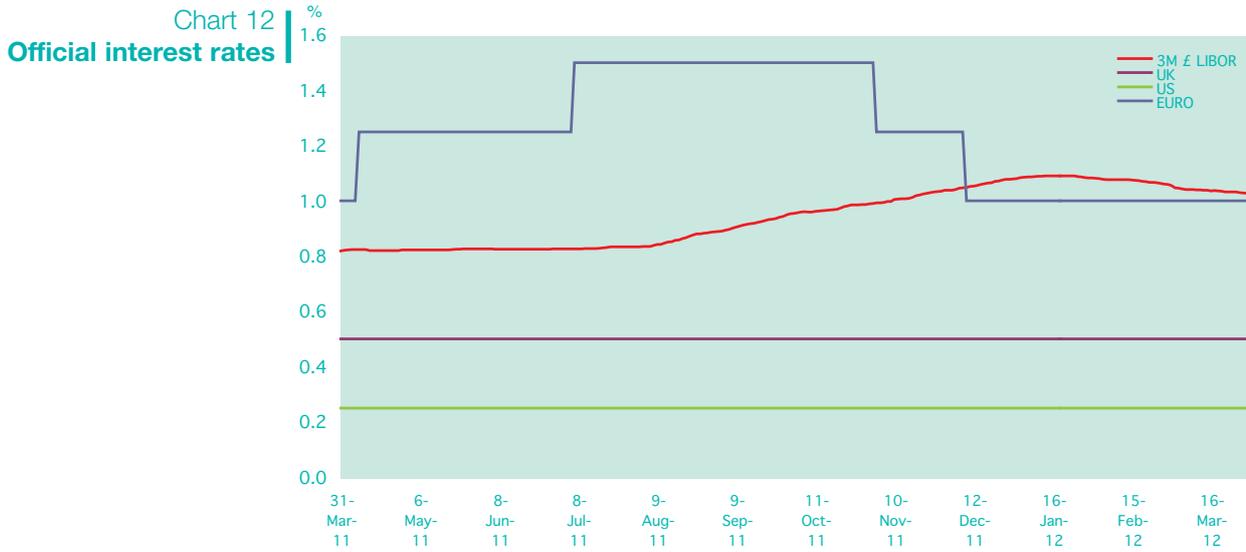
Concerns about the sustainability of fiscal and external positions of some euro-area periphery countries (and the implication of these for the banking sector in these countries) compounded by concerns about the sustainability of global economic recovery, influenced financial markets in the major economies in 2011-12. Policymakers in the UK and elsewhere reacted to these conditions by expanding liquidity to the financial sector and easing monetary policy.

In addition to the asset purchases noted above via the Bank of England's APF, the Bank also joined a number of central banks in announcing actions to enhance their capacity to provide liquidity support in overseas currencies.

In the USA, the Federal Open Market Committee (FOMC) completed its planned \$600 billion asset purchase programme at the end of June 2011 and decided at its meeting in mid-September 2011 to extend the average maturity of its holding of securities by announcing a programme to sell \$400 billion of shorter-term Treasury securities and use the proceeds to buy longer-term Treasury securities. The FOMC also stated at its August meeting that anticipated economic conditions were likely to warrant exceptionally low levels for the Federal Funds Rate at least until mid-2013.

In the euro area, the ECB conducted a supplementary long-term repo operation (LTRO), in August, with a maturity of six months to provide liquidity to Euro area banks. This was followed by an announcement, in October, of a second programme of covered bond purchases totalling €40 billion to contribute to easing funding conditions for credit institutions and enterprises. Furthermore the ECB extended its liquidity provision to euro area banks with two longer-term refinancing operations and two three-year LTROs. It also continued to purchase debt securities under the Securities Markets Programme.

Chart 12 also shows the path of three-month Sterling LIBOR rates in 2011-12. In the UK the spread between three-month LIBOR rate and Bank Rate peaked at 59 basis points in January 2012 but fell back slightly to 53 basis points by the end of the financial year.



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 significantly over the course of the year. Interest rate expectations two years forward were stable at 1.50% in the September 2011, December 2011 and March 2012 contracts.



Source: Bloomberg

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:

- meeting the principles of openness, transparency and predictability;
- developing a liquid and efficient gilt market;
- issuing gilts that achieve a benchmark premium;
- adjusting the maturity and nature of the Government's debt portfolio, primarily by means of the maturity and composition of debt issuance and potentially by other market operations, including switch auctions, conversion offers and buy-backs; and
- offering cost-effective savings instruments to the retail sector through 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;
- 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 financing remit for 2011-12 was published alongside the Budget on 23 March 2011. The Central Government Net Cash Requirement (CGNCR) forecast for 2011-12 was £120.4 billion, and the DMO's net financing requirement was forecast to be £167.4 billion.

Total planned debt sales were split as follows:

- Outright gilt sales: £169.0 billion
- Net Treasury bill sales: -£1.6 billion

The structure of the gilt financing remit

The planned gilt sales programme of £169.0 billion, comprised:

- a core gilt sales programme of £132.8 billion in 47 auctions,
- supplementary gilt sales programmes of £36.2 billion, split as follows:
 - £31.6 billion of gilt sales via up to eight syndicated offerings; and
 - £4.6 billion of gilt sales via mini-tenders.

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

Overall planned issuance was split as follows:

- £58.0 billion of short conventional gilt sales in 12 auctions;
- £34.9 billion of medium conventional gilt sales in 10 auctions;
- £37.7 billion of long conventional gilt sales via 10 auctions (aiming to raise £21.3 billion) and a combination of syndicated offerings and mini-tenders (aiming to raise £16.4 billion); and
- £38.4 billion of index-linked gilt sales via 15 auctions (aiming to raise £18.6 billion) and a combination of syndicated offerings and mini-tenders (aiming to raise £19.8 billion).

Planned gilt sales rose by £2.6 billion compared with 2010-11 and the split of issuance was broadly similar compared with the previous year. Short conventional issuance remained the largest single component of the plans in both absolute and proportional terms (rising by £4.8 billion and 2% respectively compared with 2010-11) while planned medium issuance was reduced marginally by £3.2 billion or 2% in proportional terms compared with 2010-11. Long conventional sales plans were also reduced, by £3.4 billion, representing a reduction in proportional terms of around 1.5%. By contrast, planned sales of index-linked gilts increased in both absolute and proportional terms, rising £4.4 billion (2.3%). The marginal adjustments to the split of issuance reflected an assessment of the prevailing relative cost effectiveness of issuance at different parts of the yield curve within the wider overall context of achieving the debt management objective.

There were no plans to hold any switch auctions, reverse auctions, or conversion offers in 2011-12 and none were held.

Post auction option facility (PAOF)

The 2011-12 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.

Outturn of the 2010-11 CGNCR: April 2011

On 21 April 2011 the outturn CGNCR for 2010-11 was published. At £139.6 billion it was £1.6 billion lower than the forecast in the March 2011 Budget. In addition, the outturn for the sale of Treasury bills via the DMO's bilateral facility was £1.7 billion higher than the forecast in the March Budget.

Overall, the DMO's forecast net financing requirement for 2010-11 fell by £3.2 billion⁶ compared with the position at the March Budget and the financing remit was revised as follows:

- Gilt sales via auctions were reduced by £1.5 billion to £167.5 billion, split as follows:
 - short conventional sales reduced by £0.6 billion to £57.4 billion;
 - medium conventional sales reduced by £0.2 billion to £34.7 billion;
 - long conventional sales reduced by £0.3 billion to £21.0 billion; and
 - index-linked sales reduced by £0.4 billion to £18.2 billion.
- Treasury bill sales were reduced by £1.7 billion (resulting in a revised planned stock change of -£3.3 billion by end-March 2012).

Autumn Statement 2011

The Economic and Fiscal Outlook 2011 was published on 29 November 2011 by the OBR, and included new forecasts for the public finances, including the CGNCR. Alongside this, HM Treasury published the Autumn Statement (AS) 2011 which included the consequent revision to the DMO's financing remit.

The DMO's net financing requirement for 2011-12 rose by £13.8 billion at the AS 2011 remit revision. The main⁷ factors contributing to the change were:

- an increase of £14.6 billion (to £135.0 billion) in the forecast CGNCR for 2011-12; and
- an increase of £1.0 billion (to £3.0 billion) in the forecast contribution to financing from National Savings & Investments.

The £13.8 billion increase in the net financing requirement was met by:

- an increase of £11.4 billion to £178.9 billion in planned gilt sales, split as follows:
 - Short conventional: £3.2 billion increase to £60.6 billion;

⁶ Also reflecting a £0.2 billion adjustment to the net contribution to financing from National Savings & Investments (NS&I). Figures may not sum due to rounding.

⁷ In addition, there was an increase of £0.1 billion arising from a revision to the outturn of the 2010-11 CGNCR subsequent to the April remit revision announcement. Figures may not sum due to rounding.

- Medium conventional: £5.1 billion increase to £39.8 billion;
 - Long conventional: £2.1 billion increase to £39.5 billion; and
 - Index-linked: £1.0 billion increase to £39.0 billion.
- An increase of £2.4 billion in net Treasury bill sales, taking the planned stock at end-March 2012 to £63.2 billion.

The increases to planned gilt sales necessitated the scheduling of two additional auctions, one each of short- and medium conventional gilts. The new auction dates added to the calendar were 14 December 2011 and 11 January 2012.

The AS 2011 remit revision also saw the inclusion in the calculation of average auction sizes of proceeds from the PAOF received in the period before the AS.

PAOF proceeds in the pre-AS period totalled £3.36 billion, split as shown below:

- Short conventional £0.86 billion
- Medium conventional £1.11 billion
- Long conventional £0.83 billion
- Index-linked £0.56 billion

In addition a forward looking adjustment was made in accordance with the provisions of the remit, which specified that: *“the DMO will assume that proceeds from the PAOF up to that point (i.e. AS) will continue to accrue for the remainder of the financial year at the same rate per type and maturity of gilt”*

Based on the pre-AS rate of take up of PAOF at AS 2011, the sums below were also deducted from the remaining auction balance of sales to meet targets (i.e. the target sums used to calculate average auction sizes):

- Short conventional £0.46 billion
- Medium conventional £0.89 billion
- Long conventional £0.35 billion
- Index-linked £0.28 billion

Had it not been for the increases in the auction targets themselves, the adjustments relating to PAOF would have served to reduce the required auction sizes in the period after AS 2011. However, the average auction sizes after AS also reflected both the increase in planned sales and, in the case of short and medium conventional gilts, the scheduling of an additional auction. Table 1 below shows the average required auction sizes before and after AS 2011.

Table 1
Average auction sizes pre-
and post AS 2011

Gilt	Pre AS 2011	Post AS 2011
Short	4.71	4.14
Medium	3.43	3.37
Long	1.97	2.11
Index-linked	1.22	1.19

Budget March 2012

The Debt and reserves management report (DRMR) 2012-13 published on 21 March 2012 alongside the Budget included a new forecast for the 2011-12 CGNCR of £129.9 billion, a reduction of £5.1 billion since the AS 2011. The revised net financing requirement for 2011-12 was £172.0 billion (a reduction of £6.5 billion relative to AS 2011).

The other main changes (since the AS 2011) impacting on financing in 2011-12 were:

- a net increase in Treasury bill sales of £6.6 billion⁸ (an increase in the Treasury bill stock of £6.2 billion compared with a forecast of -£0.4 billion);
- gilt sales which were £0.5 billion higher than planned (largely because of higher than anticipated proceeds from the PAOF); and
- an increase of £1.3 billion in the forecast net contribution to financing by NS&I (from £3.0 billion to £4.3 billion).

The 2011-12 gilt sales programme had been completed in advance of the publication of the new lower financing forecast, which meant that at Budget 2012 over-financing of £13.6 billion in 2011-12 was forecast (reducing the financing requirement in 2012-13 accordingly).

