United Kingdom
Debt Management
Office

DMO Annual Review 2018-19

October 2019

Contents

Foreword by the DMO Chief Executive

At the start of 2018-19 the DMO reached its twentieth anniversary and, by the end of the financial year, our cumulative gilt sales since April 1998 totalled £1.999 trillion.

During 2018-19, the DMO maintained its track record of successfully delivering the financing and cash management remits set by Treasury Ministers. Gilt financing totalling £98.6 billion was raised compared with £115.5 billion in 2017-18, a reduction of £16.9 billion. This was the first financial year since 2007-08 that annual gross gilt sales had fallen below £100 billion[1]. At the end of 2007-08, as the financial crisis began, the nominal (uplifted) value of the gilt portfolio was £479 billion. At the end of 2018-19, it was £1.59 trillion, 3.3 times larger. Over the same period, the gilt market has developed significantly, with a greater diversity of investors.

Auctions remain the government's primary means of distributing gilts and accounted for £79.4 billion of gilt sales in 2018-19, 80.5% of the overall programme. The average cover ratio at gilt auctions in 2018-19 fell slightly to 2.09x from 2.30x in 2017-18.

The use of supplementary distribution methods, in the form of syndicated gilt offerings of long-dated conventional and index-linked gilts in 2018-19, again allowed the DMO to target its core domestic investor base directly.

Four syndications were held in 2018-19, raising £19.2 billion (19.5% of total gilt sales). Over the financial year £1.8 billion of an initially unallocated portion of financing was moved into the syndication programme, with £2.8 billion of that unallocated portion transferred to the gilt auction programme. The gilt sales programme was revised downward by £8.5 billion at Autumn Budget 2018 and £2.1 billion of the unallocated amount was cancelled. No gilt tenders were held in 2018-19. The DMO held 40 gilt financing operations in total (including 36 auctions), six fewer than in the previous financial year.

The gilt market continued to absorb the level of gilt supply in 2018-19. Average daily turnover in the gilt market increased by 11% to £36.3 billion compared to the previous financial year. The presence of a deep and well functioning gilt market is critical to the DMO's ability to carry out its mandate successfully.

The DMO also continued to perform strongly in carrying out its cash management function in 2018-19, with all related objectives achieved, despite ongoing challenges in the money market, in particular reduced liquidity in the repo market.

There was ongoing strong demand for Treasury bills. As with gilts, Treasury bills continued to attract significant overseas investor interest, with around 49% of the market being held by such investors at the end of March 2019[2].

The Public Works Loan Board (PWLB) has continued to fulfil its statutory function. At 31 March 2019, the PWLB's loan book was £78.3 billion (compared with £70.8 billion at end 2017-18). 1,308 new loans totalling £9.1 billion were advanced during the financial year (compared to 780 loans totalling £5.1 billion in the previous financial year).

[1] In 2007-08 gross gilt sales were £58.5 billion.
[2] Source ONS sectoral holdings data.

The DMO also again successfully provided a cost-effective service to its clients through the fund management operations of the Commissioners for the Reduction of the National Debt. The market value of these funds was £35.0 billion at 31 March 2019 (£32.0 billion at end-March 2018).

Looking ahead, the DMO's financing remit for 2019-20 was published on 13 March 2019 with £114.1 billion in planned gilt sales and a remit structure broadly similar to 2018-19. The largest structural change compared to the previous year was a small shift toward short and medium conventional issuance (up 1.6 and 2.0 percentage points respectively) at the expense of long conventional and index-linked issuance (down 1.6 and 2.0 percentage points respectively). Planned gilt sales rose by £3.7 billion to £117.8 billion at the remit revision on 24 April 2019 which coincided with the publication of the outturn for the CGNCR (ex NRAM, B&B and NR)[3] for 2018-19 on 24 April 2019. A £4.0 billion contribution to debt financing from Treasury bills is planned for 2019-20.

Overall, the DMO has continued to perform very strongly this year across its range of activities and operations. Once again, I want to express my sincere appreciation to DMO staff, as well as to colleagues at HM Treasury and at the Bank of England for their hard work and commitment in helping us to deliver our objectives. I am also grateful to our market counterparties for their professionalism and continued support throughout the year. The success of the DMO would not have been possible without all their contributions. I hope that the DMO will continue to be characterised by efficient operations and strong relationships with our stakeholders, guided by the fundamental principles of transparency and predictability.

Sir Robert Stheeman

October 2019

[3] Central Government Net Cash Requirement (excluding Northern Rock (Asset Management), Bradford & Bingley and Network Rail).

Chapter 1: The Economy and Financial Markets

Macroeconomic developments

Growth in both advanced and emerging economies slowed in 2018 partly as a result of global trade tensions.

In equities many of the main indices fell significantly in the last quarter of 2018 amid concerns about lower global growth, but that weakness was reversed during the first quarter of 2019 as market expectations for central bank stimulus increased, and many of the main indices were at, or close to, record high levels at the end of 2018-19.

Following robust domestic Gross Domestic Product (GDP) data and rising inflationary pressures, US policymakers increased the target range of the US Federal Funds rate by 0.25% on three occasions from April 2018 to the end of the calendar year, such that the target range stood at 2.25%-2.50% at 31 December 2018, its highest level since March 2008. However, by the end of the financial year, market rates implied that further rate rises were unlikely in the short term. In the euro area, economic activity slowed to half the rate of the previous year (averaging around 0.3% on a quarter-on-quarter (q-o-q) basis) and inflation remained subdued. To support growth the European Central Bank (ECB) Governing Council committed to keeping its main interest rate at a record low of 0.0% at least to the end of 2019.

In the UK, real GDP on a q-o-q basis averaged 0.45%[4] in the financial year, a modest increase on the previous year. Lack of clarity about the terms of the UK's withdrawal from the European Union (EU) was a key source of uncertainty throughout the period and uncertainty continued beyond the original 29 March 2019 withdrawal deadline as an extension was granted. This uncertainty heightened volatility in GDP as businesses went through cycles of stock-building and reduction.

Consumer Prices Index (CPI) inflation was at 2.4% at the start of the financial year, above the Bank of England's (Bank's) target rate of 2.0% year-on-year (y-o-y). The rate increased to a financial year peak of 2.7% in August, partly driven by rising motor fuel prices, before falling to 1.8% in January 2019 as the impact of higher fuel prices waned and then housing and utility costs fell. Sterling weakness ensured that upward pressures on inflation came from higher import prices and the y-o-y rate had risen to 2.1% by the financial year end.

The Retail Prices Index (RPI) measure of inflation, which is used to set the cash flows on index-linked gilts, started the financial year at 3.4% y-o-y and was range-bound between 3.2% and 3.5% (the financial year peak, reached in August 2018) until December 2018. From this point the rate fell relatively rapidly from 3.2% to 2.4% in March 2019.

[4] Quarterly averages for financial years 2016-17 and 2017-18 were 0.45% and 0.3% respectively.

Gilt market developments

Nominal Par[5] gilt yields

Nominal gilt yields fell along the curve in 2018-19, with maturities up to 25 years falling most, whilst ultra-long yields fell only marginally. Over the course of the financial year, 2-year par yields fell by 13 basis points (bps)6 to 0.64%, 5-year yields by 32bps to 0.71% and 10-year yields by 39bps to 1.03%, whilst 30-year yields fell by 14bps to 1.56% but 50-year yields by only 4bps to 1.43% (see Chart 1).

Chart 1: Nominal par gilt yield curves

Source: DMO

Real par yields

Real par yields fell most sharply at shorter maturities (up to the 15 year area) and in particular at the 10-year area. For longer maturities yield falls were relatively small. 5-year real par yields fell by 57bps to -2.37%, and 10-year real par yields by 61bps to -2.24%, whilst 30-year real par gilt yields fell by 13bps to -1.74% and 50-year real par yields fell by only 8bps to -1.79% (see Chart 2).

The pattern of curve changes in both the nominal and real yield curves is consistent with feedback received from the market that the focus of demand, in particular from Liability Driven Investment (LDI) investors in the UK pension industry, was transitioning from ultra-long maturities shorter down the curve to the 25-35 year area.

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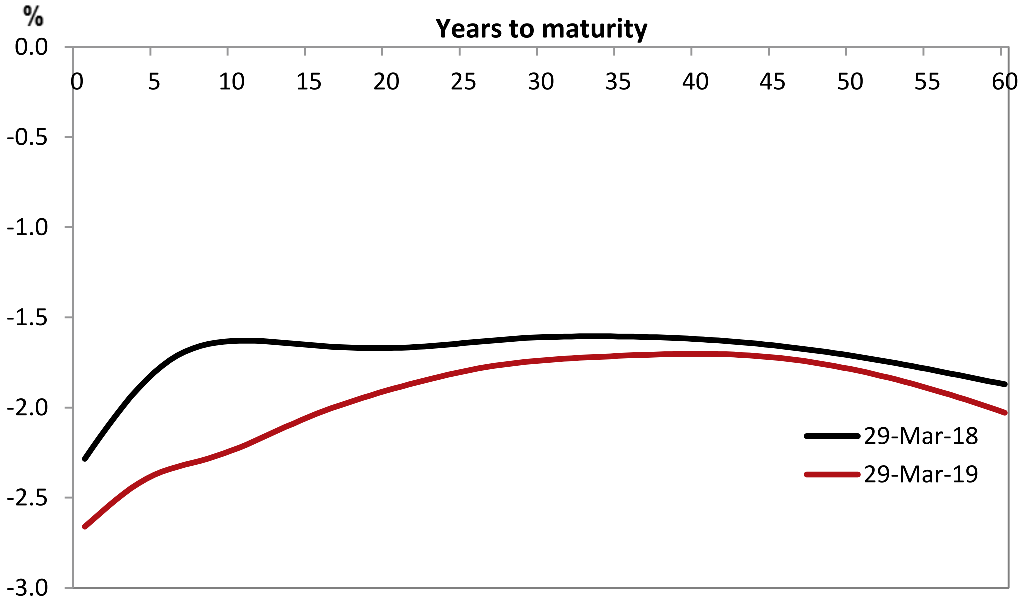
[5] A par yield curve is a graphical representation of the yields of a range of bonds with different maturities, but priced at par. On the par yield curve, the coupon rate on each bond will equal the yield-to-maturity of that bond.

[6] One basis point =100th of one per cent.

