Sterling wholesale markets: developments in 2000

- *Sterling wholesale markets grew by 5% in 2000, less quickly than in 1999.*
- *The money, corporate bond and swap markets continued to expand, whereas the amount of gilt-edged stock outstanding was broadly unchanged.*
- *Liquidity in sterling markets stabilised during the year; in some markets turnover and liquidity increased.*
- *Government cash management transferred to the UK Debt Management Office; the Bank of England's open market operations continued as before.*

Overview

The total amount outstanding in sterling wholesale financial markets rose by £249 billion in 2000 (see Table A). By the end of the year, the value of instruments outstanding in sterling markets was equivalent to nearly six years' UK nominal GDP; markets grew less quickly in 2000 than in 1999 on this measure. The money, corporate bond and interest rate swap markets grew in 2000, whereas the amount outstanding in the gilt-edged market was little changed and the market capitalisation of the UK equity market, as measured by the FTSE All-Share index, fell.

Table A
Size of sterling markets

Amounts outstanding: £ billions

	Money market (a)	Gilts	Non-gilt sterling bonds	Equities (b)	Swaps (c)	**Total**	Multiple of annual GDP
1990	183	125	60	486	167	**1,021**	1.8
1995	195	233	117	849	541	**1,935**	2.7
1998	434	301	203	1,334	1,979	**4,251**	5.0
1999	475	294	255	1,893	2,194	**5,111**	6.0
2000 Nov.	504	294	314	1,715	2,533	**5,360**	5.9

Sources: Bank for International Settlements, Capital Bondware, Office for National Statistics, and Bank of England.

(a) Defined here as amounts outstanding in the interbank, certificate of deposit, gilt repo and stock lending, bill and commercial paper markets.
(b) Measured as market capitalisation of FTSE All-Share index; 1990 data are estimated.
(c) Single-currency interest rate swaps, notional principal outstanding. 1990 data are not available so the table uses 1992 data; data for 2000 are end-June.

Liquidity in sterling financial markets, which had fallen during 1999 following the international financial crises in the second half of 1998, appeared to stabilise in some markets in 2000. And in some cases, turnover and liquidity increased.

Table B
Market turnover: average daily amounts

£ billions

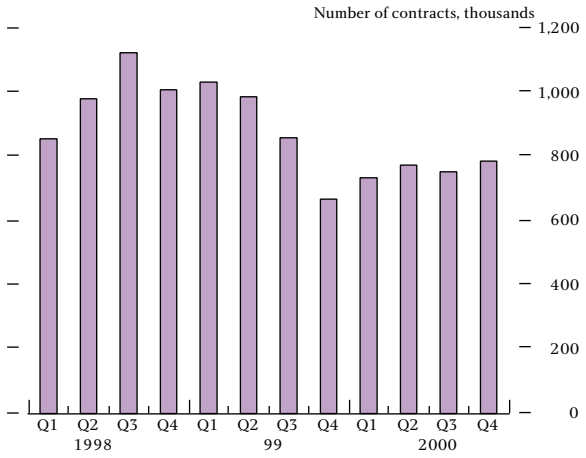
	1997	1998	1999	2000
Futures (a)				
Short sterling	40	67	54	45
Long gilt	3.9	4.9	3.4	2.0
Gilts				
Conventional	7.0	6.0	5.2	6.1
Index-linked	0.2	0.1	0.1	0.3
Money markets				
Gilt repo	14.8	14.7	13.6	17.8
Overnight interbank (b)	6.1	7.5	8.0	10.4

Sources: Bloomberg, London Stock Exchange, Wholesale Market Brokers' Association, and Bank of England.

(a) Converted to equivalent nominal amounts. Short sterling is the sum of all 20 contracts extant; long gilt future is the sum of the front two contracts—the third and final contract is rarely traded.
(b) Reported by the Wholesale Market Brokers' Association.

Table B reports turnover in several key sterling markets. Turnover of short sterling futures contracts fell by more than 15% to around £45 billion (equivalent) a day; open interest, the number of contracts outstanding, was lower than it had been for most of the previous two years (see Chart 1). Three factors help to explain this. First, the continued consolidation of the financial markets, through mergers and acquisitions between financial institutions, has reduced the number of active players. Second, short-term interest rates were stable through most of 2000 and, in the second half of the year, the money market yield curve was relatively 'flat'. Against such a stable interest rate background, there may have been less demand to hedge and take views in short sterling futures. Third, though short sterling futures continue to be by far the main tool for taking and hedging short-term interest rate views, there is growing use of other instruments, such as SONIA swaps. In a

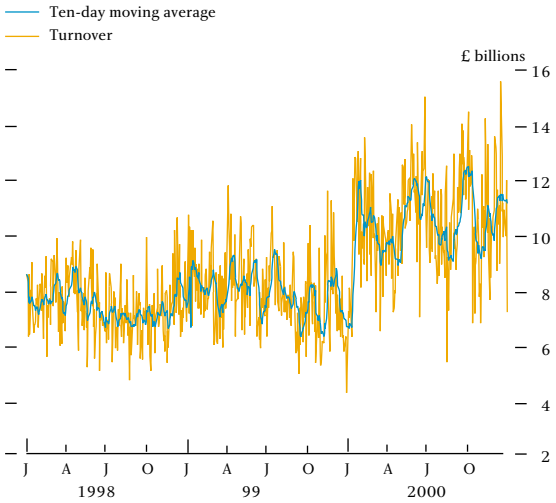
Chart 1
Open interest of short sterling futures contracts traded on LIFFE at quarter-end(a)



Source: Bloomberg.