Outturn CGNCR for 2011-12 and the financing outturn

An outturn CGNCR for 2011-12 was published on 24 April 2012 and, at £126.4 billion, it was £3.5 billion lower than the forecast at the March Budget. As a result of this, and a number of other minor adjustments since the March Budget⁹ the outturn net financing requirement fell by £3.9 billion to £162.5 billion¹⁰. As a consequence, the quantum of over-financing in 2011-12 rose to £17.4 billion.

The figures in the previous paragraph have been updated in Table 2 below to reflect an upward adjustment to the CGNCR which materialised after the 24 April announcement (see footnote 10).

The developments in the 2011-12 financing arithmetic over the course of the financial year are shown in Table 2.

⁸ As a result of Treasury bill sales via the DMO's bilateral facility.

⁹ Treasury bill sales via the DMO's bilateral facility were £0.6 billion higher than forecast at the Budget and NS&I's net contribution to financing was £0.3 billion lower than forecast in March 2011.

¹⁰ Due to a refinement to the 2011-12 CGNCR which materialised after the April outturn announcement, the final outturn for the CGNCR was £126.537 billion, £0.176 billion higher than the figure published 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 2012-13 CGNCR expected at the AS 2012, but it has been reflected in Table 2.

Table 2
**Financing arithmetic
 updates throughout 2011-12**

(£ billion)	Budget 2011	Apr 2011	AS 2011	Budget 2012	Outturn*
CGNCR	120.4	120.4	135.0	129.9	126.5
Redemptions	49.0	49.0	49.0	49.0	49.0
Financing for reserves	6.0	6.0	6.0	6.0	6.0
Buy-backs	0.0	0.0	0.0	0.0	0.0
Planned short-term financing adjustment ¹	-6.0	-9.2	-8.6	-8.6	-8.6
Gross Financing requirement	182.6	162.5	162.7	159.7	158.1
Less					
NS&I	2.0	2.0	3.0	4.3	4.0
Net Financing requirement	167.4	164.2	178.5	172.0	169.0
Financed by					
1. Debt issuance by the DMO					
a) T bills	-1.6	-3.3	-0.4	6.2	6.8
b) Gilt sales	169.0	167.5	178.9	179.4	179.4
Short conventionals	58.0	57.4	60.6	60.6	60.6
Medium conventionals	34.9	34.7	39.8	40.1	40.1
Long conventionals	37.4	37.4	39.5	39.7	39.7
Index-linked	38.4	38.0	39.0	39.0	39.0
2. Other planned change in short term debt²					
Ways and Means	0.0	0.0	0.0	0.0	0.0
3. Change in short term cash position³	0.0	0.0	0.0	13.6	17.2
Total financing	167.4	167.4	178.5	185.6	186.2
Short-term debt levels at end of financial year					
T bill stock (in market hands)	60.8	60.8	63.2	69.8	70.4
Ways and Means	0.4	0.4	0.4	0.4	0.4
DMO net cash position	0.5	0.5	0.5	14.1	17.7
*Includes a £0.2bn adjustment to the 2011-12 CGNCR published subsequently to the April 2012 outturn announcement. Figures may not sum due to rounding					
1. To accommodate changes to the stated year's financing requirement resulting from: (i) publication of the previous year's CGNCR outturn, (ii) an increase in the DMO's cash position at the Bank of England, and/or (iii) carry over of unanticipated changes to the cash position from the previous year.					
2. Total planned changes to short-term debt are the sum of (i) the planned short-term financing adjustment, (ii) net Treasury bill sales, and (iii) changes to the level of the Ways and Means Advance.					
3. The change in the short-term cash position for 2011-12 (and the level of the net short term cash position at the end of the financial year) reflects changes to the public finance forecasts, any changes to financing from NS&I and Treasury bills (including those sold direct to counterparties separately from weekly tenders). It will also reflect any variances between the gilt sales outturn and plans. In addition, the change will include any impact on financing arising from other activities carried out within Government (e.g. issuance of tax instruments, transfers between central government and other sectors, and foreign exchange transactions). A positive (negative) number here indicates a reduction in (increase in) the financing requirement for the following financial year.					

DMO gilt financing operations in 2011-12

The DMO issued six new gilts in 2011-12, three each of conventional and index-linked gilts, as detailed in Table 3. Four were launched by syndication, including all three new index-linked gilts and the new 40-year conventional, while the new 10-year gilts were both launched by auction.

Table 3
New gilts issued in 2011-12

Gilt	First issued
0¾% Index-linked Treasury Gilt 2034	25 May 2011
1¾% Treasury Gilt 2017	19 Aug 2011
3¾% Treasury Gilt 2052	28 Sept 2011
0½% Index-linked Treasury Gilt 2062	26 Oct 2011
0⅞% Index-linked Treasury Gilt 2029	23 Nov 2011
1% Treasury Gilt 2017	8 Mar 2012

Implementing the 2011-12 remit

a) Auctions

As usual, auctions comprised the core of the DMO's gilt sales programme in 2011-12 and, together with associated proceeds from the PAOF, accounted for 79.4% 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 2011-12 these meetings again 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 2011 (to discuss issuance in April-June), May 2011 (to discuss issuance in July-September), August 2011 (to discuss issuance in October-December) and November 2011 (to discuss issuance in January-March 2012).

Ahead of the meetings, the DMO publishes on its screens and website an agenda to steer the discussion. The morning after each meeting, summary minutes are 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 together with advance notice of some of the details of forthcoming syndicated offerings, are published on the last business day of March, May, August and November respectively.

49 gilt auctions were held, 13 of short conventional gilts, 11 of medium conventional gilts, 10 of long 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 2011-12 was 1.83, marginally down on an average of 1.93 in 2010-11, and the concentration of bidding at conventional gilt auctions, as measured by the tail¹¹, was also marginally weaker at 0.6 basis points, compared with 0.4 basis points in the previous year. See Table 4. These are, however, satisfactory levels of performance.

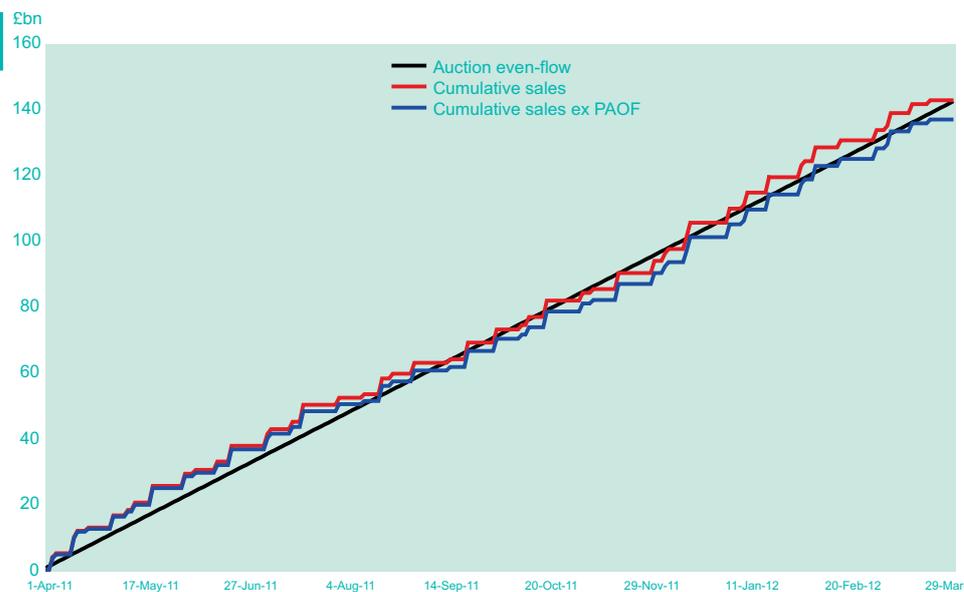
¹¹ The tail is the difference in basis points between the yield at the average and lowest accepted prices at multiple price auctions.

Table 4
Auction cover and tail
2010-11 and 2011-12

	2011-12		2010-11	
	Cover	Tail (bps)	Cover	Tail (bps)
Short conventional	1.68	0.8	1.93	0.6
Medium conventional	1.81	0.6	1.95	0.3
Long conventional	1.85	0.4	1.82	0.4
Index-linked	1.95	na	2.02	na
Average	1.83	0.6	1.93	0.4

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 AS at which point previously accumulated PAOF proceeds were factored into the auction sizing calculations along with anticipated future PAOF proceeds. Consequently, auction sizes were smaller later in the financial year, which meant that the contribution made by auctions to meeting the overall target slipped below the even-flow pace. At the same time the contribution from PAOF proceeds filled the gap so as to meet (and just marginally exceed) the overall auction sales target. Relative to the target sales of £141.9 billion the DMO raised £142.5 billion from the combination of auctions (£136.7 billion) and PAOF (£5.8 billion): i.e. the target was exceeded by £0.6 billion (0.4%).

Chart 14
Gilt auction evenflow



Source: DMO

b) Syndicated Offerings

For the third year in succession, given the ongoing historically high level of the financing requirement, in 2011-12 the DMO used syndicated offerings as an integral part of the remit, to supplement auctions and facilitate the primary gilt distribution process. In particular, syndicated offerings again enabled the Government to issue more long conventional and index-linked gilts, than it judged would have been possible via the auction process alone.

An outline pattern for the approximate timing of syndications and the scheduling of gilt sales by type in the quarter ahead was discussed at the quarterly consultation meetings in 2011-12 and planning assumptions about the syndication programme were published in the quarterly operations calendar announcements. A greater level of precision is typically 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 begin, 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, £34.4 billion was raised through eight syndicated offerings in 2011-12, (£2.8 billion more than originally planned) all of long conventional and index-linked gilts.

Three new index-linked gilts (the 2029, 2034 and 2062 maturities) were launched by syndication in 2011-12 as well as a new ultra-long conventional gilt maturing in 2052. The results of the syndication programme in 2011-12 are set out in Table 5.

Table 5
Syndicated gilt
offerings in 2011-12

Date	Gilt	Size £mn (nominal)	Issue Price (£)	Issue Yield (%)	Proceeds (£mn)
24 May 2011	0¾% IL Treasury Gilt 2034	3,500	99.104	0.793	3,462
28 Jun 2011	4% Treasury Gilt 2060	5,000	96.626	4.148	4,836
26 Jul 2011	0¾% IL Treasury Gilt 2034	4,000	102.316	0.640	4,136
27 Sep 2011	3¾% Treasury Gilt 2052	4,500	99.838	3.758	4,483
25 Oct 2011	0¾% IL Treasury Gilt 2062	4,500	94.869	0.490	4,259
22 Nov 2011	0¼% IL Treasury Gilt 2029	3,500	100.688	0.085	3,518
24 Jan 2012	3¾% Treasury Gilt 2052	4,750	112.854	3.183	5,351
21 Feb 2012	0¾% IL Treasury Gilt 2062	3,750	113.456	0.0995	4,307
					34,352

As in the previous financial year, strong domestic order books were a feature throughout the 2011-12 syndication programme, with the domestic investor base taking an average of 94.5% of each sale. Domestic orders largely comprised asset managers, pension funds and insurance companies, reflecting their structural demand for liability-matching long fixed income assets.

