

7. Funding government borrowing

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Summary

- The government's ballooning budget deficit will soon require it to issue debt on a scale last seen at the end of the Second World War. On its 2008 Pre-Budget Report projections, the government will have to issue about £630 billion in gilts over the next five years, £300 billion more than it expected at Budget time.
- But demand for government debt is likely to remain firm. UK households, insurance companies and pension funds may all wish to hold more gilts, but the main source of additional demand is likely to be banks looking for liquid assets with little risk attached.
- The state of the economy means that demand for short-dated gilts is strong relative to demand for long-dated gilts. The Debt Management Office can therefore help keep the cost of government borrowing down by issuing relatively more short-dated gilts while current market conditions persist.
- Taken at face value, recent movements in the credit default swap (CDS) market suggest that investors see a more-than-7% chance that the UK government will default on its debt. But this probably reflects unusual developments in this market rather than a genuine belief that there is a 1-in-15 chance of default.
- Firm demand for gilts – combined with a sensible approach to issuance from the Debt Management Office – should keep gilt yields low by historical standards, allowing a further decline in the average coupon paid on the outstanding stock of gilts. But there is clearly a risk that the surge in issuance could push gilt yields higher. Even if it does not, the total amount the government will have to pay in interest will rise because the stock of debt goes up so much.

7.1 Introduction

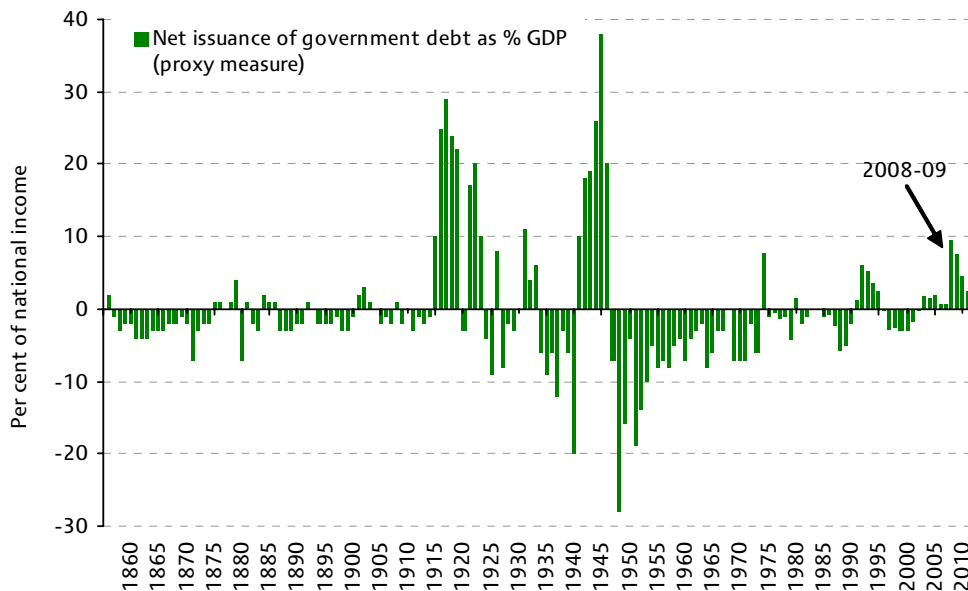
We begin this chapter by assessing the likely scale of gilt sales over the next few years (Section 7.2). We then analyse how the government might finance deficits that will be on a scale massively larger than had seemed likely as recently as last summer and which are likely to be of a magnitude that, in the last 150 years, has only been seen during the two world wars and during the inter-war depression. In Section 7.3, we analyse the risk that the scale of issuance might trigger sharp shifts in bond yields – a risk that has risen in an environment where the economic outlook has deteriorated sharply, sterling has depreciated significantly and the financial system looks fragile. In Section 7.4, we focus on debt management and analyse what the best way to finance the deficits might be.

7.2 The likely scale of debt issuance

Gross gilt issuance depends upon the central government net cash requirement, which is closely linked to public sector net borrowing and the scale of redemptions.¹ Based on the Treasury's November 2008 Pre-Budget Report (PBR) projections for borrowing, and making certain plausible assumptions about non-gilt sources of funding (National Savings inflows and changes in the stock of Treasury bills), it is likely that the scale of net and gross issuance of gilts will be enormously bigger than had been forecast in the March 2008 Budget. Gross gilt issuance was projected at the time of the PBR to be around £630 billion in 2008–09 to 2012–13, £300 billion (approximately 20% of national income) higher than projected in the 2008 Budget.²

The change in the stock of government debt, relative to GDP, over the next few years will be on a scale that is exceptional. Over the past 150 years, apart from during the two world wars, the only period when debt increased faster was during the inter-war slump (Figure 7.1).

Figure 7.1. Government net debt issuance



Notes: Series is changes in government debt as a percentage of GDP. Pre-1974 series is gross nominal liabilities of the National Loans Fund (formerly known as the national debt). 1974 onwards it is the general government gross debt. Data beyond 2008–09 use HMT forecasts (for general government gross debt as a percentage of GDP) and are for fiscal year rather than calendar year.

Sources: Morgan Stanley Research; DMO; HM Treasury.

¹ The net cash requirement can sometimes differ significantly from the net borrowing requirement. For example, the recapitalisation of the banks undertaken this financial year generated a cash requirement but did not count as net borrowing.

² This estimate does not include the impact of the Treasury's announcement on 19 January 2009 that it would create a Bank of England asset purchase facility, with authorisation for initial purchases of £50 billion financed by the issue of extra Treasury bills (http://www.hm-treasury.gov.uk/press_05_09.htm).

Part of the rise in gilt issuance, particularly this financial year, is due to the scale of the financial operations to support the banking sector. The central government net cash requirement for 2008–09 is now expected by the Treasury to be over £150 billion – just over £90 billion more than forecast in the 2008 Budget. But around £70 billion of this rise reflects rescue operations and recapitalisations that came in the wake of enormous problems in the banking sector. This comprises:

- £37 billion for government recapitalisation of RBS, Lloyds TSB and HBOS;
- £21 billion to refinance Bank of England loans to the Financial Services Compensation Scheme, made to facilitate the transfer of the deposits of Bradford & Bingley (and for subsidiaries of Icelandic banks);
- £5.7 billion to refinance the Bank of England’s working capital loan to Bradford & Bingley;
- £5.4 billion to cover retail deposits of Bradford & Bingley and the Icelandic bank subsidiaries, reflecting deposits above the current compensation limits.

For later years, however, higher cash requirements primarily reflect a sharp deterioration in projected tax revenues relative to government spending rather than support for the banking sector.

