

United Kingdom
**Debt
Management
Office**

DMO Annual Review

2004 | 2005



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

July 2005



United Kingdom
**Debt
Management
Office**

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Chapter 1: Introduction

Foreword by the Chief Executive

In terms of operations conducted, the past financial year was the busiest so far for the DMO in its seven year history. During the year, the DMO successfully met both the debt and cash management remits given to it by HM Treasury. Gilt sales have risen steadily over the past few years from £26.3 billion in 2002-03 to £50.1 billion last year. For 2005-06, gilt sales of £51.1 billion are currently planned; the highest level for a decade.

Partly as a consequence of the sharp rise in gilt sales, aggregate daily turnover in the gilts market has also risen rapidly, from £8.7 billion in 2002-03 to a record £12.8 billion in 2004-05, reflecting increased liquidity in the market.

During the year, the DMO consulted both formally and informally with market stakeholders on the potential issuance of ultra-long gilts for the first time in a generation. As a result, the Chancellor of the Exchequer announced in his Budget speech in March that ultra-long conventional gilts could be issued from May 2005. The first 50-year conventional gilt since 1960, 4¼% Treasury Gilt 2055, was successfully auctioned on 26 May 2005. Such instruments offer potential cost savings to the Government and represent an important and interesting investment opportunity for the pensions and life insurance industry. The DMO has also announced that new index-linked gilts issued from the second quarter of 2005-06 will use a three-month indexation lag as opposed to the current eight month lag – this brings the UK into line with international best practice on index-linked instrument design.

The DMO has also conducted a review of its cash management operations which is designed to improve the DMO's effectiveness and accountability in discharging this important responsibility. This is covered in Chapter 5.

This latest edition of the DMO Annual Review covers the background to, and summarises the key points of, the DMO's activities in delivering its remits from HM Treasury. The Review also covers the operations of the Public Works Loan Board (PWLB) and the Commissioners for the Reduction of the National Debt (CRND). It also includes, in Chapter 7, the detailed analysis underpinning the Government's response, published alongside Budget 2005, to the Miles Review recommendation that the Government consider the cost and benefits of using interest rate derivatives.

Robert Stheeman
July 2005

Chapter 2: The Economy and Financial Markets

Macroeconomic and fiscal developments

During 2004-05 the world economy as a whole enjoyed fairly robust growth. In the UK, real Gross Domestic Product (GDP) growth remained above trend throughout most of the financial year, reaching 3.6% in the second quarter of 2004, and easing to 2.7% in the first quarter of 2005.

Inflation in the UK picked up over the year. Measured by the Consumer Price Index (CPI), the measure of inflation targeted by the Bank of England, inflation rose from 1.2% in April 2004 to 1.9% in March 2005, but remained below the 2.0% target. Similarly, inflation measured by the Retail Prices Index (RPI) and RPIX¹ rose from 2.5% to 3.2% and from 2.0% to 2.4% respectively.

The Bank of England repo rate increased by 75 basis points (bps) in 2004-05. Having started the financial year at 4.0% the Bank of England increased its repo rate by 25bps on each occasion in May, June and August 2004 to bring it to 4.75%. The rate remained unchanged at this level for the rest of the financial year.

The tax-GDP ratio is expected to have risen in 2004-05 primarily due to strong growth in income tax receipts, non-North Sea corporation tax and relatively low nominal GDP. Current receipts as a percentage of GDP increased from 37.5% in 2003-04 to 38.3% 2004-05. Total managed expenditure as a percentage of GDP increased by less, from 40.6% in 2003-04 to 41.2% in 2004-05. As a consequence, the Central Government Net Cash Requirement (CGNCR) fell from £39.4 billion to £38.6 billion. Net debt increased to an estimated 34.5% of nominal GDP, up from 32.8% in 2003-04.

The UK Government continues to enjoy the highest credit rating on its liabilities outstanding.

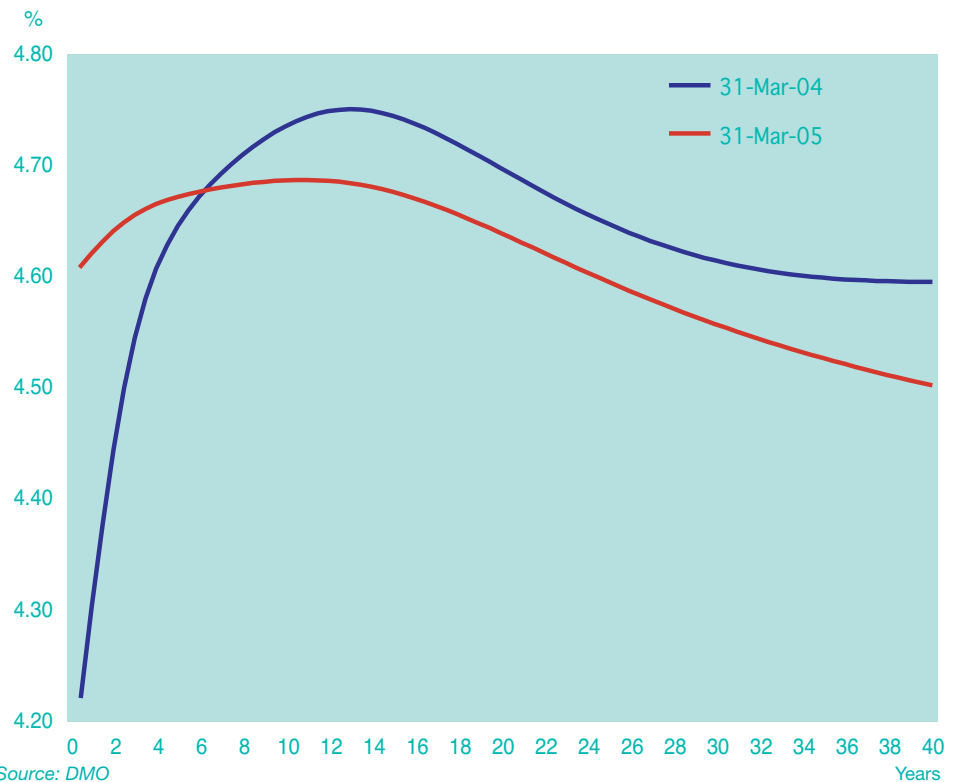
Gilts market developments

Par gilt yield curves

The changing shape of the par gilt yield curve between end-March 2004 and end-March 2005 is shown in Chart 1. Par yields rose significantly at the ultra-short-end over the financial year, by 20bps at the 2-year maturity and by 3bps at the 5-year maturity. In contrast, par yields fell by 5bps at the 10-year maturity and by 6bps at the 30-year maturity. The under-performance of the short-end of the curve relative to the long reflected rising interest rate expectations over the period.

¹ RPI excluding mortgage interest costs

Chart 1
Par yield curves



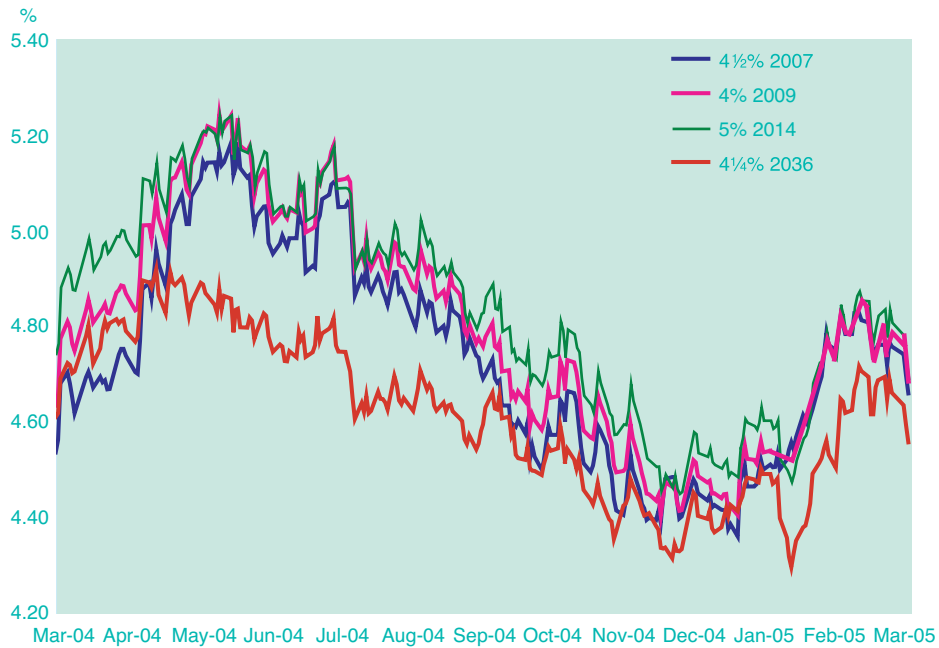
Conventional benchmark gilts

Gilt yields began the financial year continuing the upward trend observed since summer 2003. Escalating violence in Iraq and geopolitical tensions had prompted some safe-haven flows into gilts early in the financial year but this was not sustained as strong US economic indicators prompted yields to move higher again. UK monetary policy continued to tighten with the Bank of England's repo rate being increased by 25bps in May, June and August 2004 and peaking at 4.75 per cent. The yield on 4¼% Treasury Stock 2036 hit a high of 4.91% in mid-May, whilst 4% Treasury Stock 2009 and 5% Treasury Stock 2014 both reached a peak of 5.24% in early June. Long-dated gilts remained resilient to the 5% barrier.

However, from August onwards, yields fell reflecting market speculation that, in the face of weakening UK economic data, the UK was at the peak of its current interest rate cycle. A weak RICS housing survey in November (the lowest since 1992) was seen as further evidence of a cooling in the housing market and supported the view that the next interest rate move would be downwards. The yields on the key benchmarks hit lows around Christmas of 4.40%, 4.45% and 4.31%, falls of some 80bps for the 5- and 10-year benchmarks and 60bps for the 30-year. The release of the DMO consultation document on ultra-long gilts issuance (published alongside the Pre-Budget Report on 2 December) prompted the 10-30 year spread to steepen by over 5bps.

The gilts market retreated in January-February 2005, driven by stronger than anticipated CPI data, and signs of improvement in international economic conditions. By end-March 2005 most of the movement was focused in the 2-10 year sector, which remained the most rate sensitive part of the curve. Chart 2 below shows the evolution of benchmark conventional yields during the year to end-March 2005.

Chart 2
Conventional benchmark gilt yields

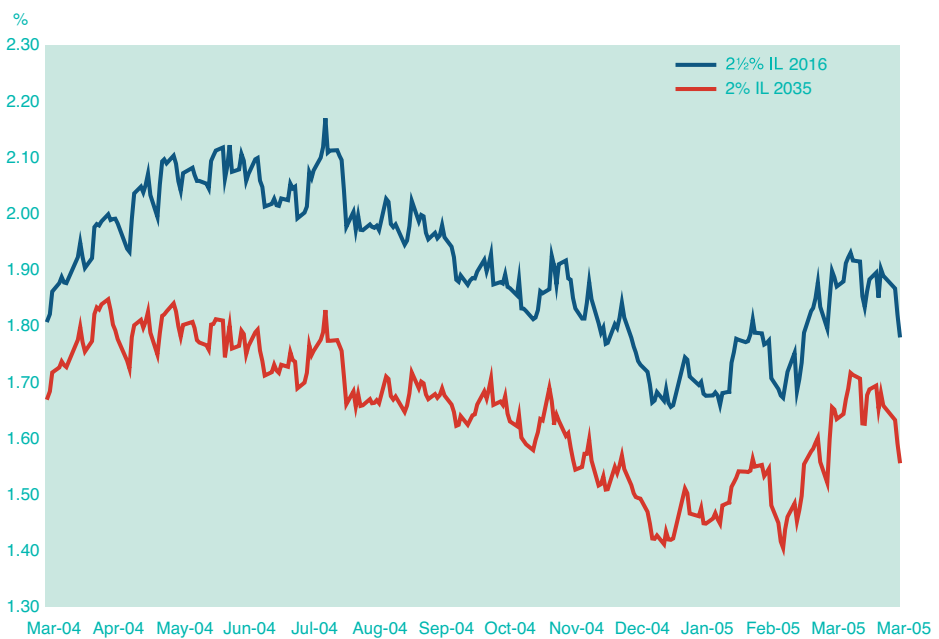


Source: DMO

Index-linked real yields

Real yields on the 2016 and 2035 index-linked gilts followed the same broad trends as conventionals – with real yields hitting in-year highs last summer of 2.17% (2016) and 1.84% (2035) and lows around Christmas 2004 of 1.65% and 1.40% respectively. Ongoing concern about rising oil prices, other inflationary indicators and structural demand for liability matching assets helped to sustain the appeal for long-dated inflation protected gilts and drove real yields lower. This was reflected in the February 2005 Bank of England Inflation Report, where domestic household spending data were identified as specific areas of inflationary concern. Over the period to end-March 2005 the yield on 2½% Index-linked 2016 fell by 3bps to 1.78% whilst the yield on 2% Index-linked 2035 fell by 11bps to 1.56%.

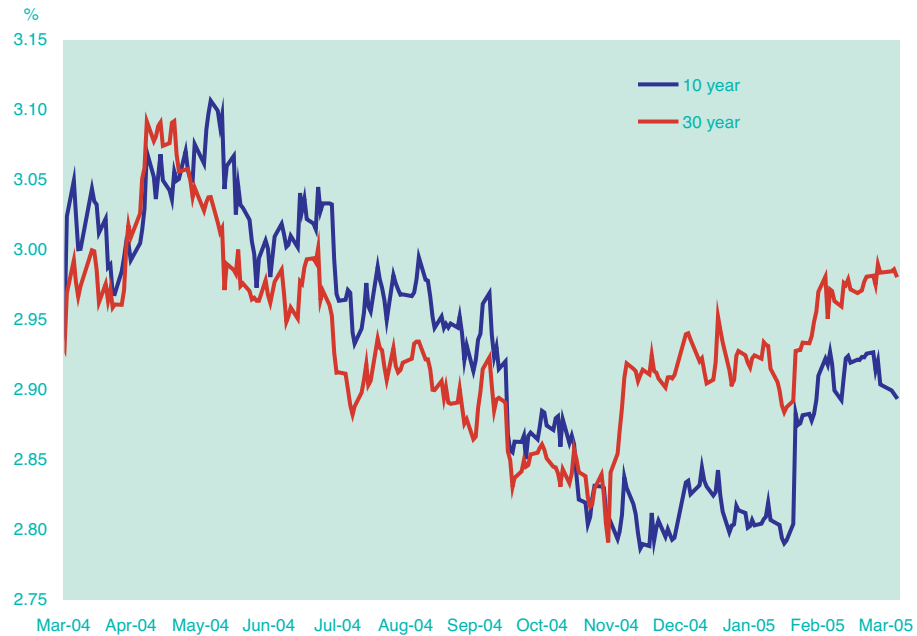
Chart 3
10- and 30-year index-linked gilt real yields



Source: DMO

Early in the financial-year break-even inflation rates trended downwards, however, a stronger-than-expected November RPI release (the strongest since June 2004) prompted index-linked gilts to out-perform conventionals. By end-March 2005 10-year break-even inflation rates had risen year-on-year by 4bps and 30-year break-even inflation rates had fallen by 5bps.

Chart 4
10- and 30-year break-even inflation rates



Source: DMO

Gilts market turnover

Turnover in the gilts market continued to increase in 2004-05, for the fifth successive year, reflecting, in part, the sharp increase in outright gilt issuance over the past few years. Gilt sales have risen from £8.2 billion in the first year of the DMO's existence to £50.1 billion in 2004-05.

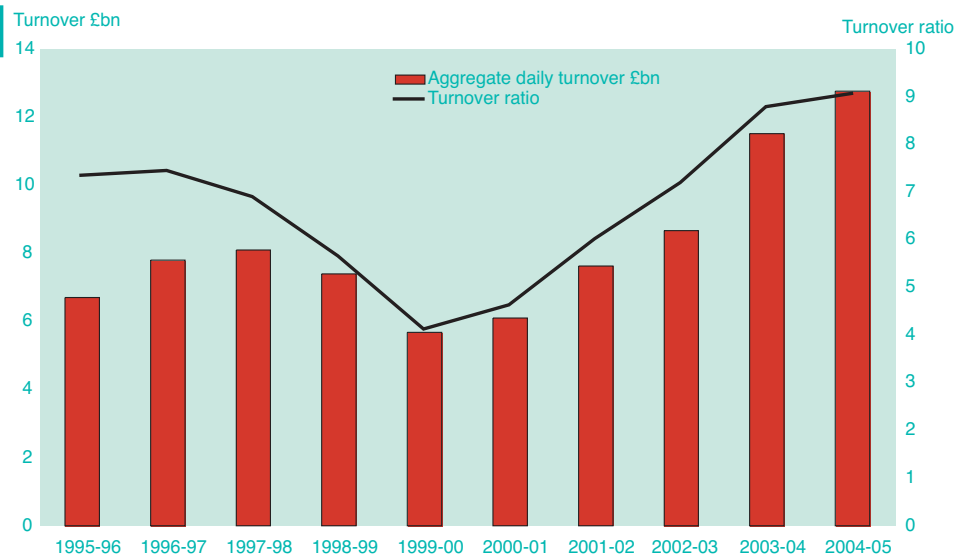
Table 1
Outright gilt sales since 1998-99

Outright gilt issuance (£bn)	
1998-99	8.2
1999-00	14.4
2000-01	10.0
2001-02	13.7
2002-03	26.3
2003-04	49.9
2004-05	50.1
2005-06 (plan)	51.1

According to data provided to the DMO by the Gilt-edged Market Makers (GEMMs), aggregate daily turnover in 2004-05 was £12.8 billion, an increase of 11% over the previous financial year. Over the same period, trading intensity (as measured by the turnover ratio) increased by 3% to 9.05².

² This is a measure of how many times the stock of gilts turns over in the financial year. The turnover ratio for 2004-05 equals the aggregate turnover relative to the market value of the portfolio at the start of the financial year.

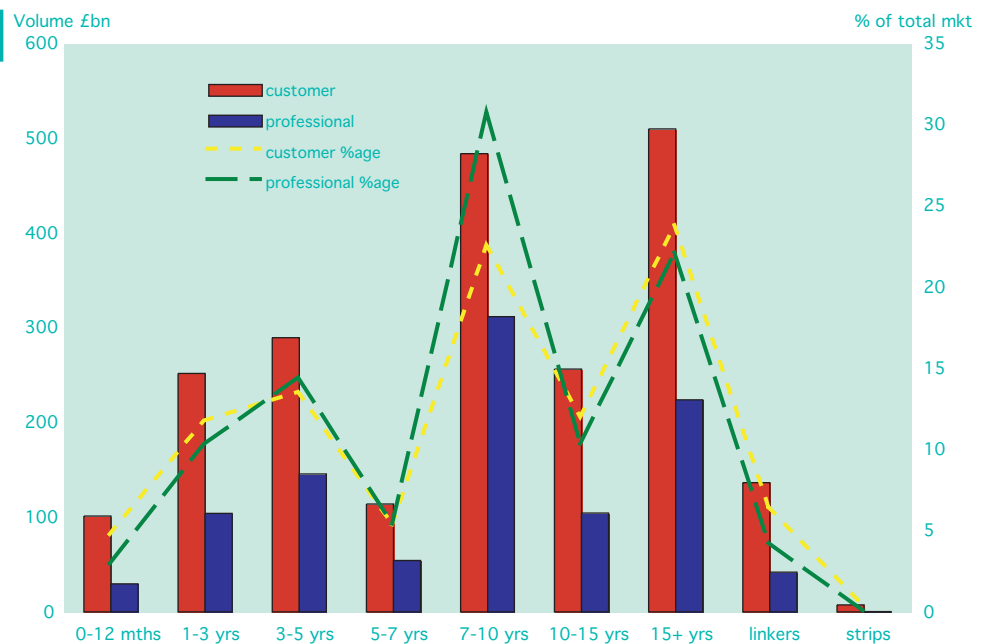
Chart 5
Gilts market turnover



Source: GEMMs

Gilts market turnover by maturity was weighted most towards the 7-10 year and long (over 15-year) sectors.