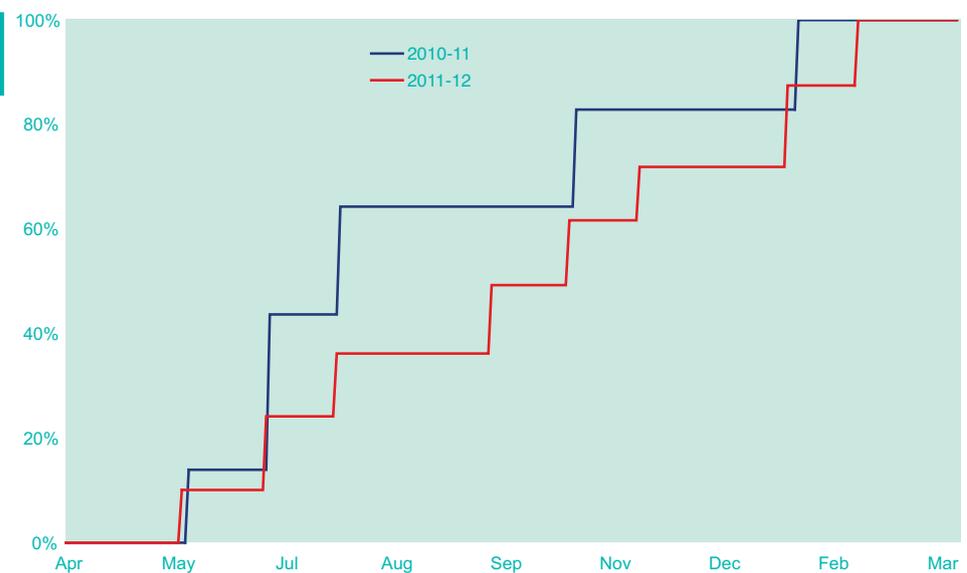
One key difference between the delivery of the syndication programme in 2011-12 compared with the previous financial year was the more even-flow approach to financing: with more operations (eight compared with five) and smaller sizes (the average cash proceeds from a conventional syndication fell from £6.5 billion to £4.9 billion and the average proceeds from an index-linked syndication fell from £4.6 billion to £3.9 billion).

The approach adopted in 2011-12 represented a move away from the significantly front-loaded nature of the programme in 2010-11, which saw two thirds of the annual syndication sales target reached in the first third of the financial year. The decision to move to a more even-flow approach reflected consideration of the nature of front loading which 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 by sampling interest rates evenly across the year (the move was also

consistent with the view that the Government does not try to second-guess movements in market yields by focussing issuance on one part of the year). As an issuer moves away from sampling interest rates on average throughout the year, there is an increased risk that the weighted average issuance yield for the year could be higher than it would 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. The decision to adopt a more even-flow approach (by effectively limiting the discretion as regards the size of operations) also added to the degree of predictability associated with the implementation of this part of the remit.

The different pace of funding in the syndication programmes for 2010-11 and 2011-12 (measured as a percentage of the final sales) is illustrated in Chart 15.

Chart 15
Syndication programmes:
pace of funding
2010-11 and 2011-12



Source: DMO

c) Mini-tenders

The DMO continued to use mini-tenders to issue long conventional and index-linked gilts in 2011-12.

The quarterly operations calendars specify the week(s) in which the mini-tenders are planned, 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 is announced 1-2 days before the operation.

Mini-tenders had originally been introduced in 2008 to target pockets of demand in specific gilts as they emerged in-year. However, in 2011-12 (as in the previous financial year) mini-tenders were used primarily to support the syndication programme by accommodating unexpected variances in syndication proceeds by either being added to, or removed from, the operations calendar. In practice, as syndication proceeds came in higher than anticipated, the DMO was able to cancel mini-tenders originally planned for November 2011, February and March 2012.

Consequently only three mini-tenders were held in 2011-12, raising £2.6 billion, compared with original plans to raise £4.6 billion. The mini-tender programme was implemented smoothly during the year, and the average bid to cover ratio was 2.29. Table 6 below summarises the results of the mini-tenders held in 2011-12.

Table 6
Gilt mini-tenders in
2011-12

Date	Gilt Name	Size £mn (nominal)	Cover	Issue Price (£)	Yield (%)	Proceeds (£mn)
23 Jun 2011	0½% IL Treasury Gilt 2050	450	2.17	100.05	0.499	493.6
06 Sep 2011	4¾% Treasury Gilt 2030	1,000	1.88	118.55	3.426	1,185.1
20 Dec 2011	4¾% Treasury Gilt 2027	750	2.81	120.90	2.637	906.1
						2,584.8

Gilt sales outturn for 2011-12

The outturn for gilt sales versus the different remit targets in 2011-12 is shown in Table 7 (parts A-C). The DMO exceeded its overall gilt sales target by £0.5 billion (0.3%), via higher proceeds from the auction programme (and also reflecting take-up of the PAOF).

In aggregate, sales from the supplementary programmes were fractionally below the plans announced at the Autumn Statement 2011, by £0.06 billion. Proceeds from syndicated offers exceeded plans by £1.65 billion and proceeds from mini-tenders fell short by £1.72 billion. This reflects the fact that three mini-tenders were cancelled after some syndicated offers had been increased in size.

Table 7
Gilt sales outturn
relative to remit
targets

A. Aggregate sales

(£mn)	Short	Medium	Long	ILG	Total
Outturn	60,578.6	40,122.4	39,739.2	38,971.8	179,412.0
Target	60,600	39,800	39,500	39,000	178,900
Difference	-21.4	322.4	239.2	-28.2	512.0
Deviation	0.0%	0.8%	0.6%	-0.1%	0.3%

(Figures may not sum due to rounding).

B. Auction sales

Auctions (£mn)	AS 2011 plans	Outturn	Difference
Short	60,600	60,598.4	-1.6
Medium	39,800	40,122.4	322.4
Longs	22,600	22,978.1	378.1
ILG	18,900	18,796.4	-103.6
Total	141,900	142,475.5	575.5

Auction sales outturns include proceeds from the PAOF

C. Supplementary issuance sales

(£mn)	AS 2011	Outturn	Difference
Supplementary			
Syndication	32,700	34,351.7	1,651.7
Mini-tender	4,300	2,584.8	-1,715.2
Total	37,000	36,936.5	-63.5
Longs			
Syndication	13,800	14,670.0	870.0
Mini-tender	3,100	2,091.2	-1,008.8
Total	16,900	16,761.2	-138.9
Index-linked			
Syndication	18,900	19,681.8	781.8
Mini-tender	1,200	493.6	-706.4
Total	20,100	20,175.4	75.4

Examples of the application of analysis and research techniques to the preparation of remit advice

In order to inform the formulation of the annual remit advice to HM Treasury the DMO undertakes a range of analysis and research into a variety of topics which are considered to be relevant to the structure of the financing remit for the forthcoming financial year. This section summarises analysis of two of the issues that the DMO bears in mind when framing its remit advice – bond risk premia and cost-effectiveness of index-linked gilt issuance.

It should be borne in mind that these issues are components of a wider set of analysis that the DMO undertakes in assessing how best to structure a remit which it believes is best suited to delivering the Government's debt management objective. Therefore, while a particular piece of research might, of itself, suggest a that particular course of action should be followed (e.g. as regards the split of issuance by maturity and type of gilt) when balanced against the range of other considerations (e.g. the government's appetite for risk, the shape of the nominal and real yield curves, investors' demand for gilts and practical operational issues) the recommended outcome might well differ from what is implied by a single strand of research. Hence, the findings in the following examples of research should be read in that context.

a) Bond risk premia in the gilt market

As part of the DMO's remit analysis for 2012-13¹² a study of bond risk premia in the gilt market was carried out. The aim was to demonstrate that premia do exist and to identify the maturity segments of the yield curve where premia are at their lowest relative to some other segments historically. It is important to understand risk premia and their trends and variability as these affect directly the cost of funding for an issuer.

What is a bond risk premium?

In the context of this study, a bond risk premium is the proportion of bond yield an issuer pays investors as compensation for assuming the risk associated with holding longer maturity bonds as opposed to cash investments. The risk premium contains all the risks an investor may want to diversify away from its bond portfolio:

- (i) a term premium, which compensates investors for the fact that uncertainty increases with longer maturity investments;
- (ii) a credit and default risk premium;
- (iii) a liquidity premium due to the lower liquidity in some bonds or maturities, which restricts investors ability to hedge; and
- (iv) an inflation risk premium to compensate holders of nominal bonds for inflation uncertainty.

The objective of the DMO's study was to estimate an 'all in'¹³ risk premium that contains all of these components.

Context for this study

In a risk neutral¹⁴ world, premia would be zero and an issuer would be indifferent (from a cost perspective) between issuing long maturity bonds or short maturity bonds which they have to roll over. In practice, risk preferences change this relationship and premia arise. For example, an issuer might typically prefer a skew towards longer maturities in order to minimise refinancing risk¹⁵ and it will pay the investor for this protection. A positive premium that increases with maturity is, therefore, expected to be the norm as the yield curve would 'naturally' tend to be upward sloping.

Premia can also be negative, especially in periods of high market uncertainty and flight to safety¹⁶. By issuing at a negative premium the government is expected to save on future debt service costs while also meeting its risk preferences e.g.

¹² See also the Debt and reserves management report 2012-13 http://www.dmo.gov.uk/documentview.aspx?docname=remit/drmr1213.pdf&page=Remit/full_details.

¹³ If a liquid gilt market and low credit risk (to reflect AAA status of the UK government) is assumed, then the 'all in' risk premium is a proxy for the term premium, net of inflation risk.

¹⁴ 'Risk neutral' means that investors are all equally risk averse and do not apply a price for risk to investments and, hence, arbitrage opportunities can arise.

¹⁵ See DRMR 2012-13 BOX 2A for a list of definitions of risks.

¹⁶ Market uncertainty creates flows towards assets that are perceived to be relatively safe.

lowering refinancing risk by extending the maturity of issuance beyond money market maturities. The DMO issues across different maturities, so cost savings are also expected to materialise from skewing the issuance towards maturities where premia are lower than at other maturities.

Model description

The estimation of bond risk premia follows a recent academic research paper originally by Christensen-Diebold-Rudebusch¹⁷, where a Nelson-Siegel (NS)-type yield curve with a convexity adjustment¹⁸ is applied.

¹⁷ The affine arbitrage class of Nelson-Siegel term structure model, Christensen-Diebold-Rudebusch, 2009.

¹⁸ Convexity is a measure of the curvature of the price/yield relationship of a bond and it provides an approximation of the part of the price change of a bond for a given change in yield that is not explained by modified duration. The price of a more convex bond tends to rise more for a given fall in bond yields than it falls for the same rise in bond yields. It is this property that makes more convex bonds attractive to investors. The convexity adjustment actually plays quite an important role in the estimation of the risk premium at the longest maturities. As convexity increases with maturity, it is possible that the overall premium paid by the issuer can fall for longer maturities as a result of offsetting taking place between that part of the premium that is attributed to risk and that which is due to convexity.

In this model the yield curve is explained by three independent unobservable factors, identified as Level, Slope and Curvature, which are estimated using the DMO's historical data¹⁹. The zero coupon rate for maturity τ at time t is:

$$i(t, \tau) = x_1 + x_2 \frac{1 - e^{-a\tau}}{a\tau} + x_3 \left(\frac{1 - e^{-a\tau}}{a\tau} - e^{-a\tau} \right) + C(\tau)$$

C is the convexity adjustment. The parameters that govern the N-S loadings²⁰ and the dynamics of the three latent factors over time, modelled by Vector Autoregression, are estimated using the Kalman Filter²¹.

Results

Results using this model (Chart 16) confirm the existence of a time-varying term premium in the conventional gilt market. It is usually positive and, as a general rule, increases with maturity. The premium at March 2012 was at historically low levels at all maturities.

Chart 16
Estimates of the
risk premium at
different points on
the nominal yield
curve



Source: DMO and Société Générale-Cross Asset Research

Note: The model used to plot this chart is a Multi-Factor Econometric Nelson-Siegel model of interest rates (MENIR) provided by Société Générale Cross Asset Research.

¹⁹ Historical data are from the DMO's operational yield curve model which is the Variable Roughness Penalty (VRP) developed by the Bank of England and used by the DMO since 2007.

²⁰ Coefficients consistent with the Christensen-Diebold-Rudebusch specifications (Affine Nelson Siegel model) that relate the price of the zero coupon bond to the factors.

²¹ The Kalman filter is an algorithm which uses a series of measurements observed over time, containing noise, and produces estimates of unknown variables that tend to be more precise than those based on a single measurement alone.

