United Kingdom
Debt Management
Office

DMO Annual Review 2020-21

19 November 2021

Contents

Foreword by the DMO Chief Executive

This was the 23rd operational year for the DMO. It was a year quite unlike any other in our history.

It was a year dominated, of course, by COVID-19, the impact of which not only transformed the way we operated as an organisation but also transformed the lives of everyone who works at the DMO, their families and beyond. Before looking at the considerable operational achievements of the past year, I would like, first, to put on record my sincere thanks and appreciation to all those who work at the DMO for their great contribution over the year and the positive way in which they have responded to the unique challenges we have all faced.

Gilt sales during the year were by far the highest in the DMO's history: £485.8 billion. However, they formed just one part of our activities. The DMO's cash management operations also involved unprecedented levels of daily trading amounting to £7.1 trillion during 2020-21 (out of a total of £8.3 trillion from all activities) compared to £4.9 trillion during the previous year.

Gilt and cash management operations, as well as local authority lending via the PWLB lending facility, and investment of public sector funds via the CRND were successfully delivered whilst the great majority of DMO staff were working remotely, with a critical cadre of staff continuing to work onsite.

Our original financing remit for 2020-21 became almost immediately overtaken by events relating to the measures announced by HM Treasury to support the economy in the light of the COVID-19 pandemic. It also quickly became clear that, because of the level of uncertainty associated with both the size and timing of the impact of the pandemic on the economy, it would not be possible to estimate a financing requirement for the whole of the financial year. For the first time ever, therefore, the DMO's financing remit was structured to deliver a series of in-year extensions to the gilt financing requirement and the associated operations calendar.

On 31 March 2020 the size of the gilt operations programme for April 2020 was increased to £45.0 billion (more than double the amount originally envisaged) and 11 auctions were added to the calendar for that month alone. Further revisions followed on 23 April 2020, increasing planned gilt sales to end-July 2020 to £225.0 billion; 29 June 2020, which increased planned gilt sales to end-August 2020 to £275.0 billion; 16 July 2020, which increased planned gilt sales to end-November 2020 to a minimum of £385.0 billion; and 25 November 2020, following the publication of the Office for Budget Responsibility's (OBR's) revised public finance forecasts, taking planned gilt sales for the financial year 2020-21 to £485.5 billion.

This unprecedented increase in the financing requirement resulted in the DMO having to make a number of significant changes to the way it managed its gilt sales activities. In particular, for the first time, the DMO began scheduling two auctions per day often on two consecutive days with two auction bidding windows, from 9.00am to 10.00am for the first auction and from 10.30am to 11.30am for the second. In addition, the rate of the Post Auction Option Facility (PAOF) was increased from 15% to 25% to help incentivise auction participation.

A record number of 150 gilt auctions were held in 2020-21 and auctions remained the DMO's primary means of selling gilts, accounting for £429.5 billion of gilt sales. This sum included £49.6 billion of proceeds from the PAOF, and represented 88.4% of overall sales.

The average cover ratio at gilt auctions in 2020-21 increased significantly to 2.49x from 2.18x in 2019-20.

The auction programme was supplemented by a programme of seven syndicated offerings (six of conventional and one of index-linked gilts) which raised £52.3 billion (10.8% of total gilt sales). For the first time the syndication programme included sales of 10-year and 15-year maturities. In addition, two gilt tenders were held which raised in total £3.9 billion.

The gilt market successfully absorbed the unprecedented level of gilt supply in 2020-21 smoothly. The gilt market has grown and developed significantly over the past decade. At the end of 2007-08, at the start of the global financial crisis, the nominal (uplifted) value of the gilt portfolio was £479 billion. At the end of 2020-2021, it was 4.1 times larger at £1,974 billion. Average daily turnover in the gilt market increased by 10.6% compared to the previous year to £41.3 billion. The presence of a deep and well-functioning gilt market remains critical to the DMO's ability to deliver successfully its debt management objective.

There was ongoing strong demand for Treasury bills in the year. As with gilts, Treasury bills continued to attract significant overseas investor interest, with around 50% of the amount outstanding at 31 December 2020 being held by this group.

Turning to the current financial year, the DMO's financing remit for 2021-22 was published on 3 March 2021, with planned gilt sales of £295.9 billion announced. While this was a reduction of £189.9 billion (39.0%) compared to gilt sales in 2020-21, it was the largest pre-announced annual target on record.

Planned gilt sales in 2021-22 were lowered by £43.3 billion to £252.6 billion at the remit revision announced to coincide with the publication of the outturn to the 2020-21 Central Government Net Cash Requirement (excluding NRAM ltd, Bradford & Bingley and Network Rail) (CGNCR ex) on 23 April 2021. Planned gilt sales were reduced by a further £57.9 billion to £194.8 billion on 27 October 2021 following the publication of an updated forecast of CGNCR ex for 2021-22 by the Office for Budget Responsibility (OBR) alongside the Autumn Budget 2021. Planned sales of Treasury bills for debt management purposes were also reduced by £25.0 billion.

In addition to my gratitude for the valuable contribution made by DMO employees to our achievements in 2020-21, I would like to emphasise how appreciative I am to all our market counterparties for their professionalism and continued support throughout the year. The success of the DMO in meeting the exceptional challenges of 2020-21 would not have been possible without all their contributions.

I hope that the DMO will continue to be characterised by excellent staff, efficient market operations and strong relationships with our stakeholders.

Robert Stheeman

19 November 2021

Chapter 1: The Economy and Financial Markets

Macroeconomic developments

Global economic activity slowed sharply in the first part of the financial year 2020-21 as a result of the COVID-19 pandemic and the public health measures designed to contain it. Travel restrictions were introduced, workplaces and schools were closed and people in many countries were instructed to stay at home. There was a rapid decline in global trade and oil prices, which had already halved to around $35 per barrel in the first three months of 2020, fell to below $20 per barrel, the lowest level in nearly twenty years. Many of the major global equity indices fell by over 30%.

Extraordinary fiscal and monetary policy support from governments and central banks around the world helped activity to rebound strongly as restrictions were relaxed. While increasing infection rates resulted in the re-imposition of restrictions at various times later in the year, the slowdown in economic activity was limited compared to the early stages of the pandemic, as businesses adapted. From December 2020 and early 2021, the resurgence of the pandemic globally led to the re-imposition of restrictions in many parts of the world, including Europe. The roll-out of newly-developed vaccines in developed economies led to the gradual re-opening of contact intensive sectors and this, coupled with ongoing fiscal support and new fiscal packages (including a $1.9 trillion fiscal stimulus package in the US), supported global growth. Oil prices recovered to approximately $60 per barrel at the end of the financial year, the major global equity indices recovered to close to, or in some cases above, pre-pandemic levels.

In the UK, as in many countries, the pandemic caused unprecedented volatility in economic activity. Real GDP on a quarter-on-quarter (q-o-q) basis contracted 19.5% in the first quarter of the 2020-21 financial year as the first lockdown led to the sharpest fall in economic activity on record. As activity had also contracted in the last quarter of 2019-20 the economy entered recession. With a relaxation of restrictions during Q2 2020-21 activity rebounded sharply to 17.4%, q-o-q, the fastest quarterly growth rate on record, with some sectors supported by fiscal measures, such as lower Value Added Tax and the Eat Out to Help Out scheme. The Coronavirus Job Retention Scheme, which had been announced on 20 March 2020, continued to limit redundancies. GDP slowed significantly to 1.1% q-o-q in Q3 2020-21 as UK nations returned to a state of lockdown in the autumn. The EU-UK Trade and Cooperation Agreement was signed on 30 December 2020, coming into effect on 1 January 2021 at the end of the Brexit transition period, after eight months of negotiations. Following a further surge in case rates and the subsequent discovery of a more infectious variant, a third lockdown commenced on 5 January 2021 and the economy contracted by 1.4% q-o-q in Q4 2020-21.

Consumer Prices Index (CPI) inflation was significantly below the Bank of England's (Bank's) target rate of 2.0% year-on-year (y-o-y) throughout the financial year. July's rate of 1.0% was the in-year high but the rate fell to just 0.2%, the lowest level since 2015, largely driven by lower household utility prices, lower motor fuel prices, Value Added Tax rate cuts and the Eat Out to Help Out scheme which significantly lowered prices in the hospitality sector. At the end of the financial year the rate was 0.7%. The Retail Prices Index (RPI) measure of inflation, which is used to set the cash flows on index-linked gilts, was also at relatively subdued levels throughout the financial year ranging between 0.5% and 1.6% y-o-y, ending the financial year at 1.5%.

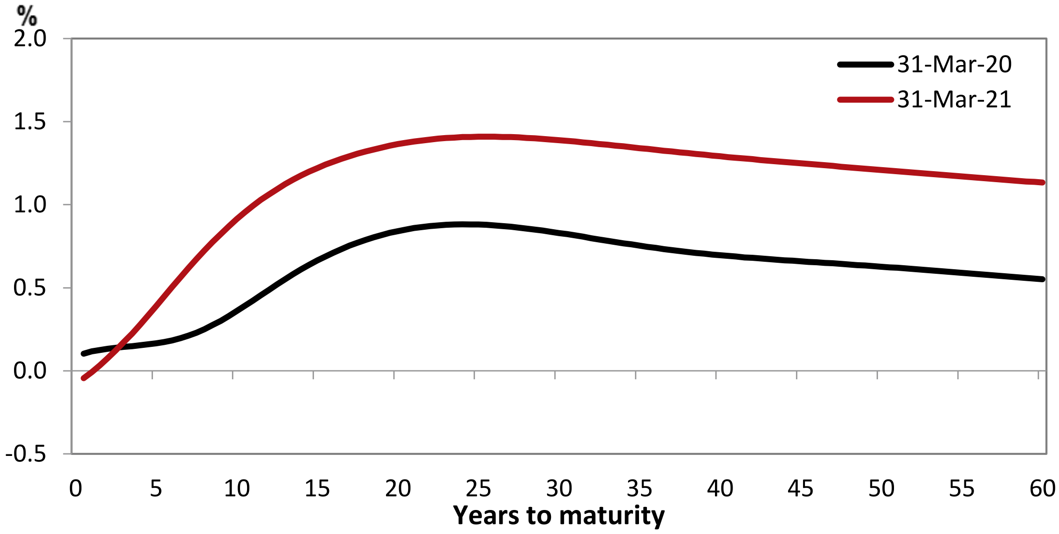
The Bank of England's Monetary Policy Committee (MPC) maintained Bank Rate at the historic low rate of 0.10% for the financial year. The Bank's target stock of purchased bonds (primarily gilts), financed by central bank reserves, was increased by £100 billion to £745 billion in June 2020, and by further £150 billion to £895 billion in November 2020, with the intention of providing additional monetary policy stimulus.