These latest, and enormously higher, projections for the scale of borrowing are based on particular Treasury assumptions about growth in the economy: output is assumed to fall by around 1% this year but then growth returns to trend over the next few years. But, on the latest Treasury forecasts, although the rate of growth does return to trend, there is a *permanent* loss in the level of output relative to what had been assumed prior to the 2008 PBR of around 4% of GDP (some £60 billion). Unlike in recent years, when we have considered the Treasury projections for growth in the near term to be optimistic, this set of economic forecasts on which the PBR makes its projections for borrowing look much more like our central forecast (see Chapter 4). But whether the forecast amount of tax revenue generated by a given path of real output (and corporate and household incomes and spending) is reasonable is a separate question (see Chapter 6).

Alternative profiles for the evolution of public sector borrowing, gilt issuance and the stock of debt based on different assumptions about economic growth and the tax take-out of national income are shown in Tables 7.1 to 7.4.

Table 7.1 shows estimates of the scale of public sector net borrowing under the five scenarios set out in Chapter 6:

1. the Treasury’s 2008 PBR forecast;
2. the IFS ‘base case’, in which the economy evolves largely as the Treasury expects, but where revenues are weaker;
3. the IFS forecast if the economy evolves according to Morgan Stanley’s ‘central case’ (see Section 4.4);
4. the IFS forecast if the economy evolves according to Morgan Stanley’s ‘pessimistic case’ (also see Section 4.4);
5. the IFS forecast if the economy evolves according to Morgan Stanley’s ‘optimistic case’ (also see Section 4.4).

Table 7.1. Public sector net borrowing

<i>£ billion</i>	2007–08	2008–09	2009–10	2010–11	2011–12	2012–13	2013–14
2008 PBR	36.6	77.6	118.3	105	87	70	54
IFS base case	36.6	84.3	124.7	119	104	90	77
MS central case	36.6	84.2	124.3	114	108	104	103
MS pessimistic case	36.6	84.2	132.6	141	146	150	156
MS optimistic case	36.6	73.2	111.0	78	41	19	0

Sources: IFS; Morgan Stanley Research; HM Treasury.

Table 7.2. Public sector net debt

<i>% of GDP</i>	2007–08	2008–09	2009–10	2010–11	2011–12	2012–13	2013–14
2008 PBR	36.3	41.2	48.2	52.9	55.6	57.1	57.4
IFS base case	36.3	41.6	49.1	54.6	58.2	60.7	62.1
MS central case	36.3	41.4	49.2	54.5	59.0	63.9	67.7
MS pessimistic case	36.3	41.5	53.9	64.2	74.0	82.6	90.5
MS optimistic case	36.3	40.2	45.6	47.3	46.6	45.7	43.6

Sources: IFS; Morgan Stanley Research; HM Treasury.

Table 7.3. Gilt issuance: the DMO's illustrative projections based on Pre-Budget Report forecasts

<i>£ billion</i>	2006–07	2007–08	2008–09	2009–10	2010–11	2011–12	2012–13
Central government net cash requirement	41.2	37.3	152.9	125.9	108	97	80
Redemptions	29.9	29.2	18.3	17	39	38	24
Financing requirement	71.1	66.5	171.2	142.9	147	135	104
Other sources of financing*	–8.6	–8.1	–24.8	–10.0	–10	–10	–10
Illustrative gross gilt sales	62.5	58.4	146.4	132.9	137	125	94

* Other sources of financing include net sales of National Savings and changes in the outstanding stock of Treasury bills. Both factors contribute strongly to funding the net cash requirement in 2009–10. Treasury bill issuance contributes around £14.5 billion to funding and National Savings and Investment over £10 billion. For future years, we assume that National Savings and Investments run at a higher level than on average over the past few years and contribute £10 billion, but that changes in the stock of Treasury bills, and other short-term financing arrangements, have zero net impact.

Sources: DMO, Morgan Stanley Research.

Table 7.4. Outlook for gross gilt issuance

<i>£ billion</i>	2006–07	2007–08	2008–09	2009–10	2010–11	2011–12	2012–13
<i>DMO/PBR illustrative gilt sales</i>	62.5	58.4	146.4	132.9	137	125	94
IFS base case	62.5	58.4	153.1	139.6	150.5	142	114
MS central case	62.5	58.4	153.0	139.2	146.1	146	128
MS pessimistic case	62.5	58.4	153.0	147.5	172.9	184	174
MS optimistic case	62.5	58.4	142.0	125.9	109.9	79	43

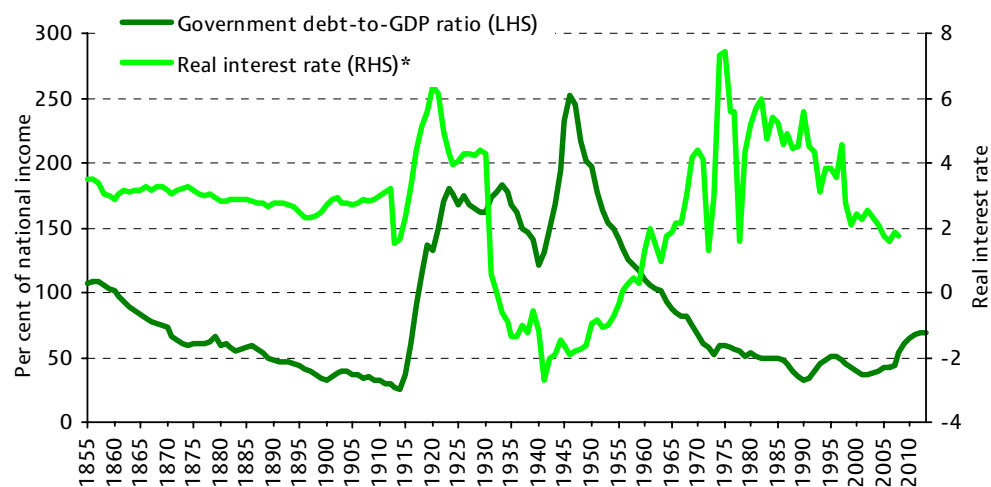
Note: The alternative projections in this table to the DMO/PBR illustrations are not really forecasts of what gilt sales would be, since they are based on an assumption of unchanged spending plans and tax rates.

Sources: IFS; Morgan Stanley Research; HM Treasury.

Table 7.2 shows how the stock of net debt relative to national income might evolve in each case. In this table, the impact of nationalisation of banks and of taking controlling interests in others is excluded; such operations might increase the gross liabilities of the government but would have a very much smaller, and much less clear, impact on net debt. Table 7.3 shows the Debt Management Office's (DMO's) illustrative projection of gilt issuance based on the Treasury's 2008 PBR forecasts. Table 7.4 compares this with the outlook for gilt issuance on the other four borrowing scenarios. The IFS base case and the Morgan Stanley central case show public sector net borrowing consistently a little higher than the Treasury expects over the next five years. This reflects a somewhat more pessimistic assessment of the likely level of tax revenue generated by the planned structure of the tax system. Assuming no offsetting changes elsewhere, the IFS base case and the Morgan Stanley central case imply that over the four years from April 2010, borrowing and gilt issuance would be on average £18 billion and £28 billion a year higher respectively than the DMO projections. On the Morgan Stanley 'pessimistic case' scenario, borrowing is higher still and consistently remains well above the PBR projections; while on the Morgan Stanley 'optimistic case' scenario, borrowing would be considerably lower. Under either of these two latter scenarios, large policy changes to offset the additional or lower level of borrowing would be likely, at least in the medium term.