*Main points to note:**Short maturity conventional gilts*

The analysis produced in advance of the Budget indicated that the premium at short maturities was at its lowest level for 12 years. Not only had the premium at the short-end of the curve been consistently lower than at other maturities over this period, but the spread between the premium at the short-end and all other maturities had been progressively widening. These results suggested, therefore, that in addition to short maturity gilts proving the most cost-effective for the DMO to issue, their relative cost-effectiveness compared with other maturities had increased over time. If therefore, this trend were to continue, then these results suggested that short gilts would continue to be highly cost-effective to issue relative to other maturities.

Long maturity conventional gilts

Over the 12 year period studied, the premium consistently peaks in the 30-year part of the curve, making bonds in this sector the most costly to issue. As the spread between the premium at the 20 year and 5 year maturities was at an all time high, this suggests that a 20 year gilt was more expensive to issue relative to a 5 year gilt than had previously been the case. The premium at the long-end of the curve had consistently been at its lowest at the 50 year maturity and the premium at this maturity was significantly less than at other long maturities including the 40 year point. Part of the reason for the premium for ultra-long maturities being lower than that for long maturities is due to the much greater convexity of ultra-long gilts.

Conclusions

The analysis suggested from a cost perspective that for 2012-13 the DMO should consider a skew towards issuing more short conventional gilts and ultra-long conventional gilts (especially 50 year bonds), whilst issuing fewer long (i.e. 30 year) conventional gilts.

While the model may suggest following a particular strategy, in order to reduce costs, in practice there are a range of other factors that the DMO also considers, including demand, operational and practical considerations that will influence decisions and may result in a different skew of issuance.

b) Measuring Index-linked gilt cost effectiveness

An analysis of the cost effectiveness of index-linked gilt issuance is one of a number of inputs used to determine the appropriate amount of index-linked gilts that the Government issues on an annual basis, and at what maturities issuance is most appropriately directed.

In the case of the UK, index-linked gilts form part of a wider set of issuance choices, including conventional gilts and Treasury bills. Of these instruments, conventional gilts account for the largest part of the UK's issuance programme and are the most suitable benchmark against which index-linked issuance can be evaluated.

The break-even inflation rate on index-linked gilts acts as the point of comparison. This is because the break-even is the rate of inflation that will equalise the return on an index-linked bond with that of a conventional bond of the same maturity. It can be seen as the average rate of inflation, over the life of an index-linked gilt issue that will make the Government indifferent on cost grounds between issuing either a conventional or an index-linked bond. At its most basic, it can be calculated by subtracting the yield of an index-linked bond from that of a conventional bond of the same maturity; more precisely, it is calculated using the Fisher identity.²²

While the break-even inflation rate is often interpreted as the market's expected view of inflation (in this instance RPI) over a specific time period, in practice there are a number of factors that will cause it to deviate from this. Two key factors²³ are:

- **an illiquidity premium:** index-linked gilts are typically less liquid than conventional gilts²⁴, and so investors may require a premium for this illiquidity in order to hold them – this typically causes index-linked yields to be higher relative to conventional gilts, and the corresponding break-even inflation rate to be lower; and

- **an inflation risk premium:** if investors attach value to protection against inflation risk then they may be prepared to pay a premium for this protection – this will typically result in lower yields for index-linked gilts relative to conventional gilts, translating into a higher break-even inflation rate.

While it is possible to estimate the effect of these premia individually, it is sufficient for the purposes of this analysis to take account of them in aggregate, as they are factors that can explain the overall relative demand between conventional and index-linked gilts. Assuming the existence of investor preferences (i.e. preferred habitats²⁵) for specific types or maturities of gilt (which may, amongst other factors, include a desire for liquidity or for inflation-linked cash flows), then yields on both conventional and index-linked gilts may deviate from those based on future expectations of interest rates. In turn, break-even inflation rates will deviate from inflation expectations because they capture the relative demand between these two types of instrument (in the context of a given level of supply).

²² Where the break-even inflation rate = $[(1 + \text{nominal yield}) / (1 + \text{real yield})] - 1$.

²³ Other factors include the differential taxation treatment between fixed-coupon and index-linked bonds, as well as the different duration and convexity properties of the two instruments (in this analysis it is assumed that a debt manager is interested in making relative issuance decisions based on the maturity of the instruments that it issues, rather than their duration characteristics).

²⁴ Reflecting their different investor base, which typically includes a greater proportion of buy-and-hold investors, such as pension funds that purchase them for liability matching purposes, as well as a general lack of direct hedging instruments (e.g. index-linked bond futures).

²⁵ Based on segmented market theory, we assume that demand for government bonds is segmented, that is different types and maturities of bonds are not substitutes for one another.

As an example, if there are investors with strong demand (a preferred habitat) for long inflation-linked cash flows, then the yield on index-linked gilts may be lower than that based on expectations of real interest rates alone. In this instance, if there is not equivalently strong demand for long conventional gilts, then the break-even inflation rate will be higher than it would be otherwise on the basis of inflation expectations only. That is, if investors are willing to pay for inflation protection, and do not discount the relative illiquidity of index-linked bonds too heavily and/or there is strong demand for index-linked relative to conventional gilt issuance, then there may be cost benefits for the issuer from issuance of the former relative to the latter. In essence, if the break-even inflation rate on an index-linked gilt is higher than the actual inflation outturn over its life, then issuance will have been more cost effective than issuance of an equivalent conventional gilt, and vice versa.

The methodology used by the DMO for measuring the cost effectiveness of index-linked gilts is based on that developed by Sack and Elsasser (2002)²⁶, which uses the break-even inflation rate to create a counterfactual bond issue against which index-linked issuance is evaluated. The counterfactual bond has its coupon set at the same rate as that on the index-linked gilt that is being evaluated. However, the cash flows paid on the counterfactual will grow at a constant rate determined by the break-even at issue, while the cash flows on the index-linked gilt grow in line with the prevailing rate of inflation. Both the coupons and redemption payment on the counterfactual bond are indexed to a Break-even Index (BEI), which grows at the rate set by the break-even inflation rate at issue, in contrast with the index-linked gilt whose coupons and redemption payment are determined by the growth in the relevant price index. The difference in the cashflows on the counterfactual and the equivalent index-linked gilt will determine cost effectiveness of each index-linked bond issue. As these cash flows arise at different points in time, it is necessary to discount each back to today to calculate a net present value of the costs or savings from each issue.

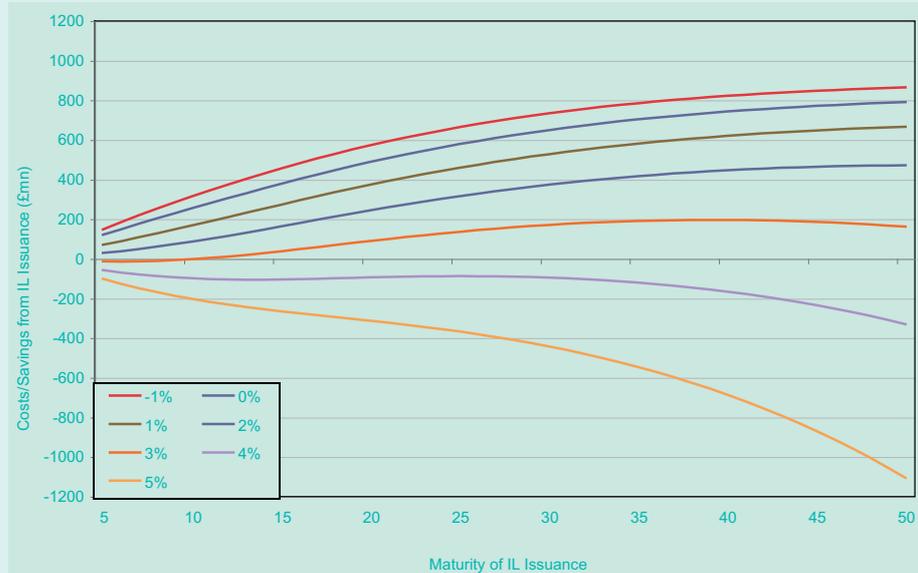
Charts 17 and 18 show the results of such an analysis in practice. They demonstrate how data from the DMO's nominal and real yield curves, combined with a range of paths for future inflation, can be used to estimate potential future costs or savings from issuance of index-linked gilts across the maturity spectrum at a set point in time. Chart 17 shows these potential paths of future inflation, while Chart 18 translates them into cost-effectiveness forecasts for index-linked gilt issuance by maturity.

²⁶ The methodology in this paper, developed at the UK DMO in 2006, is similar to that later developed independently by Roush. See Roush, J. E. (2008). The 'Growing Pains' of TIPS Issuance. *Board of the Federal Reserve System Finance and Discussion Series*. 2008-08.

Chart 17
Inflation: actual and forecast



Chart 18
Cost/savings from issuance (per £ billion)



In this example (data as at 21 March 2012), the charts demonstrate the potential cost effectiveness of longer index-linked gilts relative to those at shorter maturities; however, they also highlight the greater dispersion in potential costs or savings from longer index-linked issuance, consistent with the longer horizon over which these bonds are in issue. This approach can be repeated across a series of dates to show the evolution of the forecast cost effectiveness of index-linked issuance by maturity through time.

Alongside this curve-based analysis, the DMO evaluates the cost effectiveness of individual index-linked gilts. Again, this analysis is used in both providing advice to HM Treasury on the potential amount of index-linked issuance for the year ahead, but also as an input during the course of the year to decisions about which specific index-linked gilts to issue on a quarterly basis. Chart 19 shows the potential savings (positive) or costs (negative) from individual index-linked gilt issues, based on a range of long-term inflation assumptions (as at end-March 2012).

Chart 19
Cost effectiveness
of index-linked gilts
(per £ billion of
issuance)



In summary, the results of this cost effectiveness analysis provide a useful role in informing decisions on the potential amount of issuance of index-linked gilts for the year ahead, as well as at what maturities issuance is best directed. However, such analysis is not taken in isolation: it forms part of a wider evaluation of the costs and risks of issuing index-linked bonds.

The DMO remit 2012-13 and future financing projections

March 2012 Budget

The DMO remit for 2012-13 was published in the Debt and reserves management report 2012-13 on 21 March 2012 alongside the Budget.

Total debt sales by the DMO of £166.4 billion were planned in 2012-13, split as follows:

Outright gilt sales	£167.7 billion
Net Treasury bill sales	-£1.3 billion

The gilt financing remit structure

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

- £126.7 billion sales in 45 outright auctions; and
- £41.0 billion sales via supplementary distribution methods split as follows:
 - £33.5 billion in a programme of up to eight syndicated offerings; and
 - £7.5 billion in a programme of sales by mini-tender.

The planning assumption was that (as in previous years) sales via the syndication programme would be of long conventional and index-linked gilts only. For the first time, however, in a move designed to enhance the extent to which the mini-tender programme is responsive to market demand in-year, all maturities and types of gilt are eligible for sale via mini-tender in 2012-13.

The following planned split of issuance was announced:

- £51.6 billion of short conventional gilt sales in 12 auctions;
- £34.9 billion of medium conventional gilt sales in 10 auctions;
- £37.6 billion of long conventional gilt sales (£23.6 billion in 11 auctions and £14.0 billion via syndicated offerings); and
- £36.1 billion of index-linked gilts sales (£16.6 billion in 12 auctions; and £19.5 billion via syndicated offerings).

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 is, however, a planning assumption. Total financing by supplementary methods (and the split between methods) is dependent on market and demand conditions at the time the operations are conducted.

The supplementary distribution programme

● Syndicated Offerings

The DMO announced that it intended to continue to implement the syndication programme in a broadly even-flow manner (as in 2011-12) – with a frequency of two operations per quarter.

The initial planning assumption was for a programme of up to eight syndicated offerings (five of index-linked gilts with an average size of £3.9 billion (cash) and three of long conventional gilts with an average size of £4.7 billion (cash)). This decision took into account mitigation of intra-year financing risk associated with the possibility of either a heavily front or back loaded programme (as had been adopted in 2010-11).