Gilt market developments

Nominal par gilt yields[1]

Nominal par gilt yields increased significantly along the curve in 2020-21, except for sub 3-year yields, which fell; notably sub 1-year yields reached negative levels. 5-year par yields increased by 22 basis points (bp) to 0.39%, 10-year par yields increased by 55bp to 0.91%, 30-year par yields increased by 56bp to 1.39% and 50-year par yields increased by 58bp to 1.21%. See Chart 1.

Chart 1: Nominal par gilt yield curves 2020-21



Source: DMO

Real par yields

Real par yields, however, fell at both the short and long end of the curve, whereas they remained fairly unchanged in the 10- to 20-year area. While real par yields fell by 55bp at the 5-year point to -3.02% and at the 50-year point by 36bp to -2.09%, 10-year and 30-year par real yields fell by only 3bp to -2.62% and by 12bp to -1.87%, respectively. See Chart 2.

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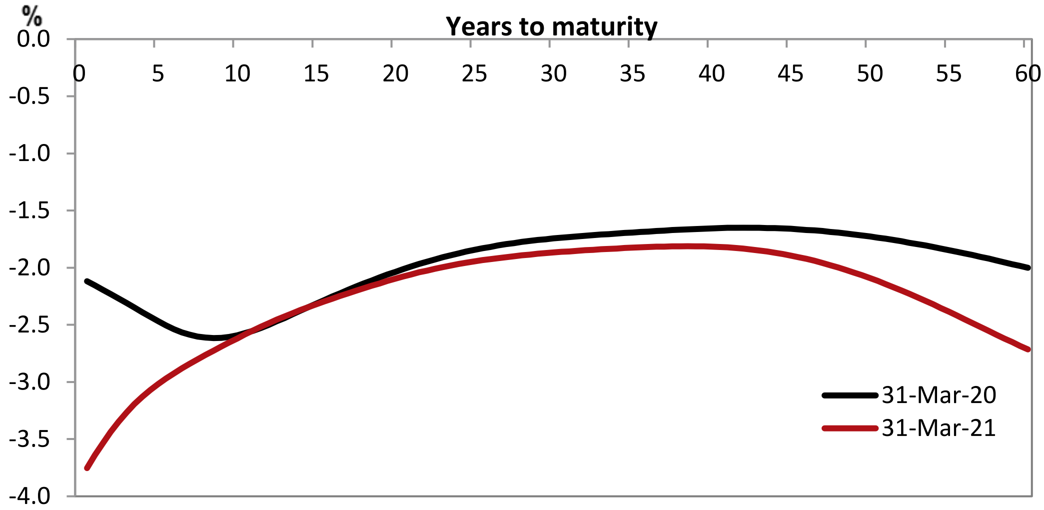
[1] A par yield curve is a graphical representation of the yields of a range of bonds with different maturities, priced at par. On the par yield curve, the coupon rate on each bond will equal the yield-to-maturity of that bond. The changes referred to here are obtained by comparing yields at 31 March 2020 and 31 March 2021.

Chart 2: Real par gilt yield curves 2020-21



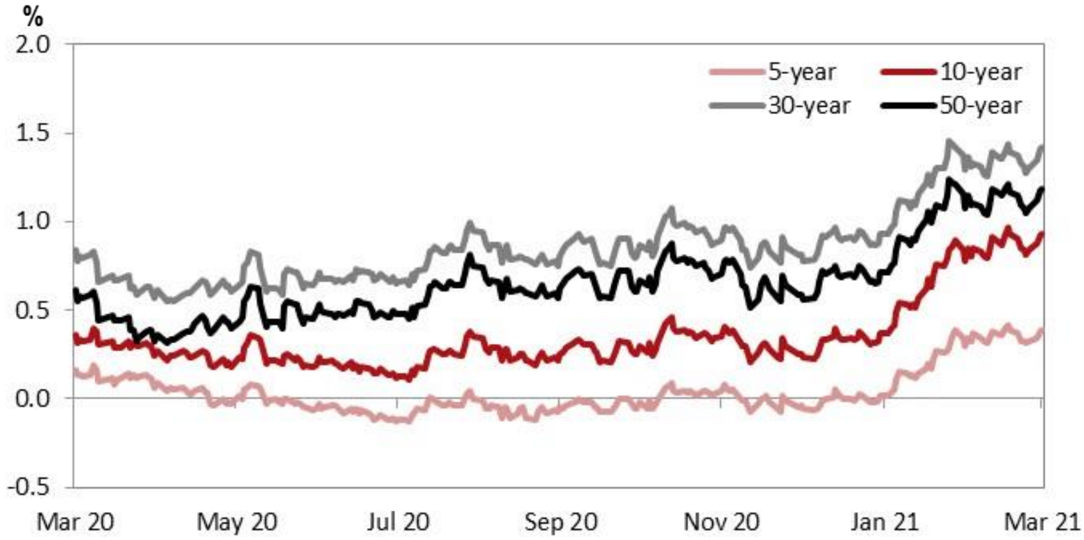
Source: DMO

Nominal yields

Chart 3 shows the path of conventional benchmark gilt yields at 5-, 10-, 30- and 50-year maturities in 2020-21. Yields were broadly stable around record low levels in the earlier part of the financial year as economic activity was constrained by COVID-19 lockdown measures. As restrictions were first lifted yields began rising slowly with the increase accelerating in the early part of 2021, despite a renewed lockdown, in part reflecting optimism about the impact of the vaccine roll out.

Over the financial year, the yield on the 5-year benchmark gilt increased by 23bp to 0.39%, that on the 10-year by 57bp to 0.93%, that on the 30-year by 58bp to 1.42% and that on the 50-year by 57bp to 1.18%. See Chart 3.

Chart 3: Nominal gilt yields 2020-21

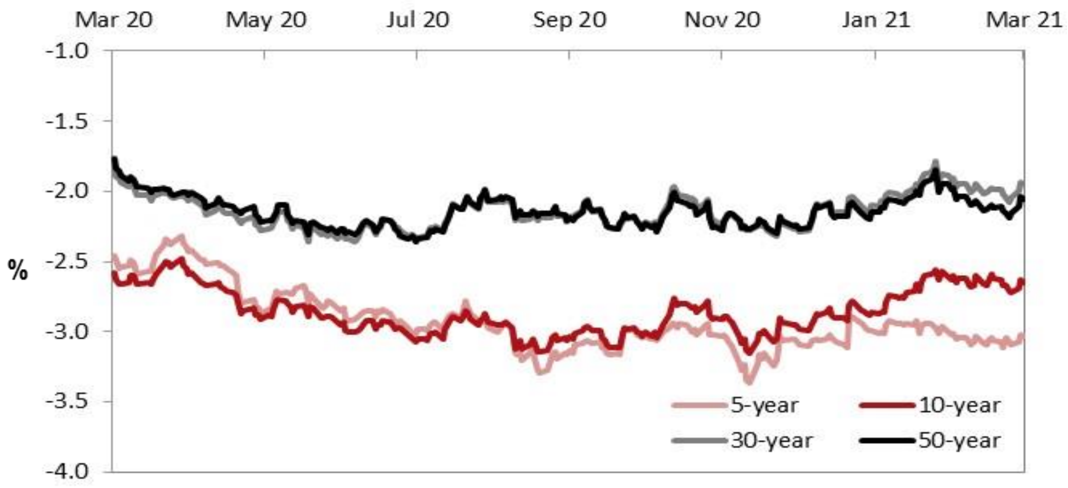


Source: DMO

Real gilt yields

Chart 4 shows the real yields on selected benchmark index-linked maturities in 2020-21, all of which fell over the course of the financial year. The real yield on both the 5- and 10-year benchmarks fell by 57 bps to -3.03 % and by 7bp, to -2.65%, over 2020-21. Among longer maturities the real yield on the 30-year fell by 12bp to -1.95% and that on the 50-year by 29bp to -2.06%.