Chart 2: Real par gilt yield curves



Source: DMO

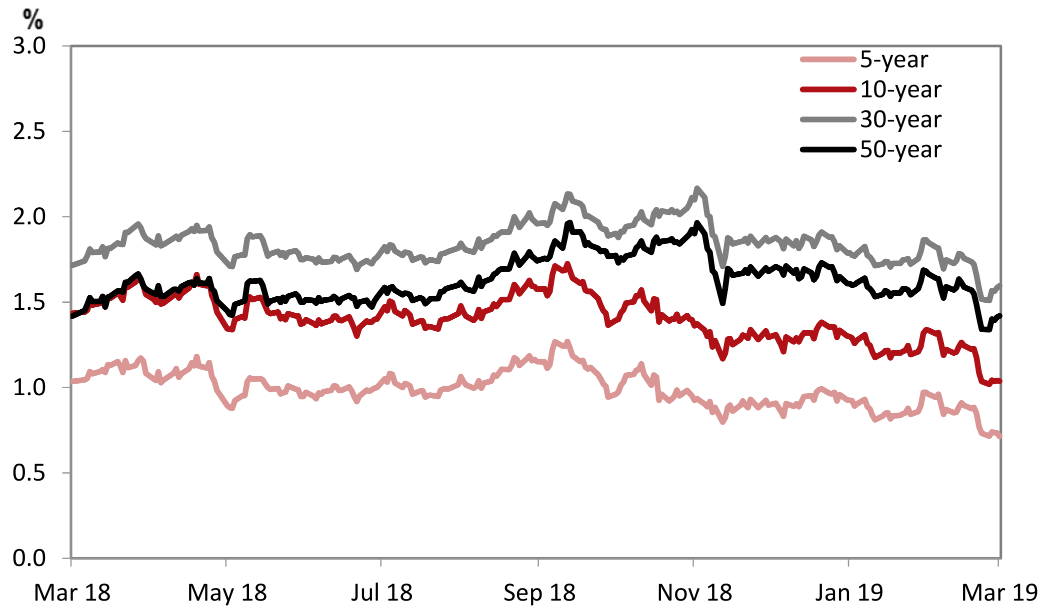
Nominal yields

Chart 3 shows the path of conventional benchmark gilt yields at 5-,10- 30- and 50-year maturities. While yields were relatively range-bound in the first half of the year, the second half the year saw yields at the short and medium areas of the curve on a clear downward path towards record low levels.

Market direction during the financial year was driven domestically primarily by the perceived progress of the UK's negotiations to leave the European Union. Internationally declining expectations for economic growth exacerbated by geo-political developments, in particular concerning relations between the US and China and the US and Iran, drove yields lower. As sentiment deteriorated, a flight to quality to core government bond markets, including gilts, took place.

The yield on the 5-year benchmark gilt fell by 32bps to 0.71% and that on the 10-year by 40bps to 1.04%, whereas the 30-year benchmark yield fell by 12bps to 1.60% and that on the 50-year ended the financial year was unchanged at 1.42%.

Chart 3: Nominal gilt yields

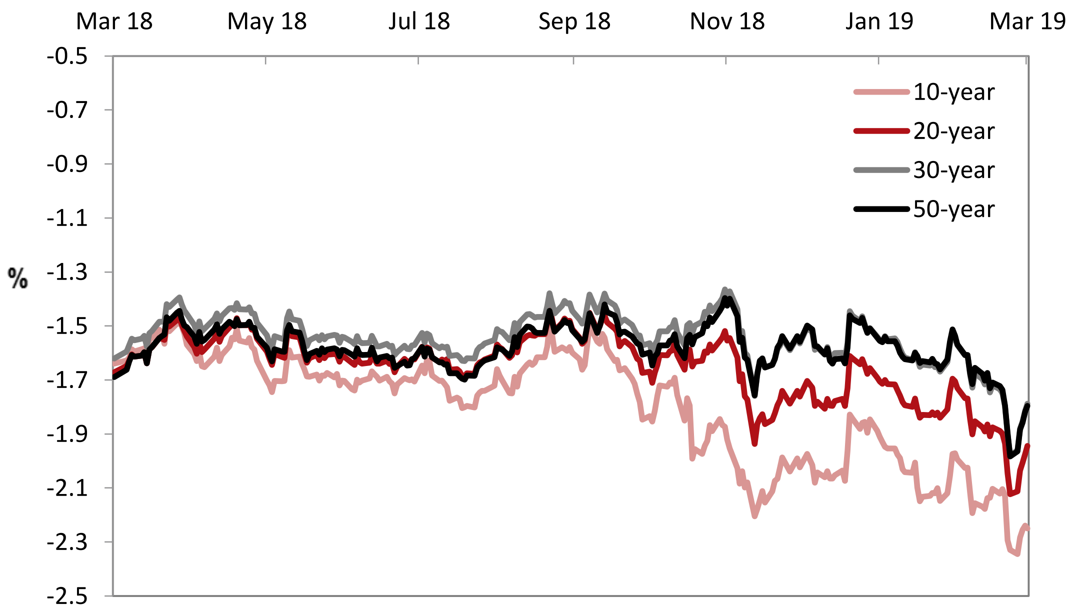


Source: DMO

Real gilt yields

Chart 4 shows the real yields on selected benchmark index-linked maturities in 2018-19, all of which fell (albeit marginally at longer maturities) over the course of the financial year. The real yield on the 10-year benchmark fell by 61bps to -2.25% and the real yield on the 10-year fell by 27bps to -1.94%. Among longer maturities the real yield on the 30-year fell by 17bps to -1.79% and that on the 50-year by 11bps to -1.80%.

Chart 4: Real gilt yields

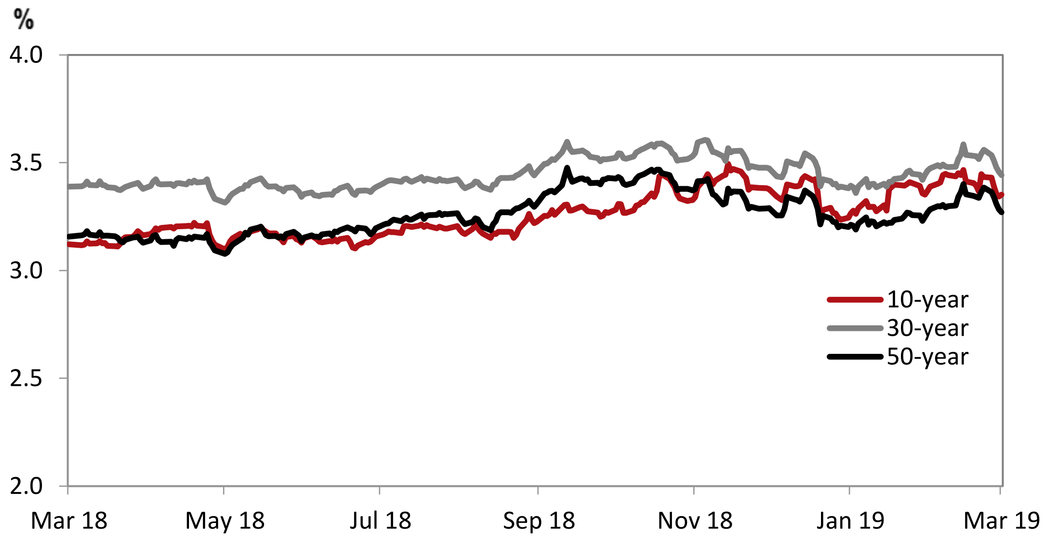


Source: DMO

Break-even inflation rates

Over the course of 2018-19, 10-year break-even inflation rates (BEIRs) rose by 23bps (to 3.35%), while 30-year and 50-year BEIRs rose by 5bps (to 3.44%) and 11bps (to 3.27%) respectively (see Chart 5). Index-linked gilts, as measured by BEIRs, therefore outperformed their conventional gilt counterparts marginally over the course of the financial year, but to a greater extent at shorter maturities.

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

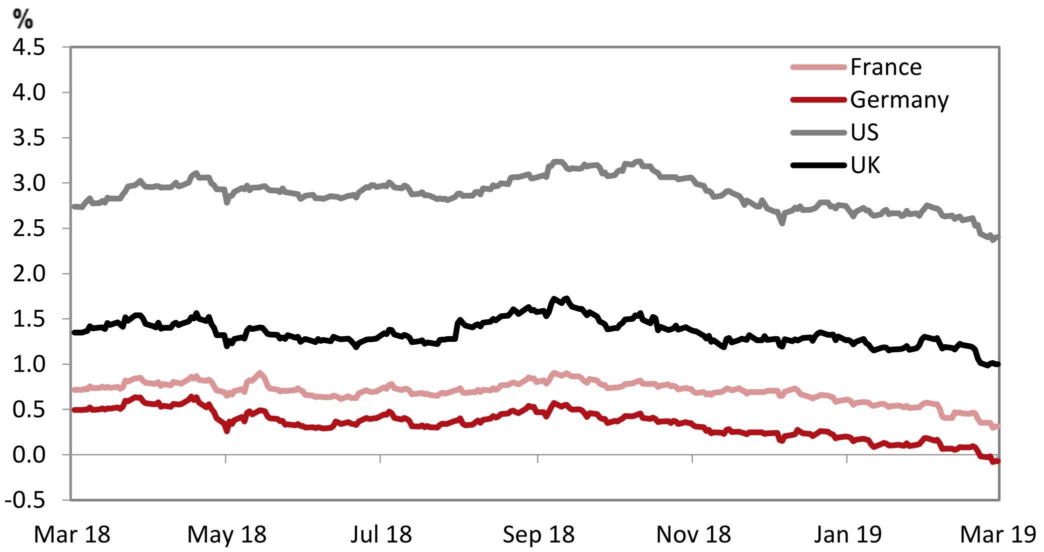


Source: Bloomberg/DMO

International comparisons

Yields on 10-year UK, US, German and French government bonds all ended the financial year lower. In the UK 10-year yields fell by 35bps, by 40bps in France by 33bps in the US and in Germany by 57bps (ending the financial year in negative territory at -7bps (see Chart 6)).

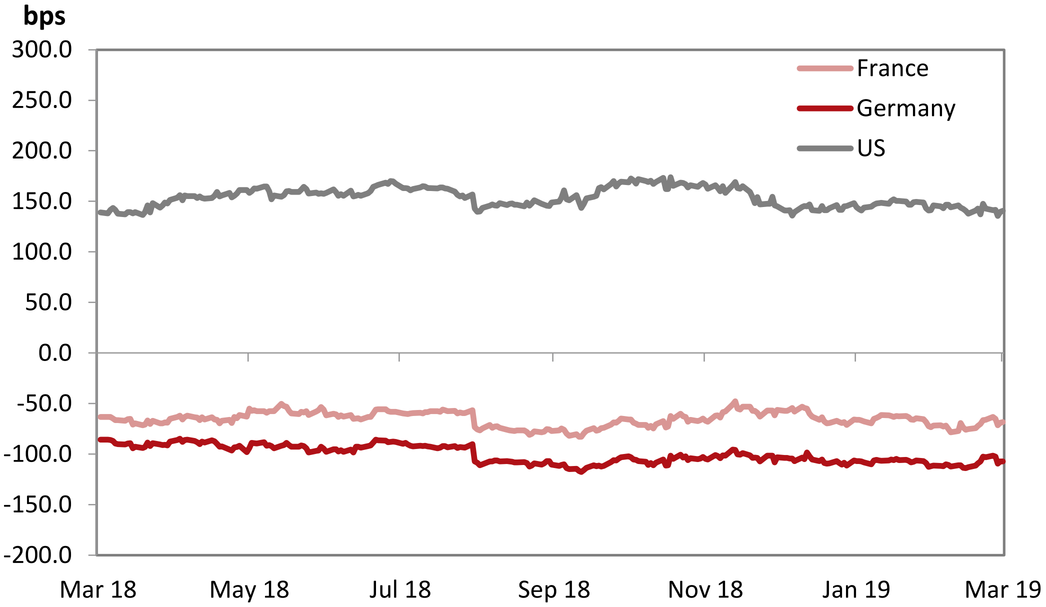
Chart 6: Selected international 10-year benchmark yields



Source: Bloomberg

The spread between 10-year gilt yields and comparable 10-year US Treasury yields and French bond yields were almost unchanged over the course of 2018-19; the spread against US Treasuries widened by 2bps to 141bps and against French bonds it widened by 5bps to -68bps. The spread against German 10-year widened by 22bps to -107bps (see Chart 7).