The remit explicitly stated, however, that the DMO retains discretion to vary the cash size of individual syndications to take account of prevailing market and demand conditions, but that in order to maintain predictability, that discretion would be limited to around £1 billion (cash) above or below the prevailing average required operation size.

A clear link was established between the respective sizes of the syndication and mini-tender programmes. The remit provided that in circumstances where the discretion to increase syndication sizes is exercised consistently, the size of the mini-tender programme would be reduced (and vice versa). In addition, in the event that a number of syndications were increased in size such that the remaining balance of sales required to reach the planned target was too small to hold viable operations toward the year-end, then the remit allows the DMO to increase the size of the syndication programme by up to 10%.

● Mini-Tenders

Mini-tenders are to be scheduled in-year, depending on market demand and the progress of the syndication programme, and will be added to the calendar with at least seven working days notice, after market consultation.

The remit also provided for the continued application of the PAOF in 2012-13.

Other operations

The remit also specified that the DMO has no current plans to hold any switch auctions, reverse auctions or conversion offers in 2012-13.

Royal Mail Pension Plan: gilt holdings

The assets (and liabilities) of the Royal Mail Pension Plan (RMPP) were transferred into public ownership on 1 April 2012; these included £5.7 billion (nominal) of index-linked gilts and £2.2 billion (nominal) of conventional gilts. The remit announcement included an intention to cancel these gilt holdings in 2012-13, with the DMO giving an undertaking to provide the market with at least seven working days notice of cancellation(s).

New gilt instruments

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 intended to hold a formal market consultation on the issuance of gilts with maturities potentially significantly longer than those currently in issue (around 50-years to maturity) and/or perpetual gilts. The consultation was launched on 25 May 2012 with a deadline for responses of 17 August.

Treasury bill financing

The stock of Treasury bills in market hands was scheduled at the Budget to fall by £1.3 billion in 2012-13, implying a projected stock of Treasury bills at end-March 2013 of £68.5 billion.

CGNCR outturn 2011-12 revision to the 2012-13 financing remit

The publication of the CGNCR outturn for 2011-12 on 24 April 2012 which, at £126.4 billion was £3.5 billion lower than the Budget forecast, resulted in a reduction in planned gilt sales in 2012-13 of £3.3 billion to £164.4 billion. The remit adjustment was accommodated by reducing sales broadly in line with the planned split of issuance announced at Budget 2012, as follows:

● Short conventional	-£1.2 billion (to £50.4 billion).
● Medium conventional	-£0.4 billion (to £34.5 billion).
● Long conventional	-£0.4 billion (to £37.2 billion).
● Index-linked gilts	-£0.8 billion (to £35.3 billion).
● Mini-tenders	-£0.5 billion (to £7.0 billion).

Planned gilt sales at auctions were reduced by £1.8 billion to £124.9 billion. One gilt auction, (for a short conventional gilt) was cancelled, with a consequent increase in the average size of auctions of that maturity, while the average auction sizes for other types of gilt were only marginally affected.

Average auction sizes (cash)	March Budget	April revision
● Short conventional	£4.30 billion	(£4.58 billion).
● Medium conventional	£3.49 billion	(£3.45 billion).
● Long conventional	£2.15 billion	(£2.15 billion).
● Index-linked	£1.38 billion	(£1.36 billion).

Planned sales at syndications were reduced by £1.0 billion to £32.5 billion, with the reduction split equally between the long-conventional and index-linked programmes. The size of the mini-tender programme was reduced by £0.5 billion to £7.0 billion.

On 29 May 2012 a further change was made to the split between the syndication and mini-tender programmes following a larger than anticipated syndicated offering of 0¹/₈% Index-linked Treasury Gilt 2062. £0.5 billion was added to planned sales of index-linked gilts by syndication and the mini-tender programme was reduced accordingly

The remit structure following the April 2012 revision and the subsequent adjustment on 29 May is shown in Table 8.

Table 8
Structure of the 2012-13 gilt financing remit

	Auction	Syndication	Mini-tender	Total
Short-dated conventional				
£ billion	50.4			50.4
Per cent				30.7%
Medium-dated conventional				
£ billion	34.5			34.5
Per cent				21.0%
Long-dated conventional				
£ billion	23.7	13.5		37.2
Per cent				22.6%
Index-linked				
£ billion	16.3	19.5		35.8
Per cent				21.8%
Total	124.9	33.0	6.5	164.4
	76.0%	20.1%	4.0%	

In-year revisions to the remit

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

Future financing projections

The Budget in March 2012 also included projections for the CGNCR as a percentage of GDP out to 2016-17. Table 9 sets out the resulting CGNCR projections in cash terms together with current redemption totals to produce illustrative gross financing projections. Note that these are not gilt sales forecasts, as they take no account of possible contributions to financing by NS&I or Treasury bill sales.

Table 9
March 2012 Budget:
illustrative financing
projections

(£bn)	2012-13	2013-14	2014-15	2015-16
CCGNCR projections	112	81	56	37
Gilt redemptions	52	60	67	69
Financing for the reserves	6	6	0	0
Illustrative gross financing requirement	170	147	123	106

Chapter 3: Exchequer Cash Management

Exchequer cash management remit 2011-12

The DMO's cash management remit for 2011-12, published alongside the Budget on 23 March 2011, specified that the Government's cash management objective is:

“to ensure that sufficient funds are always available to meet any net daily central Government cash shortfall and, on any day when there is a 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 DMO's 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 2011-12 the DMO carried out its cash management objective primarily through a combination of:

- bilateral market operations with DMO counterparties; and
- Treasury bill sales via the DMO's bilateral facility.

The average yields achieved compared with prevailing General Collateral (GC) repo rates 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 2011-12, Treasury bill sales contributed £6.8 billion to financing. Treasury bill tender sizes are determined with a view to meeting the end financial year target stock. Table 10 shows the split of issuance in Treasury bills by maturity at tenders over the course of the financial year.

Bilateral Treasury bill facility

Since November 2007, the DMO has had access to a facility which allows it to re-open 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, Treasury bills sold through the bilateral facility can contribute to smoothing cumulative cash positions. Monthly issuance of Treasury bills via the bilateral facility is shown in the "Other issuance" category in Table 10²⁷. At end-March 2012, £7.4 billion of Treasury bills sold bilaterally were in issue and these formed part of the £70.4 billion stock in market hands on that date.

Table 10
Treasury bill issuance 2011-12

Month End	One Month (£ million)	Three Month (£ million)	Six Month (£ million)	Other Issuance (£ million)	Total Issuance (£ million)	Total Stock Outstanding (£ million)
Apr-11	6,000	6,000	6,000	372.9	18,372.9	62,699.9
May-11	7,500	7,500	7,500	2,001.1	24,501.1	65,004.5
Jun-11	6,000	5,000	6,000	3,343.2	20,343.2	67,281.0
Jul-11	4,500	4,000	6,000	1,745.4	16,245.4	64,413.0
Aug-11	3,000	5,000	7,500	6,178.7	21,678.7	64,335.3
Sep-11	5,500	4,000	6,000	3,962.4	19,462.4	66,847.6
Oct-11	3,500	5,000	7,500	4,548.9	20,548.9	63,486.8
Nov-11	3,000	4,000	6,000	6,109.1	19,109.1	65,538.3
Dec-11	2,500	3,000	4,000	13,153.8	22,653.8	70,314.3
Jan-12	2,500	7,000	7,000	3,005.7	19,505.7	66,448.5
Feb-12	2,500	6,000	6,000	1,886.4	16,386.4	64,004.2
Mar-12	7,500	6,000	6,000	3,032.5	22,532.5	70,417.1

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

Table 11
Treasury bills outstanding at 31 March 2012

Bill maturity date	Amount in issue (£mn)
02 Apr 2012	4,811.2
10 Apr 2012	5,722.5
16 Apr 2012	5,376.7
23 Apr 2012	5,927.6
30 Apr 2012	3,528.1
08 May 2012	3,208.6
14 May 2012	3,721.8
21 May 2012	3,597.7
28 May 2012	3,387.0
06 Jun 2012	3,663.0
11 Jun 2012	3,078.1
18 Jun 2012	2,891.3
25 Jun 2012	1,500.0
02 Jul 2012	1,011.0
09 Jul 2012	1,508.0
16 Jul 2012	1,504.0
23 Jul 2012	1,527.2
30 Jul 2012	1,652.0
06 Aug 2012	1,598.0
13 Aug 2012	1,936.5
20 Aug 2012	1,745.9
28 Aug 2012	1,518.4
03 Sep 2012	1,501.0
10 Sep 2012	1,500.0
17 Sep 2012	1,501.0
24 Sep 2012	1,500.0
TOTAL	70,417.1

²⁷ Issuance of Treasury bills via the bilateral facility in December reflected both the usual end calendar year demand for Treasury bills for balance sheet purposes and 'flight-to-safety' flows arising from prevailing concerns about the Greek debt crisis.

Bilateral cash management operations

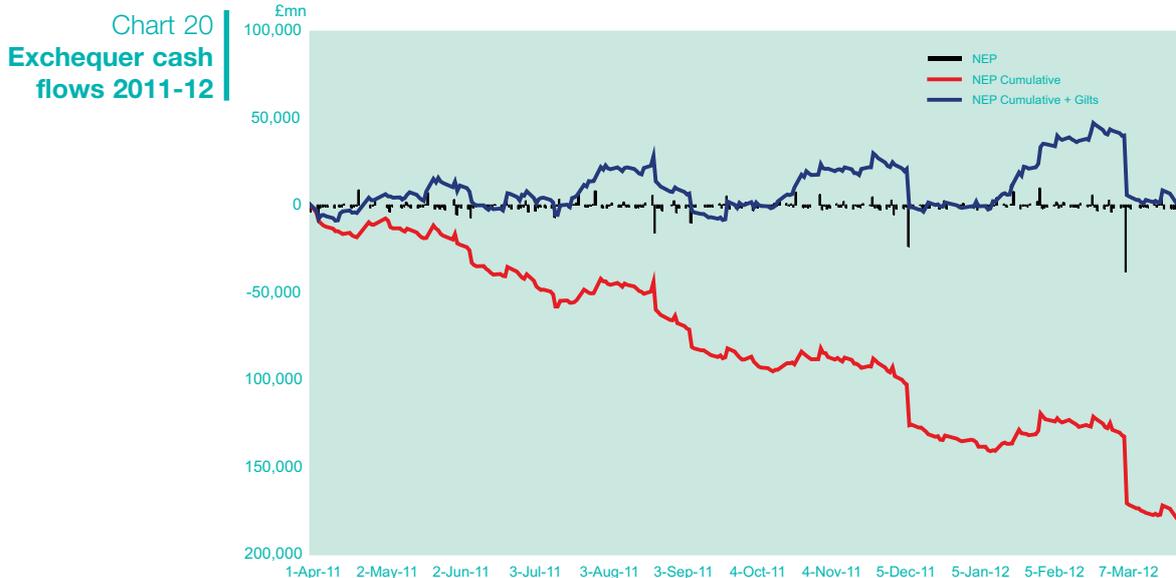
In practice, a large majority of cash management operations in 2011-12, as in previous years, were negotiated bilaterally by the DMO with market counterparties. To ensure competitive pricing, the DMO maintains relations with a wide range of money market counterparties with whom it transacts both directly 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 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 20 shows the scale of daily cash flows measured in terms of the Net Exchequer Position (NEP) in 2011-12. 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.



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 HM 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 2004-05²⁸ 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 2011-12 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 2011-12 is presented in Annex B.

²⁸ 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 responsibility for the investment of major Government funds. This now constitutes the main function of CRND, which had around £45.3 billion under its control, at end-March 2012, 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 or risk profiles agreed with Fund owners, but essentially investments are restricted to cash deposits or government-issued 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 CRND management at end-March 2012 were as follows:

- Court Funds Investment Account
- Insolvency Services Investment Account
- 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, and
- National Endowment for Science, Technology and the Arts²⁹.