Chart 4: Real gilt yields 2020-21

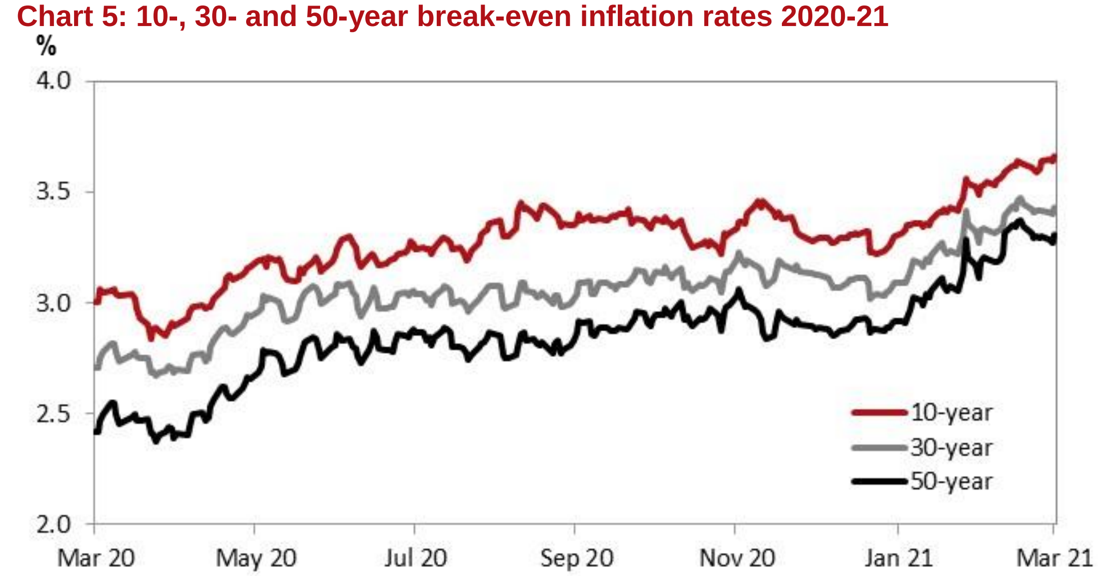


Source: DMO

Break-even inflation rates

Over the course of 2020-21, 10-year break-even inflation rates (BEIRs) rose strongly by 66bp (to 3.66%), while 30-year and 50-year BEIRs rose even more by 72bp (to 3.43%) and 89bp (to 3.30%) respectively. Index-linked gilts, therefore significantly outperformed their conventional gilt counterparts significantly over the course of the financial year. See Chart 5.

Chart 5: 10-, 30- and 50-year break-even inflation rates 2020-21

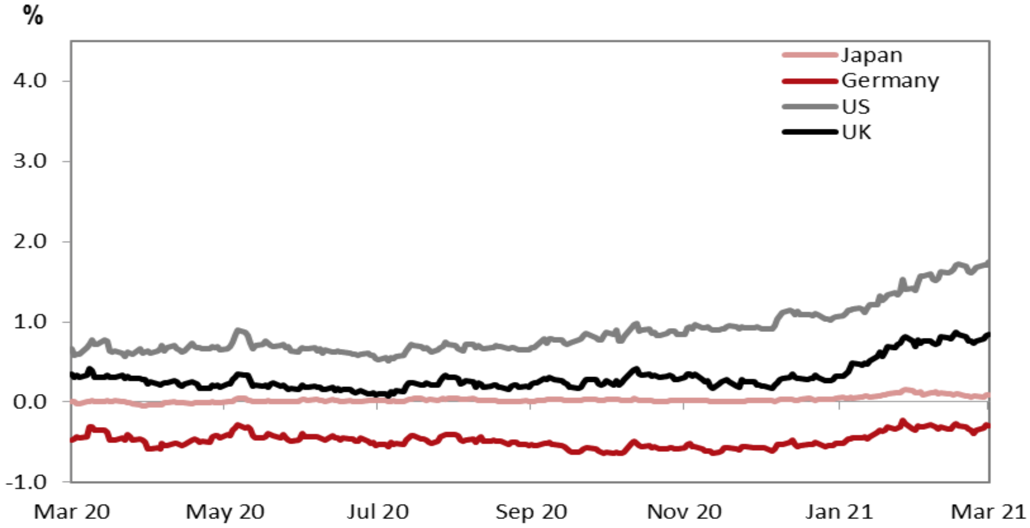


Source: Bloomberg/DMO

International comparisons

Yields on 10-year UK, US, German government bonds increased towards the end of the financial year, whereas those on Japanese government bonds remained almost unchanged. In the UK 10-year yields rose by 49bp, by 108bp in the US and by 18bp in Germany, whereas corresponding yields in Japan rose by 8bps. See Chart 6.

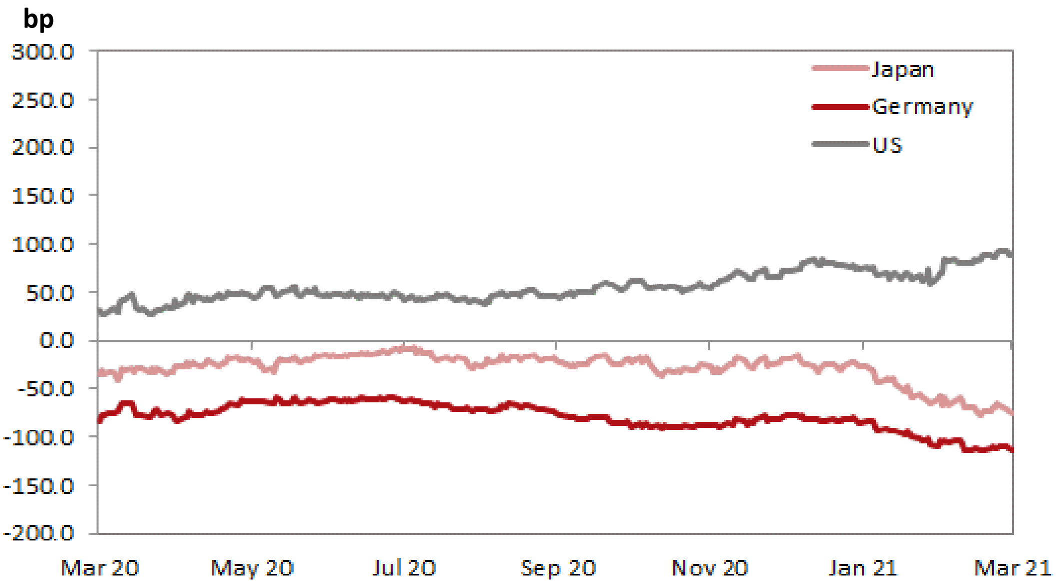
Chart 6: Selected international 10-year benchmark yields 2020-21



Source: Bloomberg

10-year gilts outperformed comparable maturity US Treasuries with the spread increasing by 59bp to 90bp in 2020-21. Gilt underperformed comparable German and Japanese government bonds, however: the spread between 10-year gilts and German bonds fell by 31bp to -114bp and the spread versus 10-year Japanese bonds fell by 41bp to -76bp. 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 2020-21, as reported by the Gilt-edged Market Makers (GEMMs)[2] rose by £966 billion (9%) compared with the previous financial year (from £9.49 trillion to a new record high of £10.46 trillion). Turnover rose in short conventional gilts by 8.3% to £2.42 trillion, in medium conventional gilts by 26.7% to £4.27 trillion, in long conventional gilts by 17.1% to £2.48 trillion whereas in index-linked gilts it fell by 27.2% to £1.29 trillion. Developments in gilt market turnover are shown in Table 1 and Chart 8.

Table 1: Aggregate gilt market turnover by GEMMs 2020-21 (£ billion)[3]

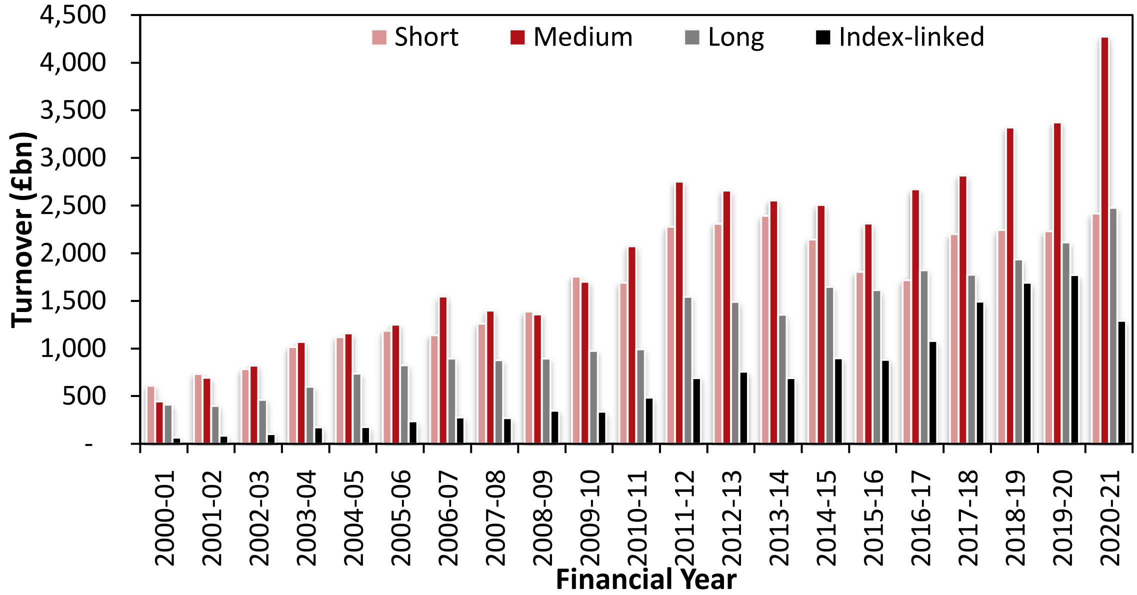
	Short	Medium	Long	Index-linked	Total
2000-01	608	446	412	65	**1,531**
2001-02	733	692	396	86	**1,907**
2002-03	784	822	460	103	**2,168**
2003-04	1,016	1,071	599	172	**2,858**
2004-05	1,120	1,161	738	176	**3,195**
2005-06	1,186	1,252	825	236	**3,500**
2006-07	1,139	1,548	893	276	**3,856**
2007-08	1,262	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**
2019-20	2,231	3,375	2,114	1,771	**9,491**
2020-21	2,417	4,275	2,476	1,290	**10,457**

Source: GEMMs

And 31 March[2] The current list of GEMMs and their web addresses are available on the DMO website via https://www.dmo.gov.uk/responsibilities/gilt-market/market-participants/

[3] These data cover only those transactions conducted by 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.