Chart 7: Selected international 10-year benchmark bond yield spreads to 10-year gilts



Source: DMO

Gilt market turnover

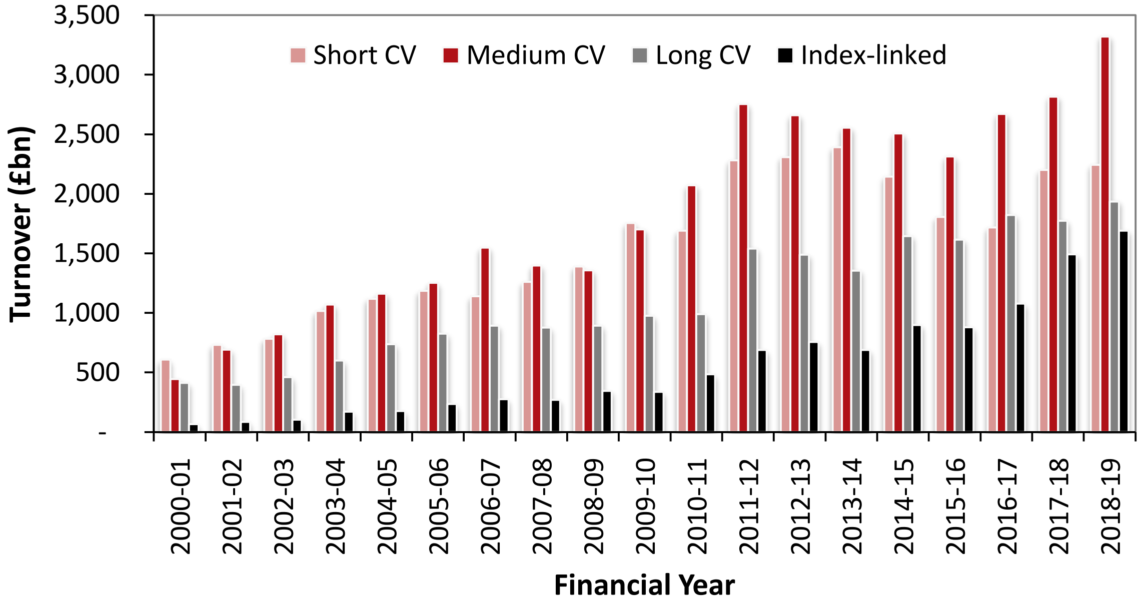
Aggregate gilt market turnover in 2018-19 rose by £907 billion (11%) compared with the previous financial year (from £8.28 trillion to a new record high of £9.19 trillion). Turnover rose in short conventional gilts by 2% to £2.24 trillion, in medium conventional gilts by 18% to £3.32 trillion, by 9% in long conventional gilts to £1.94 trillion and in index-linked gilts by 13% to £1.69 trillion. Developments in gilt market turnover are shown in Table 1 and Chart 8.

Table 1: Aggregate gilt market turnover by GEMMs (£ billion)[7]

	Short	Medium	Long	Index-linked	Total
2000-01	608	446	412	65	**1,531**
2001-02	733	692	396	86	**1,907**
2002-03	784	822	460	103	**2,168**
2003-04	1,016	1,071	599	172	**2,858**
2004-05	1,120	1,161	738	176	**3,195**
2005-06	1,186	1,252	825	236	**3,500**
2006-07	1,139	1,548	893	276	**3,856**
2007-08	1,262	1,399	877	271	**3,808**
2008-09	1,389	1,358	894	346	**3,988**
2009-10	1,754	1,702	976	336	**4,769**
2010-11	1,691	2,073	991	485	**5,240**
2011-12	2,280	2,753	1,541	689	**7,263**
2012-13	2,308	2,659	1,488	757	**7,213**
2013-14	2,391	2,555	1,356	690	**6,992**
2014-15	2,145	2,506	1,646	898	**7,196**
2015-16	1,805	2,313	1,615	880	**6,613**
2016-17	1,717	2,670	1,822	1,078	**7,288**
2017-18	2,201	2,817	1,773	1,493	**8,284**
2018-19	2,244	3,321	1,936	1,690	**9,191**

Source: Gilt-edged Market Makers (GEMMs)

Chart 8: GEMM gilt market turnover



Source: Gilt-edged Market Makers (GEMMs)

[7] These data cover only those transactions conducted by recognised GEMMs, and are therefore not wholly comprehensive in terms of turnover in the entire gilt market. Nevertheless, they should represent a significant proportion of total transaction volume.

Money market developments

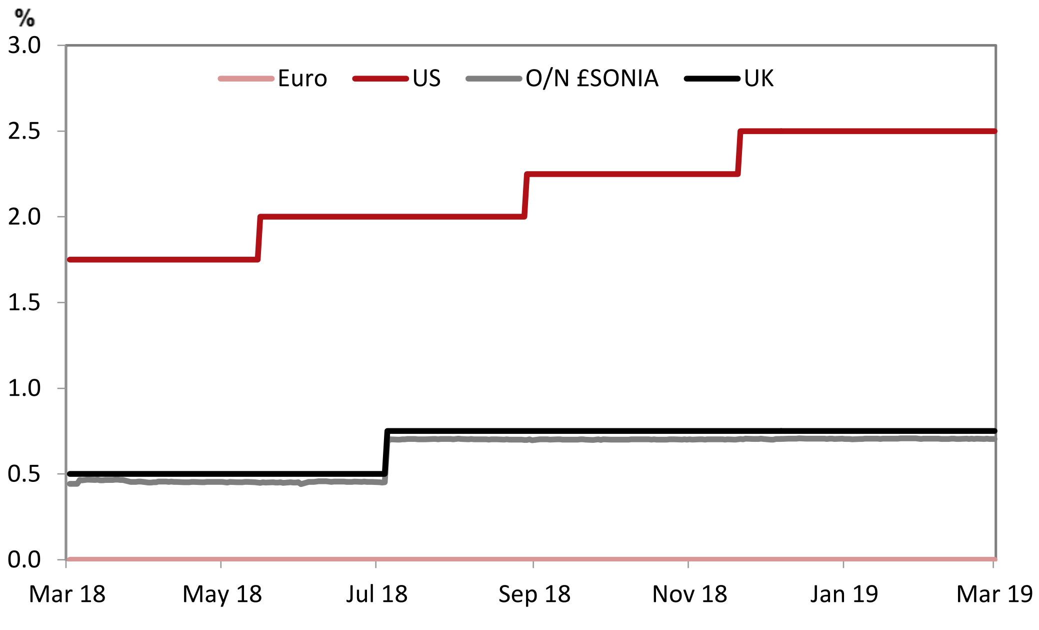
In the UK, the Bank's Monetary policy Committee (MPC) voted in August 2018 to increase the Bank Rate from 0.5% to 0.75%. This level was maintained for the remainder of the financial year. The MPC voted to maintain the stock of purchased gilts at £435 billion.

The ECB maintained an accommodative monetary policy stance during 2018-19 keeping its main Refinancing Rate at a historic low of 0.0%. It also maintained a -0.40% rate on it's deposit facility, the rate at which banks may make overnight deposits with the ECB. The Bank continued to invest in securities under the asset purchase programme (APP) until December 2018. From this point the APP began a reinvestment phase (i.e. purchasing new assets only with funds from maturing assets). In March 2019 targeted longer-term refinancing operations (TLTROs) were reintroduced to provide banks with long-term funding designed to stimulate onward lending to the real economy.

The US Federal Reserve Board increased the target range for the Federal Funds rate three times, each time by 0.25%, from 1.50%-1.75% to 1.75%-2.00% in June 2018, to 1.75%-2.00% in September 2018 and from 2.00%-2.25% in December 2018. However, by the end of the financial year 2018-19, market rates implied that further rate hikes were unlikely in the near term and in fact, that rate cuts were probable.

The pattern of official interest rates is shown in Chart 9.

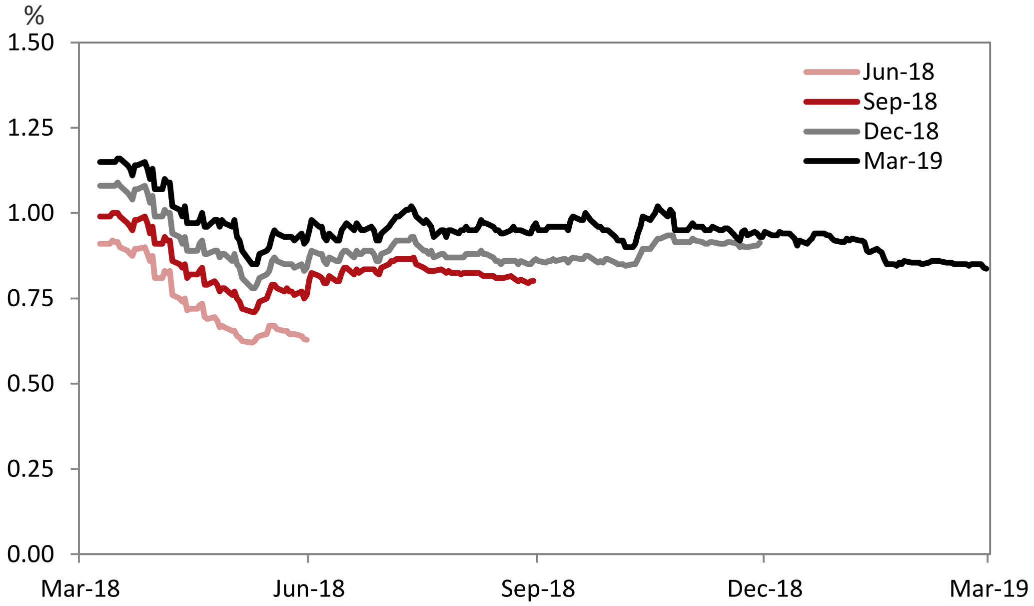
Chart 9: Official interest rates



Source: Bloomberg

The changing path of future interest rate expectations over 2018-19 can be seen in the implied rates of short sterling contracts shown in Chart 10. Sterling market rates generally implied that the Bank Rate was likely to be relatively stable in 2018-19 (as indeed it turned out to be).