Chart 6
Gilts market turnover by maturity/type of gilt



Source: GEMMs

Money market developments

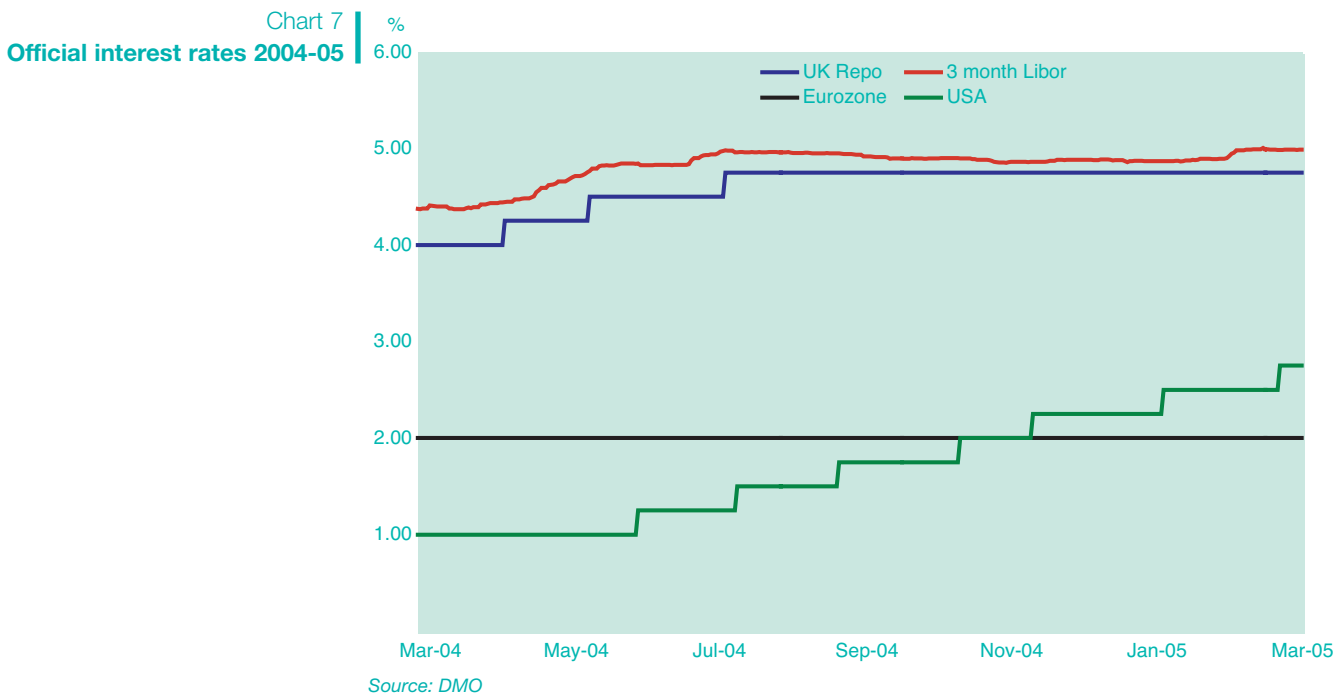
The money market began the financial year anticipating further tightening of UK monetary policy after the increase in the Bank of England repo rate to 4.0% in February 2004. Market sentiment reflected bullish economic data particularly from the US. In the UK, 3-month LIBOR³ began the financial year 37bps above the Bank of England repo rate and was on average 40bps above in the period until the Bank increased the repo rate by 25bps to 4.25% on 6 May 2004.

³ London Interbank Offer Rate; the rate at which AA rated banks lend to each other. LIBOR is a key market reference rate.

Also, in the face of increasingly strong economic data, monetary policy began to tighten in the USA on 30 June 2004 with the first of what transpired to be seven 25bps increases in the Federal Funds Rate, taking it from 1.0% to 2.75% by March 2005.

In contrast, the European Central Bank (ECB) kept eurozone rates unchanged at 2.0% throughout the financial year; this reflected relatively weaker economic conditions in Europe with subdued inflationary pressures and higher unemployment in some countries.

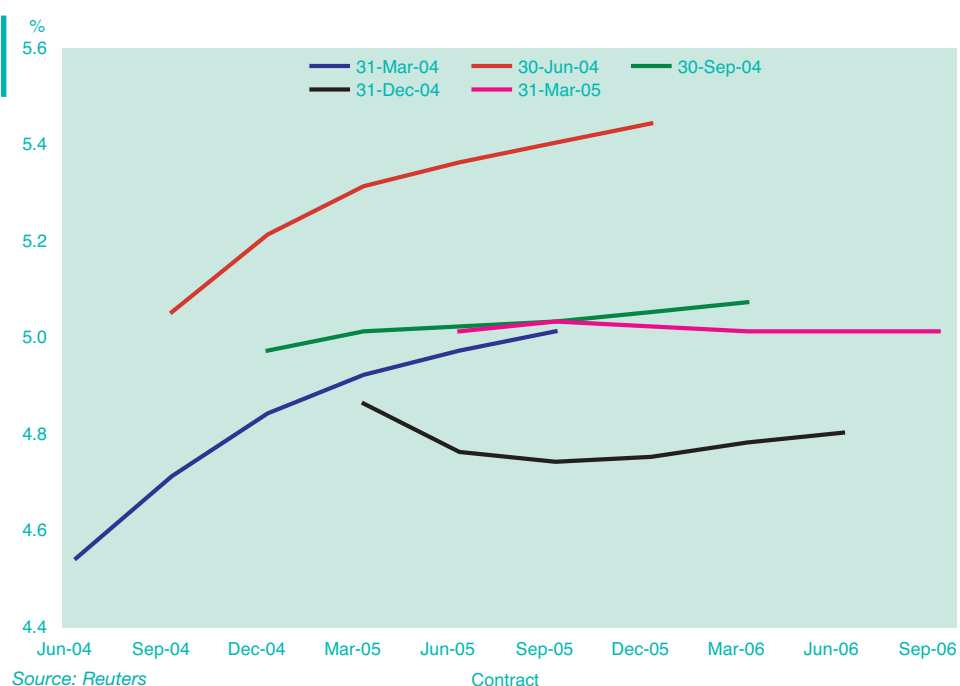
The path of official rates (and that of 3-month LIBOR in the UK) over the financial year is shown in Chart 7.



In the UK, market expectations of interest rate increases continued to grow after the repo rate was increased on 6 May, and ahead of the Bank increasing the rate to 4.50% on 10 June 2004, 3-month LIBOR had reached 50bps above the repo. Again, by the time the Bank increased rates by 25bps to 4.75% on 5 August 2004, 3-month LIBOR was 47bps above the UK repo rate. Expectations about further rises fluctuated over the second half of the financial year. LIBOR was over 20bps above the repo rate for the month or so after the August rate rise but, as house price inflation began to slow later in 2004, rate rise expectations abated somewhat and by December LIBOR was only 10-11bps above the repo rate; it ended the financial year 24bps above.

The changing path of future interest rate expectations can also be shown in the implied yields of the short sterling contracts over the period. Chart 8 shows the implied curves at the end of each quarter. The first two curves show fairly steeply rising expectations of interest rates, peaking at 5.44% for the December 2005 contract on 30 June 2004. By end-September 2004 implied yields had fallen by about 40bps; the peak then was 5.07% for the March 2006 contract, and the curve was flattening. Implied rates fell by another 20-30bps in the final quarter of 2004 before reversing these losses in the first quarter of 2005. By end-March 2005 the curve was virtually flat, ranging only from 5.01-5.03%, and indicating expectations of one more 25bp rise in the repo rate.

Chart 8
Implied curves from short sterling contracts



Bank of England reform of its operations in the money markets

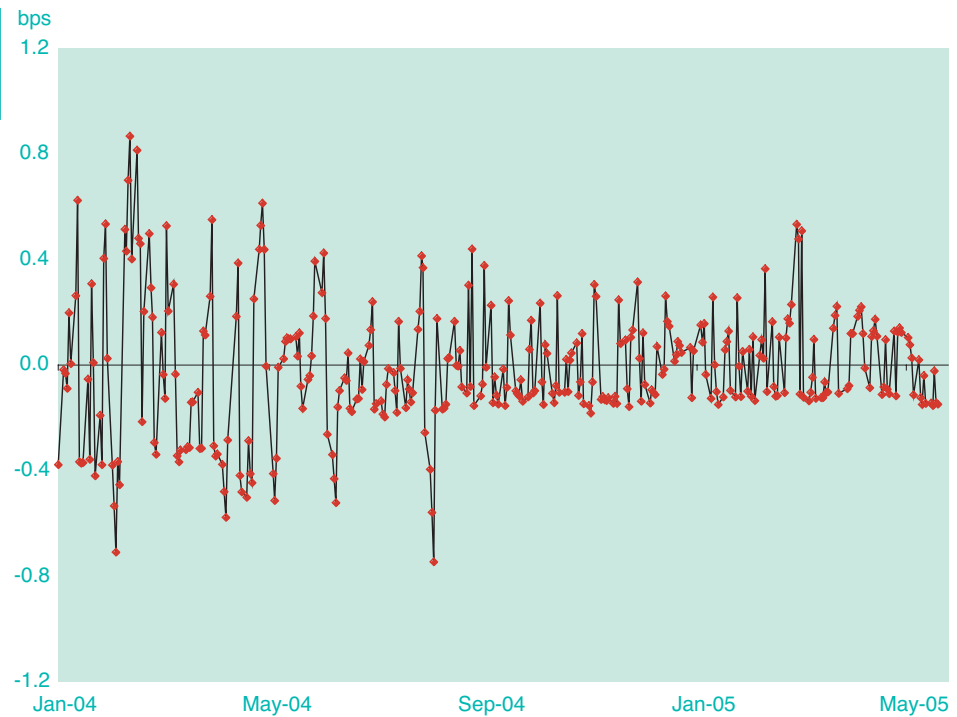
In 2004 the Bank of England consulted the market on possible reforms to its official operations in the sterling money markets. The proposed reforms were aimed at controlling overnight market interest rates more closely in order to reduce volatility and promote broader participation and to support better liquidity management in the banking sector, both day-by-day and in the event of stressed conditions.

A new system is envisaged which will be based on banks holding voluntary reserves at the Bank. These will be remunerated at the Bank's repo rate and the banks will have to commit to maintaining an agreed average balance over a pre-specified maintenance period. This period will span the exact period between MPC meetings. Standing lending and deposit facilities will provide a corridor to control short interest rates on the final day of the maintenance period. A single open market operation (OMO) will be conducted weekly with a maturity of one week.

In March 2005, the Bank introduced some interim changes to the operational framework with the aim of stabilising overnight rates further pending the introduction of the full reforms in the period March to June 2006.

The new arrangements have already had a significant impact in reducing overnight volatility – see Chart 9.

Chart 9
Spread between the SONIA
overnight rate and the Bank of
England repo rate



Source: Bloomberg and DMO

The DMO welcomes the Bank's reforms. The prospect of stability in short rates, both day-to-day and intra-day, has been an important consideration in the DMO's Review of Government Cash Management (see Chapter 5).

In the reformed system, an important assumption in the Bank's forecast of the banking system's net liquidity need over the period of each open market operation (OMO) will be the expected behaviour of net Government cash flows. The DMO plans to provide the Bank with a forecast of expected net behaviour. The DMO and the Bank are currently working together to put in place suitable arrangements to enable the DMO to manage net Government cash flows effectively in the reformed system.

Chapter 3: Debt Management Operations

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 debt management policy objective is achieved by:

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

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:

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

Strategic Debt Analysis

In 2004-05 progress was made towards the construction of an analytical instrument – the Strategic Debt Analysis (SDA) tool, designed for use in the evaluation of strategic long-term decisions on the UK Government debt portfolio.

The SDA tool compares different debt strategies with the aim of finding a portfolio, which satisfies the Government's main debt management objective of minimising the long-term costs of meeting its financing needs whilst taking account of risk.

Decisions about the structure of the optimal debt portfolio depend on the details of the environment: the debt instruments that are available to the Government, their expected cost and risk characteristics, and the preferences of both the Government and investors.

Several factors influence the cost of servicing the Government debt: the size and composition of the debt portfolio, the term structure of interest rates, inflation and the financing requirement of the Government. These factors interact in a complex way to determine the aggregate cost of servicing the Government debt.

The framework of the SDA tool is a Monte Carlo simulation model⁴. In this simulation model, the debt strategies are tested with stochastic economic and financial variables and the resulting costs and risks associated with the various debt strategies are compared.

The DMO uses a stochastic simulation modelling framework because it allows a coherent and consistent investigation of the consequences of debt portfolio choice on long-term costs and risks. The stylised model helps the DMO to understand the interactions between the variables that influence the costs associated with the Government debt and thus provides a clearer comprehension of the results obtained.

The simulation framework consists of three main building blocks: (i) a macroeconomic model in which the economic cycle, output gap, the Government's net primary financing requirement (that is, the Central Government Net Cash Requirement (CGNCR), excluding interest payments), inflation and the short interest rate are modelled as separate, but interdependent equations; (ii) a model of the term structure of interest rates, which provides the specification for both the nominal and real term structure of interest rates; and (iii) a debt strategy simulation component, which is used to determine how, under a given debt strategy the Government meets its total financing requirement, i.e. the CGNCR plus the refinancing of maturing debt. The debt strategy simulation component of the simulation model is also used to compute the cost and risks associated with the respective debt strategies, given the simulated path for the economy, the Government's funding requirement, interest rates and inflation.

Despite the progress made during this financial year, the construction of the SDA tool is still at a formative stage and further work on its development is expected to continue in 2005-06.

Government balance sheet management

The gilt and Treasury bill portfolio managed by the DMO represents only a part of the Government's financial liabilities. These also include, for example, the liabilities incurred by National Savings & Investment through the issuance of retail debt instruments.

The DMO also manages assets – such as loans to local authorities granted by the Public Works Loan Board – that represent themselves a subset of the Government's financial assets.

Links also exist between the assets and liabilities managed by the DMO and between those other financial assets and liabilities appearing elsewhere on HM Government's balance sheet. Prudent management of the Government's balance sheet requires that these linkages be taken into account in the implementation of debt management, notably when defining the desirable structure of the debt portfolio (the object of the Strategic Debt Analysis project referred to above).

⁴ The Monte Carlo simulation method is an analytical technique used in performing repeated 'trial runs' (i.e. simulation runs), from which a probability distribution of possible outcomes is generated. Relationships between variables can then be inferred from the resulting distribution of outcomes.

As an illustration, the rates applied to lending by the Public Works Loan Board are set in relation to the rates at which the Government finances its cash requirements (gilt yields), as ultimately any cash disbursement occasioned by the issuance of a loan to local authorities increases proportionally the Central Government Net Cash Requirement (CGNCR), i.e. net gilt sales. For all practical purposes, loans to local authorities can be considered as funded off the gilt portfolio.

Another example of DMO involvement in the management of HM Government's balance sheet is the execution of debt equity swaps. The issuance by National Savings & Investments of Guaranteed Equity Bonds (bonds whose return is contingent on the performance of a stock exchange index) generates for HM Government an equity market exposure. The DMO offsets this exposure by entering into equity swap contracts with selected counterparties. In 2004-05, the notional value of equity swaps transactions entered into by the DMO totalled £128 million.

How far such asset and liability management operations can and should be extended to other elements of the Government's balance sheet is currently under investigation by HM Treasury in cooperation with the DMO. In particular, ongoing work aims at establishing to what extent the Government's debt management policy objective of minimising, over the long-term, its cost of funding, taking account of risk, can be applied to a net portfolio encompassing various financial assets and liabilities and the practical consequences of doing so.

The DMO remit for 2004-05

The DMO remit for 2004-05 was published on 17 March 2004 in the Debt and Reserves Management Report 2004-05. On the basis of a forecast Central Government Net Cash Requirement (CGNCR) of £35.6 billion, and a net financing requirement of £48.1 billion⁵, gilt sales of £48.0 billion were planned – the highest level since 1993-94.

The planned split of gilt sales, and number of auctions, were as follows:

- short conventional gilts: £15.0 billion in 5 auctions.
- medium conventional gilts: £10.5 billion in 4 auctions.
- long conventional gilts: £14.5 billion in 6 auctions.
- index-linked gilts: £ 8.0 billion in 10 auctions.

In part, the decision on the split of issuance took account of feedback from meetings with gilts market participants held by the Financial Secretary to the Treasury on 2 February 2004 and by the DMO with gilts market investors based in Scotland on 4 February 2004. These meetings reflected support for the issuance of index-linked gilts to be increased to around £8 billion. Attendees at the meetings in London, in particular, indicated continued support for the issuance of long-dated maturities.

Other elements contributing to financing in 2004-05 were additional Treasury bill sales of £0.1 billion and a run-down of £0.2 billion in the DMO short-term cash position.

⁵ Reflecting gilt redemptions of £14.7 billion (adding to the financing requirement) and a forecast contribution to financing of £2.0 billion by National Savings & Investments.

Remit contingencies

The remit included contingencies that could be implemented in the event that the forecast financing requirement changed in-year. Any such changes were to be met by increasing or reducing planned gilt sales broadly in proportion to the splits planned in the remit. Planned sales of Treasury bills could also be revised. Specific decisions were to be taken subject to considerations about debt portfolio objectives and evolving market conditions.

Adjustment to reflect the outturn of the 2003-04 CGNCR

The outturn CGNCR for 2003-04 was published on 22 April 2004, and, at £39.4 billion, it was £2.9 billion below the forecast in the Budget. However, the required net adjustment to financing in 2004-05 was a reduction of £2.8 billion (due to National Savings & Investments' contribution to financing being £0.2 billion lower than the Budget forecast and outturn gilt sales for 2003-04 £0.1 billion higher). The £2.8 billion reduction was achieved by:

- a reduction of £1.9 billion in planned Treasury bill sales compared to Budget plans (taking the planned end-March 2005 stock to £17.5 billion); and
- a reduction of £0.9 billion in planned gilt sales – split as follows:

	<i>Reduction (£bn)</i>	<i>Planned sales</i>
– short conventionals	0.2	14.8
– medium conventionals	0.3	10.2
– long conventionals	0.2	14.3
– index-linked	0.2	7.8

Pre-Budget Report (PBR) 2004

PBR 2004 was published on 2 December 2004. The forecast of the CGNCR for 2004-05 was increased by £4.1 billion (compared with the Budget forecast) to £39.7 billion. The increased financing requirement was met by an increase in planned gilt sales of £3.2 billion split as follows:

	<i>Increase (£bn)</i>	<i>Planned sales</i>
– short conventionals:	2.8	17.6
– long conventionals:	0.2	14.5
– index-linked:	0.2	8.0

In addition, planned Treasury bill sales were increased by £1.0 billion (compared to the remit revision on 22 April) taking the planned stock of Treasury bill at end-March 2005 to £18.5 billion.

An additional conventional gilt auction was scheduled for Thursday 20 January, taking the total number of auctions for the financial year to 26.

Budget 2005

The CGNCR forecast for 2004-05 was revised again in Budget 2005 on 16 March 2005, with an increase of £3.2 billion to £42.9 billion. This change came too late to affect planned gilt sales in 2004-05, but Treasury bill sales were increased by £2.0 billion, taking the end-March 2005 stock to £20.5 billion – an increase of £1.2 billion over the financial year. As a consequence of the higher CGNCR, the DMO cash position at end-March 2005 was forecast to be –£1.1 billion, relative to the target of +£0.2 billion⁶.

CGNCR 2004-05 outturn

The CGNCR outturn for 2004-05 was published on 20 April 2005 and, at £38.6 billion, it was £4.3 billion lower than had been forecast in Budget 2005. As a result of this, the outturn DMO cash position at end-March 2005 was £2.9 billion, £2.7 billion above the target. Returning the cash position to £0.2 billion reduced the financing requirement in 2005-06 accordingly.

The development of the financing arithmetic over 2004-05 is shown in Table 2.

Table 2
The financing arithmetic
2004-05

	Budget 2004	April 2004 Outturn	PBR 2004	Budget 2005	April 2005 Outturn
Central Government Net Cash Requirement	35.6	35.6	39.7	42.9	38.6
Redemptions	14.7	14.7	14.7	14.7	14.7
Financing for the Official Reserves	0.0	0.0	0.0	0.0	0.0
Buy-backs	0.0	0.0	0.0	0.1	0.1
Planned short-term financing adjustment ¹	-0.2	-2.9	-2.9	-2.9	-2.9
Gross financing requirement	50.1	47.4	51.5	54.8	50.5
<i>Less:</i>					
National Savings & Investments	2.0	2.0	2.0	2.0	1.9
Net financing requirement	48.1	45.4	49.5	52.8	48.6
<i>Financed by:</i>					
1. Debt issuance by the DMO					
a) Treasury bills	0.1	-1.8	-0.8	1.2	1.2
b) Gilt sales	48.0	47.1	50.3	50.3	50.1
<i>Of which:</i>					
Conventional					
Short	15.0	14.8	17.6	17.6	17.6
Medium	10.5	10.2	10.2	10.2	10.1
Long	14.5	14.3	14.5	14.5	14.4
Index-linked	8.0	7.8	8.0	8.0	8.0
2. Other planned changes in short-term debt²	9.8	7.4	7.4	8.2	5.4
Ways & Means	0.0	0.0	0.0	0.0	0.0
3. Unanticipated changes in short-term cash position³	0.0	1.2	0.0	-1.3	2.7
Total financing	48.1	45.3	49.5	51.5	51.3
Short term debt levels at end-financial year					
Treasury bill stock	19.4	17.5	18.5	20.5	20.5
Ways & Means	13.4	13.4	13.4	13.4	13.4
DMO net cash position ⁴	0.2	0.2	0.2	-1.1	2.9

Figure may not sum due to rounding

1. To accommodate changes to the current years financing requirement resulting from (i) publication of the previous year's outturn CGNCR and/or (ii) carry over of unanticipated changes to the cash position from the previous year.

2. Total planned changes to short-term debt are the sum of (i) the planned short-term financing adjustment. (ii) T-bill sales; and (iii) changes to the level of the Ways and Means Advance.