Whichever of these projections turns out to be nearest to the truth, it is now clear that the scale of borrowing and gilt issuance will be vastly greater than had seemed likely – even

Figure 7.2. National debt as a percentage of national income and the real interest rate since 1855



Notes: Pre-1974 series is gross nominal liabilities of the National Loans Fund (formerly known as the national debt). 1974 onwards it is the general government gross debt. Data beyond 2008–09 are HMT forecasts (for general government gross debt as a percentage of GDP) and are for fiscal year rather than calendar year.

* Real interest rate series is the consol rate less long-term expected inflation. For calculation of the latter, we use an econometric model (based on past values of inflation) to project expected inflation at each point in time. For more details, see box 1 in D. Miles et al., *Where Should Long-Term Interest Rates Be Today?* 9 March 2005.

Sources: DMO; HM Treasury. Estimates of inflation expectations (and of real interest rates) during the years of the Second World War and immediately after are not reliable due to the impact of rationing.

on what had seemed pessimistic assumptions – a year ago.³ And while public debt will remain far lower as a share of national income than the levels reached after the two world wars, it will, within a few years, be higher than we have seen in almost 50 years.

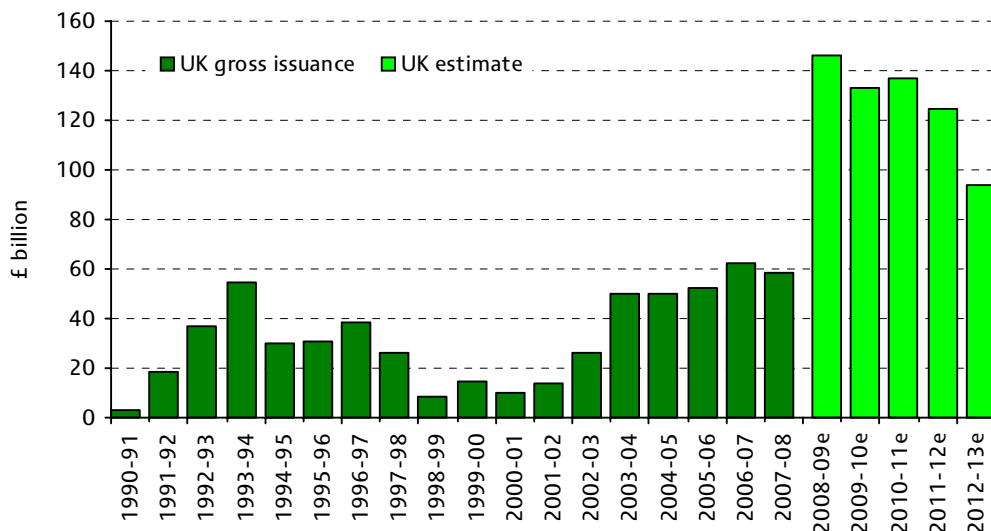
Long-term real interest rates in the last few years have, by the standards seen since the start of the 1970s, been very low (Figure 7.2). Over the period from the turn of the century, it has been striking how the UK government’s cost of borrowing has been falling – in both nominal and real terms – even though the amount it has borrowed has been rising and has consistently exceeded its own forecasts. But whether this will continue in the light of a huge rise in debt issuance is unclear. Gilt yields did not rise after the government revised up its projections of gilt sales so dramatically in the PBR. There was a rise in yields on longer-dated gilts after the bank support package announced on 19 January, but that still left nominal gilt yields at lower levels than they were just before the PBR. On 22 January, 10-year gilt yields were only around 3.5%, but they had been close to 4% just before the PBR. But can this last? Who will buy all the debt and on what terms?

7.3 Gilt issuance and borrowing costs

Gross gilt issuance is expected to average more than £130 billion a year for the next three years. This is about 2¼ times the gross issuance in 2007–08 of £58 billion, and around four times the average annual issuance between 1997–98 and 2007–08 of £34 billion (Figure 7.3).

Nor is the UK government alone. Other European economies and the US will see their governments undertake record or near-record debt issuance too. Additional competition for funds will come from the government-guaranteed bank bonds, a sector that did not exist until the bank rescue packages of October 2008. Government-guaranteed issuance

Figure 7.3. UK gross issuance forecast



Source: Morgan Stanley.

³See D. Miles and L. Mutkin, ‘Funding, debt management, and credit market problems’, in R. Chote, C. Emmerson, J. Shaw and D. Miles (eds), *The IFS Green Budget: January 2008*, IFS Commentary 104 (<http://www.ifs.org.uk/budgets/gb2008/08chap6.pdf>).

by UK banks alone could reach £250 billion. Gross issuance from other governments will be very large too. US gross borrowing will be in excess of \$1,400 billion, on Morgan Stanley forecasts, and could rise to more than \$2,000 billion if President Obama's further stimulus package is enacted. Likewise, euro area governments' 2009 budgets already commit them to issuing about €760 billion; and if they follow through on all the support packages that have been announced, we calculate that this number could top €1,000 billion.

In short, the UK government is planning to borrow unprecedented sums during a period of great competition for investors' funds.

The effect of increased issuance on gilt yields

The logic of supply and demand would suggest that the vast increase in gilt supply will push prices down and yields up. But the historical evidence is that government issuance has little correlation with the level of yields. Figure 7.2 shows that if there is a relationship, it is more likely to be a perverse one – the real yield on long-term gilts has, if anything, tended to be lower when the stock of gilts is higher relative to national income.

Why is this the case? An increase in government bond issuance is often due to circumstances that are fundamentally supportive of government bonds. These include: recession or a sharp fall in economic growth; (and hence) falling expectations of future inflation; cuts in official interest rates; increased aversion to credit risk; and a flight to safe and liquid assets. And when stressed financial conditions make it difficult to obtain cash using other assets as collateral, gilts can become even more desirable because their high credit quality and good liquidity mean that they can be used as collateral both with the central bank and with the private sector.

So gilt yields will not necessarily rise due to the surge in government borrowing.

But the rising cost of insuring against UK government default in the credit default swap (CDS) market has raised fears that gilt yields will have to rise. The five-year UK CDS spread rose from less than 20bp to more than 100bp between August and December last year and increased to around 150bp by mid-January. On the face of it, this implies a probability of at least 7% that the UK government will default on its debt within five years – in which case, a large rise in gilt yields would surely be inevitable. But there are several reasons why the pricing of CDS is not now giving a reasonable measure of market expectations of the chances of the UK government defaulting (see Box 7.1).