Chart 10: Implied interest rate expectations



Source: Bloomberg

Chapter 2: Government Debt Management

The DMO's financing remit for 2018-19

In 2018-19, the DMO successfully delivered the gilt sales programme, as needed to meet the government's net financing requirement for the financial year. The DMO's gilt sales target started the financial year at £102.9 billion, as announced in the Spring Budget on 13 March 2018. This was increased slightly to £106.0 billion, following the outturn for the CGNCR (ex NRAM, B&B and NR)[8] for 2017-2018 on 24 April 2018.

Net sales of Treasury bills were initially planned to make a zero contribution to debt financing in 2018-19. This planning assumption was changed at the Autumn Budget 2018 on 29 October 2018 when net sales of Treasury bills for debt management purposes were reduced by £4.0 billion, i.e. to a planned negative net contribution to financing of £4.0 billion.

At the 2018 Autumn Budget, the DMO's net financing requirement (NFR) fell by £12.4 billion to £93.5 billion[9], with planned gilt sales falling by £8.5 billion to £97.5 billion. Overall gilt sales in the financial year were £98.6 billion, successfully delivering the remit, with the £1.1 billion of additional sales above the planned total reflecting take-up of the Post Auction Option Facility (PAOF) at auctions towards the end of the financial year.

A total of 36 gilt auctions were held in 2018-19, with an average release time for auction results of 3.8 minutes. Gilt auctions remained the core of the financing programme, raising £79.4 billion (80.5% of total gilt sales).

The auction programme was supplemented by a programme of four syndicated offerings (two each of long-dated conventional and index-linked gilts) which raised £19.2 billion (19.5% of total gilt sales). Such was the demand for this programme that three of the syndications were increased in size above initial planning assumptions. This resulted in £1.8 billion of a £6.7 billion unallocated supplementary issuance amount being re-directed to the syndication programme to accommodate these increases.

In addition, £2.8 billion of the unallocated supplementary issuance amount was allocated to the short (£1.3 billion), medium (£1.1 billion) and long (£0.4 billion) conventional auction programmes to increase average auction sizes, which had been reduced due to take-up of the PAOF. In addition, £2.1 billion of the unallocated amount was cancelled at the Autumn Budget 2018 as part of the management of the lower financing requirement. No gilt tenders were scheduled in 2018-19.

The PAOF, through which successful bidders at gilt auctions have the right to acquire up to an additional 15% of their auction allocation, was activated 20 times out of 36 auctions, raising £5.1 billion of the £79.4 billion raised by gilt auctions.

The significant difference in the gilt issuance profile in 2018-19 compared to the previous financial year was an intended reduction in the proportion of index-linked issuance, reflecting the government's stated intention to look to reduce the proportion of index-

[8] Central Government Net Cash Requirement (excluding Northern Rock (Asset Management) (NRAM), Bradford & Bingley (B&B) and Network Rail (NR)).

[9] Figures may not sum due to rounding. The published NFR fell from £106.0 billion to £93.5 billion, optically a reduction of £12.5 billion. The more detailed reduction was, however, from £105.960 billion to £93.525 billion, a reduction of £12.435 billion.

linked issuance in a measured fashion as a share of total issuance over the medium term, reflecting the government's preferences for inflation exposure.

Short-dated conventional gilt issuance was £26.2 billion (26.5% of sales), medium-dated conventional gilt issuance was £21.2 billion (21.5% of sales), and long-dated conventional gilt issuance was £29.9 billion (30.3% of sales). Index-linked gilt issuance was £21.4 billion (21.7% of sales, compared to a share of 24.7% in 2017-18).

Average daily turnover in the gilt market in 2018-19 was £36.3 billion, an increase of £3.3 billion from 2017-18. Maintaining market liquidity is a key factor in addressing the needs of a diversified investor base.

The DMO also delivered a large Treasury bill sales programme comprising sales for both debt and cash management purposes. The stock of Treasury bills issued for debt management purposes fell by £4.0 billion during the year to £56.0 billion at 31 March 2018 to help manage the reduction in the DMO's financing requirement announced at Autumn Budget 2018.

Table 2: The 2018-19 gilt financing remit structure at Spring Statement 2018

(£ billion Proportions in brackets)	Auction	Syndication	Gilt tender	Unallocated	Total
Short	24.9	-	-	-	24.9 (24.2%)
Medium	20.3	-	-	-	20.3 (19.7%)
Long	20.4	9.0	-	-	29.4 (28.5%)
Index-linked	13.7	8.0	-	-	21.7 (21.1%)
Unallocated	-	-	-	6.6	6.6 (6.4%)
Total	**79.3 (77.1%)**	**17.0 (16.5%)**	**- -**	**6.6 6.4%**	**102.9**

Figures may not sum due to rounding.

Source: DMO

Table 3: The revised remit structure at 24 April 2018

(£ billion Proportions in brackets)	Auction	Syndication	Gilt tender	Unallocated	Total
Short	25.6	-	-	-	25.6 (24.2%)
Medium	21.0	-	-	-	21.0 (19.8%)
Long	20.8	9.5	-	-	30.3 (28.6%)
Index-linked	13.9	8.5	-	-	22.4 (21.1%)
Unallocated	-	-	-	6.7	6.7 (6.3%)
Total	**81.3 (76.7%)**	**18.0 (17.0 %)**	**- -**	**6.7 6.3%**	**106.0**

Figures may not sum due to rounding.

Source: DMO

Table 4: The revised remit structure at Autumn Budget 2018

(£ billion Proportions in brackets)	Auction	Syndication	Gilt tender	Unallocated	Total
Short	24.9	-	-	-	24.9 (25.5%)
Medium	20.3	-	-	-	20.3 (20.8%)
Long	19.2	10.5	-	-	29.7 (30.5%)
Index-linked	12.7	8.4	-	-	21.1 (21.6%)
Unallocated	-	-	-	1.5	1.5 (1.5%)
Total	**77.1 (79.1%)**	**18.9 (19.4%)**	**- -**	**1.5 (1.5%)**	**97.5**

Figures may not sum due to rounding.

Source: DMO

Remit 2018-19: Gilt sales outturn

The outturn for gross gilt sales in 2018-19 was £98.6 billion, £1.1 billion above the remit target; this largely reflected the high level of take-up of the Post Auction Option Facility at auctions towards the end of the financial year. The gilt sales v remit position at the end of 2018-19 is shown in Table 5 below.

Table 5: Gilt sales outturn 2018-19

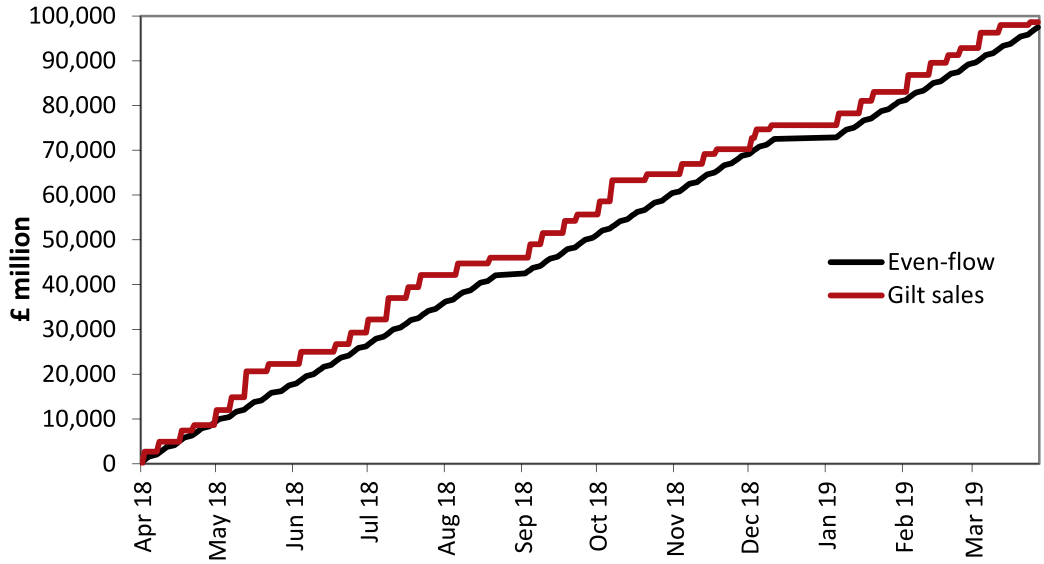
(£ million)	Conventional gilts			Index-linked gilts	Total
	Short	Medium	Long		
Auction proceeds	25,033	20,050	17,267	11,952	74,301
PAOF proceeds	1,134	1,118	2,066	787	5,104
Auction and PAOF proceeds	**26,166**	**21,168**	**19,333**	**12,739**	**79,406**
Syndication sales	-	-	10,562	8,633	19,196
Gilt tender sales	-	-	-	-	-
Total gilt sales	**26,166**	**21,168**	**29,895**	**21,372**	**98,602**
Planned gilt sales at auctions	25,700	20,800	19,200	12,700	78,400
Number of auctions scheduled	9	8	9	10	36
Syndication sales plans	-	-	10,500	8,600	19,100
Total planned supplementary gilt sales	-	-	-	-	19,100
Total planned gilt sales	**-**	**-**	**-**	**-**	**97,500**

Figures may not sum due to rounding.

Source: DMO

Gilt sales proceeds were received on a broadly even-flow basis throughout the year as illustrated in Chart 11, which shows cumulative proceeds from all operations, including proceeds from the PAOF in 2018-19.

Chart 11: Cumulative gilt sales proceeds and business day even-flow 2018-19



Source: DMO

The in-year changes to the 2018-19 financing arithmetic are shown in Table 6.

Table 6: The 2018-19 financing arithmetic[1]

(£ billion)	Spring Budget 2018	April 2018 outturn	Autumn Budget 2018	Spring Statement 2019	April 2019 outturn
CGNCR (ex NRAM, B&B and NR)	40.6	40.6	31.2	34.0	37.3
Gilt redemptions	66.7	66.7	66.7	66.7	66.7
Planned financing for the Official Reserves	6.0	6.0	6.0	6.0	6.0
Financing adjustment carried forward from previous financial years	-4.5	-1.4	-1.4	-1.4	-1.4
Gross financing requirement	**108.9**	**112.0**	**102.5**	**105.4**	**108.6**
less:					
NS&I net financing	6.0	6.0	9.0	11.0	10.8
Other financing[2]	0.0	0.0	0.0	-0.2	-0.7
NFR for the DMO	**102.9**	**106.0**	**93.5**	**94.6**	**98.6**
DMO's NFR will be financed through:					
a) Gilt sales of which:	**102.9**	**106.0**	**97.5**	**98.3**	**98.6**
Short conventional gilts	24.9	25.6	24.9	26.2	26.2
Medium conventional gilts	20.3	21.0	20.3	21.2	21.2
Long conventional gilts	29.4	30.3	29.7	29.7	29.9
Index-linked gilts	21.7	22.4	21.1	21.3	21.4
Unallocated amount of gilts	6.6	6.7	1.5	0.0	0.0
b) Total net contribution of Treasury bills for debt financing	**0.0**	**0.0**	**-4.0**	**-4.0**	**-4.0**
Total financing	**102.9**	**106.0**	**93.5**	**94.3**	**94.6**
DMO net cash position	0.5	0.5	0.5	0.2	-3.5

1 Figures may not sum due to rounding.

2 Prior to publication of the end-year outturn in April each year, this financing item will mainly comprise estimated revenue from coinage. At outturn it will include outturn revenue from coinage and additional financing through non-governmental deposits, certificates of tax deposit and foreign exchange transactions relating to the Exchange Equalisation Account.