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.

²⁹ This fund was subsequently wound up on 1 April 2012 and the assets transferred under Ministerial direction to the newly-created NESTA Trust charity

Lending to local authorities

Public Works Loan Board (PWLB) responsibilities and objectives

The PWLB is an independent statutory body, headed by Commissioners, which operates as a team in the DMO. Its function is to handle loan applications from local authorities and, where loans are made, to collect the repayments. Nearly all borrowers are local authorities requiring loans for capital purposes. Loans are automatically secured by statute on the revenue stream of the authority and are sourced from the 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 & Auditor General, whose reports on them are laid before Parliament. The accounts meet the duty of the Commissioners to report annually to Parliament.

PWLB operations in 2011-12

New loans of £16.11 billion (cash) were made to local authorities during 2011-12. After taking account of loan repayments, the PWLB's portfolio of loans grew by £8.78 billion so that by end-March 2012, the outstanding balance of principal was £61.92 billion, with a market value of £76.86 billion. During the year PWLB worked with the Department of Communities and Local Government to implement self-financing housing revenue accounts. The operation resulted in a net increase in outstanding loan principal of £8.0 billion.

Chapter 5: The DMO

The DMO was established on 1 April 1998 and aims to be a centre of excellence for HM Treasury in the provision of policy advice on and the delivery of HM Government's financing needs, while acting as a gateway for HM Government to the wholesale financial markets.

In organisational terms, the DMO is legally and constitutionally part of HM Treasury, however, 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.

This policy and operational framework is encapsulated within an annual financing remit that is issued to the DMO from HM Treasury before the beginning of each financial year. The timing of this remit usually coincides with the March Budget and will specify the annual total of gilt sales planned for the forthcoming financial year and a breakdown between index-linked and conventional gilts, the latter being also broken down by maturity bands (short, medium and long).

The remit also specifies the dates of scheduled outright auctions and provides the basis for the conduct of mini-tenders, syndications, the PAOF and any switch, conversions or buy-back operations in that particular financial year.

For each sale of gilts, by whichever method, the DMO decides on the size and the choice of gilts to be offered for sale. The DMO also decides the size and maturity breakdown of Treasury bill tenders.

Opportunities exist for the DMO remit to be revised during each financial year. This usually occurs in either April when the outturn of the CGNCR for the previous financial year is published, or in November/December when the revised forecasts for the public finances are published in the Autumn Statement.

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 that sets out the DMO's targets and objectives for the year ahead, and the strategies for achieving them. This document also reviews the preceding year's achievements. The DMO's business plan is drafted taking into account the organisations strategic objectives issued by the Chancellor of the Exchequer, which are 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 each business area, taking into account budget constraints and the priority of delivery objectives.

The DMO consists of two main operational areas: Policy & Markets and Operations & Resources. These areas are in turn split into a number of business teams across which there is substantial cross-team cooperation to ensure that both policy and operational requirements are adequately met by ensuring that the relevant skills are applied to appropriate activities and that essential operations are resourced efficiently and effectively.

The DMO's Managing Board 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. During 2011-12, the DMO's Managing Board also consisted of three non-executive directors: Brian Larkman, Brian Duffin and Sam Beckett, an HM Treasury representative.

The role of the DMO's Managing Board is supplemented by a number of internal committees supporting individual business activities and overarching governance procedures. In particular, committees discuss activities relating to debt management, cash management and fund management, which are all supported by a credit and market risk committee, an operational risk committee and a business delivery committee. The DMO also has an independent audit committee that oversees matters relating to risk, internal control and governance.

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 has been 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 operational budgets within which the DMO performs its functions are approved annually by Parliament and form part of HM Treasury's Supply Estimate. The budgets are approved under net funding arrangements taking into account the administrative and operational cost of running the DMO, off-set by income received from business activities.

Details of the financial performance against this budget can be found in the DMO's Annual Report and Accounts, which is available on the DMO website. This document provides separate accounts of both the DMO and the Debt Management Account (DMA), through which all trading activity in gilts and the other treasury management activities the DMO operates are recorded.

Operating costs

The DMO's net operating costs for 2011-12 were £11.3 million, a reduction of £3.4 million from 2010-11.

This reduction in net expenditure was principally due to increased fee income associated with the PWLB lending activity to local authorities. During the year, the PWLB facilitated a Housing Self-financing initiative alongside the Department for Communities and Local Government, which planned to replace council housing subsidy with self-financing housing revenue accounts. The operation crystallised on 28 March and resulted in a net increase of £8 billion in the total outstanding local authority debt position with PWLB and the amount of new lending associated with the initiative generated fee income for the DMO of £4.5 million.

This increase in income received was partly off-set by increased expenditure associated with the successful delivery of new initiatives such as the National Loan Guarantee Scheme and higher trading activity compared with 2010-11, which generated increased settlement, custodial and brokerage costs in support of delivering the DMO annual remit requirements.

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 2011-12 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, support the UK banking sector and to help businesses access cheaper finance. This involved participation in a number of schemes (as listed below) alongside HM Treasury and the Bank of England.

i) Special Liquidity Scheme (SLS)

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 was responsible for creating the Treasury bills used in the scheme.

The drawdown window to access the SLS closed on 30 January 2009, but existing swaps could be extended until 30 January 2012, when the scheme formally closed.

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, until 9 April 2012, and subject to the agreement of HM Treasury, some guaranteed liabilities could 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.

iii) National Loan Guarantee Scheme (NLGS)

The National Loan Guarantee Scheme (NLGS) was launched by HM Treasury on 20 March 2012 and is designed to help businesses access cheaper finance by reducing the cost of bank loans under the scheme by 1 percentage point. To be able to benefit from the NLGS, businesses with a turnover of not more than £50³⁰ million should apply for loans at a participating bank. The NLGS works by providing banks with up to £20 billion of guarantees to issue unsecured debt, thereby enabling them to borrow at a cheaper rate. The banks then pass on all the benefit that they receive to smaller businesses through cheaper loans.

The DMO has worked with the participating banks to confirm that the debt instruments that they propose to issue, in order to raise funds to finance loans under the scheme, meet the legal and other requirements to qualify for a government guarantee. Once confirmed, the DMO issues a Guarantee Certificate, on behalf of HM Treasury, for each qualifying debt instrument. The DMO also works with HM Treasury on the collection of lending data under the Scheme and the process for assuring participating banks are complying with the NLGS rules.

European Union Emissions Trading System: 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 2011-12 the Government auctioned a total of 24.5 million allowances across seven auctions (3.5 million allowances per auction). All auctions were successfully covered with an average bid to cover ratio of almost six times the amount offered.

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>

³⁰ Since July 2012, £250 million.

Annexes:

- A) List of GEMMs and Inter Dealer Brokers (IDBs) at 31 March 2012**
- B) Debt and cash management performance**
- C) The gilt portfolio**

A: List of GEMMs and IDBs at 31 March 2012 (All are market-makers in both conventional and index-linked gilts)

GEMM	Website
Bank of America Merrill Lynch Merrill Lynch Financial Centre 2 King Edward Street London EC1A 1HQ	www.baml.com
Barclays Capital 5 The North Colonnade Canary Wharf London E14 4BB	www.barcap.com
BNP Paribas (London Branch) 10 Harewood Avenue London NW1 6AA	www.bnpparibas.com
Citigroup Global Markets Limited Citigroup Centre 33 Canada Square London E14 5LB	www.citigroup.com
Credit Suisse Securities One Cabot Square London E14 4QJ	www.credit-suisse.com
Deutsche Bank AG (London Branch) Winchester House 1 Great Winchester Street London EC2N 2DB	www.db.com
Goldman Sachs International Limited Peterborough Court 133 Fleet Street London EC4A 2BB	www.gs.com
HSBC Bank PLC 8 Canada Square London E14 5HQ	www.hsbcgroup.com
Jefferies International Limited Vintners Place 68 Upper Thames Street London EC4V 3BJ	www.jefferies.com

JP Morgan Securities Limited

25 Bank Street
London E14 5JP

www.jpmorgan.com

Lloyds TSB Bank plc

25 Gresham Street
London
EC2V 7AE

www.lloydstsb.com

Morgan Stanley & Co. International Limited

20 Cabot Square
Canary Wharf
London E14 4QW

www.morganstanley.com

Nomura International plc

One Angel Lane
London
EC4R 3AB

www.nomura.com

Royal Bank of Canada Europe Limited

Thames Court
One Queenhithe
London EC4V 4DE

www.rbccm.com

Royal Bank of Scotland

135 Bishopsgate
London EC2M 3UR

www.rbsmarkets.com

Santander Global Banking & Markets UK

2 Triton Square
Regents Place
London NW1 3AN

www.santander.com

Scotiabank Europe plc

201 Bishopsgate
London EC2M 3NS

www.scotiabank.com

Societe General Corporate & Investment Banking

SG House
41 Tower Hill
London EC3M 4SG

www.socgen.com/

The Toronto-Dominion Bank (London Branch)*

60 Threadneedle Street
London EC2R 8AP

www.tordom.com/

UBS Limited

1 Finsbury Avenue
London EC2M 2PP

www.ubs.com/investmentbank/

Winterflood Securities Limited*

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

www.wins.co.uk

* Retail GEMM

Inter Dealer Brokers

BGC International

One Churchill Place
Canary Wharf
London E14 5RD

www.bgcpartners.com

Dowgate

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

www.ksbb.com

ICAP Electronic Broking Limited

2 Broadgate
London EC2M 7UR

www.icap.com

ICAP WCLK Limited

2 Broadgate
London EC2M 7UR

www.icap.com

Tullet Prebon Gilts

155 Bishopsgate
London EC2N 3DA

www.tulletprebon.com

B: Debt and cash management performance

Gilt issuance counterfactuals

The DMO has published the results of its measurement of relative performance of outright issuance in each financial year against counterfactuals in its Annual Reviews since 2001. Although the UK's debt management objective is concerned with minimising the average cost of issuance "*over the long term*" rather than in any one year, the intention here is to illustrate whether different non-discretionary issuance patterns during a particular year could have resulted in higher or lower costs of financing.

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).

There are a number of limitations to this analysis. In particular, a major assumption that is unlikely to hold in practice 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 issuance needs to be refinanced much more frequently than long) 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 would be too simplistic to say that in any one year one issuance pattern has outperformed another.

Another relevant assumption is that the counterfactual issuance patterns themselves 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 macro-economic 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.

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 decisions on the split between maturities/types of gilt sold in a given year. 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 annual counterfactuals should not be interpreted as a complete or authoritative means by which to test achievement against the debt management objective – which as noted above is a long-term test.

For these reasons, caution is required when interpreting the yield impact of counterfactual issuance patterns set out in this annex in comparison with the actual issuance yield.

The cash weighted average yield of actual issuance at the gilt auctions, syndicated offerings and mini-tenders in 2011-12 was 2.663%³¹ (significantly lower than 3.329% in the previous financial year). The cash weighted average yield of issuance by type of gilt and maturity is shown in Table B1.

Table B1
Average issuance yield
by type and maturity of gilt
2011-12

	Cash	%
All issuance	179,412	2.663
By maturity		
Short (conventional)	60,579	1.497
Medium (conventional and index-linked)	43,313	2.837
Long (conventional and index-linked)	75,521	3.450
Conventional		
Short	60,579	1.497
Medium	40,122	2.807
Long	39,739	3.638
Total conventional	140,440	2.477
Index-linked		
Medium	3,190	3.214
Long	35,781	3.242
Total Index-linked	38,972	3.239

This yield of 2.663% 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 2011-12 with three counterfactuals which assume:

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

Table B2
Illustrative yields assuming
different issuance patterns

Conventional		Even-flow	Very long	Very short
	%	(£bn)	(£bn)	(£bn)
Short	1.497	46.8	20.0	100.4
Medium	2.807	46.8	20.0	20.0
Long	3.638	46.8	100.4	20.0
		140.4	140.4	140.4
Index linked				
Medium	3.214	19.5	0.0	39.0
Long	3.242	19.5	39.0	0.0
		39.0	39.0	39.0
Total gilt sales		179.4	179.4	179.4
Average yield %		2.773	3.220	2.254
Difference (basis points)		11.0	55.7	-40.9

³¹ Index-linked real yields have been converted to nominal equivalents, assuming 3% RPI inflation.