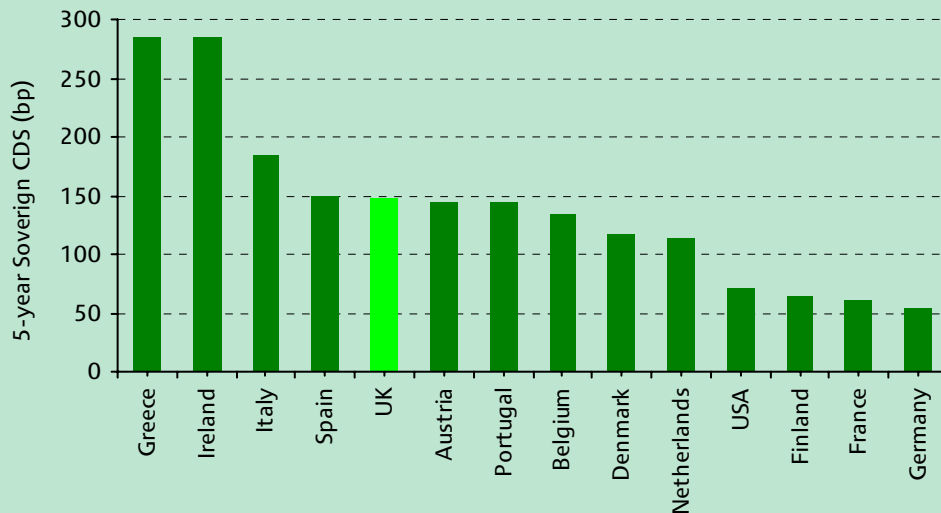
Box 7.1. The CDS market

The term 'credit default swap' is something of a misnomer: it is not actually a swap, in the sense that there is no regular two-way stream of cash flows. It is an agreement under which the buyer of default protection agrees to pay a fixed annual premium in return for the right to deliver a particular issuer's bond to the seller of default protection and receive its face value in exchange, in circumstances in which the issuer defaults in some way on its obligations as a debtor ('credit events'). The premium payable is known as the CDS spread, and the issuer to whose bonds the agreement refers is known as the reference entity.

Where the reference entity is a sovereign, the most important credit events are: failure to pay coupon or principal; the repudiation of or imposition of a moratorium on payment of debt; or the restructuring of its debt obligations.

The recent sharp widening of CDS spreads is not confined to the UK government. All government CDS spreads widened during the second half of 2008. The UK government CDS spread is higher than for many developed countries, but it is not an outlier (Figure 7.4).

Figure 7.4. Sovereign five-year CDS



Source: Morgan Stanley (as at 21 January 2009).

It is not plausible to interpret the widespread increase in government CDS premiums as a pure expression of the market's perception of the probability of a government default on its debt obligations. Using an expected recovery rate⁴ of 40%, a 150bp five-year CDS premium implies a more than 12% chance that the UK government will default within five years. Even assuming only a 10% recovery rate, a 150bp CDS spread implies a more-than-7% chance that the borrower will default. Such implied probabilities are at odds with the ratings assigned by credit rating agencies and with the behaviour of even the most conservative of investors (such as official reserves managers, who continue to own gilts).

The widening of government CDS spreads is explained by factors that are related, one way or another, to the credit crunch and its effects.

Under more normal market conditions, arbitrage should ensure that the cash bond market and an associated derivative market, such as CDS, will be closely aligned. But the credit crunch, which has increased the cost to some institutions of holding positions on their balance sheet, has made arbitrage expensive. Arbitrageurs who would normally act to take advantage of the widening of CDS spreads are unwilling or unable to do so.

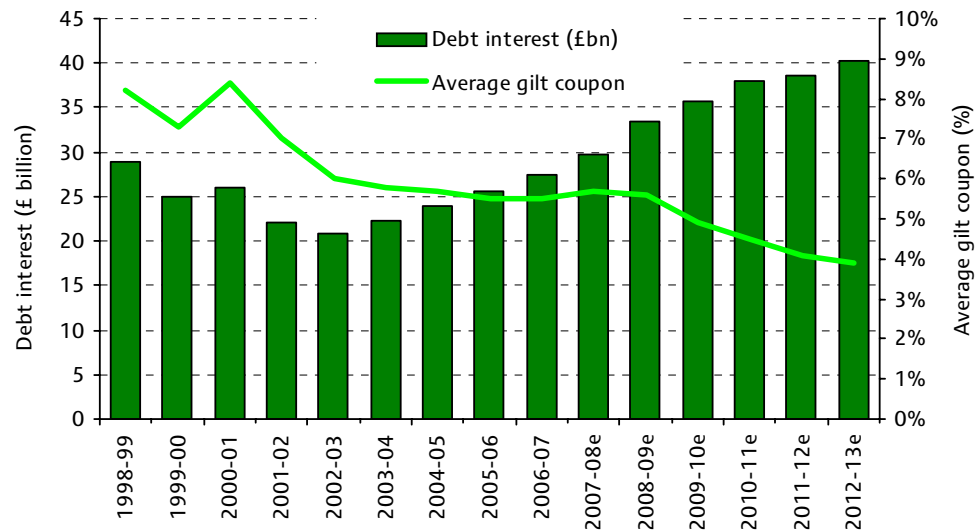
Thus, government CDS spreads have widened as risk managers (and speculators) have bought default protection, while potential arbitrageurs have found that their higher cost of balance sheet has made arbitrage between the CDS and the underlying government bond market prohibitively costly. The widening of UK CDS is no doubt partly a symptom of the government's deteriorating fiscal position; but it is much more a sign that the credit crunch continues to cause severe stresses and rather bizarre pricing in many financial markets.

⁴ Expected recovery rate = the percentage of face value expected to be recovered by the creditor in the event of the borrower defaulting.

The effect of increased issuance on the interest burden

The forthcoming surge in gilt issuance means that the burden of paying the interest on the stock of gilts will rise in the coming few years, even if gilt yields do not rise. Although the average coupon rate on the gilt market will fall quite significantly if yields remain around their present low levels, the total interest burden will rise by about a third to around £40 billion by 2012–13 (Figure 7.5).

Figure 7.5. Average gilt interest rate and annual debt service cost



Sources: DMO and Morgan Stanley estimates.

Further, the total interest burden will be more sensitive than usual to changes in yields during the coming few years, due to the large volume of new gilts that will come to the market. Every 25bp rise in gilt yields next year would add about £1.2 billion to the ongoing annual cost of debt service by 2012–13 (although this sensitivity would be lower if the yield did not rise until later years).