(a) Sum of all contracts extant.

Chart 2
Turnover in the overnight interbank market(a)



(a) Turnover reported by the Wholesale Market Brokers' Association.

SONIA swap, one party pays a fixed rate and the other a floating rate linked to the average of the sterling overnight index average (SONIA) over the life of the swap.(1) One advantage of a SONIA swap, compared with futures, is that, because it is a negotiated over-the-counter instrument, it can be tailored to meet a specific hedging or speculative demand. And the ability to trade and take views on the overnight rate is a useful addition to banks' liquidity management tools.

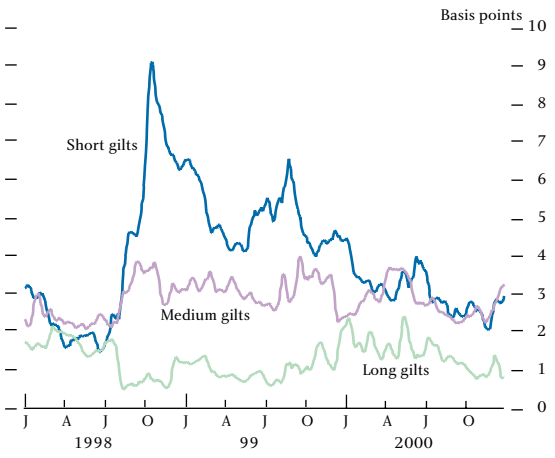
As Table B shows, gilt repo turnover rose from around £13½ billion a day in 1999 to £18 billion a day in 2000. This may partly reflect an unusually depressed level of activity in the second half of 1999 as the market prepared for the millennium date change. But it also reflects a wider picture in which banks are tending to shift liquidity management to collateralised markets.

Table B reports that the amount traded through brokers in the sterling overnight interbank market rose in 2000. Chart 2 also shows this: market contacts suggest that the broked market accounts for around three quarters of total activity in the overnight interbank market.(2) The rise in overnight interbank volumes is part of a trend in which banks are tending to manage their liquidity and cash management needs at shorter maturities (corroborating this, gilt repo liquidity and turnover is concentrated at very short maturities).

Increased turnover in some markets coincided with other indications of more stable or even improved liquidity and depth. For example, in the gilt market one indicator of greater liquidity was that yield volatility in 2000 was less than in 1999. The rolling 30-day standard deviation of daily changes in 10-year gilt yields fell from 18%–20% at the beginning of 2000 to 10%–12% by the end of the year. The volatility of 30-year gilt yields, measured in the same way, also fell.

The spread of individual bond yields around a fitted curve is another possible indicator of the liquidity of the gilt market. The more efficient and liquid the market, the closer government bonds trade to the fitted curve. The extent to which individual bond yields diverge from the fitted curve is a measure of the liquidity premia at different maturities (bonds are referred to as cheap or dear to the curve, reflecting this gap). The level of dispersion is the absolute average of these differences

Chart 3
Mean absolute deviation from fitted yield curve



(1) Market estimates suggest that turnover of SONIA swaps was around £1 billion–£1½ billion a day in 2000, compared with around £2 billion a day for forward-rate agreements.
(2) There are no comprehensive turnover data for maturities beyond overnight in the unsecured interbank market.

from the fitted curve, at various maturity ranges. Chart 3 shows that the dispersion of short and long stocks fell during the year, and the dispersion of medium stocks was little changed.

Changes in bid-offer spreads can also indicate changes in liquidity conditions: market-makers would tend to widen spreads if they were less certain of being able to exit from a position because of market illiquidity. During 1999, for example, contacts reported a widening of bid-offer spreads in the gilt market as liquidity conditions worsened. There is no definitive measure of bid-offer spreads, but market contacts suggest that spreads did not widen further during 2000.