Chart 8: GEMM gilt market turnover 2000-21



Source: GEMMs

Monetary policy background

The Bank of England's Monetary Policy Committee (MPC) maintained Bank Rate at the historic low rate of 0.10% throughout the financial year. The Bank's target stock of purchased bonds (primarily gilts), financed by central bank reserves, was increased by £100 billion to £745 billion in June 2020, and by a further £150 billion to £895 billion in November 2020, with the intention of providing additional monetary policy stimulus. These purchases were scheduled to be completed by end 2021.

The ECB maintained an accommodative monetary policy stance during 2020-21 keeping the interest rate on the main refinancing operations at a historic low of 0.0%. The Pandemic Emergency Purchase Programme (PEPP) a temporary asset purchase programme of private and public sector securities, which had been launched in March 2020, was extended by €600 billion in June 2020 and a further €500 billion in December 2020 to a total of €1,850 billion. This programme complemented existing non-standard measures such as the ECB's asset purchase programme (APP), which continued at a net purchase rate of €20 billion per month, and targeted longer-term financing operations.

In the US, the Federal Reserve maintained the target range for the Federal Funds Rate of 0%-0.25% throughout the financial year and committed to purchasing US Treasuries at $80 billion per month and mortgage-backed securities by $40 billion per month to smooth market functioning and to help support the flow of credit to households and businesses.

Chapter 2: Government Debt Management

DMO financing remit for 2020-21

In 2020-21, the DMO successfully delivered a financing remit that was unique in its size and its number of revisions, against an unprecedented background dominated by COVID-19.

The DMO's original remit for 2020-21, as announced in the Spring Budget on 11 March 2020, included planned gilt sales of £156.1 billion; gilt sales ended the financial year at £485.8 billion.

Net sales of Treasury bills were originally planned to make a nil contribution to debt financing in 2020-21, but this was changed to a planned net negative contribution to financing of £2.0 billion at a remit adjustment on 25 November 2020.

The structure of the original gilt financing remit for 2020-21 is summarised in Table 2.

Table 2: Original gilt financing remit structure at Spring Budget 2020

(£ billion Proportions in brackets)	Auction	Syndication	Gilt tender	Unallocated	Total
Short	51.0	-	-	-	51.0 (32.7%)
Medium	34.2	-	-	-	34.2 (21.9%)
Long	26.3	16.0	-	-	42.3 (27.1%)
Index-linked	12.6	8.0	-	-	20.6 (13.2%)
Unallocated	-	-	-	8.0	8.0 (5.1%)
Total	**124.1 (79.5%)**	**24.0 (15.4%)**	**- -**	**8.0 (5.1%)**	**156.1**

Figures may not sum due to rounding.

Source: DMO

These plans were superseded almost immediately, owing to the scale of the measures announced by HM Treasury to support the economy through the period of disruption caused by COVID-19.

It also quickly became clear that, because of the level of uncertainty associated with both the size and timing of expenditure on COVID-19, and the impact of the pandemic on the economy, it would not be possible to estimate a financing requirement for the whole of the financial year. Therefore, for the first time ever, the DMO's financing remit was structured to deliver a series of partial in-year extensions to the gilt financing requirement and the associated calendar of operations. In particular:

- On 31 March 2020 the size of the gilt operations programme for April 2020 was announced to be £45.0 billion (more than double the amount originally implied) and with 11 auctions were added to the calendar for that month;

- On 23 April 2020 planned gilt sales of £180.0 billion were announced for May-July 2020, taking the total of planned sales for the first four months of 2020-21 to £225.0 billion;

- On 29 June 2020 an additional £50.0 billion of gilt sales were announced for August 2020 taking the total of planned sales for the first five months of 2020-21 to £275.0 billion;

- On 16 July 2020 it was announced that planned gilt sales in the financial year to 30 November 2020 would be a minimum of £385.0 billion; and

- On 25 November 2020 it was announced that planned gilt sales for the financial year 2020-21 would be £485.5 billion (£329.4 billion more than originally planned and more than twice that of the previous record of £227.6 billion in 2009-10).

The outturn for gilt sales in 2020-21 was £485.8 billion, just £0.3 billion (0.06%) above the final (minimum) remit target. The outturn is summarised in Table 3.

Table 3: The financing remit outturn for 2020-21 (summary)

(£ billion Proportions in brackets)	**Auction**	**Syndication**	**Gilt tender**	**Unallocated**	**Total**
Short	168.7	-	-	-	168.7 (34.7%)
Medium	126.1	20.1	3.4	-	149.5 (30.8%)
Long	106.2	28.0	-	-	134.2 (27.6%)
Index-linked	28.6	4.3	0.5	-	33.4 (6.9%)
Unallocated	-	-	-	0.0	0.0 (0.0%)
Total	**429.4 (88.4%)**	**52.3 (10.8%)**	**3.9 (0.8%)**	**0.0 (0.0%)**	**485.8**

Figures may not sum due to rounding.

Source: DMO

A more detailed outturn for gilt sales in 2020-21 is shown in Table 4.

Table 4: Gilt sales outturn 2020-21

(£ million)	Conventional gilts			Index-linked gilts	Total
	Short	Medium	Long		
Auction proceeds	152,377	110,432	92,205	24,927	379,941
PAOF proceeds	16,310	15,627	14,017	3,653	49,607
Auction and PAOF proceeds	**168,687**	**126,058**	**106,247**	**28,580**	**429,548**
Syndication sales	-	20,057	28,024	4,264	52,345
Gilt tender sales	-	3,361	-	521	3,882
Total gilt sales	**168,687**	**149,477**	**134,247**	**33,365**	**485,775**
Number of auctions held	46	39	46	19	150
Syndications held	-	2	4	1	7
Gilt tenders held	-	1	-	1	2
Total planned gilt sales (minimum)	**-**	**-**	**-**	**-**	**485,500**

Figures may not sum due to rounding.

Source: DMO

Operational innovations introduced in 2020-21

This unprecedented increase in the financing requirement required the DMO to make a number of significant changes to the way it managed its gilt sales activities, namely:

- With effect from the week commencing 6 April 2020, for the first time the DMO scheduled two auctions on the same day, and did so 58 times, often on two consecutive days;

- Two auction bidding windows were established, from 9.00am to 10.00am for the first auction and from 10.30am to 11.30am for the second auction;

- The Post Auction Option Facility (PAOF) windows associated with two successive auctions were set at 12.30pm to 1.00pm and 2.00pm to 2.30pm respectively; and

- The rate of the PAOF was increased from 15% to 25% to help incentivise auction bidding.

Pace of financing in 2020-21

The unprecedented financing requirement also saw the DMO depart from its usual broadly even-flow basis throughout the year given that the in-year developing financing requirement turned out to be heavily weighted toward the earlier period of the financial year.

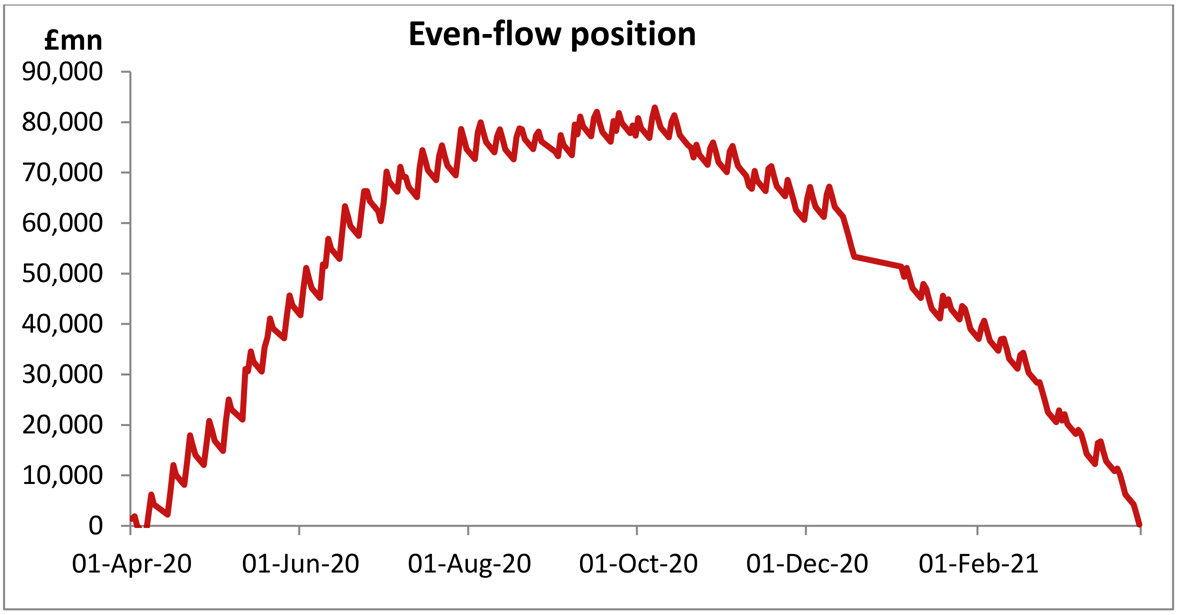
As shown in Table 5, gilt sales averaged around £60 billion per month in the first four months of the financial year, so that around half of the final total of gilt sales had been raised in the first third of the financial year. By contrast, gilt sales in the final four months of the financial year averaged around £23 billion.

Table 5: Monthly sales in 2020-21

(£bn)	Gilt sales	Cumulative	% of total
Apr-20	58.5	58.5	12.0%
May-20	62.5	121.0	24.9%
Jun-20	60.3	181.2	37.3%
Jul-20	59.9	241.1	49.6%
Aug-20	39.1	280.3	57.7%
Sep-20	44.8	325.0	66.9%
Oct-20	38.3	363.4	74.8%
Nov-20	30.2	393.6	81.0%
Dec-20	20.4	414.0	85.2%
Jan-21	25.3	439.3	90.4%
Feb-21	23.1	462.4	95.2%
Mar-21	23.3	485.8	100.0%
Total	**485.8**		

Chart 9 shows cumulative proceeds from all operations, compared to a counterfactual even-flow pace of financing required to deliver the final gilt sales total in 2020-21. By September 2020 cumulative financing was running at around £80 billion above an even-flow position. But this position sharply declined in the second half of the financial year.