Sensitivity to changes in RPI inflation is much smaller: our central forecast assumes –1.3% RPI inflation for 2009–10 and 2.5% thereafter. If inflation were to be 100bp higher, the annual cost of debt service would rise by only £100 million or so by 2013–14.

But provided the yield on gilts does not rise very sharply, there will not be a big increase in the debt servicing burden relative to GDP. It is projected to increase from 2.1% in 2008–09 to 2.5% by 2012–13. Whether or not yields will need to rise obviously depends on the demand for gilts – the issue we turn to next.

Who is going to buy all the new gilts?

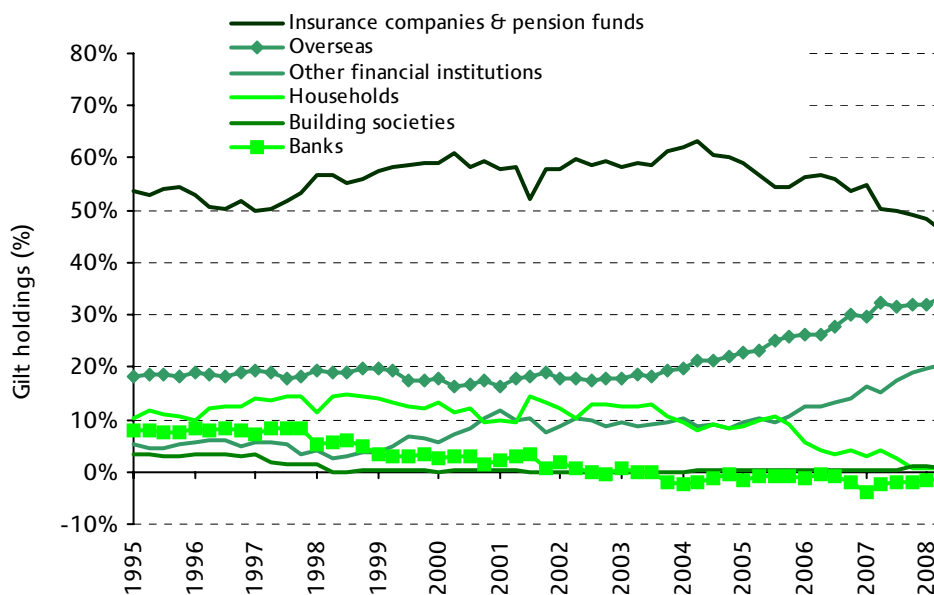
The unprecedented volume of gross gilt issuance raises concerns over whether sufficient buyers will be found at the many gilt auctions that will have to take place in the coming fiscal year. Failed gilt auctions (i.e. where the auction is undersubscribed) could lead to a disorderly repricing in the gilt market and bring into question the ability of the government to fund itself in the future.

Mindful of the increased risk of undersubscribed gilt auctions, the DMO has issued a consultation document⁵ on possible supplementary methods of distributing gilts, which we discuss in the next section.

Whether or not changes are announced to the process by which gilts are issued, most of the gilts sold during 2009–10 will probably be bought by domestic buyers. Indeed, there are several reasons to expect strong demand, from the banking sector in particular.

The composition of gilt holdings has changed considerably during the past few years. Overseas investors now hold about one-third of outstanding gilts, up from 25% five years ago. Of these, we estimate that some 40% (12% of the entire market) is held as reserve assets by official institutions. Insurance companies and pension funds remain the gilts market’s largest single constituency, but now account for only 46% of the market, down from 60% five years ago. Direct holdings by households have fallen from over 10% of the market to practically nothing, while other financial institutions, such as mutual funds, have increased their holdings to about 20% of the market. Banks and building societies have owned almost no gilts for the past 10 years. Indeed, DMO data show that banks have had negative holdings of gilts since 2003, i.e. they borrow more gilts on repo than they own (Figure 7.6). We look at each constituency in turn.

Figure 7.6. Breakdown of gilt holdings



Source: DMO.

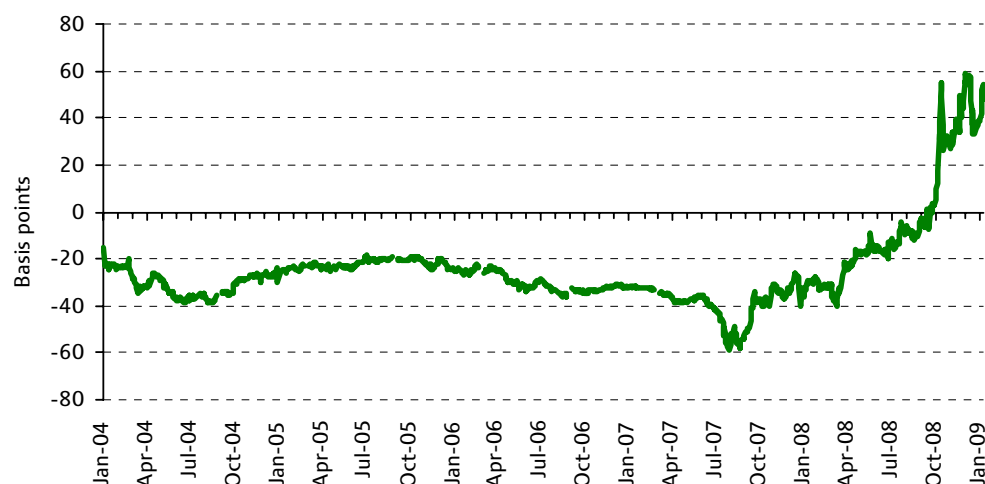
Overseas holders of gilts are unlikely to desert the market, but they will probably own a diminishing share. The slowdown in the world economy and decline in commodity prices will probably mean much slower growth in world official reserves, and therefore in official institutions’ buying of gilts. Private sector overseas holdings of gilts may mostly be held by international government bond funds. These could see further inflows, as end investors fight shy of risky assets, so we may see some increased demand from that quarter. But in the light of substantial currency volatility and recent sharp falls in sterling, we doubt that overseas gilt holdings will rise substantially in the coming financial year.

⁵ DMO, *Supplementary Methods for Distributing Gilts: A Consultation Document*, 17 December 2008 (<http://www.dmo.gov.uk/docs/publications/giltmarket/consultationpapers/cons171208.pdf>).

Households have run their direct gilt holdings down to negligible levels. Now, as falling property prices and high levels of indebtedness make it more pressing for households to rebuild their savings, and with risk-aversion still high, they may come back into gilts – particularly as deposit rates at banks fall towards 0%. A 2% of GDP rise in savings is worth about £30 billion – a substantial part of which could go into gilts, either as direct or indirect holding.