3. A negative (positive) number indicates an addition to (reduction in) the financing requirement for the following financial year.

4. Including the DMO's cash deposit at the Bank of England

⁶ At the time of Budget 2005 it was assumed that this negative cash position would have to be refinanced in 2005-06.

DMO gilt operations 2004-05

The DMO issued three new conventional gilts in 2004-05: 4¾% Treasury Stock 2038 on 23 April 2004, 4¾% Treasury Stock 2010 on 19 November 2004 and 4¾% Treasury Stock 2020 on 25 March 2005.

In developing the gilt issuance programme to deliver the remit the DMO consults with gilts market participants (GEMMs and investors) throughout the year. More formal discussions take place at quarterly consultation meetings, held toward the end of each quarter, which review gilt auction choices for the following quarter. Minutes of these meetings are published on the morning after and the DMO announces its decision on which gilts will be auctioned at 3.30pm on the last working day of each quarter (i.e. March, June and September), however, the December announcement is made before Christmas.

The meetings to discuss issuance in the first quarter of the financial year were held on 22 March 2004. Both GEMMs and investors supported the case for two long conventional auctions in the quarter with maturities of 2038 and 2040 often mentioned. Building up 4¾% 2015 was seen as the logical candidate for medium issuance and a reopening of 4½% 2007 for a short. For index-linked gilt issuance preferences were directed at long-dated maturities.

The auction calendar for the second quarter of the financial year was discussed at meetings held on 21 June 2004. Interest continued to be expressed for long maturities – both conventional and index linked. Again 4¾% 2015 was seen as the obvious choice for medium issuance. Views on the candidate(s) for short issuance were mixed.

The next consultation meetings were held on 20 September 2004. As with the first quarter, there was virtual unanimity over the need for two long conventional auctions. A wide range of choices were suggested for index-linked and short conventional issuance.

Issuance for the final quarter of the financial year was discussed at meetings on 13 December 2004. The view that the new 4¾% 2010 be issued twice was strongly expressed. On index-linked issuance, a preference towards longs was again repeated. Within medium conventionals, there were calls for a new gilt in the 2019-20 part of the curve.

Table 3 shows the results of all gilt auctions in 2004-05.

Table 3
Gilt auction results 2004-05

Date	Gilt	Amount auctioned	Cover	Average accepted price (AAP)	Yield at AAP	Tail (bp)*
22-Apr-04	4¼% 2038	£2,500mn	2.12	£99.15	4.80%	0
28-Apr-04	2% IL 2035	£575mn	2.12	£110.03	1.78%	na
20-May-04	2½% IL 2020	£475mn	1.32	£234.06	2.03%	na
25-May-04	4½% 2007	£3,000mn	2.06	£98.60	5.04%	0
27-May-04	4¼% 2038	£2,500mn	1.87	£98.16	4.86%	0
17-Jun-04	4¼% 2015	£2,750mn	2.31	£96.03	5.22%	0
24-Jun-04	2% IL 2035	£600mn	2.25	£110.88	1.79%	na
15-Jul-04	4½% 2007	£2,750mn	3.22	£98.73	5.02%	0
22-Jul-04	4¼% 2038	£2,250mn	2.18	£99.38	4.79%	0
28-Jul-04	2½% IL 2013	£425mn	1.96	£210.42	2.24%	na
12-Aug-04	5¼% 2009	£2,500mn	3.02	£103.51	4.99%	0
16-Sep-04	4¼% 2015	£2,500mn	2.18	£98.41	4.94%	0
28-Sep-04	4½% IL 2030	£350mn	3.03	£204.90	1.71%	na
14-Oct-04	4¼% 2038	£2,250mn	2.51	£103.48	4.55%	0
26-Oct-04	2½% IL 2016	£350mn	2.53	£243.13	1.80%	na
28-Oct-04	4¼% 2015	£2,500mn	2.39	£100.05	4.74%	0
18-Nov-04	4¼% 2010	£3,500mn	1.32	£100.71	4.60%	1
24-Nov-04	2% IL 2035	£600mn	1.95	£118.55	1.54%	na
07-Dec-04	4¼% 2038	£2,500mn	1.78	£105.46	4.44%	1
12-Jan-05	2% IL 2035	£625mn	2.99	£121.03	1.47%	na
20-Jan-05	4¼% 2010	£3,000mn	1.61	£101.01	4.53%	1
27-Jan-05	4¼% 2038	£2,250mn	1.95	£104.55	4.49%	1
02-Feb-05	2½% IL 2013	£375mn	3.04	£221.10	1.80%	na
24-Feb-05	4¼% 2010	£2,750mn	1.31	£99.93	4.76%	1
02-Mar-05	4½% IL 2030	£400mn	2.09	£207.40	1.66%	na
24-Mar-05	4¼% 2020	£2,500mn	2.04	£99.18	4.83%	0

* Index-linked gilts are issued through a uniform price format

The results above (in terms of yield) are compared with a number of counterfactual issuance patterns in Annex C.

Breakdown of gilt sales by maturity 2004-05

Table 4 shows a proportionate breakdown by type and maturity of planned gilt sales in the original remit of March 2004 and the outturn for gilt sales.

Table 4
Gilt sales by type and maturity

Type/maturity	Remit March 2004		Outturn April 2005*	
	% total issuance	% conventional	% total issuance	% conventional
Short conventional	31	38	35	42
Medium conventional	22	26	20	24
Long conventional	30	36	29	34
Index-linked	17		16	

* Short conventional gilt sales were increased by £2.8 billion and an auction added at PBR in December 2004

The DMO remit 2005-06 and future financing projections

The DMO remit for 2005-06 was published with the Budget on 16 March 2005. On the basis of a CGNCR forecast of £40.2 billion for 2005-06, the financing requirement was £56.0 billion (after adding gilt redemptions of £14.5 billion and a short term financing adjustment of £1.3 billion⁷). After taking account of a forecast contribution to financing of £3.5 billion by National Savings & Investments (NS&I), the DMO was left to meet a net financing requirement of £52.5 billion.

⁷ The latter was required to refinance a forecast outturn DMO cash position for 2004-05 of -£1.1 billion.

Gilt sales plans of £53.5 billion were announced, reflecting a decision to run down the stock of Treasury bills by £1.0 billion. In part this decision reflected a desire to limit variable rate debt exposure – which had been increased following higher planned index-linked gilt sales and increased financing by NS&I.

Planned gilt sales were split as follows:

- short conventionals: £12.5 billion in four auctions
- medium conventionals: £11.5 billion in four auctions
- long conventionals: £18.5 billion in seven auctions
- index-linked gilts: £11.0 billion in eleven auctions

Following the DMO's consultation exercise on ultra-long gilt issuance (see pages 21-22) the remit provided that sales of long conventional and index-linked gilts could include issuance of gilts with maturities of up to circa 50-years. However, sales of ultra-long conventionals were not to begin before May 2005 and those of ultra-long index-linked gilts not before the second quarter of the financial year. In addition, the remit confirmed the intention, first announced in December 2004, that any new index-linked gilts issued from 2005-06 would use the Canadian design three-month indexation lag, as opposed to the prevailing eight-month lag.

Twenty six gilt auctions were planned for 2005-06 (15 conventional and 11 index-linked) as shown in Table 5.

Table 5
Gilt auction calendar 2005-06

Date	Gilt/Type
Tuesday 12 April	2% IL 2035
Thursday 14 April	5% 2025
Thursday 28 April	4¾% 2010
Tuesday 24 May	2½% IL 2016
Thursday 26 May	4¼% 2055
Tuesday 7 June	4¾% 2020
Thursday 23 June	4⅞% IL 2030
Thursday 14 July	4¼% 2055
Tuesday 26 July	2½% IL 2020
Tuesday 2 August	4% 2009
Tuesday 6 September	4¼% 2036
Thursday 22 September	X% IL 2055
Tuesday 27 September	4¾% 2020
Tuesday 11 October**	Index-linked
Thursday 13 October	Conventional
Tuesday 25 October	Index-linked
Tuesday 8 November ¹	Conventional
Thursday 24 November ¹	Index-linked
Tuesday 6 December ¹	Conventional
2006	
Tuesday 10 January	Conventional
Tuesday 24 January	Index-linked
Thursday 26 January	Conventional
Tuesday 7 February	Index-linked
Thursday 16 February ¹	Conventional
Wednesday 1 March ¹	Conventional
Tuesday 7 March ¹	Index-linked

¹ Subject to confirmation following the Chancellor's decisions on the Budgetary timetable

** this auction was cancelled on 20 April 2005

Remit contingencies

As usual, the remit included contingencies that could be implemented in the event that the financing requirement changed during the financial year. The published contingencies for 2005-06 are:

“Any changes in the published financing requirement will be met: (a) by increasing or reducing planned gilt sales broadly in proportion to the splits planned in the remit; and / or (b) increasing or reducing planned sales of T-bills; and/or (c) adding or cancelling gilt auctions. Adding or cancelling auctions will only be undertaken when changes in the published financing requirement are judged to be sufficiently large to warrant such actions. Decisions to modify gilt and T-bill sales plans or revise the gilt auction calendar will be taken subject to considerations about the debt portfolio and evolving market conditions”.

CGNCR outturn for 2004-05 and subsequent revision to the 2005-06 remit

There are two main events which can trigger the implementation of the remit contingencies in any financial year:

- the publication, usually in the third week of April, of an outturn to the CGNCR for the previous financial year which differs significantly from that published with the Budget; and
- the publication of a significantly different forecast for the current financial year – usually in the PBR in November or December.

The first of the above conditions was met with the publication of the outturn CGNCR for 2004-05 on 20 April 2005, which, at £38.6 billion, was £4.3 billion lower than the Budget forecast. Accordingly, the remit contingencies were implemented as follows:

- planned gilt sales were reduced by £2.4 billion to £51.1 billion and the index-linked gilt auction scheduled for 11 October was cancelled. This reduced the number of planned index-linked auctions in 2005-06 to ten.
- the reduction in gilt sales was split as follows:

	<i>Reduction (£bn)</i>	<i>Planned sales</i>
short conventionals	0.4	12.1
medium conventionals	0.4	11.1
long conventionals	0.6	17.9
index-linked	1.0	10.0

- Treasury bill sales were reduced by £1.5 billion compared with Budget plans, (taking the planned end-March 2006 stock to £18.0 billion).

The reduction of the CGNCR in 2004-05 moved the DMO net cash position at end-March 2005 from an anticipated deficit of £1.1 billion at Budget 2005 to a surplus of £2.9 billion. This surplus is to be run-down by £2.7 billion in 2005-06 to return it to its planned level of £0.2 billion. Unwinding the cash position in this way reduces the financing requirement in 2005-06.

The financing arithmetic for 2004-05 and 2005-06 as published at the Budget and as revised on 20 April is published below.

Table 6
Financing arithmetic 2004-05
and 2005-06

Financing arithmetic (£bn)	Budget 2005		April 20 revision	
	2004-05	2005-06	2004-05	2005-06
CGNCR	42.9	40.2	38.6	40.2
Redemptions	14.7	14.5	14.7	14.6
Financing for Reserves	0.0	0.0	0.0	0.0
Buy-backs	0.1	0.0	0.1	0.0
Planned short-term financing adjustment ¹	-2.9	1.3	-2.9	-2.7
Financing requirement	54.8	56.0	50.5	52.1
Less:				
NS&I	2.0	3.5	1.9	3.5
Net financing requirement	52.8	52.5	48.6	48.6
Financed by:				
1. Debt issuance by the DMO				
a) T bills	1.2	-1.0	1.2	-2.5
b) Gilt sales	50.3	53.5	50.1	51.1
Of which:				
Short conventionals	17.6	12.5	17.6	12.1
Medium conventionals	10.2	11.5	10.1	11.1
Long conventionals	14.5	18.5	14.4	17.9
Index-linked	8.0	11.0	8.0	10.0
2. Other planned change in short-term debt²				
Ways and Means	0.0	0.0	0.0	0.0
3. Unanticipated change in short-term cash position³				
	-1.3	0.0	2.7	0.0
Total financing	51.5	52.5	51.3	48.6
Short term debt levels at end of financial year				
T bill stock	20.5	19.5	20.5	18.0
Ways & Means	13.4	13.4	13.4	13.4
DMO net cash position	-1.1	0.2	2.9	0.2

Figure may not sum due to rounding

- To accommodate changes to the current years financing requirement resulting from (i) publication of the previous year's outturn CGNCR and/or (ii) carry over of unanticipated changes to the cash position from the previous year.
- Total planned changes to short-term debt are the sum of (i) the planned short-term financing adjustment, (ii) T-bill sales; and (iii) changes to the level of the Ways and Means Advance.
- A negative (positive) number indicates an addition to (reduction in) the financing requirement for the following financial year.

Future financing projections

Budget 2005 included forecasts for the CGNCR as a percentage of gross domestic product out to 2009-10. Table 7 sets out the CGNCR projections in £bn together with current redemption totals to produce illustrative financing projections. These are not gilt sales forecasts and they take no account of possible contributions to financing by NS&I or Treasury bill sales.

Table 7
Budget 2005 – financing
projections

Illustrative financing projections (figures may not sum due to rounding)					
£bn	2005-06	2006-07	2007-08	2008-09	2009-10
CGNCR projections	40	34	32	30	32
Redemptions	15	30	29	15	16
Financing requirement*	52	64	61	45	48
CGNCR change since PBR	4	2	3	5	4

*indicative gross financing requirements 2005-06 onwards. Financing requirement for 2005-06 was reduced on 20 April following a lower than forecast outturn of the CGNR in 2005-06
Source: HMT/DMO

Debt management initiatives

Ultra-long gilt consultation

The DMO's financing remit for 2005-06 provides for the issuance of ultra-long gilts in both conventional and index-linked form from 2005-06 onwards. In his 2005 Budget speech the Chancellor of the Exchequer announced that the Government could issue conventional gilts with maturities of up to 50-years from May 2005 onwards. The first of these, 4¼% Treasury Gilt 2055, was auctioned on 26 May 2005 – the first 50-year maturity gilt since the issue of 5½% Treasury Stock 2008-12 on 5 October 1960. The auction was the culmination of some 15 months of consultation and planning undertaken by the DMO in response to initial dialogue with industry participants, which began early in 2004.

During the first half of 2004 there were an increasing number of calls from pensions industry participants for the Government to issue longer-dated debt instruments and in particular, gilts with maturities significantly longer than was then available at that time (some 34 years). It was suggested that the provision of such instruments would better facilitate management of pension funds' liabilities and this was an issue that had a structural dimension as more pension funds closed, and the nature of their liabilities became increasingly certain.

Following a series of bilateral meetings with pension fund managers, trustees, consultants, actuaries and academics the DMO sent an informal questionnaire to specific pension industry contacts (arranged via the National Association of Pension Funds (NAPF)) and other stakeholders during the summer of 2004. The responses to the questionnaire also suggested that there was interest in the DMO issuing significantly longer (40-50 year) maturity gilts in both conventional and index-linked formats. From the DMO's perspective, the inverted shape of the yield curve made such instruments potentially attractive to issue on cost saving grounds – consistent with the achievement of the Government's debt management objective.

HM Treasury and the DMO therefore saw potential cost benefits for the Government in issuing ultra-long gilts without introducing significant additional risk into the gilt portfolio. In particular, it was considered possible that the Government might be able to capture premia from the market (e.g. a scarcity premium) from issuing bonds for which there was high demand but a shortage of supply. A potential ancillary benefit from issuing ultra-long gilts would flow to the pensions and insurance industries which would be better able to match their long-term liabilities through purchase of ultra-long gilts. On the basis of these considerations, Treasury Ministers were asked to approve the launch of a formal consultation on the issuance of ultra-long gilt instruments.

Following approval by Treasury Ministers, the Chancellor instructed the DMO to launch a formal consultation⁸ alongside the Pre-Budget Report (PBR) on 2 December 2004. In addition to seeking views on ultra-long conventional and index-linked gilts the DMO also sought the views of market participants on the possible issuance of ultra-long maturity gilts structured in annuity⁹ format. The consultation period closed on 21 January 2005 and generated a very good level of response (53 written responses¹⁰).

Following the end of the consultation period, the DMO analysed responses and concluded that it would be possible to issue ultra-long gilts at a cost favourable to the Government, given the inversion at the long-end of the gilt yield curve and the shortage of alternative instruments in this sector of the market. Ultra-long index-linked gilts were recognised by almost all respondents that expressed a view on this issue as having better asset/liability matching properties than conventionals and were in that respect the preferred instrument. However, there was a widespread feeling that ultra-long conventionals should be issued first to aid pricing of an ultra-long index-linked gilt.

However, there was very limited interest in gilts structured in an annuity format. Concerns were expressed about the potential illiquidity of such instruments and it was felt that annuities would be of interest to particular individual investors rather than of generic widespread interest. The Government therefore decided that it would not issue conventional or index-linked annuity type gilts in 2005-06 or in the near future.

On the basis of recommendations made by the DMO, Treasury Ministers agreed that the DMO's financing remit for 2005-06 should explicitly include the option of ultra-long gilts issuance in both conventional and index-linked formats from 2005-06 onwards¹¹. Reflecting the views expressed in the consultation exercise, the DMO remit also provides that ultra-long index-linked gilts should not be issued before the second quarter of the financial year.

On 30 June 2005 the DMO announced that it would re-open 4¼% Treasury Gilt 2055 on 14 July 2005 and issue a new 50-year index-linked gilt in September 2005.

Three-month lag index-linked gilts

The DMO consultation document on ultra-long gilts included the stated intention that any new index-linked gilts issued from 2005-06 will adopt the three-month lag indexation first used in the Canadian Real Return Bond market and not the eight-month lag methodology used for existing index-linked gilts. This will bring the UK into line with current international best practice on index-linked bond design. However, new index-linked gilts will continue to be linked to the UK Retail Prices Index (RPI).

The indexation on the new gilts will also be applied in a significantly different way (see below). In addition, new index-linked gilts are designed to trade on a real clean price basis. As a result, the effect of inflation is stripped out of the price of the new gilts for trading purposes, although it is included when such trades are settled.

⁸ The DMO's consultation document, Issuance of ultra-long gilt instruments, can be found on the DMO's website at: www.dmo.gov.uk/gilts/public/consdoc/index.htm.

⁹ *i.e* a bond whose cash flows are fixed over time and comprise a varying mixture of principal and interest.

¹⁰ A summary of responses to the consultation document can be found on the DMO's website at: www.dmo.gov.uk/gilts/public/consdoc/index.htm.

¹¹ The DMO's financing remit was published in the Debt and Reserves Management Report (DRMR) 2005-06 (pp21-24). Paragraph 5.8 refers to ultra-long gilts issuance. The DRMR can be accessed on the Treasury's website at: www.hm-treasury.gov.uk/media/CF3/2F/DMO2005amend.pdf.

● Indexation methodology

An Index Ratio is applied to calculate the coupon payments, the redemption payment and accrued interest. The index ratio for a gilt measures the growth in the RPI since it was first issued. For a given date it is defined as the ratio of the reference RPI applicable to that date divided by the reference RPI applicable to the original issuance date of the gilt (rounded to the nearest 5th decimal place).

The reference RPI for the first calendar day of any month is the RPI for the month three months previously (e.g. the reference RPI for 1 June is the RPI for March). The reference RPI for any other day in a month is calculated by linear interpolation between the reference RPI applicable to the first calendar day of the month in which the day falls and the reference RPI applicable to the first calendar day of the month immediately following. Interpolated values should be rounded to the nearest 5th decimal place.

Once new index-linked gilts have been issued, daily index ratios and reference RPIs will be published on the DMO website www.dmo.gov.uk following the publication of the RPI each month¹².

● Price features

Index-linked gilts with a three-month lag would trade and be issued on the basis of the Real Clean Price per £100 nominal.

The Inflation-adjusted Clean Price per £100 nominal on a given day is calculated by multiplying the Real Clean Price by the Index Ratio for the day in question¹³.

The Inflation-adjusted Dirty Price per £100 nominal on a given day is calculated by adding the Inflation-adjusted Accrued Interest¹⁴ to the Inflation-adjusted Clean Price.

Gilt registration

In December 2004, Computershare Investor Services PLC succeeded the Bank of England as Registrar of gilts. This appointment, by HM Treasury, followed a review of Government debt management arrangements, which concluded that the private sector would be better placed to provide any future benefits of economies of scale for this service. Computershare's contract as Registrar is administered by the DMO.

Publication of the GEMM Guidebook

In December 2004 the DMO published a guidebook describing the relationship between itself and its primary dealers, the Gilt-edged Market Makers (GEMMs), entitled "*A guide to the roles of the DMO and Primary Dealers in the UK Government bond market*"¹⁵.

The guidebook introduced a number of changes and clarifications to prevailing policy and/or practices in the gilts market. The key changes were:

- GEMMs' non-competitive allowances at conventional auctions were increased to an aggregate 10% from a previous individual allowance of 0.5% each;
- the obligation on GEMMs to quote mandatory prices in designated gilts to

¹² For more details about these calculations see Annex B of the third edition of the DMO publication "*Formulae for Calculating Gilt Prices from Yields*" available on the DMO website at www.dmo.gov.uk/gilts/public/technical/yldcqs.pdf. This publication also includes all relevant technical details for new (and existing) index-linked gilts.