Source: DMO

The DMO's gilt financing operations in 2018-19

- ### Auctions

Auctions continued to be the primary issuance method for delivery of the DMO's gilt sales accounting for £79.4 billion or 80.5% of gross gilt sales.

36 gilt auctions were held in 2018-19: nine of short, eight of medium and nine of long conventional gilts, and 10 of index-linked gilts[10].

The average cover ratio at gilt auctions in 2017-18 was 2.09x, 9% lower than the average of 2.30x in 2017-18 although still a satisfactory level. The average concentration of bidding at conventional gilt auctions, as measured by the tail[11], remained tight, at an average of 0.5bps, compared with 0.3bps in the previous financial year. Details are shown in Table 7.

Table 7: Auction cover and tail 2017-18 and 2018-19

	Average cover ratio (x)		Average yield tail (bps)	
	2018-19	**2017-18**	**2018-19**	**2017-18**
Short conventional	1.99	2.42	0.5	0.3
Medium conventional	2.16	2.30	0.2	0.2
Long conventional	2.06	1.97	0.9	0.5
Index-linked	2.18	2.50	N/A	N/A
All	**2.09**	**2.30**	**0.5**	**0.3**

Source: DMO

- ### Syndicated offerings

Four syndicated offerings were held in 2018-19 raising £19.2 billion or 19.5% of gross gilt sales. The total raised by the programme was £2.2 billion more than the original plan, primarily reflecting allocations into the syndication programme from the unallocated supplementary portion of gilt issuance. The results of the syndication programme in 2018-19 are summarised in Table 8.

[10] The results of gilt auctions and other operations are available on the DMO's website at: https://www.dmo.gov.uk/data/pdfdatareport?reportCode=D2.1PROF7

[11] The tail is the difference in basis points between the yield at the average and lowest accepted prices at multiple price auctions (conventional gilts only).

Table 8: Syndications in 2018-19

Date	Gilt	Size (£mn nominal)	Issue Price (£)	Issue Yield (%)	Proceeds (£mn cash)
15 May 2018	1⅝% Treasury Gilt 2071	6,000	97.615	1.693	5,843
11 Jul 2018	0⅛% Index-linked Treasury Gilt 2041	3,250	148.973	-1.617	4,835
9 Oct 2018	1⅝% Treasury Gilt 2071	5,250	90.085	1.924	4,719
5 Feb 2019	0⅛% Index-linked Treasury Gilt 2041	2,500	149.583	-1.679	3,798
Total					**19,196**

Source: DMO

The financing remit for 2019-20

The DMO received its financing remit for 2019-20 in the Spring Statement on 13 March 2019. Planned gilt sales of £114.1 billion were announced, an increase of £11.2 billion (10.9%) compared to the initial planned sales in 2018-19. In addition, planned net sales of Treasury bills for debt management purposes of £4.0 billion were announced (reversing the reduction announced at Autumn Budget 2018).

The DMO's gilt sales target for 2019-20 was increased by £3.7 billion to £117.8 billion at the remit revision coinciding with the publication of the outturn CGNCR (ex NRAM, B&B and NR) for 2018-19 on 24 April 2019. The increase in gilt sales is to be delivered by via slightly larger average auction sizes.

Chapter 3: Exchequer Cash Management

Exchequer cash management remit 2018-19

The DMO's cash management remit for 2018-19, published alongside the Spring Statement on 12 March 2018, specified that the government's cash management objective is:

> "to ensure that sufficient funds are always available to meet any net daily central government cash shortfall and, on any day when there is a net cash surplus, to ensure this is used to best advantage".

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

Instruments and operations used in Exchequer cash management

In 2018-19 the DMO carried out its cash management objective primarily through a combination of:

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

The average accepted yields achieved at the weekly Treasury bill tenders are assessed against the SONIA rates for the relevant maturities. These are reported in Annex B.

The stock of Treasury bills in issue can vary within year and across the financial year-end according to cash management requirements[12].

[12] Details are published on the DMO website at: https://www.dmo.gov.uk/data/treasury-bills/treasury-bill-issuance-and-stock/. The breakdown of the Treasury bill portfolio by maturity date is published on the DMO website at: https://www.dmo.gov.uk/data/treasury-bills/treasury-bills-outstanding/

Bilateral cash management operations

In practice, the most significant portion of cash management operations in 2018-19, as in previous years, was negotiated bilaterally by the DMO with market counterparties. To ensure competitive pricing, the DMO maintains relations with a wide range of money market counterparties with whom it transacts both directly and via voice and electronic brokers.

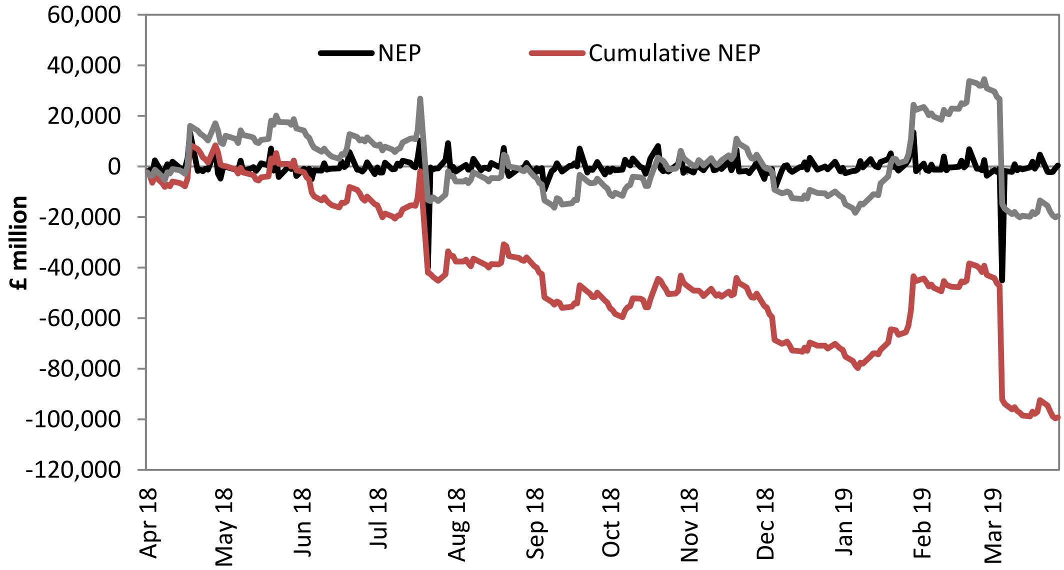
Cash management is conducted using market instruments in order to minimise cost whilst operating within agreed risk limits. Sterling-denominated repurchase agreements (repo) and reverse repurchase agreements currently dominate these transactions, though short-dated cash bonds, certificates of deposit, commercial paper, reverse repo of foreign currency bonds swapped into sterling, unsecured loans and deposits can also be used.

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

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

Chart 12 shows the scale of daily cash flows measured in terms of the Net Exchequer Position (NEP) in 2018-19 on a daily and cumulative basis. The NEP excludes the effects of gilt sales, Treasury bill issuance and NS&I's overall net contribution to financing, and therefore shows the cumulative in-year deficit which has to be financed. Chart 12 also shows the net effect including gilt sales demonstrating how the timing of these flows makes a significant contribution to reducing the in-year financing required by Exchequer cash management operations.

Chart 12: Exchequer cash flows 2018-19



Source: HM Treasury/DMO

Active cash management performance framework

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

This active cash management framework is designed to allow specialist cash managers to select appropriate counterparties, instruments and maturities with which to deliver the cash management remit at minimum cost subject to the agreed risk limits. Formal performance reporting is in place as a means of enhancing effectiveness and ensuring accountability and the results for 2018-19 are presented in Annex B. HM Treasury and the DMO recognise that performance measurement needs to capture the wider policy objectives the government sets the DMO as its cash manager, as well as the cost minimisation objective, and for this reason a number of key performance indicators are used, including a quantifiable measure of net interest saving which is shown under key performance indicator (KPI) 1.4.

HM Treasury and the DMO equally recognise that to measure performance solely in terms of net interest savings is a somewhat narrow interpretation that does not fully capture the ethos or the wider policy objectives the government sets the DMO as its cash manager. Exchequer cash management differs from that of a commercial entity in that it does not seek to maximise profits, but rather to minimise costs subject to risk, while playing no role in the determination of sterling interest rates. Consequently the DMO and HM Treasury monitor and assess overall performance in meeting the government's objectives using a number of quantitative and qualitative KPIs and controls. A full report on performance in 2018-19 is presented in Annex B.

Chapter 4: Fund Management

The origins of the Commissioners for the Reduction of the National Debt (CRND) date back to the passing of the National Debt Reduction Act of 1786. From their earliest days the Commissioners also had associations with the stock market and this led to a diversification of CRND operations, including in particular responsibility for the investment of major government funds. This now constitutes the main function of CRND, which since 2002 has been carried out under the auspices of the DMO.

CRND had funds under management of £35.0 billion by market value at end-March 2019, representing the assets of the various investment accounts.

The investment powers differ to some extent from fund to fund, depending upon the provisions of the relevant Acts of Parliament or risk profiles agreed with fund owners, but essentially investments are restricted to cash deposits or government-issued and government-guaranteed securities. Currently, the largest funds are the National Insurance Fund Investment Account, the Court Funds Investment Account and the National Lottery Distribution Fund Investment Account. The main funds under CRND management at 31 March 2019 were as follows:

- National Insurance Fund Investment Account
- Court Funds Investment Account
- National Lottery Distribution Fund Investment Account
- Northern Ireland National Insurance Fund Investment Account
- Insolvency Services Investment Account
- Northern Ireland Court Service Investment Account
- Various smaller legacy administrative accounts, including the Donations and Bequests Account, which processes any gifts to the nation for the purpose of debt reduction.

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

Annexes:

A) GEMMs and Inter Dealer Brokers (IDBs)[13]

B) Debt and cash management performance

C) The gilt portfolio

[13] More information can be found at the DMO's website at: www.dmo.gov.uk/responsibilities/gilt-market/market-participants/

ANNEX B: Debt and cash management performance

This Annex includes data on the DMO's performance in the execution of the gilt financing and Exchequer cash management remits in 2018-19.