Insurance companies' and pension funds' holdings of gilts have plateaued in recent years, as these institutions have turned to the interest rate swap market to hedge their long-term liabilities. During the past half-year, however, long-dated gilt yields have cheapened significantly relative to interest rate swaps – another symptom of the effect of the credit crunch on the cost of balance sheet (Figure 7.7). This cheapening should entice pension funds to unwind their swaps and replace them with gilts, which could take their gilt holdings back up towards the previous highs of £250 billion, an increase of about £20 billion.

Figure 7.7. 30-year gilt yield less 30-year swap rate



Source: Morgan Stanley.

But it is from **banks** that the biggest rise in demand is likely to be seen. It seems ironic that the banking system, whose travails are directly and indirectly responsible for much of the explosion in gilt issuance, should be a major buyer of extra government debt. But owning gilts is likely to become more attractive for banks in the coming years for a number of reasons:

- First, gilts are very capital-efficient for regulatory capital purposes.
- Second, banks do not need much money to buy gilts: they can be financed at the Bank of England (or in the private sector) by borrowing against them as collateral.
- Third, if banks buy gilts to be held to maturity, they effectively incur no interest rate risk (because they do not need to be marked to market).
- Fourth – but perhaps most significantly – banks and building societies are likely to need a lot of gilts in order to fulfil their obligations under the FSA's proposed new liquidity regime, which is due to be implemented during the coming fiscal year and which will require them to hold a buffer of highly liquid, high-quality assets.

The details of the FSA's new liquidity regime, which applies to UK banks, building societies and many investment firms (and to branches of some foreign firms), are still to be determined.⁶ But the effects of the new regime are likely to be profound – and swift. Its aim is to reduce the risk of a financial institution failing because of inadequate liquidity; its intended implementation date is October 2009; and based on the consultation paper, its effect could be that the top 10 UK banks need to increase their holdings of government bonds by a total of £55–210 billion

The regulatory requirements may be much more modest than this when finalised, but a significant watering-down of the new liquidity requirements is not particularly likely in our view. The FSA 'make[s] no apology for tough prudential standards' and describes its proposed regime as 'far-reaching and robust; many institutions will need to significantly reshape their business model over the next few years as a result'. The consultation paper envisages that the top 10 UK banks will increase their government bond holdings by 1.4–5.4% of their aggregate balance sheet and quotes £6 trillion as the total size of banking assets.

The proposed FSA liquidity regime does not specifically require the banks to buy gilts. Any high-quality liquid assets will do – the consultation document identifies: gilts; bonds rated at least Aa3 issued by the countries of the European Economic Area (EEA), Canada, Japan, Switzerland and the US; and banks' reserves held with the Bank of England and with the central banks of the EEA, Canada, Japan, Switzerland and the US. Banks could choose to shrink their balance sheets aggressively, reducing the need for liquid assets. But it is realistic to assume that the new liquidity requirements will substantially increase banks' demand for gilts.

There is a more fundamental reason, besides liquidity, why banks might want to hold more gilts, and it reflects the forces that have driven the level of government borrowing up. The reluctance of banks to lend to households and companies because of rising (possibly excessive) fears of credit risks is exacerbating a downturn to which the government is responding by borrowing more. The government is doing some of the borrowing that the non-bank private sector is unable to do. This is a sensible response to a form of (at least potential) market failure – particularly as the government is able to borrow at rates of interest of under 4%, below the cost of debt available to most households and companies.

This is also a reason why 'Ricardian equivalence' – the belief that debt-financed tax cuts have no impact on the economy because they are offset by higher household saving in anticipation of future tax increases – will not hold. If the UK government uses its credit status to do the borrowing that some creditworthy companies and households cannot do, it will have real, and beneficial, effects. Banks unwilling to lend to households and companies may lend to the government, in which case the government is providing a useful role in intermediating funds.

Taking all this together, we conclude that potential demand for new gilts from insurance companies, households (directly or indirectly) and banks could easily reach £100 billion during 2009–10; it could be twice that, depending on how the FSA's new liquidity regime for banks is implemented. Importantly, a lot of this demand is likely to be quite insensitive to the absolute level of yields or perceived inflation risks. Rather, it will be

⁶ Financial Services Authority, *Strengthening Liquidity Standards*, Consultation Paper 08/22, December 2008 (http://www.fsa.gov.uk/pages/Library/Policy/CP/2008/08_22.shtml). The consultation period ends on 4 March 2009.

driven by relative value considerations (for pension funds) or by regulatory requirements (for banks). To the extent that the level of yields is relevant, the key incentive for buyers – be they households or banks – would be that money-market deposit rates remain low.

7.4 Optimal debt management

The DMO faces a big challenge, given the volume of gilts it needs to sell during the coming fiscal years. This raises two questions: how should the gilts to be sold be distributed between index-linked and conventional issuance and by maturity; and should the DMO supplement its auction programme with other issuance channels?

Distribution of gilt issuance

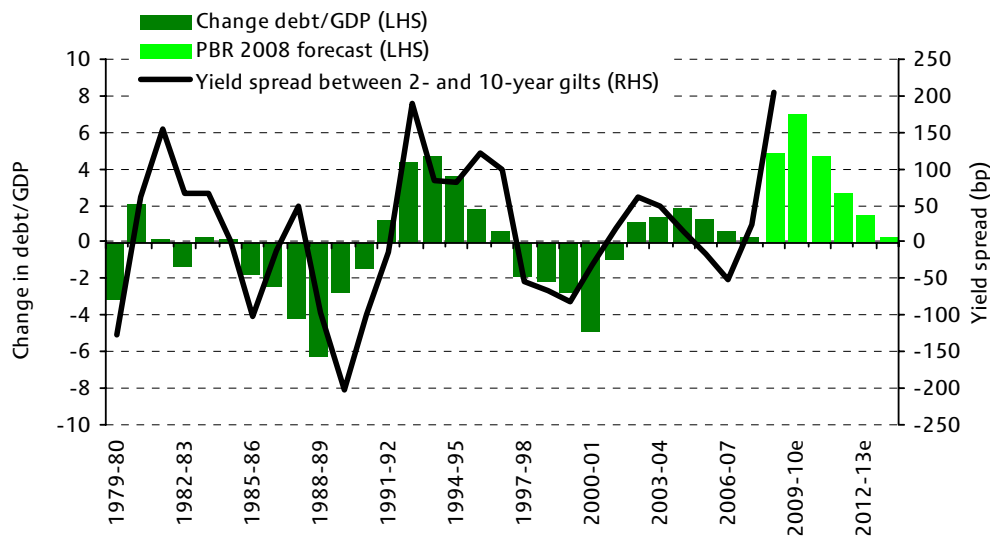
In deciding on how to distribute issuance, the DMO's remit is: 'to minimise, over the long term, the costs of meeting the government's financing needs, taking into account risk, whilst ensuring that debt management policy is consistent with the aims of monetary policy'. Historically, this has meant adjusting issuance across maturities in response to changes in the shape of the gilt yield curve (the difference between short- and long-dated gilt yields).