An even-split approach to financing by maturity produces a marginally higher average yield of issuance (up 11.0 basis points or 4.2%), this mainly reflects the lower volume of the lowest yielding short maturities. The skews much longer and shorter produce significantly larger under- and over-performances respectively compared with the actual remit. The greater bias to long issuance is 55.7 basis points or 21.0% higher and the greater bias to short issuance is 40.9 basis points or 15.4% lower, both primarily reflecting the current steep upward slope of the conventional gilt yield curve.

The results 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
- investors' demand for gilts.

Auction concession analysis

There are a number of ways to measure auction concessions. The method presented in Table B3 uses the same methodology as adopted since 2008-09 and shows the extent of any concession/premium in the immediate run up 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.

Table B3
**Concessions (-) and premia
 ahead of gilt auctions
 in 2011-12**

Operation Date	Gilt	concession (-)/ premium (£mn)
5-Apr-11	3¾% Treasury Gilt 2021	-7.7
6-Apr-11	1½% Index-linked Treasury Gilt 2037	2.7
13-Apr-11	2% Treasury Gilt 2016	-2.5
14-Apr-11	4¼% Treasury Gilt 2040	15.4
19-Apr-11	0½% Index-linked Treasury Gilt 2050	-5.8
4-May-11	5% Treasury Stock 2025	-7.8
10-May-11	1⅞% Index-linked Treasury Gilt 2022	0.4
12-May-11	4¼% Treasury Gilt 2040	4.6
19-May-11	2¼% Treasury Gilt 2014	-3.5
2-Jun-11	3¾% Treasury Gilt 2021	27.0
7-Jun-11	0⅝% Index-linked Treasury Gilt 2040	10.2
15-Jun-11	4¼% Treasury Gilt 2027	-3.4
21-Jun-11	2% Treasury Gilt 2016	-1.4
5-Jul-11	3¾% Treasury Gilt 2021	6.5
6-Jul-11	1¼% Index-linked Treasury Gilt 2027	3.9
14-Jul-11	4¼% Treasury Gilt 2040	0.2
19-Jul-11	2% Treasury Gilt 2016	-8.6
2-Aug-11	4¼% Treasury Gilt 2034	3.2
11-Aug-11	0⅞% Index-linked Treasury Gilt 2042	-13.7
18-Aug-11	1¾% Treasury Gilt 2017	16.2
23-Aug-11	1⅞% Index-linked Treasury Gilt 2022	-4.9
1-Sep-11	3¾% Treasury Gilt 2021	18.9
15-Sep-11	0¾% Index-linked Treasury Gilt 2047	-12.3
22-Sep-11	1¾% Treasury Gilt 2017	9.5
4-Oct-11	3¾% Treasury Gilt 2021	31.2
11-Oct-11	1½% Index-linked Treasury Gilt 2037	-17.8
13-Oct-11	4¼% Treasury Gilt 2039	17.6
20-Oct-11	1¾% Treasury Gilt 2017	-1.9
3-Nov-11	4¼% Treasury Stock 2032	-6.8
8-Nov-11	0⅝% Index-linked Treasury Gilt 2040	7.3
17-Nov-11	5% Treasury Gilt 2018	3.6
1-Dec-11	3¾% Treasury Gilt 2021	-18.9
6-Dec-11	4¼% Treasury Gilt 2040	10.5
7-Dec-11	1¼% Index-linked Treasury Gilt 2032	-2.2
14-Dec-11	4% Treasury Gilt 2022	-10.5
15-Dec-11	1¾% Treasury Gilt 2017	-11.2
4-Jan-12	1¾% Treasury Gilt 2017	-1.9
10-Jan-12	0¾% Index-linked Treasury Gilt 2047	-7.9
11-Jan-12	3¾% Treasury Gilt 2021	-4.8
19-Jan-12	4% Treasury Gilt 2016	-2.0
1-Feb-12	5% Treasury Stock 2025	-14.5
2-Feb-12	0⅞% Index-linked Treasury Gilt 2029	8.3
7-Feb-12	1¾% Treasury Gilt 2017	0.4
16-Feb-12	4½% Treasury Gilt 2034	3.5
1-Mar-12	4% Treasury Gilt 2022	-11.6
6-Mar-12	0¾% Index-linked Treasury Gilt 2034	2.5
7-Mar-12	1% Treasury Gilt 2017	-3.2
15-Mar-12	4½% Treasury Gilt 2042	-15.8
22-Mar-12	0⅞% Index-linked Treasury Gilt 2042	3.6
	Aggregate auctions	4.6
	Average auctions	0.1
	Short conventional auctions	-0.4
	Medium conventional auctions	2.2
	Long conventional auctions	2.9
	Index-linked auctions	-1.7

In 26 of the 49 auctions in 2011-12 prices at the auctions were lower than at the close on the previous day. The average concession across all auctions was, however, only £0.1 million (compared with £1.8 million in the previous financial year). The aggregate concession was £4.6 million compared with £86.8 million in 2010-11.

On average, there were virtually no premia or concessions at short conventional auctions (-£0.4 million). There were small (circa £2-3 million) premia at medium and long conventional auctions and an average concession of £1.7 million at index-linked auctions.

Applying the same methodology to mini-tenders results in an average premium of £1.9 million (by contrast there was an average concession of £1.2 million in 2010-11) and an aggregate premium of £5.6 million. See Table B4.

Table B4
**Concessions (-) and premia
ahead of gilt mini-tenders in
2011-12**

Date	Gilt	Concession (-) Premium (+)
23-Jun-11	0½% Index-linked Treasury Gilt 2050	2.5
6-Sep-11	4¾% Treasury Gilt 2030	3.3
20-Dec-11	4¼% Treasury Gilt 2027	-0.2
	Aggregate tenders	5.6
	Average tenders	1.9

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 2011-12.

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
<p>The Debt Management Office (DMO) must supply sufficient cash each day to enable government to meet its payment obligations. This is fundamental and unconditional.</p>	<p>Way and Means transfers must be avoided for cash management purposes by ensuring that there is always a positive Debt Management Account (DMA) balance.</p> <p>(NB: HM Treasury is responsible for monitoring and reporting performance of the forecasting function against outturns).</p>
<p>Cash management operations and arrangements should be conducted in a way that does not interfere with monetary policy operations.</p>	<p>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.</p> <p>The DMO will seek to avoid holding weekly or ad hoc Treasury bill tenders when the Bank conducts its weekly open market operations.</p>
<p>Cash management operations and arrangements should be conducted without impeding the efficient working of the Sterling money markets</p>	<p>The DMO will advise HM Treasury as appropriate on the impact of Exchequer cash flows on liquidity conditions in the sterling money markets.</p>
<p>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.</p>	<p>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.</p>
<p>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.</p>	<p>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.</p> <p>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.</p>

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: Ways 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 on each day of 2011-12.

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 weekly target 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 35 out of 53 weeks in 2011-12. In all cases, balances outside this range related to events beyond the DMO's control, largely unexpected late cash flows either 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 1.3, 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 2011-12, 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 £60.9 million for 2011-12 compared with £33.9 million for 2010-11. The DMO's estimated transaction and management costs during the year were £8.9 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 2011-12.

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 2011-12 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) or announcement of Treasury bill tender results (30 minutes) but there was one technical breach of the cash management operational notice.

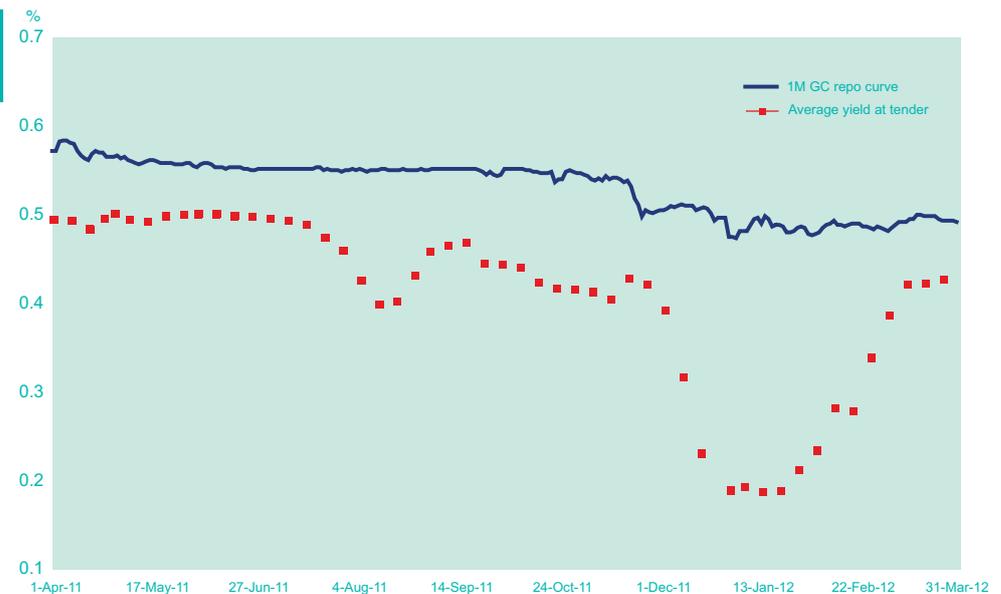
Treasury bill tender performance

Table B6 and Charts B1-3 compare the results (in terms of the average yield) of all Treasury bill tenders in 2011-12 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 7.5 to 12.0 basis points.

Table B6
Comparison of average tender yields with GC repo fixings in 2011-12

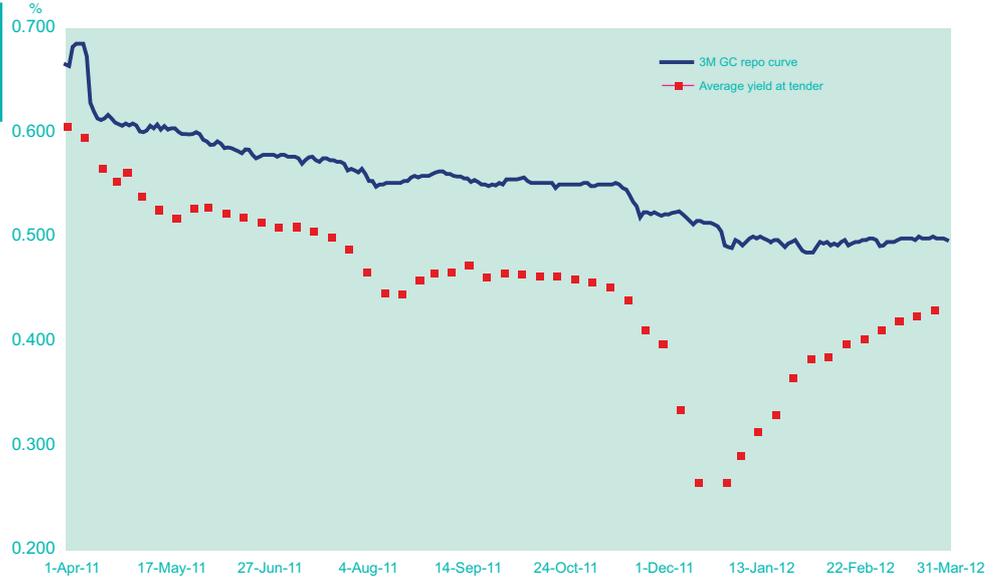
	Average tender yield %	Average GC fixing %	Tender relative performance (bps)
One-month	0.410	0.530	-12.0
Three-month	0.453	0.547	-9.4
Six-month	0.497	0.572	-7.5