Money markets

Size of sterling money markets

The sterling money market grew by 6% in 2000, to a total of £504 billion outstanding.(1) The highest growth rate (28%) was in the gilt repo market (see Table C and Chart 4). This partly reflected a growing tendency for banks to manage more and more of their liquidity needs in collateralised money markets.(2)

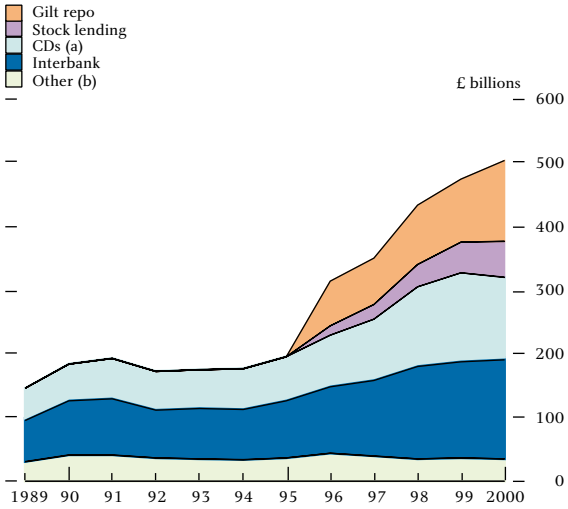
The value of interbank deposits outstanding rose, though less quickly than for repo, while the certificate of deposit (CD) market contracted. From March 2000 banks have been permitted to 'draw' bills on other banks; in due course this might be expected to affect the CD market, but so far there is little evidence of that happening, with few 'bank on bank' bills issued.

Open market operations

The Bank's money market operations in the early part of the year were influenced by the need to manage larger money market shortages. These arose because of the seasonal rise in the Government's tax receipts and the maturing of the longer-term repos, which were introduced in October 1999 to assist liquidity management over the millennium date change. Around £8 billion provided through these repos matured in January and February and, though the Bank offered to refinance these into February and March, there was no market demand for the continuation of the facilities. Consequently, the larger shortages arising from the maturing of the facilities were managed through the Bank's normal two-week repos and, during the course of January and February, the short-term interest rate structure moved back towards the Bank's repo rate from its somewhat depressed levels in December 1999.(3)

During March short-term rates began to trade increasingly below the Bank's repo rate; SONIA, for

Chart 4
Sterling money markets: amounts outstanding



(a) Bank and building society certificates of deposit.
(b) Includes Treasury, eligible and local authority bills, commercial paper and sell/buy-backs.

Table C
Sterling money markets: amounts outstanding(a)

£ billions

	Interbank	CD (b)	Gilt repo (c)	Treasury bills	Eligible bills	Commercial paper	Sell/ buy-backs (c)	Stock lending (c)	LA bills (d)	**Total**
1990	89	53	n.a.	12	23	5	n.a.	n.a.	2	**183**
1995	93	66	n.a.	9	20	6	n.a.	n.a.	2	**195**
1999	155	135	99	4	13	15	3	49	1	**475**
2000 Nov.	159	125	127	2	12	16	6	57	0	**504**

n.a. = not available.

(a) 1990 and 1995 data are end-March; other data are end-period.
(b) Bank and building society.
(c) End-November data.
(d) Local authority bills.

(1) The sterling money market is defined for this purpose as the sum of the outstanding amounts in the interbank, certificate of deposit, gilt repo and stock lending, Treasury bill, eligible bank bill, local authority bill and commercial paper markets.
(2) See also: 'Banking system liquidity: developments and issues', Chaplin, G, Emblow, A and Michael, I, *Financial Stability Review*, December 2000, pages 93–112.
(3) For example, SONIA, which had averaged around 87 basis points below the Bank's repo rate in December 1999, was 59 basis points and 7 basis points below it in January and February respectively.

example, was as much as 75 basis points below the Bank's repo rate at times in mid and late-March. In response, the Bank temporarily increased slightly the amount by which it was prepared to leave the market short after the 9.45 am round of operations, even when the Bank's counterparties had fully bid for the available refinancing. This may have helped lead to a narrowing of the spread between short-dated market rates and the Bank's repo rate. The Bank repeated the practice of increasing the amount by which it left the market short on a number of other occasions during the course of the year when it judged that short-term interest rates were trading too far away from the repo rate.

The Debt Management Office (DMO) assumed full responsibility for managing the Exchequer's daily cash position from 3 April. Since then, the level of the outstanding 'Ways and Means advance' to the Government on the Bank's balance sheet has no longer varied on a day-to-day basis and the DMO, rather than the Bank of England, now offsets the Exchequer's cash position with the money market each day. Rather than varying the size of the Ways and Means advance to balance the Exchequer's short-term financing needs each day, the DMO aims for a small (constant) precautionary deposit at the Bank each day. So the Bank's balance sheet has become more stable and predictable, and the money market's need for refinancing from the Bank is no longer influenced by the Exchequer's net cash position. The daily money market shortage averaged £2.0 billion in 2000, considerably larger than in previous years. The volatility of the size of the daily shortages (as measured by the standard deviation) has hardly changed since the cash management transfer, largely because of an increased use of overnight facilities. The two key factors that now influence the money market's need for refinancing from the Bank are changes in the note issue and the maturity of the existing stock of refinancing operations.