The gilt data compare the actual cost of gilt issuance (measured by the average yield at which gilts were sold in accordance with the DMO's financing remit) with illustrative counterfactual costs of different patterns of gilt financing. It also looks at the performance of gilt auctions by comparing the average accepted/strike price of an auction with prevailing secondary market price levels.

Table 7 on page 19 of this Review reports on the average cover ratios at all gilt auctions in 2018-19 and on the concentration of bidding (the tail) at conventional gilt auctions.

The cash management material in this Annex comprises a formal report on compliance with the DMO's published Key Performance Indicators (KPIs) in respect of Exchequer cash management and a comparison of the average yields achieved at weekly Treasury bill tenders with the prevailing SONIA rate for comparable maturities.

Other aspects of the DMO's performance each financial year are reported in the DMO's Annual Report and Accounts[14]. These comprise (page references refer to the 2018-19 Accounts published on 23 July 2019):

- A review of the DMO's main activities (pages 16-19);
- A report on achievements against agency objectives as set by HM Treasury (pages 22-23);
- A report on performance against agency targets (pages 24-26), including:
    - Compliance with the financing remit
    - Gilt and Treasury bill operation results - release times
    - Accuracy of the recording of transactions through the Debt Management Account
    - Compliance with the Freedom of Information Act 2000
    - Avoidance of breaches of operational notices
    - Compliance with the schedule for reporting cash management operational balances
    - Accurate and timely administration of settlement procedures
    - Accuracy of publications and timeliness of announcements
    - Timeliness of processing of local authority loan and early repayment applications
    - Appropriate operation of the DMO (retail) gilt purchase and sales service
    - Appropriate administration of the National Loan Guarantee Scheme.

[14] The Annual Report and Accounts for 2018-19 are available at: https://www.dmo.gov.uk/media/16024/dmodmarep2019.pdf

a) Gilt issuance counterfactuals

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

The calculations compare the cash weighted yield of actual issuance with the yield on various counterfactual issuance patterns but on the basis of a key assumption that the different issuance patterns modelled would not have impacted the levels of yields relative to those achieved in practice (see below).

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

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

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

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

The cash weighted average yield of actual issuance at the gilt auctions and syndicated offerings in 2018-19 was 1.418% (12.1 bps higher than the 1.297% in the previous financial year).

The cash weighted average yield of issuance by type of gilt and maturity is shown in Table B1. Note that the index-linked yields reported in Tables B1 and B2 are nominalised yield equivalents of real yields assuming 3% RPI inflation.

Table B1: Average issuance yield by type and maturity of gilt in 2018-19

	Cash (£mn)	Yield (%)
Conventional		
Short	26,166	1.080
Medium	21,168	1.451
Long	29,895	1.773
Total conventional	**77,229**	**1.450**
Index-linked		
Medium	5,908	1.147
Long	15,464	1.363
Total index-linked	**21,372**	**1.303**
All issuance	**98,602**	**1.418**

Source: DMO

The actual yield of 1.418% can be compared with yields derived by applying the actual annual cash weighted yield on total issuance for that year of different maturities/types of gilt to different gilt issuance patterns. Table B2 contrasts the actual average issuance yield in 2018-19 with three counterfactuals which assume the same yields by maturity and type as shown above, but with alternative issuance skews, namely:

- a significantly greater skew towards short issuance;
- a more even-distribution of financing between maturity buckets; and
- a significantly greater skew towards long issuance.

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Table B2: Illustrative average issuance yields assuming different issuance distributions

	Yield (%)	Actual distribution £mn	Shorter distribution £mn	Even distribution £mn	Longer distribution £mn
Conventional					
Short	1.080	26,166	38,615	25,743	19,307
Medium	1.451	21,168	19,307	25,743	19,307
Long	1.773	29,895	19,307	25,744	38,615
Total conventional	**1.450**	**77,229**	**77,229**	**77,229**	**77,229**
Index-linked					
Medium	1.147	5,908	14,319	10,686	2,137
Long	1.363	15,464	7,053	10,686	19,235
Total index-linked	**1.303**	**21,372**	**21,372**	**21,372**	**21,372**
All issuance		**98,602**			
Average issuance	**1.418**		**1.318**	**1.396**	**1.484**
Difference (bps)			**-10.0**	**-2.2**	**6.3**

Figures may not sum due to rounding.

Source: DMO

The more even distribution to financing by maturity produces an average yield of issuance just 2.3bps lower than the actual average yield, mainly reflecting the greater proportion of lower yielding short and medium conventional gilts at the expense of long conventional gilts. As expected, given the current shape of the yield curve, the shorter distribution[15] produces an implied issuance yield 10.1bps lower than the actual average yield while the longer distribution[16] produces an issuance yield 6.3bps higher than the actual average yield.

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

- the government's own appetite for risk, both nominal and real;
- the shape of both the nominal and real yield curves; and
- investors' demand for gilts.

b) Auction concession analysis

There are a number of ways to measure auction concessions. The method presented in Table B3 shows the extent of any concession/premium at gilt auctions by measuring the difference between the actual proceeds received and those that would have been generated had each gilt at auction been sold at the secondary market price of the gilt at the close of bidding (i.e.10.30am).

[15] This skew assumes 50% of conventional issuance is short with medium and long shares of 25% each. Index-linked issuance is assumed to be split 67% medium/33% long.

[16] This skew assumes 50% of conventional issuance is long with short and medium shares of 25% each. Index-linked issuance is assumed to be split 10% medium/90% long.

Table B3: Auction concession analysis

Date	Gilt	Concession (-) Premium (£mn)
04-Apr-18	0¾% Treasury Gilt 2023	1.26
10-Apr-18	1¾% Treasury Gilt 2057	4.28
19-Apr-18	1⅝% Treasury Gilt 2028	1.63
24-Apr-18	0⅛% Index-linked Treasury Gilt 2048	2.22
03-May-18	0¾% Treasury Gilt 2023	1.47
09-May-18	1⅝% Treasury Gilt 2028	1.43
24-May-18	0⅛% Index-linked Treasury Gilt 2036	1.41
06-Jun-18	0¾% Treasury Gilt 2023	1.05
20-Jun-18	0⅛% Index-linked Treasury Gilt 2028	0.57
26-Jun-18	1¾% Treasury Gilt 2037	2.50
03-Jul-18	1⅝% Treasury Gilt 2028	1.13
19-Jul-18	1¾% Treasury Gilt 2057	3.92
24-Jul-18	1% Treasury Gilt 2024	1.07
08-Aug-18	1⅝% Treasury Gilt 2028	1.30
21-Aug-18	0⅛% Index-linked Treasury Gilt 2028	0.72
06-Sep-18	1% Treasury Gilt 2024	1.23
11-Sep-18	1¾% Treasury Gilt 2049	2.68
20-Sep-18	1⅝% Treasury Gilt 2028	1.29
25-Sep-18	0⅛% Index-linked Treasury Gilt 2048	-1.34
04-Oct-18	1% Treasury Gilt 2024	0.75
23-Oct-18	0⅛% Index-linked Treasury Gilt 2028	0.19
06-Nov-18	1⅝% Treasury Gilt 2028	1.06
15-Nov-18	1¾% Treasury Gilt 2037	-8.88
20-Nov-18	0⅛% Index-linked Treasury Gilt 2056	6.70
04-Dec-18	1% Treasury Gilt 2024	0.95
06-Dec-18	1¾% Treasury Gilt 2049	1.96
12-Dec-18	0⅛% Index-linked Treasury Gilt 2048	4.01
08-Jan-19	1⅝% Treasury Gilt 2028	1.06
17-Jan-19	1% Treasury Gilt 2024	1.00
22-Jan-19	1¾% Treasury Gilt 2037	1.94
14-Feb-19	1⅝% Treasury Gilt 2028	0.99
21-Feb-19	1¾% Treasury Gilt 2057	3.45
26-Feb-19	0⅛% Index-linked Treasury Gilt 2028	1.45
06-Mar-19	1% Treasury Gilt 2024	0.75
14-Mar-19	1¾% Treasury Gilt 2049	1.92
26-Mar-19	0⅛% Index-linked Treasury Gilt 2048	0.02
Aggregate all auctions		**49.13**
Average all auctions		**1.36**
Average conventional auctions		**1.28**
Short-dated conventional auctions		1.06
Medium-dated conventional auctions		1.24
Long-dated conventional auctions		1.53
Average index-linked auctions		**1.59**

Source: DMO

A total premium of £49.13 million was achieved across the 36 gilt auctions held in 2018-19, an average of £1.36 million per auction - the corresponding numbers in 2017-18 were £76.78 million and £1.92 million.

The largest premium was £6.70 million at the auction of 0⅛% Index-linked Treasury Gilt 2056 on 20 November 2018 and the largest (of two) concessions was -£8.88 million at the auction of 1¾% Treasury Gilt 2037 on 15 November 2018.

c) The DMO's cash management objective: performance report

The DMO's high level cash management objective as set out in Chapter 3 has been subdivided into a series of objectives, to each of which has been attached a KPI. The following section explains how performance was delivered against these objectives in 2017-18.

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

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

Table B4: Components of the cash management objective

CASH MANAGEMENT OBJECTIVE	KEY PERFORMANCE INDICATORS AND CONTROLS
The DMO must supply sufficient cash each day to enable government to meet its payment obligations. This is fundamental and unconditional.	Ways and Means transfers must be avoided for cash management purposes by ensuring that there is always a positive Debt Management Account (DMA) balance. (NB: HM Treasury is responsible for monitoring and reporting performance of the forecasting function against outturns).
Cash management operations and arrangements should be conducted in a way that does not interfere with monetary policy operations.	The DMO will conduct market operations with a view to achieving, within a very small range, the weekly cumulative target balance for the DMA at the Bank of England. The DMO will maintain formal and informal channels of communication with the Bank on conditions in the Sterling money markets. The DMO will seek to avoid holding weekly or ad hoc Treasury bill tenders if and when the Bank conducts its weekly open market operations.
Cash management operations and arrangements should be conducted without impeding the efficient working of the Sterling money markets.	The DMO will advise HM Treasury as appropriate on the impact of Exchequer cash flows on liquidity conditions in the Sterling money markets.
The DMO should maintain a system in which the costs and risks are transparent, measured and monitored and the performance of government cash management is assessed. The DMO maintains an ethos of cost minimisation rather than profit maximisation.	The DMO will report to HM Treasury on a quarterly basis the details of its cash management activity, its active management performance against the government's marginal cost of funds and the market and credit risks incurred. Performance may also be reported in the DMO Annual Review.
The DMO should maintain a credible reputation in the market that leads to lower costs in the long term and a cash management system that is sustainable.	The DMO should maintain channels of communication with money market participants and Treasury bill counterparties both formally and informally to explain, as far as possible, the nature and intent of its operations in the money markets. The DMO should monitor compliance with its operational notices; provide complete, accurate and timely instructions to counterparties, agents, external systems and operators; and achieve the successful settlement of agreed trades on the due date.