Chart B1
One-month tender yields v GC repo fixings in 2011-12



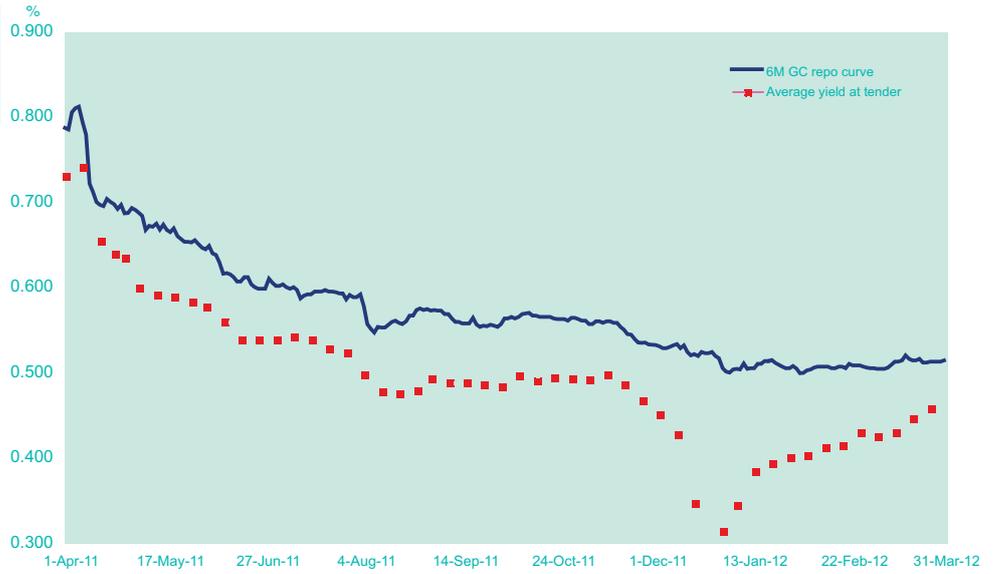
Source: DMO/British Banker's Association

Chart B2
Three-month tender yields
compared with GC fixings in
2011-12



Source: DMO/British Banker's Association

Chart B3
Six-month tender yields
compared with GC fixings in
2011-12



Source: DMO/British Banker's Association

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-March 2011		End-March 2012	
	Gross	Net	Gross	Net
Nominal value ³² of the gilt portfolio - inc TBills (£bn):	1,096.64	982.24	1,234.26	1,112.80
Nominal value of the gilt portfolio - exc TBills (£bn):	1,032.99	918.60	1,163.84	1,042.38
- conventional gilts ³³ :	799.32	697.97	898.02	788.57
- index-linked gilts:	233.67	220.63	265.82	253.82
Market value of the gilt portfolio - inc Tbills (£bn):	1,182.00	1,054.71	1,460.14	1,310.81
Market value of the gilt portfolio - exc Tbills (£bn):	1,118.43	991.13	1,389.76	1,240.44
- conventional gilts (£bn)	850.74	739.09	1,051.41	917.74
- index-linked gilts (£bn)	267.70	252.04	338.36	322.69
Weighted average market yields				
- conventional gilts:	3.11%		1.96%	
- index-linked gilts:	0.32%		-0.55%	
Portfolio average maturity - inc Tbills (years)	13.51		14.46	
Portfolio average maturity - exc Tbills (years)	14.26		15.19	
- conventional gilts (years)	13.31		13.82	
- index-linked gilts (years)	17.29		19.44	
Average modified duration				
- conventional gilts(years)	8.29		9.16	
- index-linked gilts (years)	15.83		17.34	

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/celLogon.aspx?page=D1A&rptCode=D1A>

The nominal value³⁴ of the gilt portfolio rose by 12.7% to £1,163.8 billion as gross gilt issuance greatly exceeded gilt redemptions. The market value of the portfolio rose, however, by 24.3% to £1,389.8 billion as yields fell very sharply.

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 holdings.

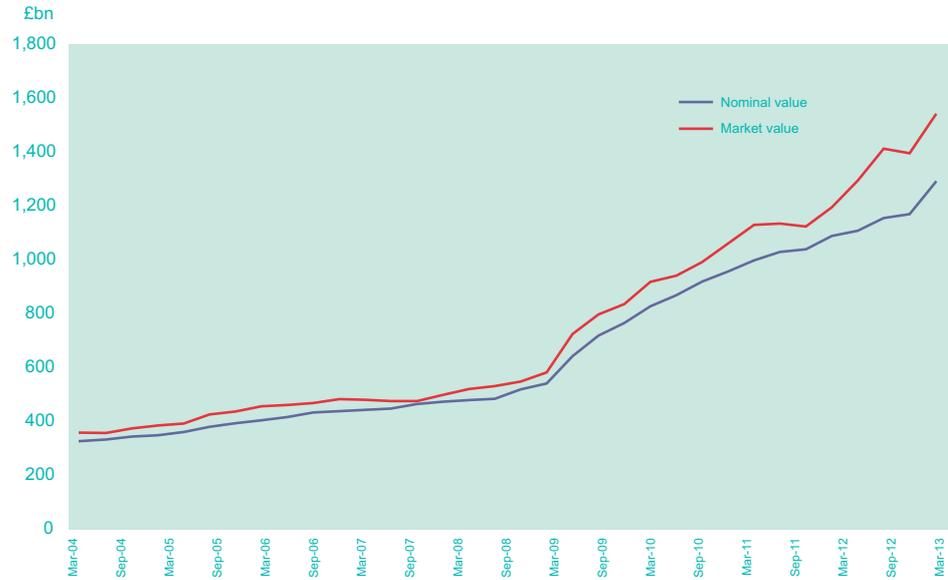
Chart C1 shows the nominal and market values of the gilt portfolio at end-March in each year since 2005 and projected to end-March 2013 based on the DMO's financing remit for 2011-12.

³² Including inflation uplift.

³³ Including undated gilts.

³⁴ Including inflation uplift on index-linked gilts.

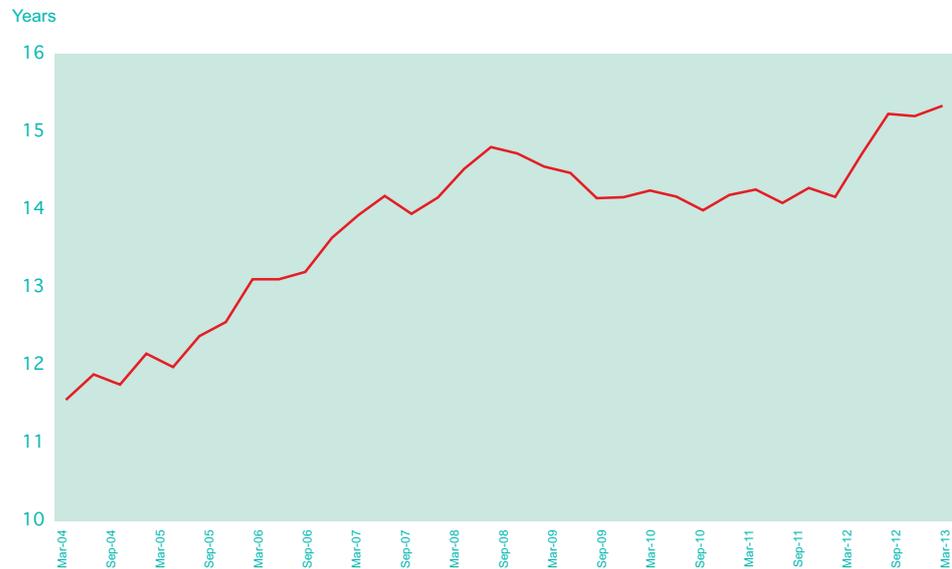
Chart C1
Nominal and market values
of the gilt portfolio
(projected to end-March 2013)



Source: DMO

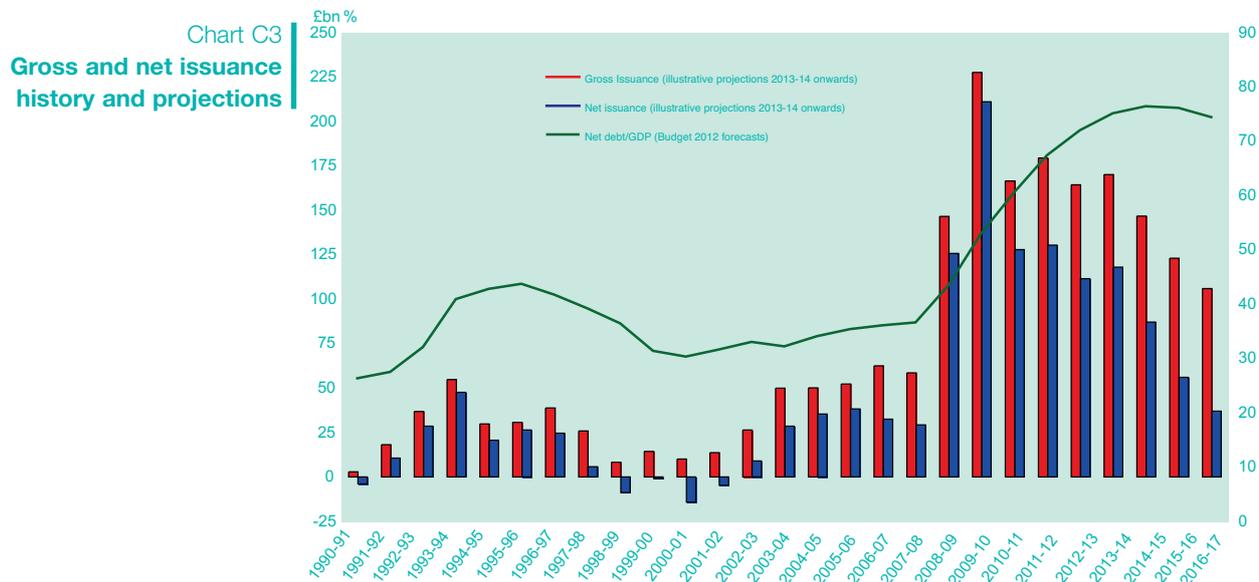
Chart C2 shows the maturity of the gilt portfolio at end-March each year since 1998 and projected to end-March 2013 on the basis of the DMO’s 2012-13 financing remit; on this basis, the gradual lengthening trend of the last year is expected to continue, with the average maturity rising from 15.2 to 15.3 years.

Chart C2
Maturity of the gilt portfolio
(projected to end-March 2013)



Source: DMO

Chart C3 shows past and projected gross and net gilt issuance levels (and net debt/GDP data) as published at the Budget on 21 March 2012.



Source: DMO / Office for Budget Responsibility (OBR)

Table C2 and Chart C4 below show the evolution of the gilt portfolio by type and maturity since March 1999. They show the steadily rising proportion of long conventional gilts (from 15% to 28% of the portfolio) over the 12 year period, and of index-linked gilts (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 larger increases in conventional gilt sales.

Table C2
Portfolio composition
1999-2010

At end-March (%)	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Conventional														
0-3 years	16	17	17	18	16	16	20	19	14	13	17	17	14	5
3-7 years	22	22	22	18	19	18	17	14	14	11	14	16	18	8
7-15 years	24	19	16	17	18	19	14	15	19	17	16	20	17	7
Over 15 years	15	16	17	20	19	21	23	25	25	28	29	26	27	28
Total Conventional	76	75	72	73	72	74	74	73	72	70	76	79	77	77
Index-linked*	21	23	25	26	27	25	25	26	27	30	24	21	23	23
Undated	1	1	1	1	1	1	0.8	0.8	0.7	0.6	0.4	0.3	0.3	0.3
Floating rate	1	1	1	0	0	0	0	0	0	0	0	0	0	0

*including index-linked uplift
(Figures may not sum due to rounding)

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.



Source: DMO

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