Chart 9: Cumulative financing relative to the even-flow position[4] 2020-21



Source: DMO

The gilt financing arithmetic

The initial gilt financing arithmetic for 2020-21 as published at Budget 2020 was not restated until the remit revision on 25 November 2020, when a revised financing requirement for the

[4] The even-flow counterfactual assumes that the same amount of cash is raised on every business day sufficient to meet the annual financing requirement.

whole of 2020-21 was published for the first time. The changes to the 2020-21 financing arithmetic are shown in Table 6.

Table 6: The 2020-21 financing arithmetic[5]

(£ billion)	Spring Budget 2020	November 2020 revision	Spring Budget 2021	April 2021 outturn
CGNCR (ex NRAM, B&B and NR)	65.3	402.5	369.7	334.5
Gilt redemptions	97.6	97.6	97.6	97.6
Financing adjustment carried forward from previous financial years	-0.8	18.4	18.4	18.4
Gross financing requirement	**162.1**	**518.5**	**485.7**	**450.5**
less:				
NS&I net financing	6.0	35.0	20.0	23.5
Other financing[6]	0.0	0.0	0.0	3.8
NFR for the DMO	**156.1**	**483.5**	**465.7**	**432.2**
DMO's NFR will be financed through:				
a) Gilt sales of which:	**156.1**	**485.5**	**485.5**	**485.8**
Short conventional gilts	51.0	167.9	167.9	168.7
Medium conventional gilts	34.2	149.6	149.6	149.5
Long conventional gilts	36.9	134.9	134.9	134.2
Index-linked gilts	20.6	33.2	33.2	33.4
Unallocated amount of gilts	8.0	0.0	0.0	0.0
b) Total net contribution of Treasury bills for debt financing	**0.0**	**-2.0**	**-2.0**	**-2.0**
Total financing	**156.1**	**483.5**	**483.5**	**483.8**
DMO net cash position	0.5	0.5	18.3	61.1

Source: DMO

Consultation on RPI reform

On 17 January 2019, the House of Lords Economic Affairs Committee published a report on 'Measuring Inflation' at the conclusion of its inquiry into the use of RPI. In

[5] Figures may not sum due to rounding
[6] 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

response to this, the government and the UK Statistics Authority (UKSA) announced a consultation on the timing of RPI reform. Specifically, UKSA proposed addressing the shortcomings of the measure by bringing the methods and data sources of the Consumer Price Index including owner occupiers' housing costs (CPIH) into RPI. The consultation launched at Budget 2020 and closed for responses on 21 August 2020.

On 25 November 2020, the government and UKSA published the response to the consultation, alongside the Spending Review. The Chancellor announced that, while he sees the statistical arguments of UKSA's intended approach to reform, in order to minimise the impact of reform on the holders of index-linked gilts, he will be unable to offer his consent to the implementation of such a proposal before the maturity of the final index-linked gilt to be specifically affected, which will occur in 2030.

Decisions on the relative weights of index-linked and conventional gilt issuance will continue to be taken annually through the financing remit, taking into account the appropriate balance between the level of structural demand, the diversity of the investor base, and the government's desired inflation exposure.

Gilt financing operations

The DMO held a total of 159 financing operations in 2020-21, more than twice the previous peak of 77 in 2009-10. In addition, the PAOF was activated, in whole or in part, at 106 of the 150 gilt auctions; including these transactions, the number of gilt sales operations in 2020-21 was 265. The history of DMO outright gilt sales operations is shown in Table 7.

Table 7: DMO outright gilt sale operations history

	Auctions	Syndications	Tenders*	Taps**	Residual tenders***	Total	Gilt sales (£bn)
1998-99	4			4		8	8.2
1999-00	8			1	1	10	14.4
2000-01	7					7	10.0
2001-02	8					8	13.7
2002-03	13				1	14	26.3
2003-04	24					24	49.9
2004-05	26					26	50.1
2005-06	25	1				26	52.3
2006-07	36					36	62.5
2007-08	34					34	58.5
2008-09	58		8			66	146.5
2009-10	58	6	12		1	77	227.6
2010-11	49	5	7			61	166.4
2011-12	49	8	3			60	179.4
2012-13	44	8	4			56	165.1
2013-14	43	5	4			52	153.4
2014-15	41	4	1			46	126.4
2015-16	39	6	2			47	127.7
2016-17	48	7	3			58	147.6
2017-18	40	5	1			46	115.5
2018 -19	36	4	0			40	98.5
2019-20	43	5	4			52	137.9
2020-21	**150**	**7**	**2**	**0**	**0**	**159**	**485.8**

**Mini-tenders from 2008-09 to 2015-16. Gilt tenders thereafter.*
***Index-linked taps in 1998-99. Tap for market management in 1999-2000.*
**** Tenders of uncovered auction residuals.*

- ## Gilt auctions

Auctions (including the associated PAOF proceeds) accounted for £429.5 billion or 88.4% of gross gilt sales in 2020-21. Of the 150 auctions held, 46 were of short, 39 of medium and 46 were of long conventional gilts, and 19 were of index-linked gilts[7].

The average cover ratio at gilt auctions in 2020-21 was 2.49x, a 14% increase on the average of 2.18x in 2019-20. The average concentration of bidding at conventional gilt auctions, as measured by the tail[8], was an average of 0.3bp, slightly smaller than in the previous financial year. Details are shown in Table 8.

[7] The results of gilt auctions and other operations are available on the DMO's website at: https://www.dmo.gov.uk/dmo_static_reports/Gilt%20Operations.pdf
[8] 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: Auction cover and tail 2019-20 and 2020-21

	Average cover ratio (x)		Average yield tail (bp)	
	2020-21	**2019-20**	**2020-21**	**2019-20**
Short conventional	2.47	2.10	0.4	0.6
Medium conventional	2.66	2.22	0.2	0.4
Long conventional	2.34	2.03	0.4	0.6
Index-linked	2.62	2.36	N/A	N/A
All	**2.49**	**2.18**	**0.3**	**0.5**

Source: DMO

- ## PAOF

Unsurprisingly, given the record number of auctions and the increase in the PAOF rate from 15% to 25%, proceeds from the PAOF in 2020-21 at £49.6 billion were also at an all-time high, with the previous highest annual amount being £9.8 billion in the period June 2009 to March 2010. Table 9 shows the increase in the take-up rate of the PAOF between 2019-20 and 2020-21, which rose from 48.0% to 52.4%.

Table 9: PAOF performance 2019-20 and 2020-21

	PAOF performance			
	Rate (%)	Take up (%)	Take-up rate	Proceeds (£bn)
2019-20	15.0	7.2	48.0%	7.8
2020-21	25.0	13.1	52.4%	49.6

- ## Syndicated offerings

Seven syndicated offerings were held in 2020-21, raising £52.3 billion or 10.8% of gross gilt sales. The results of the syndication programme in 2020-21 are summarised in Table 10.

Table 10: Syndications in 2020-21

Date	Gilt	Size (£mn nominal)	Issue Price (£)	Issue Yield (%)	Proceeds (£mn cash)
12 May 2020	0⅜% Treasury Gilt 2030	12,000	100.216	0.354	12,008
19 May 2020	0½% Treasury Gilt 2061	7,000	96.870	0.585	6,765
9 Jun 2020	0⅝% Treasury Gilt 2050	9,000	96.343	0.760	8,653
8 Sep 2020	0⅝% Treasury Gilt 2035	8,000	100.789	0.570	8,049
22 Sep 2020	0½% Treasury Gilt 2061	6,500	94.161	0.663	6,107
19 Jan 2021	0⅞% Treasury Gilt 2046	6,500	100.177	0.867	6,499
9 Feb 2021	0⅛% Index-linked Treasury Gilt 2051	2,250	189.697	-2.023	4,264
Total					**52,345**

Source: DMO

For the first time the syndication programme included sales of 10- and 15-year maturities (0⅜% Treasury Gilt 2030 and 0⅝% Treasury Gilt 2035). The first of these, on 12 May 2020, was the largest syndication conducted by the DMO (at £12.0 billion nominal).

- **Treasury Select Committee's letter on the DMO's syndication programme**

On 19 November 2020 the Chair of the Treasury Committee of the Commons Select Committee, the Rt. Hon. Mel Stride MP, wrote to Sir Robert Stheeman in his role as Chief Executive of the DMO 'regarding the DMO's continuing programme of syndicated offerings'.

The Committee was interested in understanding the pricing of gilts sold via all 58 syndications that the DMO had conducted prior to that date. In particular, the Committee sought information about how the DMO monitors the price of the 'reference gilt' prior to a transaction (i.e. the gilt that already exists, the price of which is used as a reference by the market in determining the price of the gilt being syndicated), and how the DMO ensures gilts sold via syndications are priced in such a way as to contribute to achieving value-for-money for the taxpayer in accordance with the government's debt management objective.

The Committee asked how the DMO sets the fees paid to the primary dealer banks appointed by the DMO as lead managers to run each syndicated offering and they also requested a running total of the fees paid since the introduction of the DMO's syndication programme in June 2009.

Sir Robert responded to the Committee's letter on 10 December 2020 addressing each of the questions and providing some further background on the DMO's syndication programme. This response was published on the Treasury Committee's website[9].

- **Gilt tenders**

Two gilt tenders were held in 2020-21 (there had been four in 2019-20). Proceeds from these operations totalled £3.9 billion or 0.8% of gross gilt sales. The results are summarised in Table 11.