In addition, the government favours issuing index-linked gilts, and has a medium-term strategy (articulated in the foreword to the Debt and Reserves Management Report (DRMR) 2007–08) of skewing issuance towards long maturities. The rationale for this policy is that strong demand (from pension funds and insurance companies) for these sectors of the market will 'persist in the medium term and continue to influence the shape of the yield curve'.

The shape of the gilt yield curve is an important consideration for the DMO's issuance plans, as choices about which gilts to issue will affect future government financing costs. The steepening of the yield curve seen during the second half of 2008 should result in a greater weighting of issuance in shorter-dated bonds than has been customary in recent years.

The yield curve has steepened by about 2 percentage points during the past fiscal year. This is typical of periods when government debt is rising as a share of national income; and hence of rising gilt issuance (Figure 7.8). This relationship is explained by the circumstances during which gilt issuance increases – typically, economic slowdown, falling short-term inflation expectations and (therefore) lower Bank of England interest rates. Lower money-market rates and lower short-term inflation expectations drag down shorter-dated gilt yields relative to longer-dated gilt yields, which are more influenced by longer-term inflation expectations and supply and demand. So rising gilt issuance and a steeper yield curve tend to go together. With public sector net debt forecast by the Treasury to rise by 7% of national income in 2009–10, there will be continuing pressure on the gilt curve to stay steep or get steeper.

Figure 7.8. Change in government debt as a share of national income vs spread between 2- and 10-year gilt yield



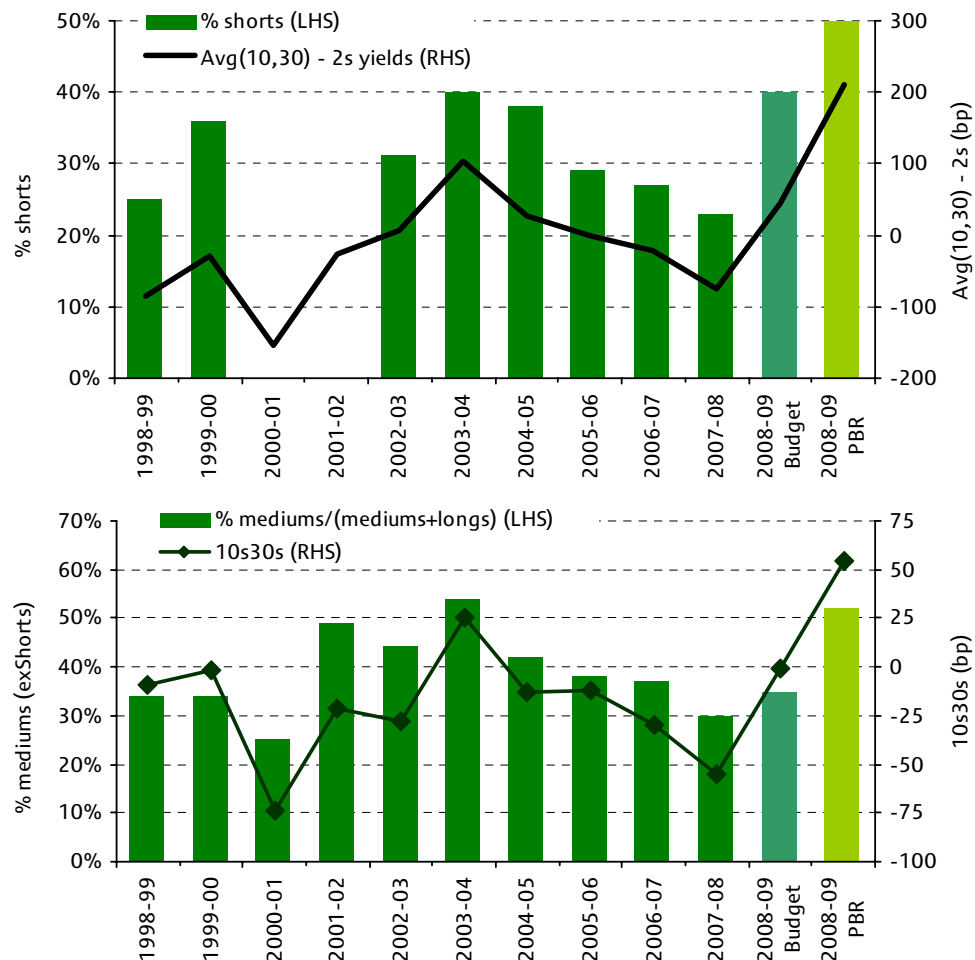
Source: Morgan Stanley.

The steepening of the yield curve, together with other factors, should encourage the DMO to weight gilt issuance to the short end of the conventional gilt curve in the coming fiscal year:

- **Cost of funding:** The steepening of the curve to date makes the cost of funding shorter- rather than longer-dated gilts relatively attractive (in contrast to recent years in which the yield curve has been rather flat).
- **Liability matching:** Many of the gilts being issued now could be repaid during the next few years if the banks quickly repay the preferred shares issued to the government under the Treasury's recapitalisation measures. This makes short-dated gilts the natural choice for liability matching.
- **Satisfying demand from banks:** The large demand for gilts expected from the banking system (see Section 7.3) should be concentrated in shorter-dated maturities. Shorter-dated gilts benefit more from lower price volatility than longer-dated bonds (which is important for liquidity); and they better suit the structure of banks' liabilities.
- **High borrowing needs:** The government's large borrowing needs militate in favour of issuing shorter-dated debt, for which demand is less uncertain than that for longer-dated debt, so that the risk of failing auctions is reduced.

The DMO has had a consistent track record of responding to changes in the yield curve slope by adjusting the relative issuance between shorts (0-7 years to maturity), mediums (7-15 years) and longs (greater than 15 years) – issuing more shorts when the yield curve is relatively steep and more longs when the curve is relatively flat. This is shown in Figure 7.9: the upper chart shows that the percentage of shorts issuance rises when the spread between the 2-year yield and the average of 10- and 30-year yields rises; and the lower chart shows that the percentage of medium issuance rises when the spread between 10- and 30-year yields rises.

Figure 7.9. Gilt issuance versus yield curve slope



Source: Morgan Stanley.

The DMO has remained true to form during the 2008–09 fiscal year. The percentages of conventional gilt issuance in shorts-mediums-long, envisaged at 40%-21%-39% at the Budget in March, shifted to 50%-26%-24% at the November PBR – with the differential between 2 and 10 year yields having steepened by about 140bp in the intervening period.

There has also been a significant change in index-linked issuance as a proportion of the total. A sharp fall in inflation expectations in the latter half of 2008 reduced demand for inflation protection; and in the PBR, the DMO increased index-linked issuance by much less than conventional issuance, taking index-linked issuance to back below 15% of total new issuance for the first time in five years, reducing the share of index-linked gilts in all debt to 26% this fiscal year (down from 30% last year) (Table 7.5).