HM Treasury's Debt Management Report for 2000–01 (published in March 2000) announced that the planned level for the Ways and Means advance for 31 March 2001 was £17 billion. This planned level was reduced to £15 billion when the gilt financing arithmetic was revised (on 20 April) in the light of a higher government cash surplus for financial year 1999/2000. The Pre-Budget Report, released on 8 November, announced that the end-year level will be £13.4 billion, given the higher-than-expected government cash surplus for 2000/01 following the auction of spectrum mobile telephone licences.

The Bank extended the range of collateral eligible in its OMOs in 1999 to include euro-denominated securities issued by central governments and central banks of the European Economic Area.(1) In 2000, around 14% of the stock of collateral taken by the Bank was euro-denominated (see Chart 5). Table D shows the increase in the stock of eligible collateral during the past decade and the consequent fall in the proportion held by the Bank.

Chart 5
Stock of refinancing: instrument share

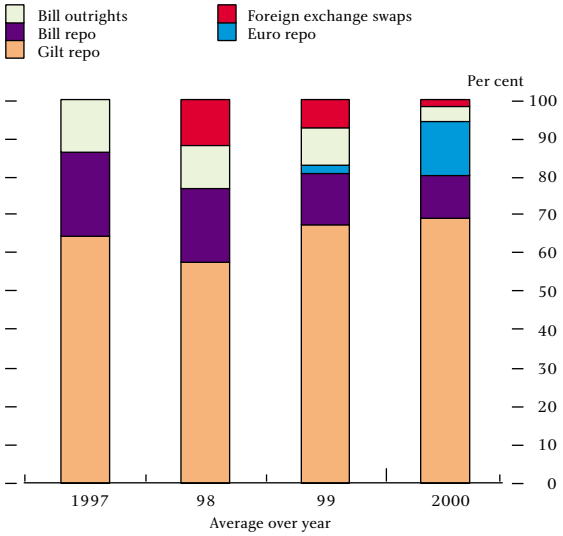


Table D
Eligible collateral in open market operations

End-year	£ billions	*of which, held at Bank (per cent)*
1990	37	*13*
1995	30	*11*
1996	34	*14*
1997	320	*2*
1998	327	*3*
1999	2,325	*1*
2000	2,350	*1*

Note: 1995 and 1996 data exclude gilts held in the rough-tuning facility.

The Exchequer cash management transfer necessitated a change to the Bank's method of absorbing any money market surplus. As the Bank is no longer able to issue Treasury bills (as the proceeds contribute to the Exchequer's cash position), the Bank will absorb (or 'mop') any market surplus by a gilt repo, executed by a competitive rate tender. So far it has not been necessary to operate in this way.

Functional criteria for OMO counterparties

The functional criteria required of the Bank's OMO counterparties were also adapted in two small ways

(1) A list of eligible securities is available on the Bank's web site at www.bankofengland.co.uk/markets/money/eligiblesecurities.htm

Table E
Sterling capital markets

Amounts outstanding and issued: £ billions

Date	Amounts outstanding					Gross issuance	
	Gilts (a)	Corporates (b)	*of which, on issue programme*	**Total bond market**	FTSE All-Share (c)	Gilts	Corporates (d)
1990	125	60	*0.3*	**185**	486	3	12
1995	233	117	*14*	**350**	849	31	13
1999	294	255	*85*	**549**	1,893	14	57
2000 Nov.	294	314	*117*	**607**	1,715	10	74

Note: Corporate outstandings are compiled from a different data source from that for gross issues, and as a result may not give directly comparable figures.

(a) Nominal value at end-period, except gilts outstanding in 1990 (end-March). Index-linked gilts include inflation uplift.
(b) These figures include both domestic and international issuance and give the nominal value at period-end. They have been calculated ignoring call and put options; had these been exercised, total outstandings would typically have a value of around 85% of the figure quoted.
(c) Market capitalisation of FTSE All-Share index at period-end.
(d) Non-government international bond issue in sterling.

during the year. First, the transfer of cash management to the DMO meant that the Bank no longer required counterparties to participate regularly in the weekly Treasury bill tenders, since these became the responsibility of the DMO. Second, the Bank had previously required counterparties to maintain an active presence in the gilt repo and/or the bill markets. This meant that counterparties were expected to trade in these markets on a reasonably continuous basis, with a range of unrelated counterparties, on a scale that would enable them to contribute in a material way to distributing around the system the liquidity provided by the Bank. The Bank updated this criterion to take account of the extension of instruments eligible in the Bank's operations, and to recognise that the liquidity provided by the Bank may be distributed through the sterling markets by channels other than gilt repo or bills. The functional criteria for OMO counterparties are now:

(i) Counterparties must maintain an active presence in the markets for at least one of the instruments eligible in the Bank's operations.

(ii) Counterparties must have the technical capability to respond quickly and efficiently to the Bank's daily rounds of operations.