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

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

- The DMO ensured a positive end-of-day DMA balance for the whole of 2018-19.

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

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

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

- The DMO achieved its target weekly cumulative balance for the DMA within a very small range (+/-2% of its weekly cumulative target) in 24 out of 52 weeks in 2018-19[17] (compared with 28 out of 52 weeks in 2017-18). All significant known daily and forecast cumulative weekly variations from target were notified to the Bank of England in a timely fashion. The DMO and the Bank held regular meetings to review the operation of these arrangements.

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

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

While this objective is difficult to capture in a KPI, the DMO interprets this as a responsibility to seek to minimise the impact of individual daily flows on the sterling money markets while ensuring it transacts at competitive prices. The DMO operates as a

[17] The +/-2% target pre-dates the current challenging money market conditions. Measured against, for example, a +/- 5% target, the weekly cumulative target balance would have been achieved in 47 out of 52 weeks (the same as in 2017-18)..

customer at the core of the money markets, seeking to ensure the widest possible access to maturities, instruments, trading arrangements and counterparties across which to diversify its cash management operations. Limits have been set on the amount of dealing with individual counterparties and in individual instruments; exposure to sterling overnight liquidity and sterling interest rates are also subject to limits. In accordance with objective 1.3, limits and controls are intended to avoid concentration of exposures and are reviewed regularly to ensure consistency with market trends and developments; they find their expression in KPI 1.3.

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

- Throughout 2018-19, the DMO undertook regular formal and informal communication with the Bank of England, money market counterparties, and industry groups to assess liquidity in the sterling money markets. It also maintained frequent and regular dialogue to update HM Treasury on market liquidity and, working with HM Treasury, reviewed its trading policies and risk controls to respond to significant sterling liquidity trends and developments.

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

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

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

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

- The DMO duly reported to HM Treasury on a quarterly cycle the details of Exchequer cash management activity carried out through the DMA, including active cash management performance and usage of liquidity, interest rate, foreign exchange and credit risk limits.

- Net returns on active cash management (over cost of funds) to the DMA are affected by market conditions, including any differential between the DMA's internal cost of funds and prevailing market rates, and the non-discretionary size and volatility of the Exchequer's cumulative cash position, both of which vary significantly over time. The Exchequer cash management results should not therefore be considered a reflection of, for example, the DMO's cash management trading strategies or performance.

- The Exchequer cash management activity is carried out in accordance with the government's ethos of cost minimisation: cash transactions are intended to support the statutory objectives of the DMA and, in particular, to enable the Exchequer's daily net cash positions to be offset over time by using a range of products and instruments, within agreed risk parameters, and are not intended to seek risk opportunities to generate excess return.

- Active cash management recorded positive net interest after cost of funds, but before transaction and management costs, of £44.1 million for 2018-19. The DMO's estimated transaction and management costs during 2018-19 were £10.8 million.

- Positive net interest after cost of funds has been recorded by virtue of funding the Exchequer's daily cash needs in the wholesale money markets at rates that have been on average below the DMA's internal cost of funds (Bank Rate) and from investing surpluses at market rates that were on average above this.

- There were no breaches of the credit, interest rate, foreign exchange or liquidity risk limits in 2018-19 and the Exchequer's net cash position was successfully offset each day. However, there was one daily settlement limit breach, which returned within limit the next day.

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

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

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

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

- As stated in the report on KPI 1.3 above, in 2018-19 the DMO maintained an active and open dialogue with cash counterparties and other market stakeholders to explain its cash management approach and strategy and to explain the context for and receive feedback on Treasury bill tenders and other market operations.

- There were no breaches of cash management operational targets for trade settlement (percentage by value on the due date[18]) or the timing of the announcement of Treasury bill tender results[19]. There were no breaches of the cash management operational notice in 2018-19.

[18] The target is to settle at least 99% of trades by value on the due date, where the DMO is responsible for delivering stock or cash: the level achieved was over 99.9%; (in 2017-18 the corresponding figure was £99.5%).
[19] The target is to release tender results within 15 minutes: the average release time was 4.7 minutes.

d) Treasury bill tender performance

Table B5 and Charts B1-3 compare the results (in terms of the average accepted yield) of all Treasury bill tenders held in 2018-19 with the corresponding SONIA rates. Over the financial year the average accepted yields at one-, and three- month tenders outperformed the corresponding SONIA rates by 3.6bps and 0.7bps respectively. Six-month tenders, however, underperformed SONIA by 2.2 bps[20].

The range of relative performances may in part reflect the range of average tender sizes. The average size of six-month Treasury bill tenders was almost 60% more than that of the average for one-month tenders. The average cover ratios were, however, somewhat more consistent across the three maturities (see Table B6)[21].

Table B5: Comparison of average Treasury bill tender yields with SONIA rates in 2018-19

	Average tender yield (%)	Average SONIA rate (%)	Difference (bps)
One-month	0.595	0.631	-3.6
Three-month	0.648	0.655	-0.7
Six-month	0.707	0.685	2.2
Average	**0.650**	**0.657**	**-0.7**

Source: DMO/Bloomberg

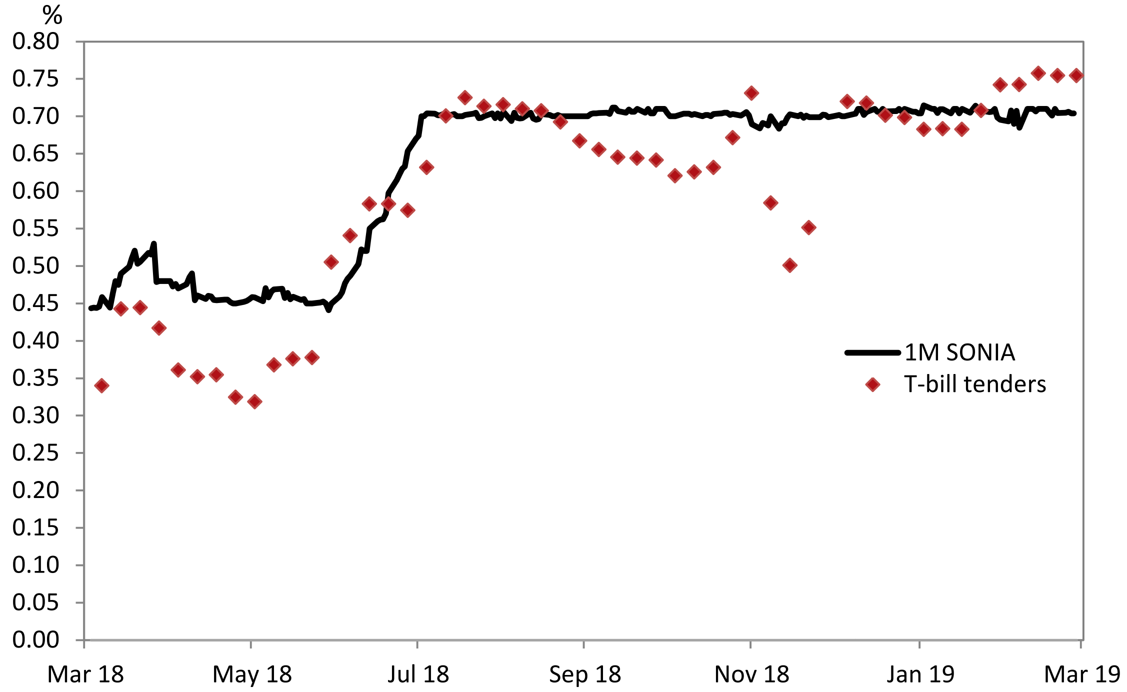
Table B6: Comparison of average Treasury bill tender sizes and cover ratios

	Average tender size (£mn)	Average cover ratio (x)
One-month	1,070	3.04
Three-month	1,580	2.72
Six-month	1,667	2.44

Source: DMO

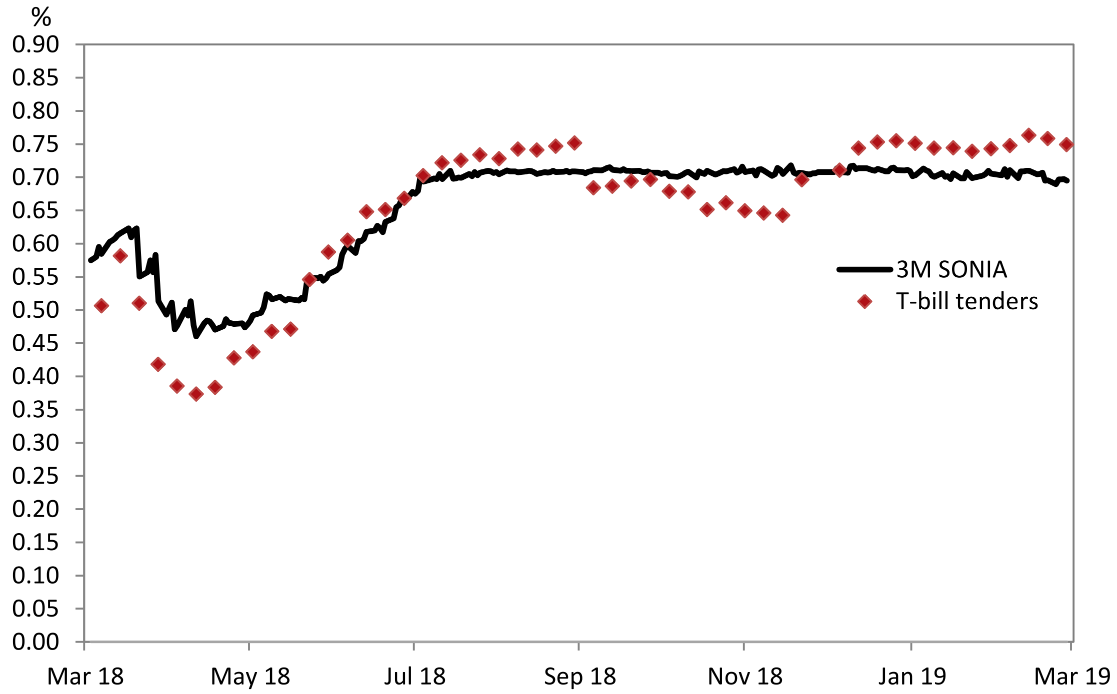
[20] In 2017-18 all maturities of tender outperformed corresponding SONIA rates by a range of 8-16 bps and the average outperformance across all three maturities was 12.6bps.
[21] In 2017-18 average cover ratios ranged from 3.16x to 4.15x, although the average size of one-month tenders was slightly smaller (at £873 million) while the average size of three-month tenders was significantly smaller (at £961 million).