¹³ This amount is left unrounded.

¹⁴ Calculated by multiplying the Real Accrued Interest amount by the Index-Ratio for the day in question.

¹⁵ This publication is available on the DMO website at www.dmo.gov.uk/gilts/public/technical/guidebook_211205.pdf

each other through Inter Dealer Brokers was suspended;

- the definition of “rump” gilts was amended to include all gilts with less than £750 million (nominal) in issue. As a result, the undated 2½% Treasury Stock was declared a “rump”, accordingly, GEMMs were no longer obliged to quote prices in it;
- from 4 January 2005 the DMO classified “agency” broker business as “professional” turnover in its data publications; and
- minimum market share targets for index-linked GEMMs were reduced from 3% to 2½%, to take account of the increased number of primary dealers in the sector and to bring the targets into line with those in the conventional gilt market.

Electronic bidding at auctions and tenders

Further progress was made towards the introduction of an electronic bidding system for use at DMO auctions (including Treasury bill tenders). Over 2004-05 much work was done on specifying the business and system requirements with a view to tendering for the most suitable solution. This included getting further feedback from the GEMMs on the high level functionality and system infrastructure.

The DMO plans to go out to tender later in 2005 and subject to the results of that process hopes to introduce the new system in the course of 2006.

Gilts dematerialisation

In December 2004, the European Securities Forum (ESF) published a report *‘Better, Quicker and More Efficient Investment Arrangements for the Individual Shareholder’*, which included proposals for the dematerialisation of share certificates in the UK. The model is similar to that previously proposed for gilts two years earlier in HM Treasury’s consultation on *Modernising the Arrangements for Registration and Transfer of British Government Stock*. HM Treasury and the DMO have therefore been closely involved in the subsequent discussions with other industry representatives to ensure the changes being considered for equities would also accommodate gilts.

The initiative involves converting existing registered certificated gilt holdings to those with statements and represented by an individual Stockholder Reference Number. Purchases and sales could then be effected without the surrender of the stock certificate or completion of a paper transfer form, making the entire process much more efficient.

Chapter 4: Cash Management Operations

Cash remit 2004-05

The DMO's cash management remit for 2004-05, published on 17 March 2004, specified that the DMO's primary objective in carrying out its Exchequer Cash management operations was:

“to offset, through its market operations, the expected cash flow into or out of the National Loans Fund. It aims to do so in a cost effective manner, taking account of risk”

The remit specified that the DMO may carry out its cash management objective primarily by a combination of:

- weekly Treasury bill tenders;
- bilateral market operations with DMO counterparties; and
- ad hoc tenders of Treasury bills (and repo or reverse repo transactions).

In practice, bilateral market operations constituted the bulk of the DMO's cash management operations in 2004-05, but Treasury bills also play an important role in smoothing cumulative cash positions and as a financing instrument within short-term debt sales. No ad hoc tenders were held in 2004-05.

Level of Treasury bill stocks

The cash management remit for 2004-05 specified that the stock of Treasury bills should rise over the financial year (i.e. contributing to financing) by £0.1 billion to £19.4 billion.

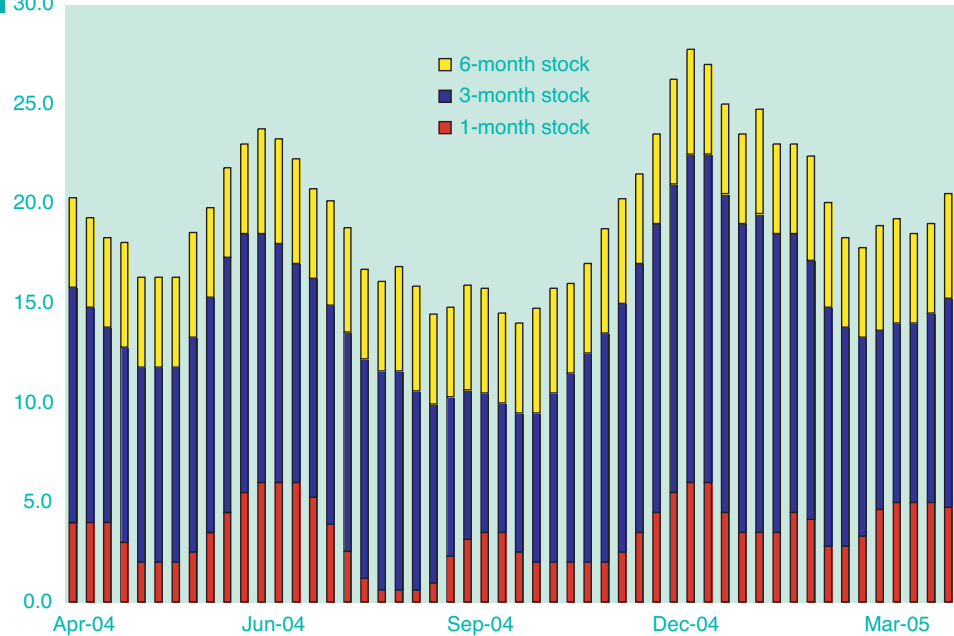
However, on 22 April 2004, planned Treasury bill sales were reduced by £1.9 billion (compared to the original remit plans) with the publication of the CGNCR outturn for 2003-04 – which showed a £2.9 billion reduction in the CGNCR since the Budget forecast. This took the planned end-March 2005 stock to £17.5 billion (a reduction of £1.8 billion year-on-year).

At PBR on 2 December 2004 the forecast for the CGNCR in 2004-05 increased by £4.1 billion compared to the Budget forecast. Planned Treasury bill sales were increased by £1.0 billion compared to the revised plans announced in April, taking the planned end-March 2005 stock to £18.5 billion (a reduction of £0.8 billion year-on-year).

Planned Treasury bill sales were increased again – by £2.0 billion – at the Budget in March 2005 taking the stock at end-March 2005 to £20.5 billion (an increase of £1.2 billion year-on-year).

Chart 10 shows the level of Treasury bill stocks in market hands over the course of the financial year and Table 8 sets out the details of the Treasury bill portfolio at end-March 2005.

Chart 10 | £bn
Treasury bill stocks 2004-05



Source: DMO

Table 8
Treasury bills outstanding at
31 March 2005

Maturity date	First issued	Amount (£mn)	Reopened	Amount (£mn)	Reopened	Amount (£mn)	Totals (£mn)
04-Apr-05	04-Jan-05	500	07-Mar-05	500			1,000
11-Apr-05	11-Oct-04	750	10-Jan-05	1,500	14-Mar-05	1,500	3,750
18-Apr-05	17-Jan-05	500	21-Mar-05	1,500			2,000
25-Apr-05	24-Jan-05	500	29-Mar-05	1,250			1,750
03-May-05	31-Jan-05	500					500
09-May-05	08-Nov-04	750	07-Feb-05	500			1,250
16-May-05	14-Feb-05	500					500
23-May-05	21-Feb-05	500					500
31-May-05	28-Feb-05	500					500
06-Jun-05	06-Dec-04	750	07-Mar-05	1,500			2,250
13-Jun-05	14-Mar-05	1,500					1,500
20-Jun-05	21-Mar-05	1,000					1,000
27-Jun-05	29-Mar-05	1,000					1,000
11-Jul-05	10-Jan-05	750					750
01-Aug-05	31-Jan-05	750					750
30-Aug-05	28-Feb-05	750					750
26-Sep-05	29-Mar-05	750					750
First issue and reopening dates are settlement dates							20,500

Source DMO

The results of all Treasury bill tenders are reported in Annex E and a comparison of the average yield achieved at each tender with prevailing GC repo rates are reported at Annex F.

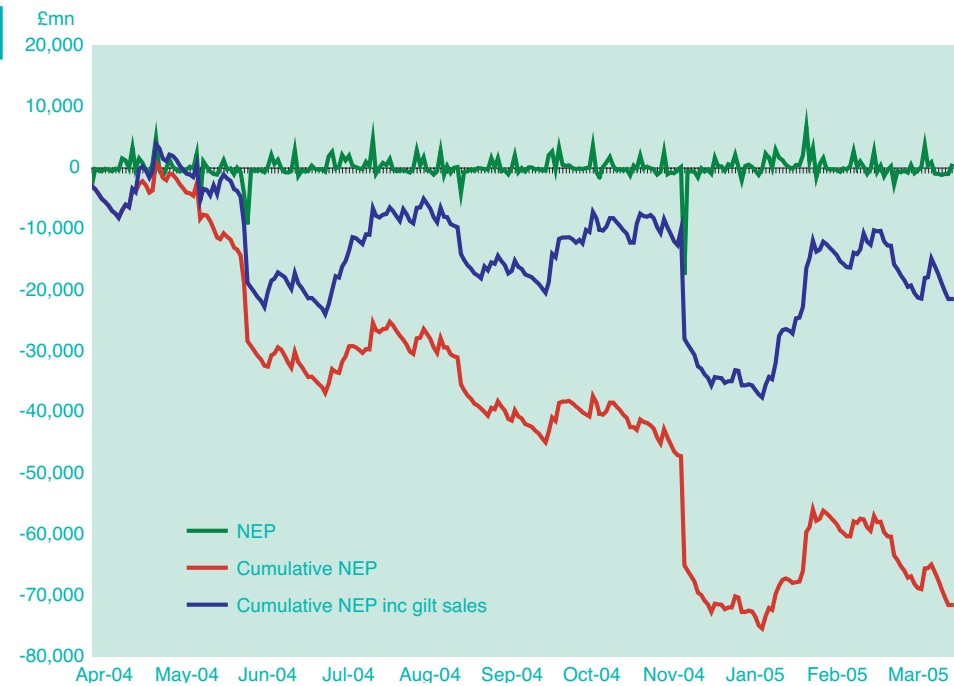
Cash management operations

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 for each business day’s significant cash flows into and out of central Government. Additionally, the DMO requires up-to-date intra-day monitoring of cash flows as they occur.

Over the course of a financial year, the Exchequer’s cash flow has a fairly regular pattern associated with the tax receipts and expenditure cycles and outflows associated with gilt redemptions.

Chart 11 shows the scale of daily cash flows measured in terms of the Net Exchequer Position (NEP) in 2004-05. It excludes the effects of Treasury bill issuance, and NS&I’s overall net contribution to Government financing, but highlights the contribution of gilt sales to reducing the cumulative deficit in year.

Chart 11
Exchequer cash flows 2004-05



Source: HMT/DMO

Chapter 5: Review of Government Cash Management

During 2004-05, the DMO carried out a Review of its Government cash management function. This chapter explores the motivation for the Review, notes the key findings and recommendations, explains the rationale behind the recently amended cash management objective¹⁶ and describes the planned improvements to current cash management practice that will be introduced over the next year or so.

Motivation for the Review

There were two main reasons for commissioning the Review:

- to see if the original cash management framework – which was designed in preparation for the DMO's becoming Government cash manager in 2000 – was still appropriate. An important point was also to take account of changes in the Sterling money market including looking ahead to the Bank of England's planned reforms¹⁷;
- to explore new ways of measuring performance of the function, primarily for public accountability purposes. This topic was discussed by the DMO at a Treasury Select Sub-Committee hearing in June 2003 when the question was raised whether the concept of a quantified performance benchmark – which had been applied by the DMO to its asset management function – was also potentially applicable in the context of government cash (and or debt) management.

Conduct of the Review

Under guidance of a Steering Group with membership from the DMO, HM Treasury and an independent member, the Review considered all aspects of the framework for cash management, including the objective and parameters set by HM Treasury for the DMO's operations, the approach to and instruments used in cash management operations, risk management practices and performance measurement. The Review made an interim report to Ministers in February 2005, recommending a change in the published DMO Cash Management Remit, and a final report to HM Treasury in April 2005.

Key findings and recommendations

The Review found that the way in which Government cash management has been carried out for the last five years, described here as 'active cash management', continues to work well. This approach was developed to reflect the ethos in which Government cash management is intended to be carried out, principally as a cost minimising rather than profit maximising activity and playing no role in the determination of interest rates. It involves the DMO transacting with money market counterparties, as a price taker, in a range of instruments and at a range of maturities with a view to positioning the DMO's net cash profile so that it will offset the expected net government cash profile over time. Some improvements were identified but no radical changes are recommended, and the framework will

¹⁶ See chapter 6 of the 'Debt and Reserves Management Report 2005-06', March 2005, published by HM Treasury.

¹⁷ See 'Reform of the Bank of England's Operations in the Sterling Money Markets – A paper on the new framework by the Bank of England', April 2005. The Bank's reforms are expected to be implemented in Q2 2006.

continue to reflect the long-standing ethos of Government cash management in the UK.

The Review also concluded that a single, quantified performance measure would be a desirable innovation, particularly as a way to enhance public accountability for Government cash management. The Review concluded, however, that some aspects of the 2000 framework are not suitable to support this. Several changes and improvements have thus been identified.

The Review's key recommendations were:

- to work towards introducing a benchmark, which would represent a default strategy for handling net Government cash flows, against which performance of 'active cash management' could be measured in a quantified way;
- to refocus the objective, in particular by introducing a quantified definition of risk – a risk appetite – into the cash management objective so that the parameters within which DMO conducts cash management are clear and objective; and
- while continuing with the current institutional arrangements for the forecasting of net Government cash flows¹⁸, to include the contribution of forecasting alongside that of market operations in any formal measure of Government cash management performance. This is to recognise that the forecast is both integral to and a significant factor in the overall performance of 'active cash management'.

The Review also recommended that changes be phased in over the next year or so, to allow them to be implemented seamlessly. This will also mean they will more or less coincide with the implementation of the Bank of England's reforms which are expected to stabilise short-term interest rates.

The rest of this chapter goes into the Review's findings and recommendations in more detail.

Assessment of 'active cash management'

The cash management framework designed in 2000 envisaged HM Treasury providing a forward looking projection of daily net Government cash flows and the DMO using a combination of bilateral dealing with money market counterparties and variations to the stock of Treasury Bills to generate the appropriate offsetting cash position. In this way, expected net deficits would be financed by short-term borrowing by the DMO and expected net surpluses invested temporarily by the DMO, as set out in its published Operational Notice. It has always been open to the DMO to undertake dealing in a range of instruments and at a range of maturities, to build up offsetting positions in advance of the day. In so doing, the DMO has always been a user of the money market, acting as a price-taker and not a price setter.

This approach is described as 'active' in the sense that it allows for the exercise of discretion by the specialist cash manager with a view to achieving better value-for-

money from the active manager's scope to react rapidly to changes in the forecast or market conditions.

The main advantage is that it allows forward-looking dealing strategies to be implemented. It is crucial for active cash management to be able to make use of cash flow forecasts to smooth the strong seasonal trends that the Government's cash flows exhibit. This should permit significant cost savings: first the net amount borrowed over the year should be less than the gross borrowing requirement: and, second, it should enable more effective management of the DMO's liquid assets. The Review considered this model in comparison with alternative, 'passive' approaches and identified a number of strong arguments in favour of the former.

These arguments and conclusions were in line with those advanced in the preparation of the 2000 framework and the Review therefore served to confirm that the 'active cash management' approach remains appropriate and should continue.

Performance measurement benchmark

As mentioned earlier, the Review concluded that a single, quantified measure of performance should be introduced. It felt that Government cash management performance would best be measured on a comparative basis by comparing the cost and risk of the active cash management strategy against the cost and risk characteristics of a simple default strategy. The default strategy would represent the performance benchmark and would allow performance to be measured quantitatively. An absolute measure of performance was not recommended because there are very large variations in the underlying net cash profile from period to period which would make performance trends difficult to observe.

The key considerations in identifying such a default strategy are:

- the Government's preferred risk stance in relation to cash management;
- the availability of forecasts for the net Government cash profile ahead (which affects the extent to which the default strategy should involve taking advance action to offset the cash flows); and
- the depth and rate stability of the money market in which the default strategy would be implemented (which affects whether the default strategy should aim, for example, to operate at a single maturity in potentially large size or across a range of operations, each smaller in size).

The DMO and HM Treasury will formalise the default strategy benchmark over the next year or so, taking into consideration, amongst other things, the impact on the money market's liquidity and short-term interest rate volatility of the planned Bank of England reforms.

Assessment of suitability of 2000 framework for performance measurement

The Review concluded that the DMO's cash management objective in the 2000 framework would need to be formalised in a different way to enable the introduction of a single, quantitative performance measure. The preferred approach would be a statement of the Government's cash management ethos in operational terms so that it is more focussed and objectively defined.

In order to make recommendations to amend the 2000 cash management framework, the Review needed to consider the background to that framework.

Before 2000, Government cash management was carried out by the Bank of England as an adjunct to the implementation of monetary policy. In practice, this meant that the Bank of England's open market operations (OMOs) throughout the day incorporated the latest estimates of the net Government cash position for that day. Variations between outturn and forecast for the Government cash position interacted with the Bank's daily OMOs and during the year the net Government cash position varied widely from surplus to deficit. This arrangement potentially risked confusing the process of implementing monetary policy. Consequently, when the Government made the Bank of England independent for monetary policy purposes, it was decided that it would be more efficient to transfer responsibility for Government cash management to the DMO. At that time, a key policy priority was to support the establishment of the new monetary policy regime, so the DMO's cash management mandate included a number of supporting policy aspirations. These intended to make it clear that the DMO's role was to be quite separate from the monetary policy role of the Bank of England. These policy aspirations, tended to be phrased in a descriptive rather than quantified way, for example: *'the DMO will not take speculative positions on interest rate decisions by the Bank...'*

The 2000 framework was also designed in an era when Sterling short-term interest rates were very volatile.¹⁸ The DMO's cash management objective intended to demonstrate that the DMO, despite its expected large market share, would not seek to exploit this to its commercial advantage. Again, the phrasing used was descriptive rather than quantified (for example: *'the DMO should ... manage cash flows without influencing the level of short-term interest rates'*). Since 2000, the DMO has been implementing Government cash management consistently with these aspirations and the Review concluded that it should now be possible to evolve to a system of quantified terms that define the appropriate patterns of cash management behaviour. This process will be overseen by Ministers.

The new cash management objective

The Review identified two key conceptual changes needed, one of which was to rephrase the 2000 cash management objective. This is primarily to be achieved by defining a quantified risk appetite.¹⁹

The definition of a quantified risk appetite will enable meaningful quantification of performance. The Government's preferences in relation to the different types of risk-taking inherent in cash management will be defined by a set of explicit limits covering four types of risk, which taken together represent the overall risk appetite (see Box 1 for further information). The risk appetite therefore defines objectively the bounds of appropriate Government cash manager behaviour determined in accordance with the Government's aspirations for cash management. The DMO may not exceed this boundary but within it the DMO will have discretion to take the actions it judges will best achieve the cost minimisation goal. In effect, the new framework enables a more structured delegation of the cash management task from Ministers to the DMO.

¹⁸ There has been a gradual decline in the level of volatility and further reductions in short-term interest rate volatility to the horizon of the next MPC meeting are expected from the Bank of England's reforms (see Chart 9 in Chapter 2). The Bank's expected success in containing short-term rate volatility is one factor taken into consideration in the Review's recommendations.

¹⁹ The term 'risk appetite' is used to mean a set of limits controlling the different types of exposure inherent in executing Government cash management.

The new wording, applicable from April 2005, is:

“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 doing so, 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.*

The wording ‘*while operating within a risk appetite approved by Ministers*’ has replaced the previous phrase ‘*with due regard for risk management*’. The statement of action has also been made stronger, becoming ‘*to minimise the cost*’ instead of ‘*...and to do so in a cost-effective way*’.

The integral role of the forecast

The second key conceptual change recommended was to recognise that the forecasting role is an integral part of ‘active cash management’. In the 2000 framework, the forecasting role was treated as an external factor because it was to be performed by a different organisation. Cash management was defined as that part of active cash management carried out by the DMO, i.e. the market operations. However, given the importance of cash flow forecasts in enabling ‘active’ forward-looking dealing strategies to be undertaken, the Review concluded the performance of cash management ultimately depends on the contributions of both the DMO and HM Treasury’s Exchequer cashflow forecasting team.

The Review also felt that the focus of effort for public accountability purposes should be on developing a single, quantified performance measure of government cash management. Indeed, a number of practical disadvantages from focusing on disaggregating the contribution of the two bodies were identified, notably that this would insert a spurious boundary within ‘active cash management’ when in practice both the forecast and cash dealing are continuously evolving processes. There will continue to be processes within and between each body to monitor local performance.

To reflect this, an explanatory text setting out the interaction of roles and responsibilities of the DMO and HM Treasury’s Exchequer cashflow forecasting team has been published as part of the new cash management objective²⁰:

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

HM Treasury’s role in this regard is to make arrangements for a forecast of the daily net flows into or out of the National Loans Fund (NLF²¹); and its objective in so doing is to provide the DMO with timely and accurate forecasts of the expected net cash position over time.

²⁰ See Chapter 6 of the ‘Debt and Reserves Management Report 2005-06’.