(iii) Counterparties will be expected to participate regularly in the Bank's daily rounds of OMOs.

(iv) The Bank will look to its counterparties to provide useful information on a regular basis on market conditions and developments in the sterling money markets.

Criteria (ii)-(iv) remain the same as they have always been and are described more fully in the paper: *Reform of the Bank of England's operations in the sterling money markets*, February 1997.(1)

Capital markets

The size of the sterling bond market rose by around £60 billion in 2000 to £607 billion (see Table E). The stock of government bonds was broadly unchanged, as the government's finances were boosted by the sale of mobile telephone licences. The demand for fixed-interest products remained high, however, and the supply of non-gilt bonds rose, partly in response. The fall in the estimated market capitalisation of the FTSE All-Share index coincided with the fall in other major stock markets worldwide.

Gilt-edged market

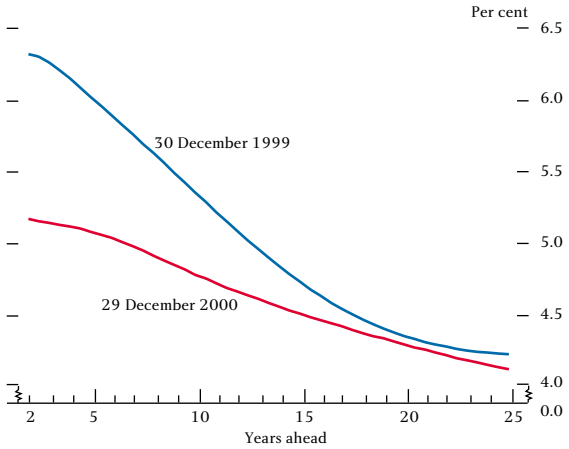
The total amount of gilts outstanding was £294 billion at end-November, little changed from a year earlier. The March 2000 Budget forecast gilt sales of £12.2 billion and redemptions of £18.6 billion, with the Central Government Net Cash Requirement (CGNCR) forecast to be a surplus of £4.9 billion.(2) However the surplus turned out higher than the profile in the Budget forecast, mainly because the proceeds of the mobile telephone spectrum auction were much higher than anticipated. The Pre-Budget Report of November 2000 revised the CGNCR forecast for 2000/01 to a £28.2 billion surplus. With gilt redemptions of £18.6 billion over the year and planned sales of only £10 billion, there is likely to be a significant net debt repayment by March 2001.

The contracting supply of gilts has put downward pressure on yields over the past year (see Chart 6). New issuance for 2000/01 has been concentrated solely at the long end and in index-linked stock. The DMO has

(1) Available on the Bank's web site at www.bankofengland.co.uk/markets
(2) These totals refer to the financial year.

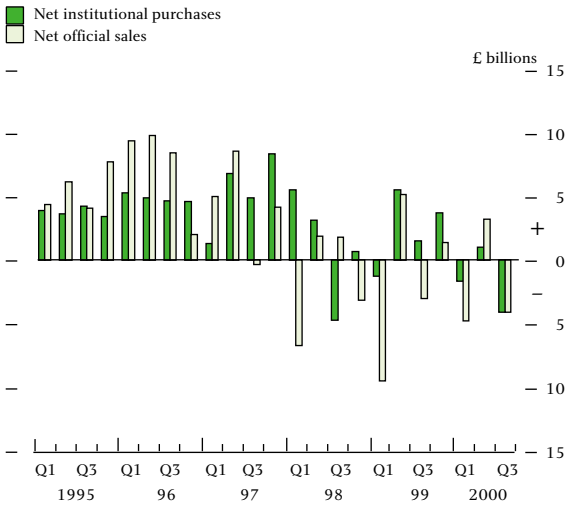
also conducted reverse auctions and switch auctions, which had the effect of converting short and medium-maturity gilts into long-term stock. Falling short-term interest rate expectations during the latter part of the year also affected short-maturity gilts, and the yield curve disinverted.

Chart 6
Gilt spot yield curve



Investment institutions were net sellers of gilts during the first three quarters of 2000 as a whole (see Chart 7). Reduced new issuance partly explains this, but it is also consistent with evidence of increasing investor demand for non-gilt assets. Rising supply of corporate bonds (and of bonds issued by other borrowers, such as supranational institutions) is a natural consequence of reduced government supply, and was also encouraged by the prospect of reform of the Minimum Funding Requirement, which was reportedly behind some of the previous price-inelastic demand for long gilts.