Chart B1: One-month Treasury bill tender yields compared with SONIA rates in 2018-19



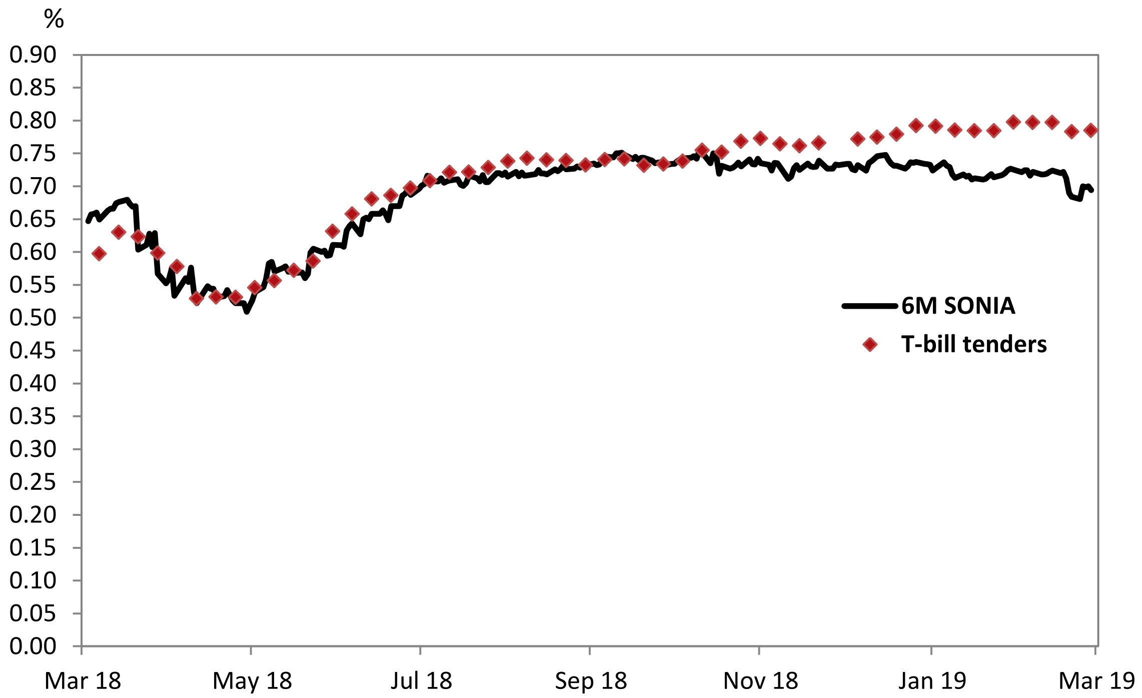
Source: DMO/Bloomberg

Chart B2: Three-month Treasury bill tender yields compared with SONIA rates in 2018-19



Source: DMO/Bloomberg

Chart B3: Six-month Treasury bill tender yields compared with SONIA rates in 2018-19



Source: DMO/Bloomberg

Annex C: The gilt portfolio

The gilt portfolio

The key statistics of the government's marketable debt portfolio at end-March 2019 compared to end-March 2018 are shown in Tables C1 and C2 below.

Tables C1 and C2: Debt Portfolio statistics

Gross values (including DMO holdings)	**29 March 2018**	**29 March 2019**
Uplifted nominal value		
Debt Portfolio	£1,607bn	£1,648bn
Conventional gilts	£1,136bn	£1,155bn
Index-linked gilts	£411bn	£437bn
Treasury Bills	£60bn	£56bn
Market value		
Debt Portfolio	£2,137bn	£2,224bn
Conventional gilts	£1,412bn	£1,448bn
Index-linked gilts	£665bn	£720bn
Treasury Bills	£60bn	£56bn
Average maturity (nominal value-weighted)		
Debt Portfolio	15.22 years	15.22 years
Gilt portfolio	15.80 years	15.75 years
Conventional gilts	14.01 years	14.25 years
Index-linked gilts	20.73 years	19.71 years
Average maturity (market value-weighted)		
Debt Portfolio	17.97 years	17.91 years
Average yield (market value-weighted)		
Conventional gilts	1.30%	1.11%
Index-linked gilts	-1.72%	-2.06%
Average modified duration (market value-weighted)		
Conventional gilts	11.35	11.61
Index-linked gilts	22.99	22.18

Source: DMO

Net values (excluding DMO holdings)	29 March 2018	29 March 2019
Uplifted nominal value		
Debt Portfolio	£1,501bn	£1,533bn
Conventional gilts	£1,037bn	£1,048bn
Index-linked gilts	£403bn	£429bn
Treasury Bills	£60bn	£56bn
Market value		
Debt Portfolio	£1,990bn	£2,065bn
Conventional gilts	£1,277bn	£1,301bn
Index-linked gilts	£653bn	£708bn
Treasury Bills	£60bn	£56bn
Average maturity (nominal value-weighted)		
Debt Portfolio	15.28 years	15.31 years
Gilt portfolio	15.91 years	15.89 years
Conventional gilts	13.94 years	14.23 years
Index-linked gilts	20.95 years	19.92 years
Average maturity (market value-weighted)		
Debt Portfolio	18.12 years	18.09 years
Average yield (market value-weighted)		
Conventional gilts	1.29%	1.10%
Index-linked gilts	-1.72%	-2.06%
Average modified duration (market value-weighted)		
Conventional gilts	11.34	11.63
Index-linked gilts	23.21	22.38

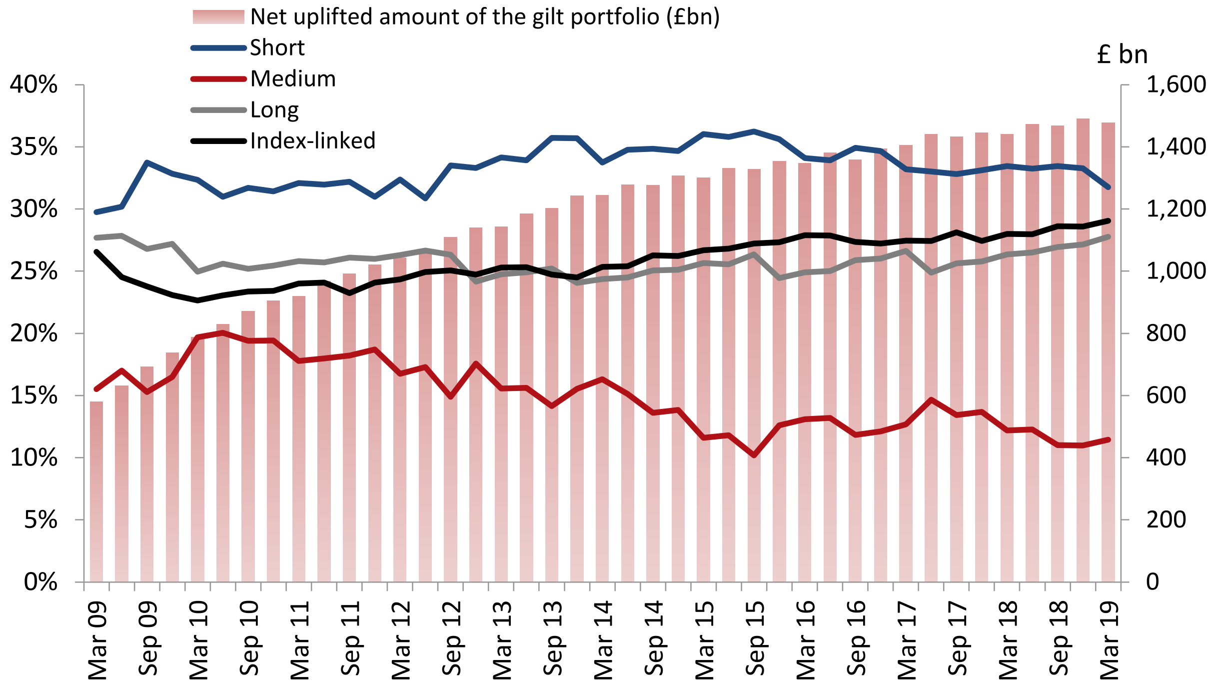
Source: DMO

The gross nominal value[22] of the gilt portfolio rose by 2.9% to £1,592.01 billion as gross gilt issuance plus inflation accrual on index-linked gilts exceeded gilt redemptions. The gross market value of the portfolio rose by 4.4% to £2,168.07 billion, reflecting the rise in the nominal value and an increase in gilt prices as indicated by the fall in yields over the course of the financial year (by 19bps in the case of nominal yields and 34bps in the case of real yields).

The growth and changing composition of the gilt portfolio is shown in Chart C1. Developments in portfolio maturity are shown in Chart C2.

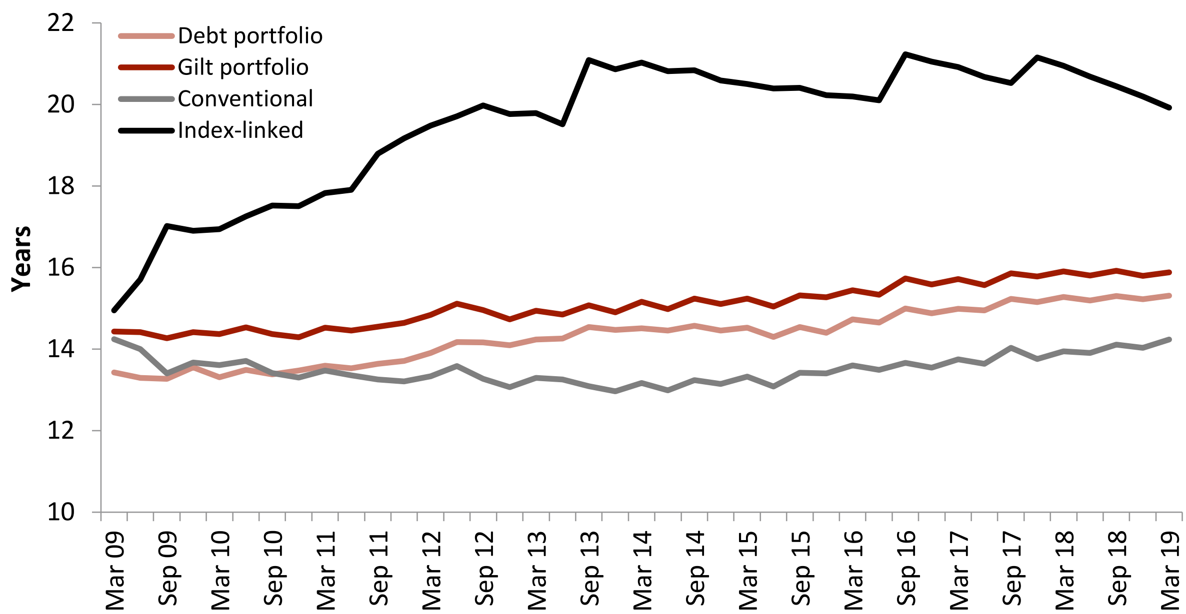
[22] Including inflation uplift on index-linked gilts.

Chart C1: Portfolio composition[23]



Source: DMO

Chart C2: Portfolio maturity (years)



Source: DMO

[23] A list of gilts, including first issue and coupon dates and nominal amounts outstanding (updated daily) is available on the DMO website at: https://www.dmo.gov.uk/data/pdfdatareport?reportCode=D1A