²¹ The NLF is the Government’s main borrowing and lending account.

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

This joint responsibility has now been formalised in a Memorandum of Understanding between HM Treasury and the DMO, one responsible for government cash management forecasting and one for market operations.

Box 1: Definition of risk appetite

The risk appetite comprises a set of risk limits: liquidity risk, interest rate risk, foreign exchange risk and credit risk. Limits will be set on potential exposures to these risks so as to reflect the pattern of exposure typically generated by the way Government cash management has been successfully carried out to date. These limits will be carefully calibrated further during the coming year and reviewed from time to time. The limits have been defined in terms of a first order trigger limit, intended to capture most activities realistically; and a second order definitive limit, intended to represent the maximum exposure under any conditions.

The liquidity risk limit will constrain the extent to which the DMO may leave an expected cash flow to be dealt with until close to the time when it occurs: and it aims to ensure that concentration of transactions by the DMO do not influence the level of short-term interest rates. A smaller limit will cause the DMO to take advance action to offset expected flows ahead of time, resulting in a higher score against the interest rate risk limit (see below). The limit will be measured as the Maximum Cumulative Flow (MCF) over one day, which is the maximum amount of funding or reinvestment permitted on a day assuming normal operating conditions. Initially this will be based on historical data, and re-calibrated over the next year or so.

The interest rate risk limit will constrain the extent to which the DMO can take advance action to offset cash flows and its purpose is to control the extent to which cash management costs are potentially exposed to changes in interest rates. A smaller limit will cause the DMO to leave the position to be dealt with until close to the time when it occurs, resulting in a higher score against the liquidity risk limit (see above). The interest rate limit will be measured initially by a standard sensitivity measure known as Price Value per basis point (PV01), based on historical data. Value at Risk (VaR) measures will be calibrated over the next year or so.

The foreign exchange risk limit will constrain the extent to which the DMO can incur a net exposure to foreign currency movements when it purchases or sells foreign currency assets.

In addition, existing arrangements for setting **credit risk limits** will continue to constrain the extent to which the DMO can incur individual and aggregate credit exposures to market counterparties.

Improvements to current cash management practice

As noted earlier, the Review concluded that the ‘active cash management’ approach and current dealing practices generally work well. The cash management review is therefore proposing to make gradual improvements rather than radical changes. These improvements will be implemented in two stages, the second of which is likely to begin around the time that the Bank of England Sterling money market reforms are implemented in full.

The following improvements are envisaged during the initial phase:

- a gradual widening of the range of cash management counterparties, possibly later to include access to electronic platforms. This reflects the view that the DMO should remain positioned as a customer at the core of the market but that it should ensure the widest possible market access to ensure competitive price-making from its counterparties;
- making more consistent use of the interbank, CD and CP markets by initially extending activity in the interbank market from overnight to two weeks. This is a move towards equalisation of the different investment horizons that DMO had previously applied to these markets; and
- internal improvements to management information and operational control procedures to allow for the implementation of risk limits and clear accountability by function across the range of DMO’s market activities. This includes the segmentation of ‘active cash management’ from other activities such as debt financing operations all of which are accounted for in the Debt Management Account (DMA). One aspect of this will be a formalisation of the debt management and cash management decision-making processes behind the Treasury bill programme.

It is also envisaged that the DMO will keep its Treasury bill programme under review during the first phase, including the maturities issued and operational arrangements such as tender and settlement dates. Any changes to arrangements will be announced in advance.

The second phase will include:

- the possible use of (or change in current practices for using) hedging instruments such as SONIA and foreign exchange swaps; and
- the formal introduction of an agreed risk appetite and performance benchmark following calibration during phase 1.

Conclusion

The thrust of the Review’s recommendations is to improve effectiveness and accountability; it will not make radical changes to the way the DMO interacts with the market. The DMO is committed to delivering its Government cash management responsibilities seamlessly while the recommendations of the Review are phased in. Developments in the money market, as well as lessons learnt during the gradual shift in DMO’s cash management practices over the next year or so, will be important factors in determining the precise risk appetite and performance benchmark to be applied formally at a later stage.

Chapter 6: Fund management and local authority lending for Central Government

Fund management

From its origins in the late 18th century the role of the Commissioners for the Reduction of the National Debt (CRND) has had associations with the stock market and this led to a diversification of CRND operations, including in particular the responsibility for the investment of major Government funds. This now constitutes the main function of CRND, which has around £37 billion under its control, representing the assets of the various investment funds.

The investment powers differ to some extent from Fund to Fund, depending upon the provisions of the relevant Acts of Parliament, but essentially investments are restricted to Government guaranteed securities. The largest Funds are currently the National Insurance Fund Investment Account, the National Lottery Distribution Fund Investment Account and the Court Funds Investment Account. The full list of funds under management is as follows:

- Court Funds Investment Account.
- Crown Estate.
- Insolvency Services Investment Account.
- National Endowment for Science, Technology and the Arts.
- National Insurance Fund Investment Account.
- National Lottery Distribution Fund Investment Account.
- National Savings Bank Fund.
- Northern Ireland Court Service Investment Account.
- Northern Ireland National Insurance Fund Investment Account.

CRND operations

During the year, the DMO's Managing Board commissioned a report, the objective of which was to consider the impact of the loss of one (or more) of CRND's major clients on the management charges of its remaining client funds. The report was to take account of value for money principles established as a result of the Gershon Review.

There were three distinct phases to the work:

- to assess the in-house capability of providing "active" fund management;
- consult with providers of active fund management available within the private sector; and
- consult with CRND's clients, to understand better their investment requirements.

The Report concluded that:

- CRND does provide a value for money service to its clients;
- for those clients whose preference was for cash management or index-tracking gilt funds, these could be facilitated in-house; and
- for those clients whose preference was for a more active style of fund management, this would be best facilitated from within the private sector.

Following the implementation of the DMO Landscape Review completed in June 2004, the DMO commissioned a Post Implementation Report on CRND and the Public Works Loan Board's (PWLB's) integration with the DMO. The Report concluded that:

- the merger had been a success, noting the benefits of the introduction of "best practice" into the business processes and improvements made in communications with other Government departments.

Also, during the year, Pension Commutation Board Annuities that had been paid out of the National Savings Bank Fund since 1871, ceased to be paid out of the Fund from 31 March 2005.

Lending to local authorities

PWLB responsibilities and objectives

The PWLB is a discrete statutory body that merged with the DMO in July 2002. It is headed by Commissioners whose function is to consider loan applications from local authorities and other prescribed bodies and, where loans are made, to collect the repayments. Nearly all borrowers are local authorities requiring loans for capital purposes. Loans, which are automatically secured by statute on the revenues of the authority, are sourced from the National Loans Fund. Rates of interest are determined by HM Treasury, drawing on data provided by the DMO. Rates are determined daily by reference, in the case of the single set of fixed interest rates, to gilt yields and, in the case of variable rates, to the general collateral repo rate.

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

Since the merger, the Board has operated as a business unit of the DMO within the DMO's offices and sharing common services. The Commissioners have retained their statutory role but expect and require the Board otherwise to be subject to the same controls as the DMO's operations as a whole. The Secretary to the Board is a senior official of the DMO and the other staff of the Board are DMO employees.

PWLB operations in 2004-05

2004-05 saw the Board change its lending arrangements to take account of the 'prudential' regime for local government capital finance introduced by the Local Government Act 2003. The Government's long-standing aim is that the Board

should be able to meet all of an authority's legitimate need for long-term loans. Accordingly, the Board is generally prepared to lend up to the available capacity in an authority legal borrowing limit. The Commissioners expect any authority undertaking financial transactions with the Board to act prudently and comply with all relevant legislation.

Summary figures for the Board's operations are below. 2004-05 was the first year since 2000-01 that net lending was positive. Further details are in the Board's Annual Report, published separately.

Table 9
PWLB operations in 2004-05

Summary of PWLB operations in 2004-05 (£mn)		
Debt outstanding at	31-March-2004	41,307
Advances to	31-March-2005	5,822
Repayments to	31-March-2005	5,059
Net activity to	31-March-2005	763
Debt outstanding at	31-March-2005	42,070

Chapter 7: The DMO

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

The separate responsibilities of the Chancellor and other Treasury Ministers, the Permanent Secretary to the Treasury and the DMO's Chief Executive are set out in a published Framework Document²², 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 Plan²³. The Plan sets out the DMO's targets and objectives for the year ahead, and the strategies for achieving them. It also reviews the immediately preceding year. The starting point of the DMO's Business Plan is the strategic objectives given by the Chancellor of the Exchequer to the DMO and set out in the Framework Document.

Organisation and resources

The DMO is organised flexibly to ensure that resources are available as necessary for the respective tasks.

There are two main business areas in the DMO: Policy & Markets, and Operations & Resources. These areas are in turn split into a number of teams across which there is substantial cross-team working to ensure that both policy and operational concerns are adequately met; that the relevant skills are brought to bear on tasks or problems; and that important operations are adequately resourced.

The DMO's Managing Board considers all major strategic decisions and comprises the Chief Executive, the Deputy Chief Executive (and Head of Policy and Markets) and the Chief Operating Officer together with non-executive members from outside the DMO who in 2004-05 were: James Barclay, Colin Price and, from HM Treasury, Sue Owen. Colin Price is also Chairman of the DMO's Audit Committee.

Within the DMO most business issues are considered by cross-cutting committees: in particular those on debt management, cash management; and investment. They are supported by a Credit and Risk Committee, which also reports to the Managing Board.

²² Available on the DMO website at www.dmo.gov.uk/publication/fwork040405.pdf.

²³ The DMO Business Plan for 2005-06 was published on 4 April 2005 – it is available from the DMO or the website at www.dmo.gov.uk/publication/busplan05.pdf.

Managing risk

During the year work has continued further to develop and embed processes and systems to enhance the ability accurately to identify and manage risks of both a quantifiable and qualitative in nature. Of particular note are:

- The agreement with HM Treasury of explicit parameters to define the risk appetite for the cash management operation (to be implemented in 2005-06).
- The extension of the Approved Group of Investors to reduce the risks of money laundering in the operation of the Gilts Purchase and Sale Service.
- Increased focus by senior managers on assessing high-level risks and 'horizon scanning' activities.

Budget

The DMO's resource requirement is largely driven by the need to meet its responsibilities, as well as the wider need within Government to maintain taut administrative budgets. Its budget, which is financed as part of the budget for HM Treasury as a whole, has to reflect a need for both skills and systems that are not available elsewhere within Government. The DMO's net operating costs in 2004-05 were £6.9 million, £1.2 million less than in 2003-04.

Chapter 8: Response to Professor Miles' recommendation on interest rate derivatives

In April 2003, the Chancellor of the Exchequer asked Professor David Miles to undertake a review of the UK mortgage market, which was to include an analysis of the supply and demand side factors limiting the development of the longer-term fixed-rate mortgage market. The Miles Review Final Report²⁴, published shortly before Budget 2004, contained a number of recommendations for the Government and the Financial Services Authority (FSA) that were intended to improve the efficient functioning of the mortgage market. Recommendation 17 specifically relates to debt management policy:

“[The] Government should give further consideration to the potential costs and benefits of Government issuing interest rate derivatives.”

The Government published a summary of its response to this recommendation in the Debt and Reserves Management Report 2005-06²⁵, published alongside Budget 2005. The summary response noted that the detailed analysis underpinning the response would be published in DMO's Annual Review 2004-05. This Chapter sets out the motivation underlying the recommendation and the analysis underpinning the Government's response in the context of current debt management policy. The Government's view is that a sufficiently strong case cannot currently be made for introducing such instruments given the Government's current approach to debt management policy.

Motivation for recommendation 17

One of the factors identified in the Miles Review as a deterrent to the supply of long-term fixed-rate mortgages was the risk to mortgage lenders associated with mortgage prepayment. Prepayment alters the profile of the fixed-rate mortgage lender's assets and when it occurs could generate a mismatch of assets and liabilities on the balance sheet, thereby exposing the lender to greater interest rate risk.

The Miles Review considered one way in which mortgage lenders could hedge prepayment risk would be through the purchase of interest rate derivatives²⁶, specifically some form of long-dated interest rate call options, the value of which moves in line with the value of the borrower's option to prepay the loan, thereby providing an effective hedge against interest rate movements.

However, as noted in the Review, there may be an absence of issuers of these instruments. There could then be market failure reasons for Government intervention. However, the Review suggested a better argument for Government to issue interest rate call options, namely that it may be a natural issuer of such instruments. The Review suggested this might present a real opportunity to the extent that it could be shown that such options could hedge the Government against variability in its debt financing costs – since these depend on underlying interest rate movements.

²⁴ The Miles Review Final Report, The UK Mortgage Market: Taking a longer-term view, can be found on HM Treasury's website at: http://www.hm-treasury.gov.uk/consultations_and_legislation/miles_review/consult_miles_index.cfm.

²⁵ The Government's summary response to this recommendation is set out in Chapter 3 of the Debt and Reserves Management Report 2005-06, which can be found on HM Treasury's website at: <http://www.hm-treasury.gov.uk/media/CF3/2F/DMO2005amend.pdf>.

²⁶ Interest rate derivatives are one means by which mortgage lenders could hedge early prepayment risk. There is no clear evidence of market demand for such instruments.

The Review also argued that the Government could extract a ‘scarcity premium’ from issuance of these instruments if there were excess demand for them. This premium might make the cost implications more favourable.

Potential mechanisms for Government issued derivatives

Box 2 below sets out some of the alternative derivative instruments the Government could issue that would generate the type of payoff structure that would allow mortgage lenders to hedge prepayment risk.

Whether or not gilt call options are exercised at expiry is determined by underlying movements in gilt yields. However, Government is the monopoly supplier of gilts and, therefore, if it were to issue interest rate call options on gilts this could lead to the perception of a conflict of interest if market participants believed the Government might try to manipulate the gilts market to achieve certain outcomes. This issue is far less relevant for the swaptions market because it is movements in swap market interest rates, which determine the exercise of interest rate swaptions. Furthermore, there is likely to be relatively greater demand and better value for money in the swaptions market due to its greater depth and liquidity. Hence, interest rate swaptions are perhaps the most eligible type of derivative that Government could issue.

Therefore, for the purposes of this response, consideration will be given to the costs and benefits of issuing European²⁷ interest rate call swaptions (referred to in market terminology as a ‘receiver swaption’) where the holder of the call has the right (but not the obligation) to enter into a contract to exchange cash flows at a fixed rate of interest (i.e. receive fixed) for a floating rate stream (i.e. pay floating). Interest rate swaptions have the following key properties:

- exercise of interest rate call swaptions (hereforth denoted simply ‘swaptions’) depends upon movements in underlying swap market interest rates relative to the fixed rate specified in the swaption; and
- the profit or loss²⁸ to Government from issuing interest rate call swaptions is asymmetric relative to underlying movements in market interest rates.

²⁷ The consideration of the costs and benefits to the Government from issuing these instruments will not fundamentally differ depending on the style of swaption (i.e. European, American or Bermudan). For ease of discussion European option are assumed. As referred to in Box 2, these are options where the expiry date of the option is the only time at which the option can be exercised.

²⁸ The profit or loss to Government is the price charged for the call option less the expiry value of the option.

Box 2: Interest rate derivative structures

Bond call options

The holder of a bond call option has the right but not the obligation to buy a particular bond at a pre-specified (strike) price on or before a specified date (expiry date). If the contract specifies that the option to buy the bond can be exercised only on the expiry date then the option is known as a European option. Alternatively, if the option to buy the bond can be exercised before the expiry date the option is known as an American option²⁹. Bond call options can be traded over-the-counter (OTC) or on an exchange.

As part of the specification of the contract, settlement of bond call options could take one of two forms:

- **physical delivery** – this requires that, in the event of the call option being exercised, the issuer of the bond delivers the bond to the option holder in return for the pre-specified price; and
- **cash settlement** – this requires that in the event of the call option being exercised, the issuer of the bond pays the option holder the incremental difference between the price of the bond in the secondary market and the pre-specified price.

At the time of delivery, the payoffs (in present value terms) to the writer and holder of the option from both physical delivery and cash settlement should be broadly equivalent. However, in the context of the UK Government bond (“gilt”) market, physical delivery could have more significant adverse repercussions because the stock of supply of a specific gilt over a given period would be uncertain. This uncertainty could manifest itself as an increase in risk premia. This could be mitigated to some extent by allowing for a range of gilts to be delivered but there will still be an element of uncertainty.

Interest rate swaptions

The holder of an interest rate call swaption has the right but not the obligation to enter into a pre-specified interest rate swap agreement. Interest rate swaptions can also be European or American³⁰ style and can be traded either OTC or on an exchange.

An interest rate swap agreement is a contract between two counterparties to exchange cash flows in the future. Most commonly, Counterparty A agrees to pay cash flows based on a pre-defined floating rate (for example, a rate reference to LIBOR³¹) applied to a given notional principle to Counterparty B. In return, Counterparty B pays cash flows to Counterparty A based on a pre-defined fixed rate applied to the same notional principle. A swap agreement typically involves multiple cash flows and can range up to 20 years or more. In practice, the net value of the cash flows is exchanged between the counterparties.

²⁹ There are more exotic option types not included in Box 2 such as Bermudan options. However, European and American options are the most commonly used.

³⁰ Interest rate swaptions are frequently ‘Bermudan’ in style. Bermudan options are exercisable on certain specified days of their lives and are effectively a subset of American options.

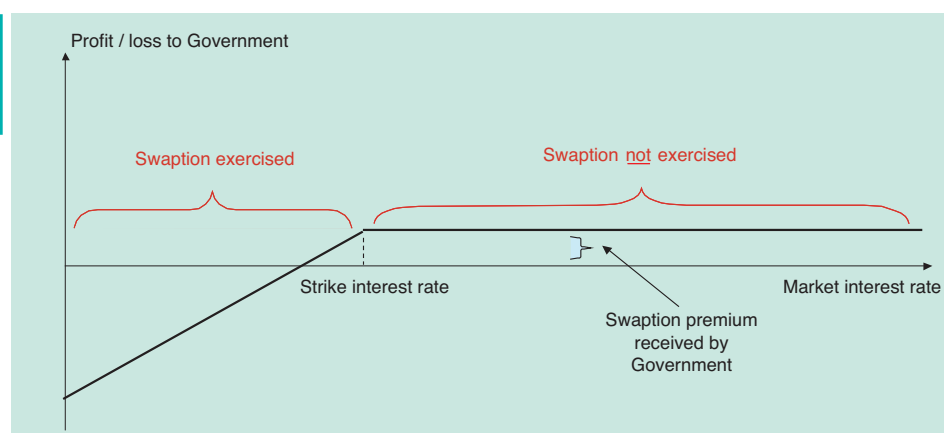
³¹ London inter-bank offer rate.

Movements in market interest rates after issuance determine the profit or loss to Government from issuing swaptions. Chart 12 illustrates the possible payoffs, at expiry, that the Government might receive and shows that the payoff to Government is asymmetric with respect to market interest rate movements.

In this simplified example, the swaption holder would exercise their right to enter the swap deal if the prevailing market interest rate at expiry is less than the fixed rate (i.e. less than the “strike interest rate” in Chart 12) specified in the swaption contract. At expiry, the net expected profit or loss to Government from the swaption is the difference between the net present value of the cash flows it pays out at the fixed (strike) rate and those it expects to receive at the floating rate (net of the premium Government received earlier for writing the swaption). If the prevailing swap market interest rate at expiry is greater than the fixed (strike) interest rate then the swaption expires unexercised. In essence, the swaption provides the buyer of such a contract (i.e. mortgage lenders in the context of the Miles Review) with insurance against unexpected falls in interest rates. When interest rates fall they could exercise the swaption and receive the higher fixed rate.

Chart 12 shows that the maximum upside profit potential for the Government is limited to the premium it receives for writing the call swaption (“swaption premium received by Government” in Chart 12). However, the potential worst-case scenario for Government is considerable because the loss increases as market interest rates fall further below the strike rate. The Government must take into account both the potential gains and losses it faces when considering writing interest rate call swaptions.

Chart 12
Profit/loss (at expiry) to
Government from writing an
interest rate swaption



When swaptions are priced fairly (i.e. zero net payoff to the Government over the economic cycle) then, on average, there will be no additions or reductions to the debt stock. The impact of introducing swaptions as a debt instrument transfers the timing of a portion of the Government’s debt issuance from one part of the economic cycle to another. This would imply different consequences for Government debt financing over an economic cycle (relative to if swaptions were not issued) as market interest rates move relative to the strike interest rate. Box 3 explains this point further.

Box 3: Implications of market interest rate movements for Government debt financing costs if swaptions were issued

Case 1: market rates are lower than the strike rate of swaptions

At points in the economic cycle when interest rates fall below the strike rate of swaptions in existence then the Government would have to issue more debt than if it had not issued swaptions. This is because holders of swaptions would exercise their options, and the Government would incur the additional cost of financing its swap obligations in addition to other debt it has to raise.