Chart 7
Gilts: net institutional investment and net official sales



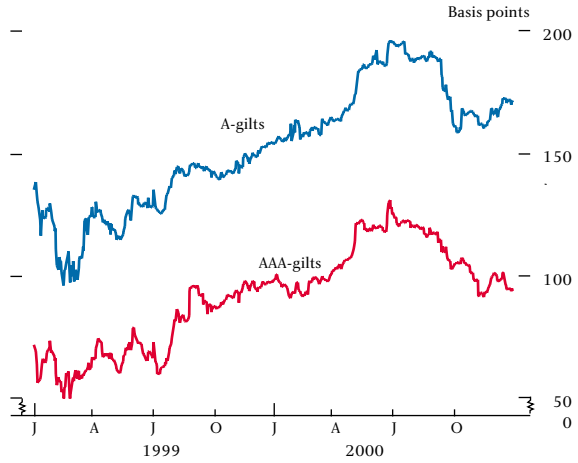
Source: Office for National Statistics.

Non-government sterling bonds

The total of non-gilt sterling bonds outstanding was £314 billion at end-November 2000, up from £255 billion at end-1999. Issuance was particularly high from AAA-rated borrowers. This reflected investors' increased demand for high-quality debt instruments in an environment of reduced gilt supply.

Total non-gilt sterling debt capital issuance increased by 30% to £74 billion in 2000. Much of this growth was at long maturities—up from £28 billion in 1999 to £36 billion in 2000—reflecting the strength of demand for long-dated bonds from UK institutional investors. Highly-rated borrowers, mostly from overseas, have been able to take advantage of this demand. (The bulk of these issues are swapped into liabilities in the 'home' currency.) Much of the growth of non-gilt issuance was in the second half of the year, which coincided with a narrowing of the gap between AAA yields and gilt yields (see Chart 8).

Chart 8
Sterling bonds: AAA and A spread over gilts at ten years



Sources: Bloomberg and Bank of England.

There has also been strong growth in short-term (AAA) issuance. The increase at the shorter end is largely accounted for by higher floating-rate issuance (up by nearly £7 billion in 2000). Investors have been particularly keen to acquire securitised assets, such as mortgage-backed bonds. These issues, being backed by a known class of assets, are thought to give greater protection against event risk than standard corporate debt.

Corporate issuers, with lower credit ratings than supranationals and government-related overseas borrowers, have been less able to take advantage of the demand for AAA-rated debt. Some of these borrowers

Inflation swaps

An inflation swap takes the form of an agreed exchange of an inflation-based payment for a fixed payment. The UK market uses RPI inflation as its benchmark; the market's development has been helped by the existence of a range of index-linked gilts at various maturities, from which participants can price the fixed leg of the swap. (The estimated size of the UK market was £2 billion nominal principal outstanding at mid-2000.) In some currencies, a lack of index-linked benchmark bonds is likely to prevent the development of an inflation swap market.

Inflation swaps provide a way for firms with cash flows that grow broadly in line with inflation to hedge their risks. For example, a utility firm or retailer has cash receipts that are linked to the rate of inflation. If inflation turns out below expectations, the firm's nominal cash income will be smaller than expected. The firm can protect against this risk by contracting to pay an inflation-based rate versus a fixed-rate receipt, to cover some proportion of its cash flow. If inflation and the firm's cash receipts turn out below expectations, the income loss will be mitigated by gains on the swap, as the firm pays smaller inflation-based sums while receiving fixed.

Conversely, firms with inflation-linked liabilities, such as insurance companies, can opt to pay fixed versus receipt of an inflation-based rate, protecting themselves against the risk that inflation, and thus their liability, is above their expectations. The inflation swap in this example is in effect a substitute for holding index-linked assets, in terms of exposure to inflation.

Currently in the inflation swaps market, there is a greater demand to receive inflation-linked rates than pay either fixed or a Libor floating rate. This has pushed inflation-linked rates down and created an arbitrage opportunity, which large debt issuers would like to exploit. Such arbitrage-driven issuers would not necessarily have inflation-linked revenue and so would want to hedge their risk by receiving inflation-indexed payments in a swap, and paying fixed or a Libor floating rate. The counterparty to such a swap could in turn hedge its liabilities only by buying an existing index-linked bond. Swap positions are therefore mostly based on underlying holdings of index-linked debt. So the size of the inflation swap market is currently constrained by the size of the underlying index-linked debt market.

However, if the inflation swap market grew from its current small size and became more liquid it could attract more players who might accept the inflation risk, in return for the premium offered by the swap market, to pay inflation. The inflation swap market would then provide a broader indicator of expected future inflation, offer a more liquid hedge of inflation risk, and become more independent of government issuance.

prefer to access the deeper, more liquid dollar capital markets, and swap the liability back into sterling. UK and overseas telecommunications companies issued a significant amount of debt last year to finance mobile telephone licences, but much of this issuance occurred in currencies other than sterling.

The non-gilt index-linked debt market also grew last year, with corporates with inflation-linked cash flows (such as property companies, utilities and retailers) seeking to hedge their real interest rate risks by issuing inflation-linked liabilities. The box above describes the parallel development of an inflation-linked swap market.