Taken together, the steepening of the yield curve, the likely increase in the importance of banks as buyers of gilts, and the government’s medium-term policy of skewing issuance to long-dated maturities, mean that 2009–10 issuance is likely to be split as follows: 20% index-linked, 80% conventionals (of which 50% shorts, 25% mediums and 25% longs).

Table 7.5. Breakdown of gilt issuance by maturity and type

	<i>Conventional</i>								<i>Index-linked</i>		<i>Total</i> £bn
	0–7 years		7–15 years		15+ years		Total		%	£bn	
	%	£bn	%	£bn	%	£bn	%	£bn			
1990–91	40	1.1	33	0.9	8	0.2	81	2.3	16	0.5	3
1991–92	43	7.7	28	5.1	11	1.9	82	14.8	16	2.9	18
1992–93	39	14.2	28	10.1	15	5.4	81	29.7	17	6.3	37
1993–94	36	19.7	30	16.7	15	8.2	81	44.6	17	9.4	55
1994–95	35	10.3	29	8.7	15	4.6	79	23.7	17	5.1	30
1995–96	36	11.1	27	8.4	15	4.6	79	24.2	18	5.5	31
1996–97	37	14.4	25	9.8	16	6.2	78	30.3	18	6.9	39
1997–98	35	9.1	25	6.6	16	4.0	76	19.7	20	5.1	26
1998–99	38	3.1	24	2.0	15	1.2	77	6.3	21	1.8	8
1999–00	39	5.6	20	2.8	17	2.4	75	10.8	23	3.3	14
2000–01	39	3.9	16	1.6	17	1.7	73	7.3	25	2.5	10
2001–02	37	5.0	17	2.3	20	2.7	73	10.0	26	3.5	14
2002–03	36	9.4	18	4.7	19	5.0	72	19.0	27	7.0	26
2003–04	34	17.1	19	9.3	21	10.5	74	36.9	25	12.5	50
2004–05	37	18.6	14	7.1	23	11.5	74	37.2	25	12.4	50
2005–06	33	17.2	15	8.1	25	13.2	74	38.4	26	13.5	52
2006–07	28	17.5	19	11.9	25	15.6	72	45.0	27	16.9	63
2007–08	17	10.1	17	10.0	40	23.4	74	43.5	26	15.0	59
2008–09	43	62.8	23	33.1	21	30.5	86	126.4	14	20.0	146
2009–10e	40	57.6	20	28.8	20	28.8	80	115.2	20	28.8	144

Source: DMO; e = DMO estimate of total with Morgan Stanley estimates of breakdown.

Issuance techniques

The DMO has correctly identified that the coincidence of (a) the government’s need to sell very large quantities of gilts, and (b) the strains on gilt edge market makers’ (GEMMs) balance sheets imposed by the credit crunch, has significantly increased the risk that gilt auctions may be undersubscribed – or that they can only be covered at a very deep discount to the prevailing market price (the DMO calls this ‘execution risk’). This risk is particularly acute for index-linked and long-dated conventional gilt auctions, where the market is relatively less liquid and duration risk is relatively high, increasing the risk to GEMMs, and so potentially depressing auction participation.

To address this issue, the DMO has published a consultation document discussing supplementary methods for distributing gilts.⁷ These include:

- syndication – using a group of underwriters to place new deals (the DMO used this method in 2005 to launch the new 2055 index-linked bond);

⁷ DMO, *Supplementary Methods for Distributing Gilts: A Consultation Document*, 17 December 2008 (<http://www.dmo.gov.uk/docs/publications/giltmarket/consultationpapers/cons171208.pdf>).

- Dutch Direct Auction (DDA) – a variant on syndication developed by the Dutch State Treasury Agency, which effectively acts as its own lead underwriter, adjusting the pricing and size of a new issue in response to investor appetite;
- direct placement of gilts with end investors, in response to specific enquiries.

At Budget time, the DMO plans to announce which, if any, of these proposals will be adopted in 2009–10. In considering them, the key objective must be to ensure that the good functioning of the gilt market-making system is maintained.

The DMO has said that any supplementary distribution methods would be introduced only if they would be consistent with ‘the principles of openness, predictability and transparency that underpin debt management policy’ and ‘would not risk damaging the role of the GEMMs as the DMO’s primary gilt market intermediaries’.

Each of these distribution methods has its advantages and disadvantages. Syndication and direct placement, which inevitably put all non-participating GEMMs at an informational disadvantage versus those that participate in the deal, are likely to be unpopular with most GEMMs (and indeed other market participants). We doubt the DMO will feel that either would be consistent with the principles quoted above.

The DDA is more attractive because: the informational unfairness between GEMMs would be reduced; it might enable a new issue to be established with a bigger initial size than could safely be raised at an auction; and the auction could not ‘fail’ (i.e. be undersubscribed), as the DMO could vary the size of the auction according to demand. But the usefulness of the DDA method is limited: it would probably only make sense for new gilts (rather than re-openings of existing gilts), of which the DMO is unlikely to issue more than a handful in longs and index-linked during the year. And being able to vary the size of a particular auction, while making an undersubscribed auction less likely, is not much help when the aim is to borrow a lot of money.

The DMO’s move to smaller and more frequent auctions (what the DMO calls ‘mini-tenders’), alongside traditional auctions, has been well received during the second half of 2008–09. A decision to continue them would be likely to be popular among GEMMs and would go some way towards reducing the DMO’s ‘execution risk’. This is likely to be announced at the time of the Budget.

The DMO may well adopt DDAs for new issues of long-dated conventionals and index-linked gilts. But the majority of issuance will be taps, not new issues – so there may only be four or five DDAs in the coming year. The most likely reform is the increased use of mini-tenders in long gilts in particular.

7.5 Conclusions

The dramatic increase in expected gilt issuance over the next five years has fuelled fears that gilt yields will rise from their recent low levels, further increasing the future burden of public sector net debt interest payments beyond what would have been expected from the rise in the stock of debt alone. These fears have been exacerbated by an apparent rise in the perceived risk that the government will default on its debt, at least as measured by CDS rates.

But we remain relatively sanguine for the time being. Demand for gilts is likely to remain firm, especially from banks. And the DMO is likely to exploit the steepening in the yield

curve, prompted by the weakening economy, by tilting its issuance towards relatively cheaper short-dated gilts. Our central expectation is that gilt yields will remain at around their current levels. Even so, the cost of servicing the stock of gilts will rise, because the stock of debt is rising faster than the likely small decline in the average coupon paid on that debt. And there is clearly a risk that investors (particularly overseas) could take fright at the worsening fiscal position and push yields higher.