Case 2: market rates are higher than the strike of swaptions

At points in the economic cycle when yields are above the strike rate of swaptions in existence then the Government would have to issue less debt than if it had not issued swaptions. This is because existing swaptions would not be exercised, but the Government would benefit from the premiums arising from the issuance of new swaptions and this will offset some of the cost of any debt it has to raise.

Context for the Government's response – debt management policy

The *Code for Fiscal Stability*³² sets out the principles on which debt management policy is based and underpins the Government's debt management framework. The principles set out in the Code, together with the current debt management policy objective provide a basis for considering any innovations to debt management policy.

The 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 of minimising cost over the long-term reflects a desire to lower the cost of real debt servicing, ultimately lowering the burden of taxation required to finance debt interest payments. At the same time, if the cost of different types of debt reflects a fair payment for risk, then the cheapest forms of funding may expose the taxpayer to too much risk. For example, if the Government were substantially to increase the proportion of debt with one-year maturity when short-term interest rates were low, it would at the same time be increasing its exposure to the risk that the refinancing cost of that debt could be higher than currently expected. In such circumstances, enhanced exposure to cheap nominal financing in the short-term could exacerbate the risk of more expensive financing in the near future. The Government's objective requires that both aspects are taken into account.

The Government's debt issuance strategy for each financial year is based on a consideration of the Government's longer-term risk preferences for the overall debt portfolio as well as localised supply and demand conditions across the yield curve. Ongoing quantitative research by the UK Debt Management Office (DMO) will help

³² Under the Finance Act 1998, the Code for Fiscal Stability sets the framework for UK fiscal and debt management policy. The Code obliges the Government to report on its debt management operations allowing Parliament and the public to scrutinise the conduct of debt management policy. It also underpins fiscal and debt management discipline through five principles of fiscal management: transparency; stability; responsibility; fairness; and efficiency. The Code can be found on the Treasury's website at: http://www.hm-treasury.gov.uk/documents/uk_economy/fiscal_policy/ukecon_fisc_code98.cfm.

provide the Government with a clearer picture of how different debt strategies affect the cost and risk characteristics of its debt portfolio.

The Miles Review Final Report suggested that the existence of a liquid market in longer-term interest rate call options could contribute to improving the efficiency of the mortgage market (and, therefore, the housing market). The Review also suggested that a liquid market for longer-term call options does not currently exist because of a lack of natural writers of these calls and indicated that the Government may have the characteristics of a natural writer of longer-term call options. The implication is that if the Government were to start writing longer-term call options, it would be helping to complete financial markets in this respect, in addition to any net benefits it might derive itself.

Although completing financial markets is a legitimate objective for Government in the presence of market failure (since it could improve overall economic welfare), it is not a direct objective of debt management policy. However, it can be argued that in some circumstances issuing instruments designed to complete markets would likely be consistent with the objectives of debt management policy. For example, if financial instruments are in short supply they would be likely to command a premium when issued. Completing markets might support the operation of monetary policy if new instruments were to improve the overall efficiency of financial markets.

There may then be circumstances where a case could be made for issuing new instruments, which would help complete financial markets, but the threshold for doing so is fairly high. In particular, clear consistency with the Government's primary debt management objective of minimising cost and risk would have to be demonstrated. It would also need to be clear that issuing any new instruments would make a significant contribution to improving the overall efficiency of financial markets, to the housing market and to overall macroeconomic volatility; hence supporting government economic policy more broadly.

It also needs to be clear that new instruments are needed to hedge mortgage prepayment risks. A market for these types of instruments exists already and could be developed further by the private sector if there was sufficient demand. If the Government issues these instruments it would be taking on risk transformation that the private sector is more expert at managing.

Potential costs and benefits to Government of issuing interest rate swaptions – issues for consideration

As stated above, current debt management policy is conducted on the basis of a consideration of the overall risk and cost implications of issuance strategies for the debt portfolio. Any innovation to debt management policy is evaluated in this context.

As mentioned previously, the impact of introducing swaptions as a debt instrument is to transfer the timing of a portion of the Government's debt issuance from one part of the economic cycle to another. This transfer is purely dependent on movements in underlying interest rates.

The introduction of swaptions would add an element of uncertainty to the overall position of the public finances unless there was a clear and stable relationship between movements in underlying interest rates and the public finances. It would also add unpredictability into both debt management and fiscal policy especially if the notional amount of the swap was large and runs counter to the way the Government currently achieves its debt management objective by adjusting the nature and maturity of the debt portfolio through a planned issuance strategy.

The potential for both substantial losses to Government as a consequence of the payoff structure of a written interest rate call swaption position and the uncertainty over the impact on the fiscal position pose new risks to the Government as debt manager. However, it is acknowledged that there is a countervailing gain from having locked in long-term borrowing costs, thereby providing more certainty over nominal debt financing costs.

These new risks may be manageable provided Government could be sure losses were not incurred at a time when the public finances were already under pressure. More specifically, whether or not issuing swaptions has beneficial implications for Government or not depends on whether the Government issues the majority of its debt at yields, which are above the average yield curve over the cycle.

Interest rate call swaptions imply that the Government will tend to issue less debt when yields are higher than previously expected, but more debt when yields are lower than expected (see Box 3).

However, consideration also needs to be given to the fact that the volume of debt issuance tends to fluctuate over the cycle. The Government's deficit tends to rise when the economy is weak. Consequently, the volume of debt issuance tends to rise during downturns and to fall when the economy is strong. The payment profiles associated with interest rate swaptions would tend to exacerbate this pattern, since interest rates also tend to be lowest when the economy is weak. Additional issuance in downturns could raise the cost of borrowing relative to what it would otherwise have been, while reduced issuance in downturns could reduce the cost of borrowing when the economy is strong. Once allowance is made for these effects, it is no longer necessarily the case that issuing interest rate swaptions would lower the cost of debt over the course of an economic cycle³³.

The Miles Review recognised this as being crucial to the argument about whether these instruments could smooth Government's debt servicing costs and offered guidance on the further work needed to assess the possible debt smoothing effects of Government issuing these types of instruments. The Review set out initial correlations between public sector net borrowing as a proportion of gross domestic product and long-term interest rates using data from 1979 to 2003³⁴. A positive, though quite weak, correlation was found between these series suggesting there might be debt-interest smoothing benefits for Government from writing interest rate calls. There are limitations with this approach, which are likely to affect the correlation results. For example, it would be desirable fully to reflect the true relationship between the two variables over this period, by adjusting for the impact of significant changes to the macroeconomic environment³⁵. Other structural

³³ Indeed if the swaption is fairly priced, the expected payoff to the issuer and to the borrower should be zero, when averaged over many economic cycles.

³⁴ Long-term interest rates data used by the Miles Review were 10-year nominal gilt yields.

³⁵ For example, establishment of the Bank of England's Monetary Policy Committee in 1997.

breaks might also have altered the relationship between the series over the period analysed. A more complete method of measuring these correlations requires stripping out these exogenous effects. However, insufficient past data are currently available to allow a more comprehensive historical analysis to be undertaken, due to the relatively recent development of markets for swaptions and long-term bond options.

Another methodological approach is to use simulation modelling. This involves constructing a model of the UK economy with pre-defined swaption pricing formulae and using this model to run a series of simulations based on, for example, the Monte Carlo method. Box 4 describes the simulation analysis that has been undertaken to explore the correlations analysis further. As explained in the text, the results from the modelling did not provide any evidence of a clear case for issuing swaptions.

Although results from further and ongoing simulation modelling may provide some insight into possible correlations between economic performance and debt servicing costs, results could be dependent on model specifications. It is also important to note that correlations are indicative of a relationship that only holds on average over a particular period, not of a relationship that holds at all times in all periods.

In addition, there still remains the possibility that, at particular times in the future, an adverse demand shock will impact on economic performance and the public finances at the same time as causing nominal interest rates to fall. The exercise of interest rate call swaptions in such circumstances would mean that the Government would be issuing a greater amount of debt than would otherwise have been the case, when its financing requirement was already unusually high. Therefore, the more fundamental and overriding issue for the Government is whether it is comfortable in having exposure to a risk that would exacerbate the pressures on public finances at a time when the financing requirement was unusually high.

These problems would be particularly critical under macroeconomic scenarios when fiscal manoeuvrability was particularly desirable, for example, in a period of recession and deflation.

All of these concerns over risk would be exacerbated in practice by the limited ability the Government would have to unwind its position once it had entered a derivatives market. Given the likely size of the Government's position and the lack of liquidity in the longer-term swaptions market, the Government could have difficulty in unwinding its position.

Box 4: Stochastic simulation modelling to investigate correlations between the net value of a written swaption position and budget deficits

Methodology

Stochastic simulation model of UK economy

A simulation model³⁶ of the UK economy was run forward over 300 years to generate a range of scenarios with varying profiles for output, the public sector deficit and the term structure of interest rates. The deficit and interest rate profiles were then used to assess the correlation between the deficit and the net revenue to the Government that would be associated with writing receiver swaptions.

Swaption contract assumptions

In the simulation it was assumed that in any one period the Government would issue 9 swaption contracts, giving options to exercise a 1-year swap 1 year ahead, 2 years ahead, up to 9 years ahead. Purchasers of such options would be largely hedged against downside risks to future interest rates, and hence they could be used as a hedge against pre-payment risk on 10 year fixed rate mortgages.

The revenue stream that the Government could receive if it were to sell such contracts was calculated using a relevant option-pricing model. And from the simulated interest rate profiles, it was possible to identify periods in which the options would be exercised, and to calculate how much the Government would then be required to pay.

Finally, the correlation between the net revenue from the swaption contracts and the Government deficit was analysed to assess whether issuing swaptions might provide a hedge against deterioration in the fiscal position.³⁷

Results

As expected, the distribution of net revenues to the Government was large and asymmetric with significantly greater downside risk than upside risk. Moreover, the correlation between the two series across all observations was low. When the observations were ordered according to the size of the Government budget, the correlation was found to be highest in the 25% of observations in which the fiscal position was most strong, but not significantly different from zero among the remaining observations. This implies that writing such options would not provide a systematic hedge against poor fiscal out-turns.

In interpreting these results, it should be noted that because the swaption contracts would tend to be exercised when interest rates are lower than had been previously expected, this should also imply that the Government can refinance its maturing debt on more favourable terms, hence providing some hedge against the option risk. But interest rates tend to be low when the economy is weak, and hence the Government's financial position is weak. A priori it is not clear that either of these effects will dominate the other: the results suggest that they may be broadly offsetting.

Conclusion

This modelling exercise failed to provide clear evidence of beneficial implications for debt management policy.

³⁶ The core of the model consisted of estimated equations for output and inflation, a calibrated process for trend GDP growth and a calibrated Taylor rule for interest rates. In the model GDP is determined by real interest rates, inflation determined by the output gap, and interest rates by the output gap and inflation. The model also generated public sector debt figures, in order to calculate debt interest payments.

³⁷ Correlations were analysed at both a quarterly and an annual frequency. The results reported above held in both cases.

This is especially important given the Government's exposure to interest rate volatility, having sold a swaption. The volatility of underlying (forward) interest rates is a key driver of the price of a swaption contract and the issuer of a swaption needs to form a view about expected volatility over the life of the contract to price the contract properly. Were interest rate volatility to turn out to be higher than expected by the issuer of a swaption, the losses to the issuer could be significant. Attempting to close out the Government's position could prove costly. This would leave the Government exposed to the risks of large potential losses during unexpected events (and periods of economic vulnerability). Hedging against such risks (by buying options) is likely to prove costly due to the acknowledged lack of sellers of long-term interest rate options.

Volatility aside, the costs involved in managing the exposure³⁸ will reduce the benefits of issuing the swaption in the first place

Conclusion

The Government has given serious consideration to the potential costs and benefits of issuing interest rate derivatives as recommended by the Miles Review. The focus for evaluating this recommendation has been whether issuing interest rate derivatives would enhance the Government's ability to achieve its debt management objective.

As reflected in the discussion above, a substantial degree of uncertainty remains over the balance of advantage to the Government from issuing these instruments. The Government's view is that there is not yet sufficient evidence that these instruments would improve its ability to minimise the long-term cost and risk of debt. If such evidence were to arise in the future the Government would reflect further on this conclusion.

³⁸ To hedge against adverse movements in underlying interest rates, a swaption issuer could, for example, purchase a certain number of futures contracts on a swap (referred to as delta hedging). Changes in underlying interest rates will also mean changes to the delta hedge itself. For an option seller to hedge effectively one must typically buy more futures contracts when prices rise and sell them when prices fall. Failing to hedge against this further risk leaves the delta-hedged option issuer exposed to large changes in underlying interest rates. To reduce these further risks the issuer would again need to buy options.

ANNEX A: Gilts in issue at 31 March 2005

Gilts in issue at 31 March 2005			(£mn nominal)		
Total amount in issue (inc IL uplift)			355,551		
Conventional gilts	Redemption date	Dividend dates	Amount in issue (£mn nom)	Amount held in stripped form at 31 March 2005	Central Govt holdings (DMO & CRND) at 31 March 2005
Shorts: (maturity up to 7 years)					
9½% Conversion 2005	18-Apr-05	18 Apr/Oct	4,469	–	95
8½% Treasury 2005	07-Dec-05	7 Jun/Dec	10,486	154	310
7¾% Treasury 2006	08-Sep-06	8 Mar/Sep	3,955	–	440
7½% Treasury 2006	07-Dec-06	7 Jun/Dec	11,807	172	276
4½% Treasury 2007	07-Mar-07	7 Mar/Sep	11,500	74	27
8½% Treasury 2007	16-Jul-07	16 Jan/Jul	4,638	–	371
7¼% Treasury 2007	07-Dec-07	7 Jun/Dec	11,103	131	244
5% Treasury 2008	07-Mar-08	7 Mar/Sep	14,221	30	166
5½% Treasury 2008/2012	10-Sep-08	10 Mar/Sep	1,026	–	182
4% Treasury 2009	07-Mar-09	7 Mar/Sep	13,250	7	22
5¾% Treasury 2009	07-Dec-09	7 Jun/Dec	11,437	110	359
4¾% Treasury 2010	07-Jun-10	7 Jun/Dec	9,250	1	11
6¼% Treasury 2010	25-Nov-10	25 May/Nov	4,958	–	477
9% Conversion 2011	12-Jul-11	12 Jan/Jul	5,396	–	205
7¾% Treasury 2012/2015	26-Jan-12	26 Jan/Jul	805	–	339
5% Treasury 2012	07-Mar-12	7 Mar/Sep	13,346	203	235
Mediums: (maturity 7 to 15 years)					
8% Treasury 2013	27-Sep-13	27 Mar/Sep	6,181	–	386
5% Treasury 2014	07-Sep-14	7 Mar/Sep	13,050	2	58
4¾% Treasury 2015	07-Sep-15	7 Mar/Sep	13,000	203	8
8% Treasury 2015	07-Dec-15	7 Jun/Dec	7,377	167	172
8¾% Treasury 2017	25-Aug-17	25 Feb/Aug	7,751	–	380
4¾% Treasury 2020	07-Mar-20	7 Mar/Sep	2,500	–	
Longs: (maturity over 15 years)					
8% Treasury 2021	07-Jun-21	7 Jun/Dec	16,741	218	346
5% Treasury 2025	07-Mar-25	7 Mar/Sep	12,922	53	177
6% Treasury 2028	07-Dec-28	7 Jun/Dec	11,756	218	309
4¼% Treasury 2032	07-Jun-32	7 Jun/Dec	13,829	593	251
4¼% Treasury 2036	07-Mar-36	7 Mar/Sep	12,250	161	3
4¾% Treasury 2038	07-Dec-38	7 Jun/Dec	14,250	116	7
3½% War	Undated	1 Jun/Dec	1,939	–	31

**It is assumed that double-dated gilts (which have not been called) currently trading above par will be redeemed at the first maturity date.*

Index-linked gilts	Base RPI	Redemption date	Dividend dates	Amount in issue (£mn nom)	Nominal including inflation uplift	Central Govt holdings (DMO & CRND) at 31 March 2005
2% I-L Treasury 2006	274.1	19-Jul-06	19 Jan/Jul	2,037	5,477	37
2½% I-L Treasury 2009	310.7	20-May-09	20 May/Nov	3,098	7,348	74
2½% I-L Treasury 2011	294.1	23-Aug-11	23 Feb/Aug	4,342	10,880	70
2½% I-L Treasury 2013	351.9	16-Aug-13	16 Feb/Aug	6,397	13,396	105
2½% I-L Treasury 2016	322.0	26-Jul-16	26 Jan/Jul	6,805	15,575	170
2½% I-L Treasury 2020	327.3	16-Apr-20	16 Apr/Oct	5,568	12,537	68
2½% I-L Treasury 2024	385.3	17-Jul-24	17 Jan/Jul	5,751	10,999	112
4½% I-L Treasury 2030	135.1	22-Jul-30	22 Jan/Jul	3,921	5,421	72
2% I-L Treasury 2035	173.6	26-Jan-35	26 Jan/Jul	6,175	6,645	2

Base RPI for all index-linked gilts from 2006 to 2024 maturities RPI Jan 1974=100. For the 2030 and 2035 maturities Base RPI Jan 1987=100

Rump gilts are not available for purchase

Rump gilts	Redemption date	Dividend dates	Amount in issue (£mn nom)	Central Govt holdings (DMO & CRND)
10½% Exchequer 2005	20-Sep-05	20 Mar/Sep	2	0
9¾% Conversion 2006	15-Nov-06	15 May/Nov	1	0
9% Treasury 2008	13-Oct-08	13 Apr/Oct	528	2
8% Treasury 2009	25-Sep-09	25 Mar/Sep	256	0.5
9% Treasury 2012	06-Aug-12	6 Feb/Aug	245	9
12% Exchequer 2013/2017	12-Dec-13	12 Jun/Dec	19	0
2½% Treasury	Undated	1 Apr/Oct	468	0.1
4% Consolidated	Undated	1 Feb/Aug	287	0.1
2½% Consolidated	Undated	5 Jan/Apr/Jul/Oct	205	2
3½% Conversion	Undated	1 Apr/Oct	19	5
3% Treasury	Undated	5 Apr/Oct	45	0
2½% Annuities	Undated	5 Jan/Apr/Jul/Oct	2	0
2¾% Annuities	Undated	5 Jan/Apr/Jul/Oct	0.7	0

*It is assumed that double-dated gilts (which have not been called) currently trading above par will be redeemed at the first maturity date.

ANNEX B: List of GEMMs and Inter Dealer Brokers at 31 March 2005

(*indicates additional IG GEMM status)

GEMMs	Website
ABN Amro Bank NV 250 Bishopsgate London EC2M 4AA	www.abnamro.com
Barclays Capital* 5 The North Colonnade Canary Wharf London E14 4BB	www.barcap.com
Citigroup Global Markets Limited Citigroup Centre 33 Canada Square London E14 5LB	www.citigroup.com
Credit Suisse First Boston (Europe) Limited* One Cabot Square London E14 4QJ	www.csfb.com
Deutsche Bank AG (London Branch)* Winchester House 1 Great Winchester Street London EC2N 2DB	research.gm.db.com
Dresdner Bank AG (London Branch)* PO Box 18075 Riverbank House 2 Swan Lane London EC4R 3UX	www.drkw.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
JP Morgan Securities Limited 125 London Wall London EC2Y 5AJ	www.jpmorgan.com

Lehman Brothers International (Europe)*

25 Bank Street
Docklands
London E14 5LE

www.lehman.com

Merrill Lynch International*

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

www.ml.com

Morgan Stanley & Co. International Limited*

20 Cabot Square
Canary Wharf
London E14 4QW

www.msdl.com

Royal Bank of Canada Europe Limited*

Thames Court, One Queenhithe
London EC4V 4DE

www.royalbank.com

Royal Bank of Scotland*

135 Bishopsgate
London EC2M 3UR

www.rbsmarkets.com

UBS Limited*

1 Finsbury Avenue
London EC2M 2PP

www.wdr.com

Winterflood Gilts Limited*

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

www.wins.co.uk

Inter Dealer Brokers**BrokerTec Europe Limited**

2 Broadgate
London EC2M 7UR

www.btec.com

BGC International

One America Square
London EC3N 2LS

www.bcgpartners.com

Dowgate

6th Floor, Candelwick House
120 Cannon Street
London EC4N 6AS

www.ksbb.com

ICAP WCLK Ltd

2 Broadgate
London EC2M 7UR

www.icap.com

ANNEX C: Performance

Gilt issuance counterfactuals

The DMO has published the results of its measurement of auction performance against counterfactuals in its Annual Reviews since 2001 and, over time, has extended the range of the counterfactuals which are designed to indicate whether different non-discretionary issuance patterns during the year would have resulted in higher or lower costs of financing (as measured by the cash weighted average yield of issuance).

Actual issuance

The cash weighted average yield of gilt issuance in the 2004-05 remit was 4.789%.