Sterling debt issuance programmes, a sub-sector of the non-gilt debt market described above, grew strongly again last year, with the amount outstanding rising by 38% to £117 billion at end-November 2000. Issuance programmes allow companies to issue debt in a standardised format at any maturity of more than a year. The abolition, in April 1997, of the five-year maximum maturity for programmes has allowed issuers, particularly those with higher credit ratings, to take advantage of high demand for gilt substitutes at longer maturities. Additional advantages of debt issuance programmes for borrowers are their flexibility, convenience and relatively low administrative cost, once the necessary backing documentation is in place. Issuance programmes are particularly heavily used by overseas borrowers.

Derivative markets

According to data collected by the Bank for International Settlements (BIS), swaps accounted for nearly three quarters of the total notional amounts outstanding in the sterling interest rate derivative market at the end of June 1998.(1) In this article, we report two indicators of activity in the sterling single-currency interest rate swap market.

Table F records data from the BIS showing notional values; these give an indication of the amount of

(1) See the BIS triennial central bank survey of foreign exchange and derivative market activity published in May 1999.

Electronic trading

The principal electronic trading initiatives in the sterling market recently have been:

Blackbird

Blackbird, the first Internet-based over-the-counter derivatives trading system, received approval to trade from the Financial Services Authority (FSA) in June. The system allows members to execute trades in euro, sterling, Swiss franc and yen.

E-Crossnet

E-Crossnet, a securities crossing network, was launched on 22 March 2000. Regulated by the FSA, its objective is to reduce the cost of trading UK equities for buying institutions. In its first eight weeks of business, more than £1 billion of trades were crossed through its system.

Gilts

During 2000, it became possible for market-makers to trade gilts electronically via eSpeed, an electronic platform owned by Cantor Fitzgerald; Garban-Intercapital's electronic trading platform for gilts was expected to come on stream in early 2001.

Jiway

Jiway, the hybrid electronic order and quote-driven market for the retail sector, was launched on 17 November. Approved as a recognised investment exchange by the FSA, it offers execution in 400 French, Swedish and UK equities (eventually it plans to offer execution in up to 6,000 shares from Europe and the United States). In the first ten days of trading, Jiway saw 3,000 trades with a total value of approximately £27 million.

LIFFE *CONNECT* ™

Last year's article reported that the financial futures contracts at LIFFE had migrated onto its electronic trading system, LIFFE *CONNECT* ™. On 27 November 2000, the remaining floor-traded commodities contracts were moved to LIFFE *CONNECT* ™, bringing to an end open-outcry trading at LIFFE.

Table F
Sterling single-currency interest rate swaps(a)

£ billions

Year (b)	Amount outstanding (c)	New swaps (d)
1992	167	n.a.
1993	291	175
1995	541	275
1998	1,979	78
1999	2,194	58
2000	2,533	54

n.a. = not available.
Source: Bank for International Settlements (BIS).

(a) The BIS quotes these figures in US dollars; they have been converted to sterling using period-average exchange rates.
(b) Year-end values are used for 1992–99, and the end-June value for 2000.
(c) This is expressed in terms of the notional principal outstanding, and has been adjusted by the BIS for double-counting for 1998–2000.
(d) This is expressed in terms of the notional principal outstanding for 1992–97, and the BIS definition of gross market value for 1998–2000.

Table G
Sterling single-currency interest rate swap positions(a)

£ billions: market values

		Assets	Liabilities	Net
1998	June	32	37	-5
	Sept.	38	38	0
	Dec.	51	52	-1
1999	Mar.	54	54	0
	June	44	43	1
	Sept.	38	38	0
	Dec.	39	39	0
2000	Mar.	35	36	-1
	June	30	32	-2
	Sept.	31	33	-2

(a) UK banks' data on gross positions include interest rate swaps, forward-rate agreements and options.

underlying business being conducted. On this measure, the value of sterling single-currency interest rate swaps outstanding rose to just over £2$^1/_2$ trillion at the end of June 2000. As the table shows, the amount of new business being conducted has been much less in recent years than in the mid-1990s. Table G reports Bank of England data, which are more up-to-date, measured as the mark-to-market values of UK banks' positions (this includes foreign-owned banks conducting business in the United Kingdom). On this measure, there was a fall in swap market activity in 2000. By the end of 2000 Q3, the outstanding mark-to-market value of sterling single-currency interest rate swaps was £31 billion, compared with £38 billion a year earlier.

Both data sources are consistent with a view that the interest rate swap market has matured during the 1990s, after rapid growth earlier in the decade. Reportedly, market players' attention is gradually switching to more complex derivative products such as credit swaps and inflation swaps (the latter are a small but growing feature of the UK market and are described in the box on the previous page).

Trading and settlement issues

During 2000, there were a number of clearing and settlement initiatives aimed at reducing risk in wholesale markets. There were also further electronic trading initiatives (see the box above).