Table 11: Gilt tenders in 2020-21

Date	Gilt	Size (£mn nominal)	Issue Price (£)	Issue Yield (%)	Proceeds (£mn cash)
1 Apr 2020	1⅝% Treasury Gilt 2028	3,000	111.970	0.212	3,361
9 Dec 2020	0⅛% Index-linked Treasury Gilt 2048	250	194.610	-2.301	521
Total					**3,882**

Source: DMO

[9] https://committees.parliament.uk/publications/4108/documents/40708/default/

Preparing for green gilt issuance in 2021

On 9 November 2020, the Chancellor of the Exchequer announced the UK's intention to issue its inaugural green gilt in 2021, as the UK looks to build out a green curve in the coming years. The government also announced its intention to launch retail green savings bonds via NS&I[10] later in 2021 to provide retail investors with the opportunity to participate in tackling climate change[11]

While the government remains open to the introduction of new financing instruments, it always needs to be satisfied that any new instrument would represent value for money for the taxpayer, enjoy strong and sustained demand in the long term and be consistent with the government's wider fiscal objectives.

Both the DMO and HM Treasury have, over a number of years, closely monitored developments in the Environmental, Social and Governance (ESG) labelled bond markets and came to the conclusion that the UK's green gilt and retail green savings bonds would meet these criteria and that, therefore, it was the appropriate time to issue these instruments. Green gilt issuance will also add greater transparency to the UK's commitment to its environmental objectives.

In order to progress towards issuance a public procurement was undertaken for the appointment of the key external roles on this project. Following an open and competitive process, structuring advisors HSBC and J.P. Morgan, were appointed on 27 January 2021. Legal advisors, Clifford Chance, were appointed on 1 March 2021. Second Party Opinion (SPO) provider, V.E (Vigeo-Eiris, an affiliate of Moody's), was appointed on 16 March 2021 to assess the alignment of the UK government green financing framework with the green bond principles published by the International Capital Market Association. Carbon Trust was appointed on 29 March 2021, to provide a pre-issuance impact assessment of the alignment of the government's intended allocation of proceeds with its climate targets and wider environmental policies.

It was announced at Budget 2021 on 3 March 2021 that planned green gilt issuance for the financial year 2021-22 would total a minimum of £15 billion (cash). It was also confirmed that there would be two green gilt issues in 2021.

Further details about the delivery of the government's plans for green gilt issuance, can be found on the DMO's website at:
https://www.dmo.gov.uk/responsibilities/green-gilts/

[10] NS&I is the HM Treasury-backed savings organisation and established retail debt financing arm of the Government. More information about the retail green savings bonds can be found at: https://www.nsandi.com/green-saving

[11] Two green gilts were issued in September and October 2021, maturing in 2033 and 2053 respectively and together raising £16.1 billion. The retail green savings bond was also issued in October 2021. Further details will be reported in the 2021-22 DMO Annual Review.

Debt management performance

This section includes data on the DMO's performance in the execution of the gilt financing remit in 2020-21.

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 8 reports on the average cover ratios at all gilt auctions in 2020-21 and on the concentration of bidding (the tail) at conventional gilt auctions.

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, syndicated offerings and gilt tenders in 2020-21 was 0.350% (42.9bp lower than the 0.779% in the previous financial year).

The cash weighted average yield of issuance by type of gilt and maturity is shown in Table 12. Note that the index-linked yields reported in Tables 12 and 13 are nominalised yield equivalents of real yields assuming 3% RPI inflation.

Table 12: Average issuance yield by type and maturity of gilt in 2020-21

	Cash (£mn)	Yield (%)
Conventional		
Short	174,611	0.040
Medium	143,552	0.322
Long	134,247	0.762
Total conventional	**452,410**	**0.344**
Index-linked		
Medium	16,454	0.119
Long	16,911	0.737
Total index-linked	**33,365**	**0.432**
All issuance	**485,775**	**0.350**

Source: DMO

The actual yield of 0.350% 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 13 contrasts the actual average issuance yield in 2020-21 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 13: Illustrative average issuance yields assuming different issuance distributions

	Yield (%)	Actual distribution £mn	Shorter distribution £mn	Even distribution £mn	Longer distribution £mn
Conventional					
Short	0.040	174,611	226,205	150,803	113,103
Medium	0.332	143,552	113,103	150,803	113,103
Long	0.762	134,247	113,103	150,803	226,205
Total conventional	**0.334**	**452,410**	**452,410**	**452,410**	**452,410**
Index-linked					
Medium	0.119	16,454	25,204	16,682	8,341
Long	0.737	16,911	8,341	16,682	24,024
Total index-linked	**0.432**	**33,365**	**33,365**	**33,365**	**33,365**
All issuance		**485,775**	**485,775**	**485,775**	**485,775**
Average issuance	**0.350%**	**0.350%**	**0.290%**	**0.379%**	**0.479%**
Difference (bp)			**-6.0**	**2.9**	**12.9**

Figures may not sum due to rounding.

Source: DMO

The more even distribution to financing by maturity produces an average yield of issuance 2.9bp higher than the actual average yield, reflecting the smaller proportion of lower yielding short conventional gilts and slightly greater proportions of higher yielding medium and long conventional gilts. The shorter distribution[12] produces an implied issuance yield 6.0bp lower than the actual average yield while the longer distribution[13] produces an issuance yield 12.9bp 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 below shows the size 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 in

[12] 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 75% medium/25% long.
[13] 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 25% medium/75% long.

2020-21 (i.e. at 10.00am on days when a single auction was scheduled and at 10.00am and 11.30am on days when two auctions were scheduled).

A total premium of £199.52 million was achieved across the 150 gilt auctions held in 2019-20, an average of £1.33 million per auction - the corresponding numbers in 2019-20 were £37.69 million and £0.88 million. The average premia for auctions of the different maturities and types of gilt were as follows:

- Short conventional: £0.61 million
- Medium conventional: £1.15 million
- Long conventional: £2.21 million
- All conventional: £1.29 million
- Index-linked: £1.48 million

The largest premium was £7.72 million at the auction of 0⅛% Index-linked Treasury Gilt 2048 on 13 May 2020 and the largest (of 11) auction concessions was -£5.24 million at the auction of 0⅛% Index-linked Treasury Gilt 2036 on 11 November 2020.

The DMO’s financing remit in 2021-22

The DMO’s financing remit for 2021-22 was published on 3 March 2021. Planned gilt sales of £95.9 billion were announced, including an unallocated portion of issuance of £28.0 billion, from which issuance of green gilts in 2021-22 will be drawn down.

The 2021-22 remit was revised on 23 April 2021, alongside the publication of the 2020-21 outturn of the CGNCR ex NRAM, B&B and NR). Planned gilt sales fell by £43.3 billion, to £252.6 billion. The unallocated portion of issuance was reduced by £2.5 billion to £25.5 billion.

The 2021-22 remit was revised again on 27 October 2021, at the Autumn Budget 2021, alongside the OBR’s lowering of its forecast of the 2020-21 Central Government Net Cash Requirement (excluding NRAM ltd, Bradford & Bingley and Network Rail) to £171.6 billion. Planned gilt sales for the current financial year fell by £57.8 billion to £194.8 billion. Planned sales of Treasury bills for debt management purposes were also reduced by £25.0 billion.

Chapter 3: Exchequer Cash Management

Exchequer cash management remit 2020-21

The DMO's cash management remit for 2020-21, published alongside the Spring Statement on 13 March 2019, specified that the government's cash management objective remains:

> "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.

The DMO successfully delivered its cash management remit for 2020-21. The DMO monitored and assessed its performance using a range of key performance indicators, details of which are in Annex B.

During the year, the DMO continued to meet the government's net cash requirements primarily by raising and investing cash in the sterling repo market.

The DMO also used weekly Treasury bill tenders to support its daily cash management activities. Throughout the year, there remained a strong market demand to buy Treasury bills at tender and through bilateral agreement.

The Debt Management Account Deposit Facility (DMADF) continued to take cash deposits from local authorities and government agencies, which can place surplus funds with the DMA for up to six months. Deposit levels remained fairly stable throughout the year.

Additionally, the DMO traded a number of other money market instruments to ensure that the government's daily cash requirements were met.

In 2020-21 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[14].

[14] 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 2020-21, 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.

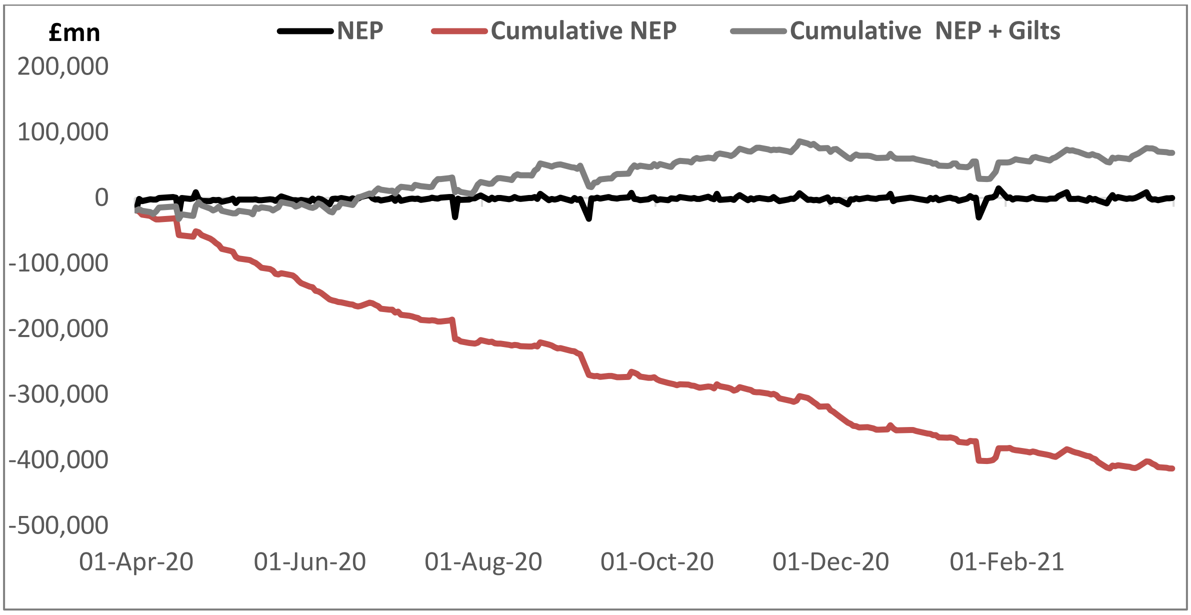
The DMO's money market dealers borrow from and/or lend to the market on each business day to balance the position on the NLF. In order to do so the DMO receives from HM Treasury forecasts of each business day's cash flows into and out of central government. Additionally, the DMO obtains up-to-date intra-day 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 10 shows the scale of daily cash flows measured in terms of the Net Exchequer Position (NEP) in 2020-21 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 10 also shows the net effect including gilt sales demonstrating how the timing of these flows made a significant contribution to reducing the in-year financing required by Exchequer cash management operations.