Table 11
Average issuance yield 2004-05

Weighted ave yield of outright issuance: 2004-05				
Auction date	Gilt	Real yield	Nom yield	Cash £mn
22-Apr	4¾% 2038		4.80	2,478.5
28-Apr	2% IL 2035	1.78	4.78	632.5
20-May	2½% IL 2020	2.03	5.04	1,111.4
25-May	4½% 2007		5.04	2,952.4
27-May	4¾% 2038		4.86	2,453.6
17-Jun	4¾% 2015		5.22	2,639.2
24-Jun	2% IL 2035	1.79	4.79	665.1
15-Jul	4½% 2007		5.02	2,712.9
22-Jul	4¾% 2038		4.79	2,234.7
28-Jul	2½% IL 2013	2.24	5.25	894.0
12-Aug	5¾% 2009		4.99	2,586.5
16-Sep	4¾% 2015		4.94	2,457.8
28-Sep	4⅞% IL 2030	1.71	4.71	716.1
14-Oct	4¾% 2038		4.55	2,325.9
26-Oct	2½% IL 2016	1.80	4.80	850.4
28-Oct	4¾% 2015		4.74	2,499.5
18-Nov	4¾% 2010		4.60	3,524.0
24-Nov	2% IL 2035	1.54	4.54	711.2
07-Dec	4¾% 2038		4.44	2,635.0
12-Jan	2% IL 2035	1.47	4.47	756.3
20-Jan	4¾% 2010		4.53	3,029.7
27-Jan	4¾% 2038		4.49	2,351.7
02-Feb	2½% IL 2013	1.80	4.80	829.1
24-Feb	4¾% 2010		4.76	2,747.2
02-Mar	4⅞% IL 2030	1.66	4.66	829.1
24-Mar	4¾% 2020		4.83	2,478.5
			4.789	50,102.3

The counterfactuals

The actual average yield is compared with yields calculated using two main counterfactuals:

Counterfactual 1 assumes that:

- for conventional issuance that the total cash raised (£42.107 billion) was achieved through sales split equally between 4% 2009, 5% 2014 and 4¼%

2036, using the average close of business (cob) yield of each of the gilts over the financial year; and

- *for index-linked issuance* that the total cash raised (£7.995 billion) was achieved by sales of equal amounts of all index-linked gilts eligible for auction (2011 maturity or longer) using the average of the cob yield of the relevant gilts over the financial year.

These test an alternative issuance scenario both in terms of gilts issued and timing, in that issuance is assumed to be spread out evenly over each business day of the year and not on specific auction dates.

Counterfactual 2 assumes that:

- *for conventional issuance* that the cash amounts of the auctions are raised at the average of the close of business yields of three counterfactual gilts (4% 2009, 5% 2014 and 4¼% 2036) at:
 - a) the day before the auction; and
 - b) the day of the auction; and
- *for index-linked issuance* that the cash amounts of the auctions are raised at the average close of business yields of all index-linked gilts eligible for auction (2011 maturity or longer) at:
 - a) the day before the auction; and
 - b) the day of the auction.

These test an alternative issuance strategy in terms of gilts issued but using the actual issuance timing pattern.

Results

Counterfactual 1: the counterfactual yield on this basis was 4.764%, so actual issuance under-performed counterfactual 1 by 2.5 bps.

Table 12
Yields for counterfactual 1

Counterfactual 1			
	Cash	Real yield	Nom yield
Conventional	42,107.1		4.752
Index-linked	7,995.2	1.822	4.827
	50,102.3		4.764

Counterfactuals 2a and 2b: The respective counterfactual yields were 4.788% and 4.782%, so actual issuance was very closely in line, under-performing the former by just 0.1bp and under-performing the latter by 0.7bps.

Table 13
Yields for Counterfactual 2

Counterfactual 2a			Real yield	Nom yield	Cash £mn	Counterfactual 2b			Real yield	Nom yield	Cash £mn
22-Apr	Conv			4.88	2,478.5	22-Apr	Conv		4.86	2,478.5	
28-Apr	ILG	1.93	4.94	632.5	28-Apr	ILG	1.93	4.93	632.5		
20-May	ILG	2.01	5.01	1,111.4	20-May	ILG	2.01	5.02	1,111.4		
25-May	Conv		5.07	2,952.4	25-May	Conv		5.05	2,952.4		
27-May	Conv		5.01	2,453.6	27-May	Conv		4.99	2,453.6		
17-Jun	Conv		5.07	2,639.2	17-Jun	Conv		5.10	2,639.2		
24-Jun	ILG	2.00	5.01	665.1	24-Jun	ILG	1.96	4.97	665.1		
15-Jul	Conv		4.98	2,712.9	15-Jul	Conv		4.98	2,712.9		
22-Jul	Conv		5.01	2,234.7	22-Jul	Conv		4.99	2,234.7		
28-Jul	ILG	2.01	5.02	894.0	28-Jul	ILG	2.06	5.07	894.0		
12-Aug	Conv		4.87	2,586.5	12-Aug	Conv		4.83	2,586.5		
16-Sep	Conv		4.80	2,457.8	16-Sep	Conv		4.63	2,457.8		
28-Sep	ILG	1.79	4.79	716.1	28-Sep	ILG	1.80	4.80	716.1		
14-Oct	Conv		4.66	2,325.9	14-Oct	Conv		4.63	2,325.9		
26-Oct	ILG	1.73	4.73	850.4	26-Oct	ILG	1.74	4.74	850.4		
28-Oct	Conv		4.62	2,499.5	28-Oct	Conv		4.65	2,499.5		
18-Nov	Conv		4.56	3,524.0	18-Nov	Conv		4.61	3,524.0		
24-Nov	ILG	1.70	4.70	711.2	24-Nov	ILG	1.71	4.71	711.2		
07-Dec	Conv		4.51	2,635.0	07-Dec	Conv		4.49	2,635.0		
12-Jan	ILG	1.62	4.62	756.3	12-Jan	ILG	1.61	4.61	756.3		
20-Jan	Conv		4.51	3,029.7	20-Jan	Conv		4.54	3,029.7		
27-Jan	Conv		4.53	2,351.7	27-Jan	Conv		4.56	2,351.7		
02-Feb	ILG	1.69	4.69	829.1	02-Feb	ILG	1.69	4.69	829.1		
24-Feb	Conv		4.68	2,747.2	24-Feb	Conv		4.71	2,747.2		
02-Mar	ILG	1.77	4.77	829.1	02-Mar	ILG	1.82	4.82	829.1		
24-Mar	Conv		4.77	2,478.5	24-Mar	Conv		4.75	2,478.5		
			4.788	50,102				4.782	50,102		

Summary

Table 14
Comparison of actual and counterfactual yields

2004-05	Weighted average issuance yield (actual)	4.789	Difference (bps)
Counterfactual 1		4.764	-2.5
Counterfactual 2a		4.788	-0.1
Counterfactual 2b		4.782	-0.7

Auction concession analysis

Table 15 compares the (nominal) yield of all auction gilts at the close of business (cob) on the day before each auction and the day of the auction itself, with the yield at the average accepted price at each auction. This gives an impression of the extent of any concessions around the auctions. On average, the cob yields on the day before auctions were just 1bp lower than the average auction yields (this figure was 2bps in 2003-04). Cob yields on the day of the auction also averaged 1bp lower the average auction yield (the same figure as in 2003-04). Within the averages, there was a significant range of results, reflecting prevailing market conditions at the time of the auctions. The largest concession was 8bps ahead of the auction of 2½% IL 2013 on 28 July; in contrast the auction yield of 2% IL 2035 on 28 April was (in nominal terms) 6bps lower than the cob yield the night before.

Table 15
Movement in yields around gilt
auctions in 2004-05

Auction date	Gilt	Yield cob day before (%) auction	Nominal auction yield (%)	Yield cob auction day (%)
22-Apr	4¾% 2038	4.79	4.80	4.78
28-Apr	2% IL 2035	4.84	4.78	4.80
20-May	2½% IL 2020	5.04	5.04	5.04
25-May	4½% 2007	5.06	5.04	5.04
27-May	4¾% 2038	4.84	4.86	4.81
17-Jun	4¾% 2015	5.19	5.22	5.20
24-Jun	2% IL 2035	4.78	4.79	4.75
15-Jul	4½% 2007	4.99	5.02	5.01
22-Jul	4¾% 2038	4.80	4.79	4.75
28-Jul	2½% IL 2013	5.17	5.25	5.23
12-Aug	5¾% 2009	4.99	4.99	4.94
16-Sep	4¾% 2015	4.91	4.94	4.93
28-Sep	4½% IL 2030	4.68	4.71	4.69
14-Oct	4¾% 2038	4.56	4.55	4.51
26-Oct	2½% IL 2016	4.81	4.80	4.81
28-Oct	4¾% 2015	4.72	4.74	4.76
18-Nov	4¾% 2010	4.62	4.60	4.68
24-Nov	2% IL 2035	4.53	4.54	4.51
07-Dec	4¾% 2038	4.41	4.44	4.40
12-Jan	2% IL 2035	4.45	4.47	4.48
20-Jan	4¾% 2010	4.54	4.53	4.57
27-Jan	4¾% 2038	4.46	4.49	4.49
02-Feb	2½% IL 2013	4.80	4.80	4.80
24-Feb	4¾% 2010	4.74	4.76	4.79
02-Mar	4½% IL 2030	4.65	4.66	4.71
24-Mar	4¾% 2020	4.83	4.83	4.80
	Average	4.78	4.79	4.78

Benchmark premia

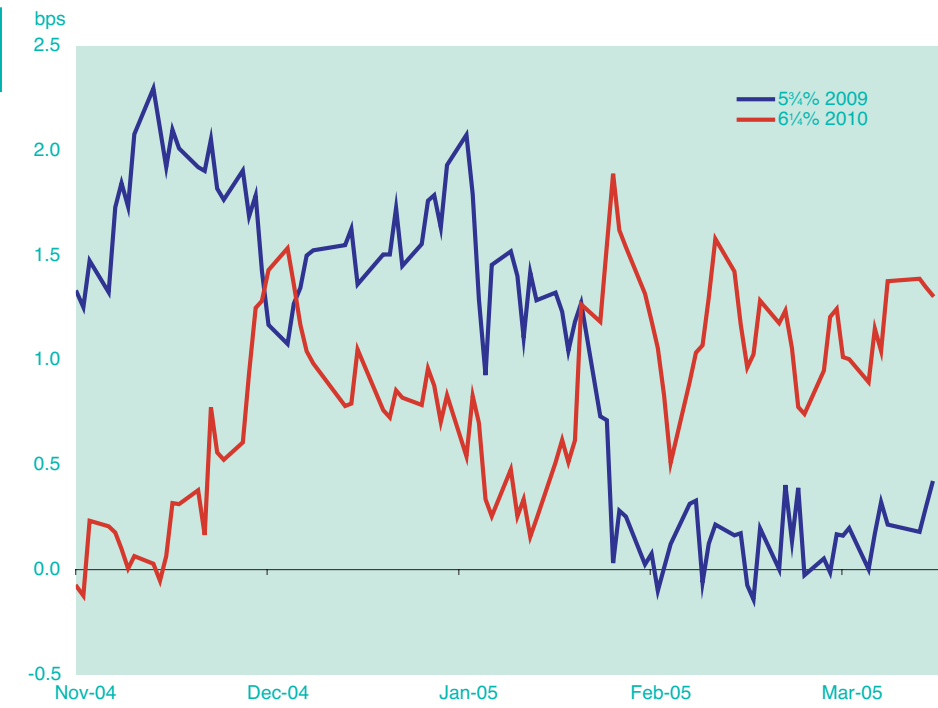
One of the ways in which the DMO seeks to deliver its debt management objectives is to issue gilts that deliver a benchmark premium, i.e. they acquire a premium relative to adjacent gilts on the yield curve by virtue of their size and liquidity. The charts below show how the yield spread between the gilts issued to become the 5- and 10-year benchmarks (4¾% Treasury 2010 and 4¾% Treasury 2015 respectively) moved relative to earlier 5- and 10-year benchmarks and the other gilts close to them on the curve.

At issue, **4¾% Treasury 2010** yielded some 2bps more than 5¾% Treasury 2009 and ended the 2004-05 financial year flat to that gilt – a modest 2bp move. However, 4¾% Treasury 2010 initially traded roughly flat to 6¼% Treasury 2010, but then steadily yielded more – albeit by only 1bp.

At issue, **4¾% Treasury 2015** yielded 4bps more than 5% Treasury 2014, but improved to achieve a premium of some 1.5bps by mid-2004, before retreating to yield 2bps more than 5% Treasury 2014 by end-2004, after which it improved modestly again. Relative to 8% Treasury 2015 there was very little movement in the spread, with the new gilt constantly yielding 1-2bps more.

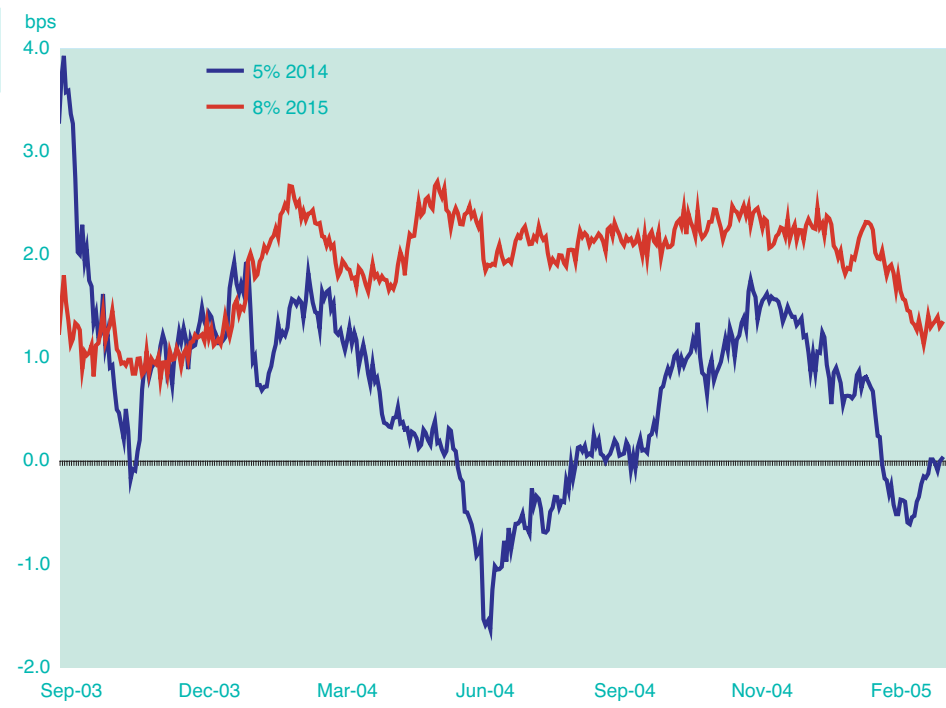
The reduced evidence of benchmark premia reported above is likely to reflect a combination of factors, in particular that the conventional gilt yield curve is now predominantly made up of benchmark issues, and the shape of the curve itself.

Chart 13
Yield spreads relative to 4¾%
2010



Source: DMO

Chart 14
Yield spreads relative to 4¾%
2015



Source: DMO

APPENDIX D: Gilt redemptions and the gilt portfolio

Gilt redemptions

£14.7 billion of gilts in market hands redeemed in 2004-05, as detailed in Table 16.

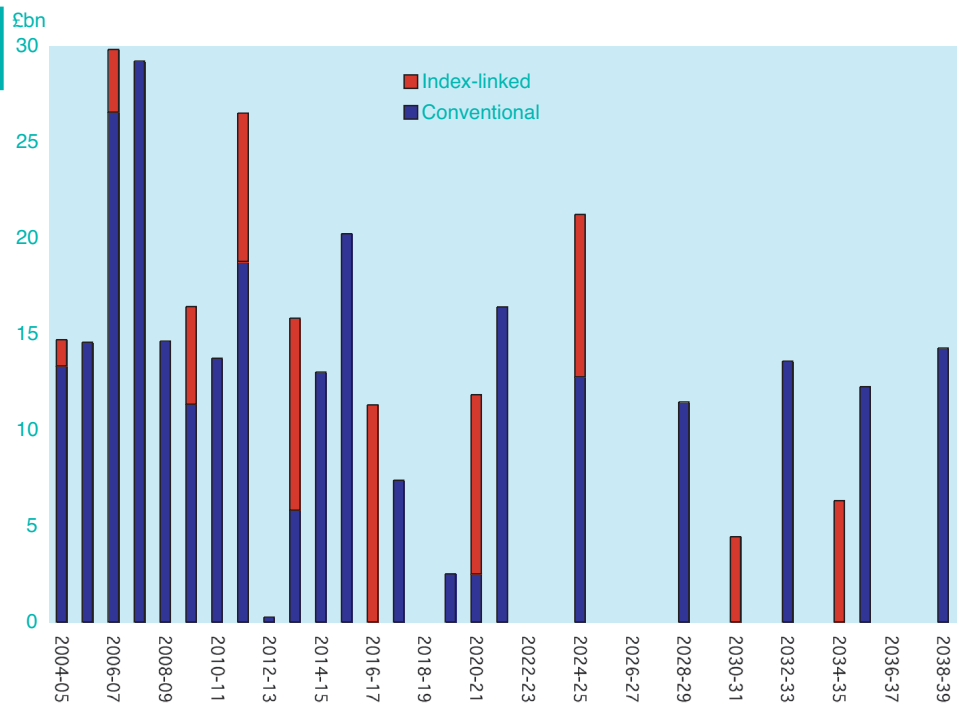
Table 16
Gilt redemptions 2004-05

Redemption date	Gilt	Nominal amount outstanding	Official holdings (end Mar 2004)	Nominal value of gilts outside central govt (end-Mar 2004)*
18-May-2004	10% Treasury 2004	20	6	14
07-Jun-2004	5% Treasury 2004	7,504	461	7,043
21-Oct-2004	4% Index-linked Treasury 2004*	1,338	38	1,369
25-Oct-2004	9½% Conversion 2004	307	158	149
26-Nov-2004	6¾% Treasury 2004	6,597	477	6,120
Totals		15,766	1,140	14,695

*Redemption amount includes accrued inflation uplift of £0.1bn

The future profile of gilt redemptions at end-March 2004 is shown in Chart 15.

Chart 15
Gilt redemption profile as at 31 March 2005



Source: DMO

Table 17 | **The Gilt portfolio**
Key portfolio statistics

The key statistics of the gilt portfolio at end-March 2005 compared to the position at the end of the previous financial year are shown in Table 17.

	31-Mar-04	31-Mar-05
Nominal value*	£321.00 bn	£355.55bn
Market value	£352.57 bn	£397.08bn
Weighted ave market yields		
Conventional gilts	4.61%	4.65%
Index-linked gilts	1.73%	1.72%
Average maturity	11.55 years	11.96 years
Average modified duration		
Conventional gilts	7.19 years	7.45 years
Index-linked gilts	11.08 years	10.85 years
Average coupon**	6.35%	6.12%

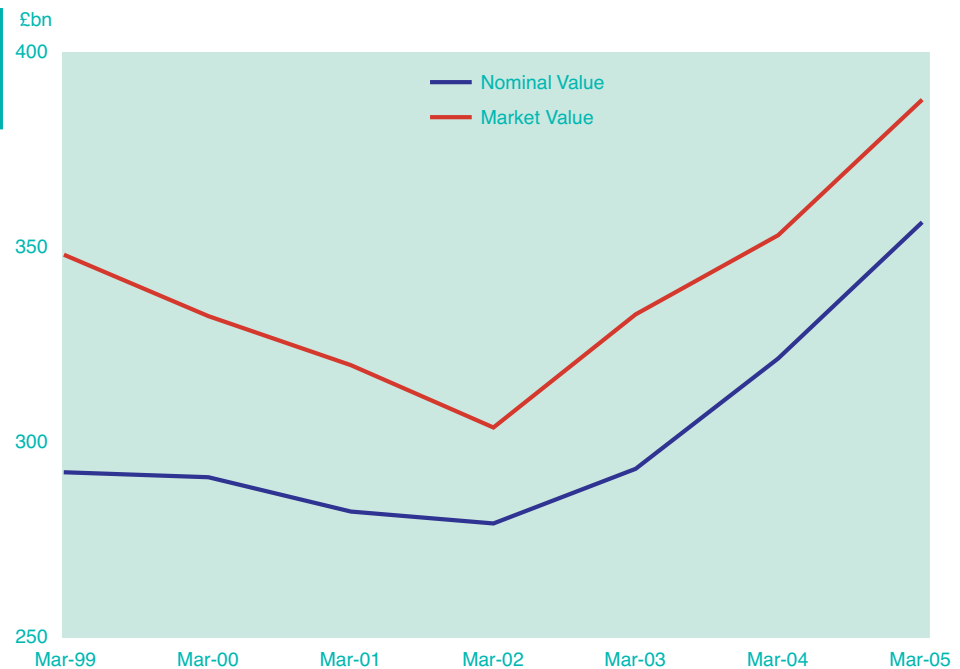
* including index-linked uplift

** of conventional, double-dated and undated gilts

The nominal value of the gilt portfolio rose by £34.55 billion (10.8%) as gross gilt issuance greatly exceeded gilt redemptions. The market value of the portfolio rose by £44.51 billion (12.6%).

The rise in nominal and market values of the portfolio continued the trend of the previous financial years, reflecting the step change in levels of gilt issuance from 2002-03 onwards. Chart 16 shows the nominal and market values at the end of March each year since 1999.