CREST and RTGS developments

During 2000, further progress was made on the merger of gilts, money market instruments (MMIs) and equities within a single settlement system, CREST. All the changes necessary for the migration of gilt settlement into the CREST system were implemented during the first half of 2000. Technical migration from the Bank's Central Gilts Office (CGO) system to the CREST system was completed over the weekend of 1–2 July 2000, as planned. Both equities and gilts now settle within the CREST system.

Work continued during 2000 on the review of MMIs, in conjunction with CREST and market participants. An interim report was published by the Bank in January 2001, alongside a CREST consultation document. The dematerialisation and integration of MMIs into CREST is expected to take place during 2002.

Delivery versus Payment (DvP) in real-time central bank money

A further improvement to the robustness of the United Kingdom's payment and settlement infrastructure will be the introduction of DvP in real-time central bank money to CREST, in place of the current assured payment arrangements. At present the cash obligations arising between CREST settlement banks, resulting from securities movements between CREST members, are settled through an end-of-day netting process. The DvP project will introduce a link between the CREST system and the real-time gross settlement (RTGS) payment system at the Bank of England, and will facilitate the movement of securities against real-time payment in central bank money. This project is well advanced, and implementation is due to be completed in November 2001.

Wholesale payments infrastructure (CHAPS)

The first stage of the NewCHAPS project (a programme of development work on the Bank's RTGS system) is also due to go live in August 2001. This project will bring improvements to the CHAPS high-value payment system and will involve the integration of the sterling and euro payment streams into a single SWIFT-based infrastructure. It will also introduce innovations, in response to market requirements, that will increase the efficiency of payment processing, such as a central payment scheduler and central queuing.

Preparations for T+3 settlement

With effect from 5 February 2001, the standard settlement period for trades in equities and corporate debt conducted on the London Stock Exchange (LSE), the Irish Stock Exchange and Tradepoint was reduced from T+5 to T+3 (ie settlement three business days after trade date).(1)

Reducing the period between trade execution and settlement is an important element in risk reduction since it shortens the period of time that a trading party is exposed to the risk of default by its counterparty and thus to the possibility of having to replace the trade, potentially at a price disadvantage. But this risk reduction will be achieved only if the shorter settlement period does not increase the risk of settlement failure on the due date; otherwise, reduced counterparty risk will simply be achieved at the cost of increased operational risk. A working party chaired by CRESTCo has been considering how to ease the transition to a shorter settlement cycle, and so minimise these operational risks. One important aspect of this transitional process has been a gradual tightening of matching and settlement targets in CREST—successful settlement critically requires early input of instructions and matching by close of business on T+2. CRESTCo's Settlement Discipline Committee is monitoring compliance with revised targets. Most participants seem reasonably confident that the transition will be achieved without a material increase in settlement failures.

The LSE has made corresponding changes to its rules, in particular relating to ex-dividend dates (confirmed in a Stock Exchange Notice of 3 July). No technical changes are required to CREST to facilitate T+3 settlement. CREST already handles settlement periods from same-day settlement through to 260 days forward; cash gilts settlement is undertaken for T+1 settlement, and most stock lending and collateral transfers are undertaken for same-day settlement. So the majority of CREST settlement by value is already undertaken for same-day or T+1 settlement.

A central counterparty for the London Stock Exchange

The LSE, CRESTCo and the London Clearing House (LCH) have developed a central counterparty service for all equities currently traded on the Stock Exchange Electronic Trading Service (SETS) or via Stock Exchange Automated Quotations (SEAQ) auctions. This was implemented on 26 February 2001, from which point

(1) Sterling money market instruments settle same day and gilts settle T+1.

LCH acts as the central counterparty for all such transactions. So a firm must either be a clearing member of LCH or pass trades via a clearing member to trade on SETS or via SEAQ auctions. Trades continue to be settled through CREST. The introduction of the central counterparty eliminates the bilateral exposures that arise between counterparties on SETS and SEAQ. LCH assumes responsibility for managing market and counterparty risk, protecting itself by taking initial and variation margin from its clearing members. Initially, settlement is continuing on a trade-by-trade basis, but it is anticipated that multilateral settlement netting will be introduced in 2002. Settlement netting should provide operational savings for Stock Exchange members and their customers.

European consolidation

During the year, there were two attempts at consolidation of the European equities market. The first was the proposed merger between the LSE and the Deutsche Börse AG, to be known as iX. This was intended to be a significant first step towards the creation of a pan-European equity market, with a market in highly capitalised stocks based in London and subject to UK regulation, and a growth/technology market based in Frankfurt. Detailed discussions between the two exchanges and their respective regulators identified a number of substantive business and regulatory issues, relating for example to the transparency rules of the two markets and to the proposal that the jurisdiction in which an equity was primarily to be traded need not be the jurisdiction in which it was listed. The LSE withdrew from the iX talks when a further initiative was announced in the form of a hostile bid for the LSE, launched by the OM Group. OM Group withdrew its bid in November after it failed to achieve sufficient acceptances of its offer. The iX merger talks were not revived.