Chart 10: Exchequer cash flows 2020-21



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. The results for 2020-21 are presented below.

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.

The cash management performance report

The DMO's high level cash management objective as set out above has been subdivided into a series of objectives, to each of which has been attached a KPI as seen in Table 14. The following section explains how performance was delivered against these objectives in 2020-21.

Table 14: 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.

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.

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 2020-21.

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 29 out of 52 weeks in 2020-21[15] (compared with 28 out of 52 weeks in 2019-20). 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 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 2020-21, 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

[15] 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 (47 in 2019-20).

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 £10.7 million for 2020-21. The DMO's estimated transaction and management costs during 2019-20 were £14.5 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.

The Exchequer's net cash position was successfully offset each day, though there was one instance of a liquidity risk limit breach in 2020-21. There were also three daily settlement breaches and one breach of an investment tenor limit during the financial year. There were no breaches of interest rate and foreign exchange limits.

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 2020-21 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[16]) or the timing of the announcement of Treasury bill tender results[17]. There was one breach of the cash management operational notice in 2020-21. There was no consequential impact on financial markets. Appropriate steps have been taken to reduce the risk of such a breach in the future.

c) Treasury bill tender performance

Table 15 and Charts 11-13 compare the results (in terms of the average accepted yield) of all Treasury bill tenders held in 2020-21 with the corresponding SONIA rates. Over the financial year the average accepted yields at one-, three- and six- month tenders outperformed the corresponding SONIA rates by 6.0p, 4.2bp and 1.1bp respectively.

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 three times 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 16)[18].

Table 15: Comparison of average Treasury bill tender yields with SONIA rates in 2020-21

	Average tender yield (%)	Average SONIA rate (%)	Difference (bp)
One-month	-0.004	0.055	-6.0
Three-month	0.010	0.052	-4.1
Six-month	0.030	0.041	-1.1
Average	**0.012**	**0.049**	**-3.7**

Source: DMO/Bloomberg

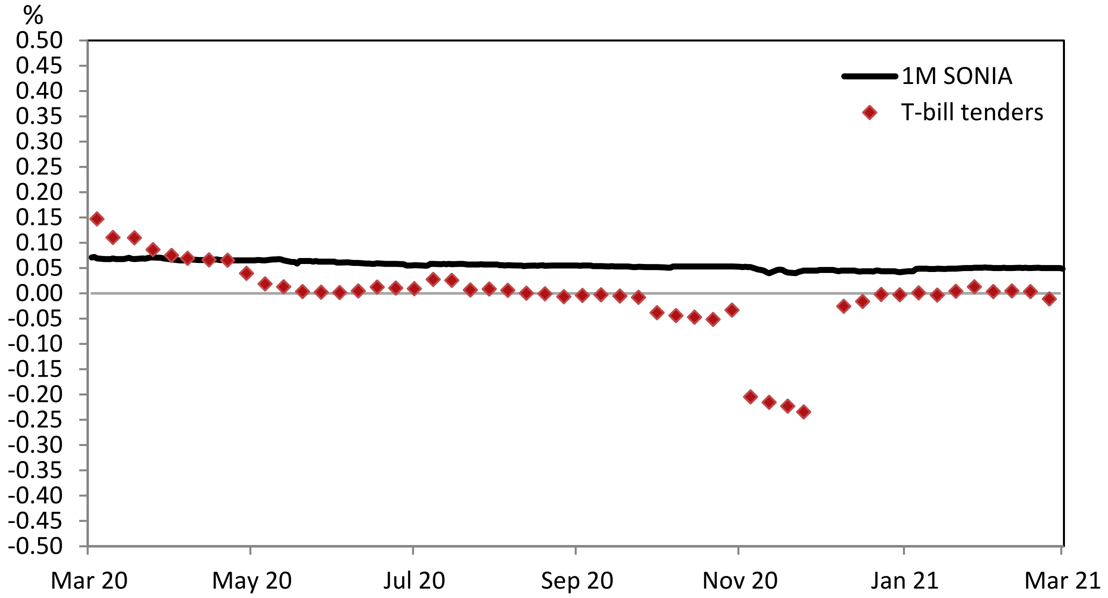
Table 16: Comparison of average Treasury bill tender sizes and cover ratios 2020-21

	Average tender size (£mn)	Average cover ratio (x)
One-month	657	4.33
Three-month	1,191	4.51
Six-month	2,000	3.66

Source: DMO

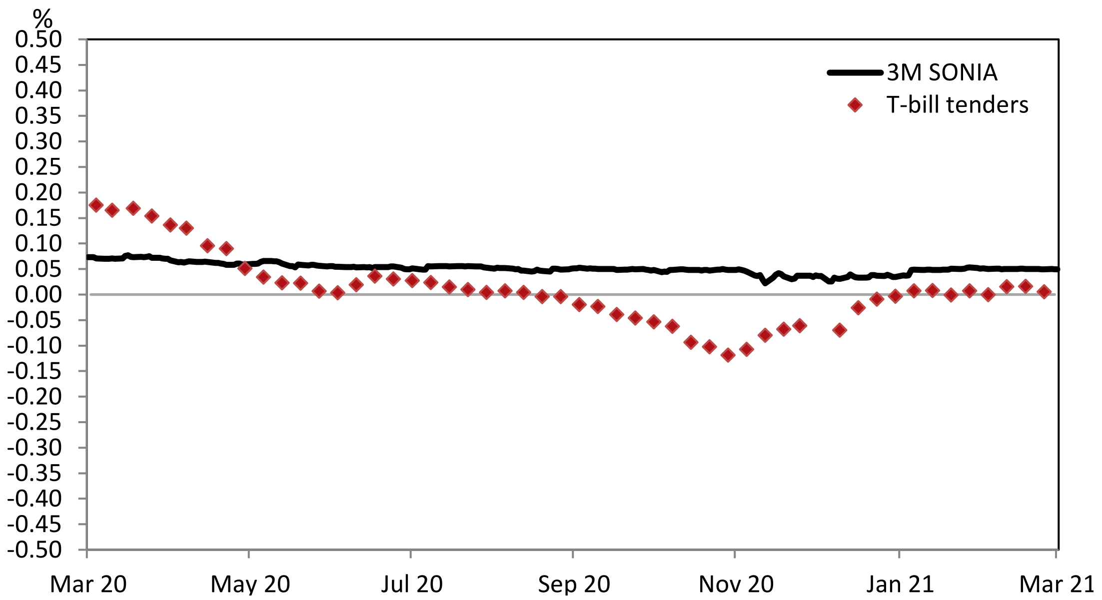
[16] The target is to settle at least 99% of trades by value on the due date, where the DMO is responsible for delivering stock or cash: the level achieved was over 99.9% (in 2019-20 the corresponding figure was also over 99.9%).
[17] The target is to release tender results within 15 minutes: the average release time was 5.5 minutes.
[18] In 2019-20 average cover ratios ranged from 2.73x to 3.36x.

Chart 11: One-month Treasury bill tender yields compared with SONIA rates in 2020-21



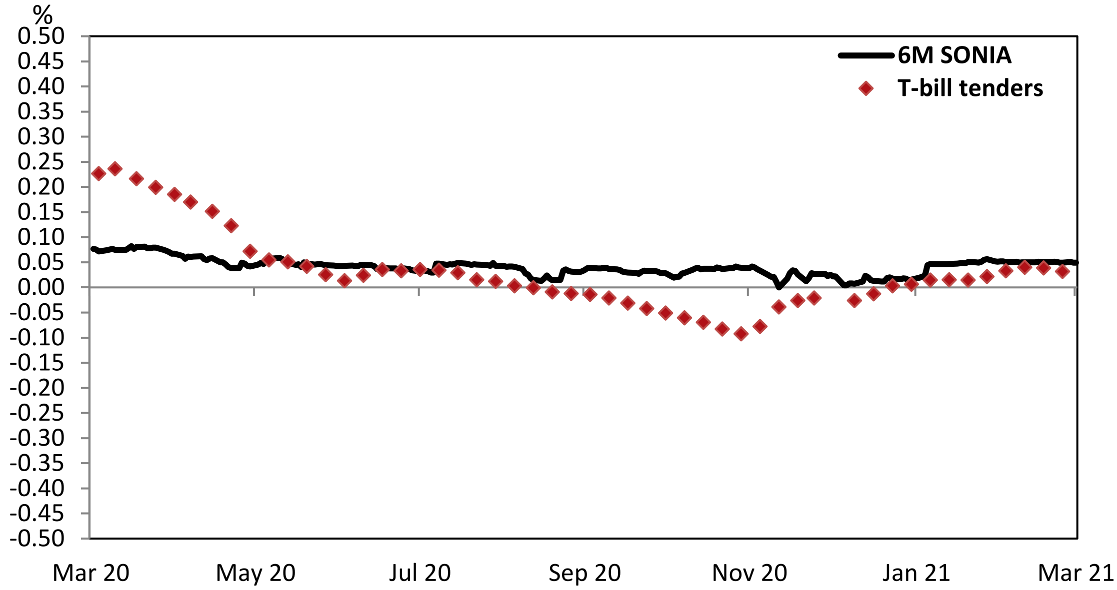
Source: DMO/Bloomberg

Chart 12: Three-month Treasury bill tender yields compared with SONIA rates in 2020-21



Source: DMO/Bloomberg

Chart 13: Six-month Treasury bill tender yields compared with SONIA rates in 2020-21



Source: DMO/Bloomberg

Annexes

a) The gilt portfolio

The key statistics of the government's marketable debt portfolio at end-March 2021 compared to end-March 2020 are shown in Tables 17 and 18 below.