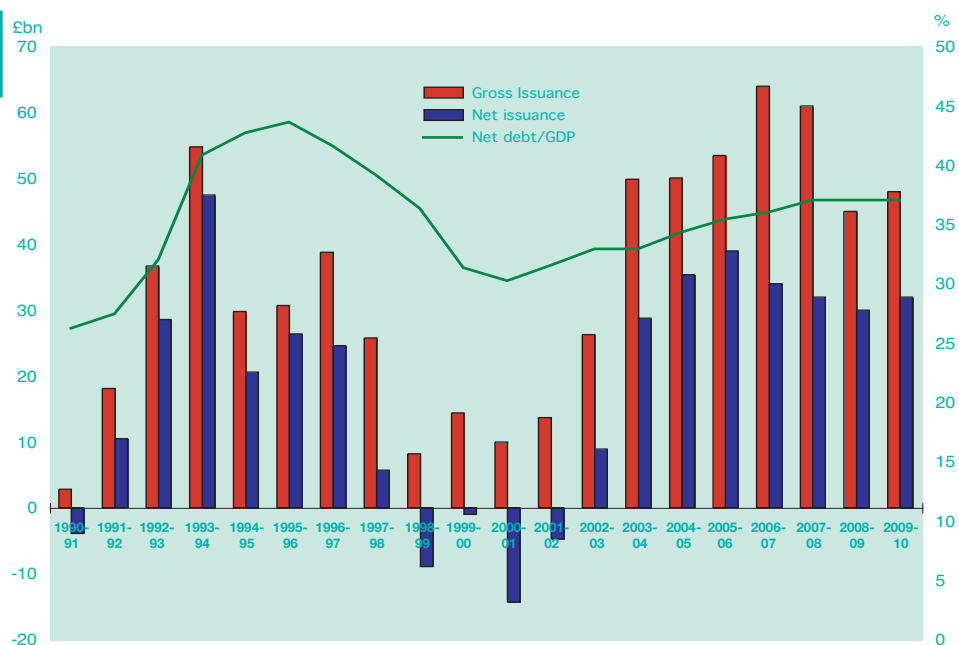
Chart 16
Nominal and market values of the gilt portfolio (as at end-March 2005)



Source: DMO

The trend of rising nominal values can be expected to continue on the basis of future financing projections. Chart 17 shows past and projected gross and net gilt issuance levels (and net debt/GDP data).

Chart 17
Gross and net issuance history and projections



Source: HMT/DMO

Breakdown of the gilt portfolio by type and maturity

Table 18 and Chart 18 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 23% of the portfolio), and until 2003-04 an increasing proportion of index-linked gilts, currently accounting for 25% of the gilt portfolio.

Table 18
Portfolio composition
1999-2005

At end-March	1999	2000	2001	2002	2003	2004	2005
Conventional							
0-3 years	16	17	17	18	16	16	20
3-7 years	22	22	22	18	19	19	17
7-15 years	24	19	16	17	18	19	14
Over 15 years	15	16	17	20	19	21	23
Total	76	75	73	73	73	74	74
Index-linked*	21	23	25	26	27	25	25
Undated	1	1	1	1	1	1	1
Floating rate	1	1	1	0	0	0	0

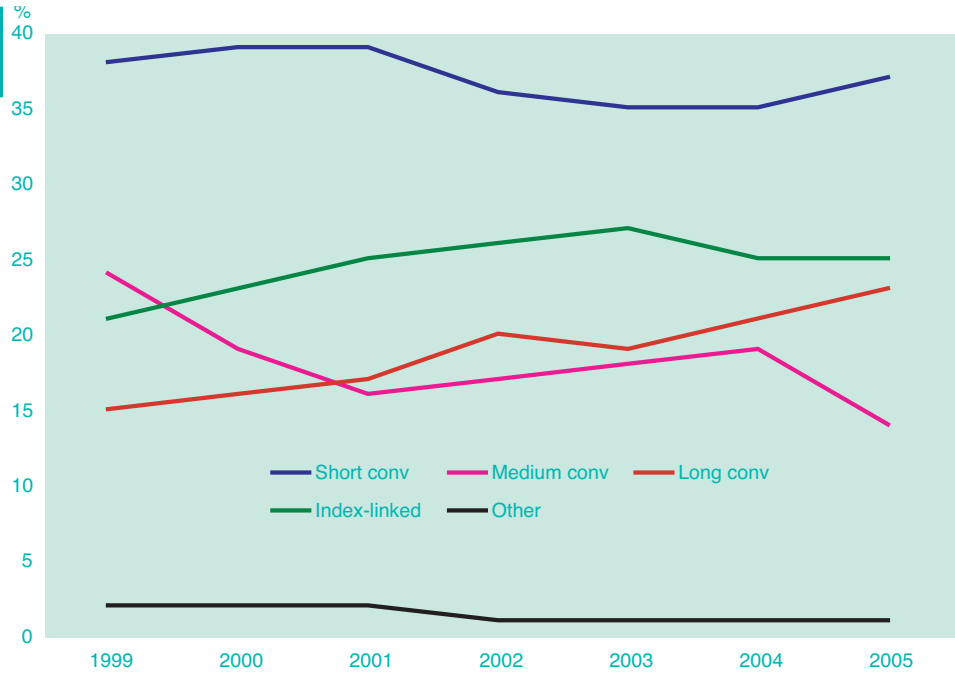
* including index-linked uplift

** of conventional, double-dated and undated gilts

Source: DMO

Chart 18 includes both the 0-3 year and 3-7 year data within the “short conventional” category and undated and floating rate gilts in the “other” category.

Chart 18
Gilt portfolio – breakdown
proportion by maturity and type



Source: DMO

APPENDIX E: Treasury bill tender results 2004-05

Table 19 One-month tender results

Date	Maturity date	Size £mn	Cover	Avg Yield %	Avg price £	Yield tail (bps)
02-Apr-04	04-May-04	1,500	4.88	4.0792	99.6769	2
08-Apr-04	10-May-04	500	8.18	4.1494	99.6940	0
16-Apr-04	17-May-04	500	8.57	3.9900	99.6949	0
23-Apr-04	24-May-04	500	7.81	4.0844	99.6877	3
30-Apr-04	01-Jun-04	500	7.43	4.1822	99.6802	1
07-May-04	07-Jun-04	500	8.35	4.2403	99.6758	0
14-May-04	14-Jun-04	500	9.23	4.2457	99.6754	0
21-May-04	21-Jun-04	1,000	5.13	4.2770	99.6730	1
28-May-04	28-Jun-04	1,500	5.20	4.3324	99.6805	1
04-Jun-04	05-Jul-04	1,500	4.81	4.3596	99.6667	0
11-Jun-04	12-Jul-04	1,500	5.83	4.4790	99.6576	0
18-Jun-04	19-Jul-04	1,500	4.04	4.5026	99.6558	1
25-Jun-04	26-Jul-04	1,500	3.69	4.5063	99.6555	0
02-Jul-04	02-Aug-04	1,500	6.46	4.4765	99.6578	0
09-Jul-04	09-Aug-04	750	7.01	4.4690	99.6583	0
16-Jul-04	16-Aug-04	150	8.88	4.4964	99.6563	1
23-Jul-04	23-Aug-04	150	7.10	4.6004	99.6483	1
30-Jul-04	31-Aug-04	150	8.65	4.6760	99.6299	0
06-Aug-04	06-Sep-04	150	8.45	4.7081	99.6401	1
13-Aug-04	13-Sep-04	150	6.65	4.7290	99.6385	0
20-Aug-04	20-Sep-04	150	6.85	4.7196	99.6393	1
27-Aug-04	27-Sep-04	500	4.54	4.7369	99.6508	0
03-Sep-04	04-Oct-04	1,500	5.22	4.7338	99.6382	0
10-Sep-04	11-Oct-04	1,000	5.57	4.7387	99.6378	1
17-Sep-04	18-Oct-04	500	5.53	4.7381	99.6378	0
24-Sep-04	25-Oct-04	500	7.86	4.7295	99.6385	1
01-Oct-04	01-Nov-04	500	7.10	4.7128	99.6398	1
08-Oct-04	08-Nov-04	500	7.56	4.7066	99.6402	0
15-Oct-04	15-Nov-04	500	6.22	4.7095	99.6400	0
22-Oct-04	22-Nov-04	500	5.05	4.7151	99.6396	0
29-Oct-04	29-Nov-04	500	7.85	4.7075	99.6402	0
05-Nov-04	06-Dec-04	500	6.01	4.7115	99.6399	1
12-Nov-04	13-Dec-04	1,000	4.56	4.7203	99.6392	1
19-Nov-04	20-Dec-04	1,500	4.63	4.7214	99.6391	1
26-Nov-04	29-Dec-04	1,500	3.88	4.6966	99.6155	0
03-Dec-04	04-Jan-05	1,500	6.04	4.7066	99.6274	1
10-Dec-04	10-Jan-05	1,500	4.88	4.7264	99.6387	0
17-Dec-04	17-Jan-05	1,500	3.91	4.7365	99.6380	1
31-Dec-04	31-Jan-05	500	5.67	4.7477	99.6500	0
07-Jan-05	07-Feb-05	1,500	5.63	4.7285	99.6386	0
14-Jan-05	14-Feb-05	1,500	4.57	4.7231	99.6390	0
21-Jan-05	21-Feb-05	1,000	6.08	4.7216	99.6391	1
28-Jan-05	28-Feb-05	150	8.71	4.7001	99.6407	1
04-Feb-05	07-Mar-05	150	6.67	4.7073	99.6402	0
11-Feb-05	14-Mar-05	1,500	3.94	4.7186	99.6393	0
18-Feb-05	21-Mar-05	1,500	4.23	4.7291	99.6385	1
25-Feb-05	29-Mar-05	1,500	4.47	4.7388	99.6249	0
04-Mar-05	04-Apr-05	500	5.47	4.7291	99.6385	0
11-Mar-05	11-Apr-05	1,500	3.61	4.7200	99.6392	0
18-Mar-05	18-Apr-05	1,500	5.22	4.7188	99.6393	0
24-Mar-05	25-Apr-05	1,250	4.69	4.7351	99.6510	0

Table 20 Three-month tender results

Date	Maturity date	Size £mn	Cover	Avg Yield %	Avg price £	Yield tail (bps)
02-Apr-04	05-Jul-04	1,500	6.47	4.2370	98.9547	1
08-Apr-04	12-Jul-04	500	9.29	4.2495	98.9630	0
16-Apr-04	19-Jul-04	500	9.40	4.1865	98.9670	1
23-Apr-04	26-Jul-04	500	11.05	4.2059	98.9623	1
30-Apr-04	02-Aug-04	500	8.86	4.2730	98.9574	1
07-May-04	09-Aug-04	500	9.38	4.3069	98.9376	0
14-May-04	16-Aug-04	500	9.85	4.3238	98.9335	1
21-May-04	23-Aug-04	1,500	6.07	4.4211	98.9098	1
28-May-04	31-Aug-04	1,500	5.66	4.4978	98.8911	1
04-Jun-04	06-Sep-04	1,500	5.55	4.5420	98.8803	1
11-Jun-04	13-Sep-04	1,000	6.05	4.6295	98.8590	1
18-Jun-04	20-Sep-04	1,000	5.57	4.6840	98.8457	1
25-Jun-04	27-Sep-04	1,000	4.49	4.6732	98.8483	2
02-Jul-04	04-Oct-04	500	8.86	4.6516	98.8536	1
09-Jul-04	11-Oct-04	500	8.23	4.6570	98.8523	1
16-Jul-04	18-Oct-04	500	8.35	4.6678	98.8496	1
23-Jul-04	25-Oct-04	500	7.53	4.7377	98.8326	2
30-Jul-04	01-Nov-04	500	7.94	4.7700	98.8247	1
06-Aug-04	08-Nov-04	500	7.07	4.7978	98.8180	2
13-Aug-04	15-Nov-04	500	11.14	4.7499	98.8296	0
20-Aug-04	22-Nov-04	500	6.15	4.7763	98.8232	1
27-Aug-04	29-Nov-04	500	4.94	4.7874	98.8333	0
03-Sep-04	06-Dec-04	500	7.27	4.7666	98.8256	0
10-Sep-04	13-Dec-04	500	6.37	4.7697	98.8248	1
17-Sep-04	20-Dec-04	500	7.36	4.7400	98.8320	0
24-Sep-04	29-Dec-04	500	9.01	4.7540	98.8032	2
01-Oct-04	04-Jan-05	1,000	6.34	4.7347	98.8207	1
08-Oct-04	10-Jan-05	1,000	6.80	4.7347	98.8333	0
15-Oct-04	17-Jan-05	1,500	5.50	4.7321	98.8340	1
22-Oct-04	24-Jan-05	1,500	5.56	4.7360	98.8330	1
29-Oct-04	31-Jan-05	1,500	5.35	4.7344	98.8334	1
05-Nov-04	07-Feb-05	1,500	5.36	4.7286	98.8348	0
12-Nov-04	14-Feb-05	1,500	5.17	4.7173	98.8376	1
19-Nov-04	21-Feb-05	1,500	6.08	4.7093	98.8395	0
26-Nov-04	28-Feb-05	1,500	6.02	4.6942	98.8432	1
03-Dec-04	07-Mar-05	1,500	5.48	4.7154	98.8380	1
10-Dec-04	14-Mar-05	1,500	5.26	4.7338	98.8336	1
17-Dec-04	21-Mar-05	500	5.21	4.7175	98.8375	3
31-Dec-04	04-Apr-05	500	5.82	4.7461	98.8433	0
07-Jan-05	11-Apr-05	1,500	5.71	4.7368	98.8328	1
14-Jan-05	18-Apr-05	500	7.98	4.6988	98.8421	0
21-Jan-05	25-Apr-05	500	9.98	4.7017	98.8414	1
28-Jan-05	03-May-05	500	7.74	4.7094	98.8269	1
04-Feb-05	09-May-05	500	7.57	4.7116	98.8390	1
11-Feb-05	16-May-05	500	6.95	4.7300	98.8345	1
18-Feb-05	23-May-05	500	7.51	4.7320	98.8340	1
25-Feb-05	31-May-05	500	6.84	4.7917	98.8066	1
04-Mar-05	06-Jun-05	1,500	4.38	4.8389	98.8080	2
11-Mar-05	13-Jun-05	1,500	3.96	4.8393	98.8079	0
18-Mar-05	20-Jun-05	1,000	5.54	4.8183	98.8130	1
24-Mar-05	27-Jun-05	1,000	5.12	4.8196	98.8256	0

Table 21 Six-month tender results

Date	Maturity date	Size £mn	Cover	Avg Yield %	Avg price £	Yield tail (bps)
23-Apr-04	25-Oct-04	750	9.29	4.3655	97.8696	0
21-May-04	22-Nov-04	750	5.96	4.6379	97.7397	1
18-Jun-04	20-Dec-04	750	5.63	4.8851	97.6221	1
16-Jul-04	17-Jan-05	750	7.56	4.8458	97.6408	0
13-Aug-04	14-Feb-05	750	7.07	4.9027	97.6137	1
10-Sep-04	14-Mar-05	750	5.46	4.8670	97.6306	1
08-Oct-04	11-Apr-05	750	8.70	4.7971	97.6639	1
05-Nov-04	09-May-05	750	7.79	4.7711	97.6763	1
03-Dec-04	06-Jun-05	750	7.08	4.7237	97.6988	2
07-Jan-05	11-Jul-05	750	7.00	4.7257	97.6979	1
28-Jan-05	01-Aug-05	750	7.23	4.7315	97.6951	1
25-Feb-05	30-Aug-05	750	6.46	4.8711	97.6160	3
24-Mar-05	26-Sep-05	750	5.63	4.8642	97.6447	4

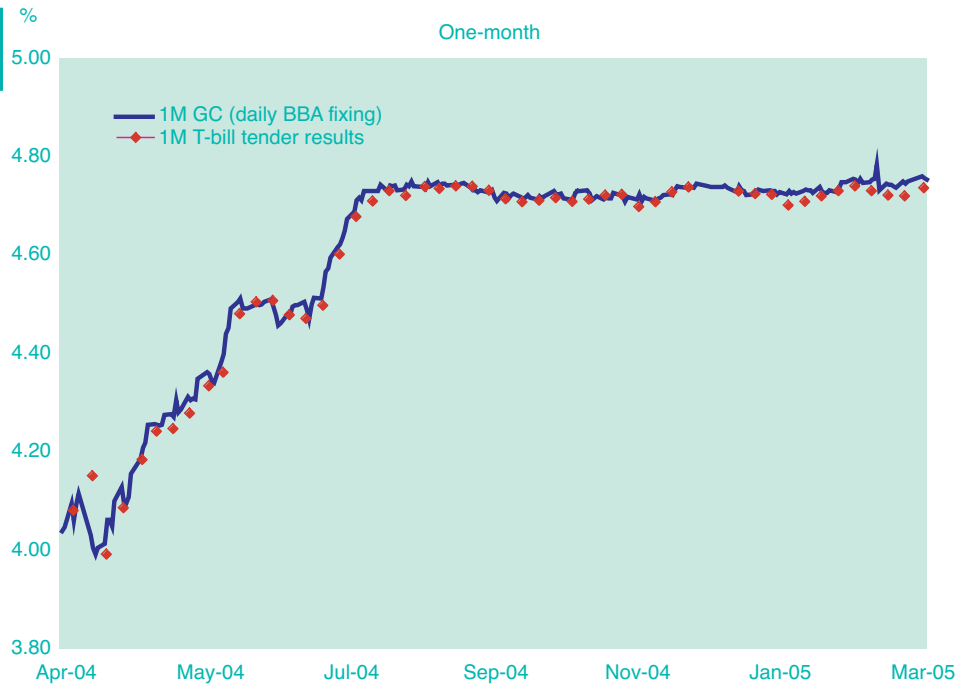
ANNEX F: Treasury bill tender performance

Table 22 and Charts 19-21 compare the results of all Treasury bill tenders in 2004-05 (in terms of average yield) 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, tenders of bills at all maturities out-performed the average of GC repo fixings by 0.6bps to 1.3bps.

Table 22
Comparison of average tender yields with GC repo

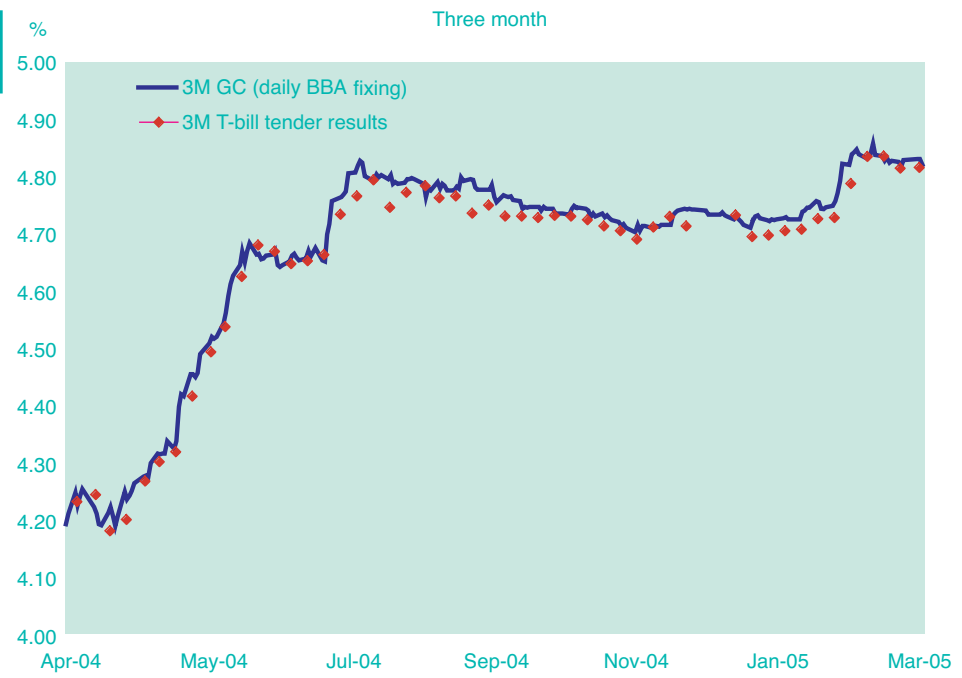
Average Treasury bill tender yields compared to average GC fixings on settlement of tenders in 2004-05			
Maturity	Average tender yield (%)	Average GC fix (%)	Relative performance (bps)
One-month	4.584	4.590	-0.6
Three-month	4.653	4.666	-1.3
Six-month	4.768	4.776	-0.8

Chart 19
One-month tender yields vs GC repo fixings 2004-05



Source: DMO/BBA

Chart 20
**Three-month tender yields vs
 GC repo fixings 2004-05**



Source: DMO/BBA

Chart 21
**Six-month tender yields vs GC
 repo fixings 2004-05**



Source: DMO/BBA

United Kingdom
**Debt
Management
Office**

*Eastcheap Court
11 Philpot Lane
London EC3M 8UD*