Tables 17 and 18: Debt portfolio statistics

Gross values (including DMO holdings)	31 March 2020	31 March 2021
Uplifted nominal value		
Debt portfolio	£1,681bn	£2,034bn
Conventional gilts	£1,164bn	£1,514bn
Index-linked gilts	£455bn	£460bn
Treasury Bills	£62bn	£60bn
Market value		
Debt portfolio	£2,379bn	£2,631bn
Conventional gilts	£1,573bn	£1,803bn
Index-linked gilts	£745bn	£767bn
Treasury Bills	£62bn	£60bn
Average maturity (nominal value-weighted)		
Debt portfolio	15.16 years	14.83 years
Gilt portfolio	15.74 years	15.27 years
Conventional gilts	14.45 years	14.17 years
Index-linked gilts	19.02 years	18.87 years
Average maturity (market value-weighted)		
Debt portfolio	18.19 years	17.05 years
Average yield (market value-weighted)		
Conventional gilts	0.48%	0.83%
Index-linked gilts	-2.11%	-2.31%
Average modified duration (market value-weighted)		
Conventional gilts	12.64 years	11.87 years
Index-linked gilts	22.06 years	21.34 years

Source: DMO

Net values (excluding DMO holdings)	31 March 2020	31 March 2021
Uplifted nominal value		
Debt portfolio	£1,574bn	£1,922bn
Conventional gilts	£1,066bn	£1,408bn
Index-linked gilts	£447bn	£454bn
Treasury Bills	£62bn	£60bn
Market value		
Debt portfolio	£2,219bn	£2,475bn
Conventional gilts	£1,425bn	£1,657bn
Index-linked gilts	£733bn	£758bn
Treasury Bills	£62bn	£60bn
Average maturity (nominal value-weighted)		
Debt portfolio	15.24 years	14.88 years
Gilt portfolio	15.86 years	15.36 years
Conventional gilts	14.44 years	14.18 years
Index-linked gilts	19.23 years	19.00 years
Average maturity (market value-weighted)		
Debt portfolio	18.34 years	17.15 years
Average yield (market value-weighted)		
Conventional gilts	0.48%	0.82%
Index-linked gilts	-2.11%	-2.31%
Average modified duration (market value-weighted)		
Conventional gilts	12.69	11.91 years
Index-linked gilts	22.21	21.47 years

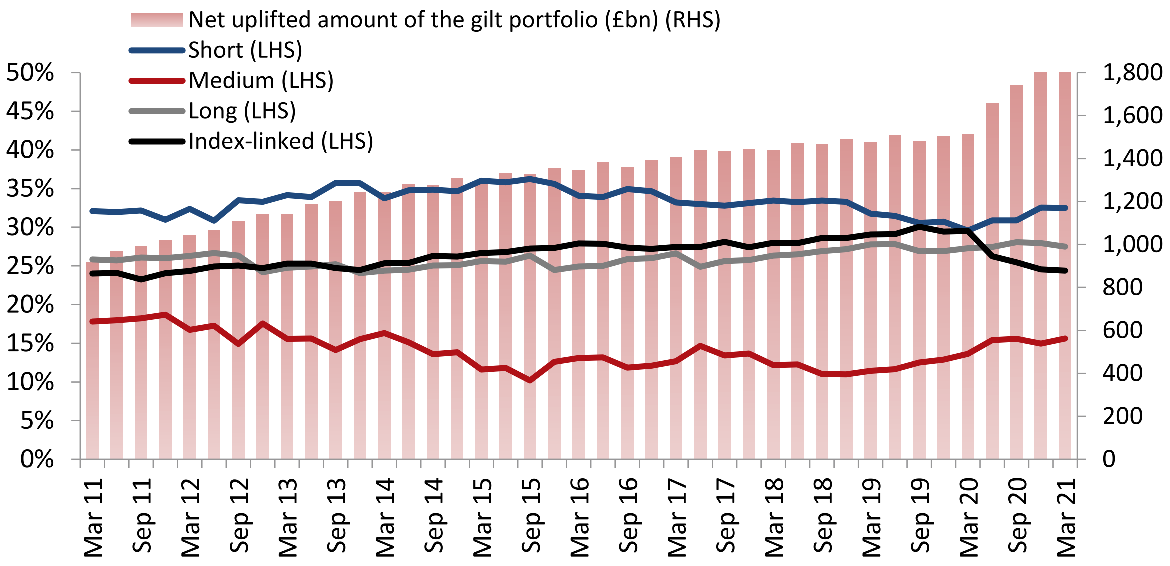
Source: DMO

The gross nominal value[19] of the gilt portfolio rose by 21.9% to £1,974 billion as gross gilt issuance plus inflation accrual on index-linked gilts exceeded gilt redemptions. The gross market value of the portfolio rose by 11.0% to £2,571 billion[20], reflecting the rise in the nominal value and also the decrease in conventional gilt prices/increase in yields over the course of the financial year (increase by 35bp in the case of nominal yields and fall by 20bp in the case of real yields).

The growth and changing composition of the gilt portfolio is shown in Chart 14. Developments in portfolio maturity are shown in Chart 15.

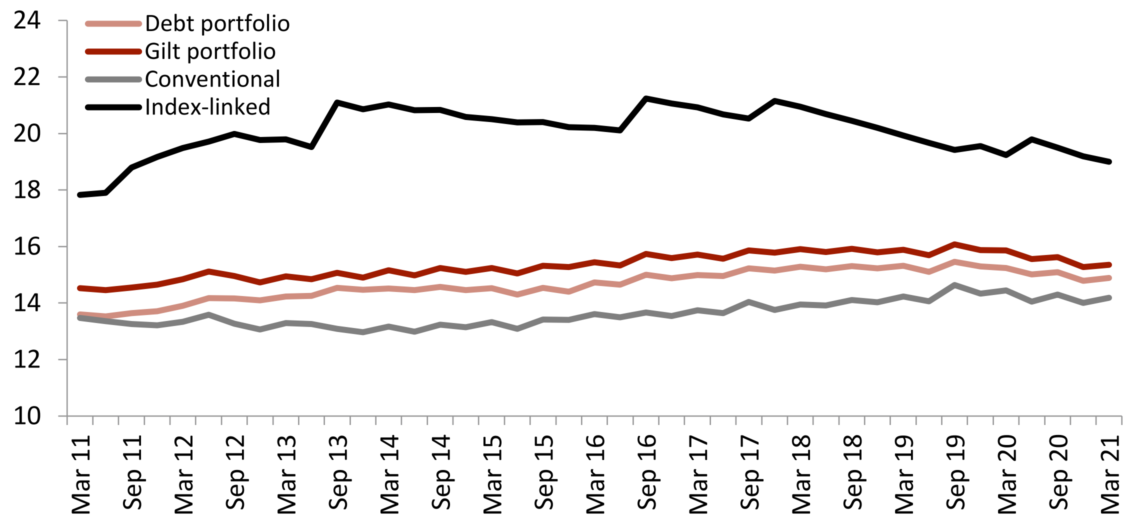
[19] Including inflation uplift on index-linked gilts.
[20] Figures may not sum due to rounding.

Chart 14: Portfolio composition[21]



Source: DMO

Chart 15: Portfolio maturity (years)



Source: DMO

[21] 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

b) Other published information on DMO activities

- ### General DMO performance

Aspects of the DMO's performance each financial year are reported in the DMO's Annual Report and Accounts. These comprise (page references refer to the 2020-21 Accounts published on 8 July 2021):

- A performance summary of the DMO's main activities (pages 16-20);

- A report on achievements against agency objectives as set by HM Treasury (pages 24-26);

- A report on performance against agency targets (pages 28-32), 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.

- ### Debt management operations

The principal publications[22] describing the DMO's activities in the gilt market are:

- Official Operations in the Gilt Market – an Operational Notice, which provides details on the operational procedures conducted by the DMO in the gilt market;

- The GEMM Guidebook - a guide to the roles of the DMO and Primary dealers in the UK government bond market, which is aimed at DMO gilt market counterparties and outlines their obligations as gilt-edged market makers and the DMO's obligations to them.

The legal details behind the DMO's gilt issuance activities are set out in:

- The Information memorandum – Issue, Stripping and Reconstitution of British Government Stock

[22] These publications can be accessed via the gilt market operational rules section of the DMO website: https://dmo.gov.uk/publications/gilt-market/operational-rules/

- ## Cash management operations

The principal publication describing the DMO's activities in carting out Exchequer Cash Management in the UK and also the legal and technical background to the issuance of Treasury bills is the:

- Cash management Operational Notice and UK Treasury Bills Information Memorandum https://dmo.gov.uk/media/17701/cmopnot200921.pdf

Other relevant sources of information include:

- About Treasury Bills:

  https://www.dmo.gov.uk/responsibilities/money-markets/about-treasury-bills/

- Discretionary Bilateral Treasury Bill Facility

  https://www.dmo.gov.uk/responsibilities/money-markets/discretionary-bilateral-treasury-bill-facility/

- A list of Treasury Bill Primary Participants:

  https://www.dmo.gov.uk/responsibilities/money-markets/primary-participants/