

Annex B

Context for decisions on the Debt Management Office's financing remit

Introduction

- B.1** This annex provides the context for the government's decisions on gilt and Treasury bill issuance in 2023-24, setting out the qualitative and quantitative considerations that have influenced them.
- B.2** The government's decisions on the structure of the financing remit, which are taken annually, are made in accordance with the debt management objective, the debt management framework, and wider policy considerations (see Chapter 2).
- B.3** In determining the overall structure of the financing remit, the government assesses the costs and risks of debt issuance by maturity and type of instrument. Decisions on the composition of debt issuance are also informed by an assessment of investor demand for debt instruments by maturity and type as reported by stakeholders, and as manifested in the shape of the nominal and real yield curves, as well as the government's appetite for risk.
- B.4** Alongside these considerations, the government takes into account the practical implications of issuance (for example, the scheduling of operations throughout the year).

Demand

- B.5** Both Gilt-Edged Market Makers (GEMMs) and investors have reported ongoing support for the current design of the issuance programme, which has helped to support market liquidity.
- B.6** At the annual consultation meetings with the Economic Secretary to the Treasury in January 2023, there was a general view that the issuance programme should be skewed towards the short and medium maturities for conventional gilts, with increased demand expected from banks and financial institutions for shorter-dated gilts in particular.
- B.7** Demand is expected to remain strong for long-dated gilts, in both conventional and index-linked format, from long term savings institutions; however, given the overall size of the financing programme, it was suggested that the proportion of long conventional and index-linked gilts be reduced somewhat relative to financial year 2022-23.

- B.8 Demand for Treasury bills is expected to remain strong in 2023, with market feedback suggesting that the size of the Treasury bill programme could potentially be increased commensurately with the increase in the size of the gilt market and to help to improve liquidity.
- B.9 Good investor appetite for further green gilt issuance was also reported, with market feedback supporting the continuation and expansion of the programme.

Cost

B.10 This section provides an overview of cost considerations. These analyses complement the qualitative demand feedback and help to inform evaluations of the relative cost effectiveness of different types of gilt issuance. Chart B.1 reports the evolution of nominal spot rates for several maturities since the beginning of 2022-23.²⁷ It shows yields climbing until they peaked in October 2022, with spot rates close to 5%. Since then, yields have fallen with 5-year, 10-year, and 30-year spot rates between 3% and 3.75% at the end of the period. The chart also illustrates large changes in yields throughout the year. Particularly during periods of volatility, outturn yields during the financial year may differ from observations made at the time at which the annual remit is set. Hence, immediately observable cost factors must be weighed carefully against other considerations.

Chart B.1 Nominal spot rate dynamics (to February 2023)¹



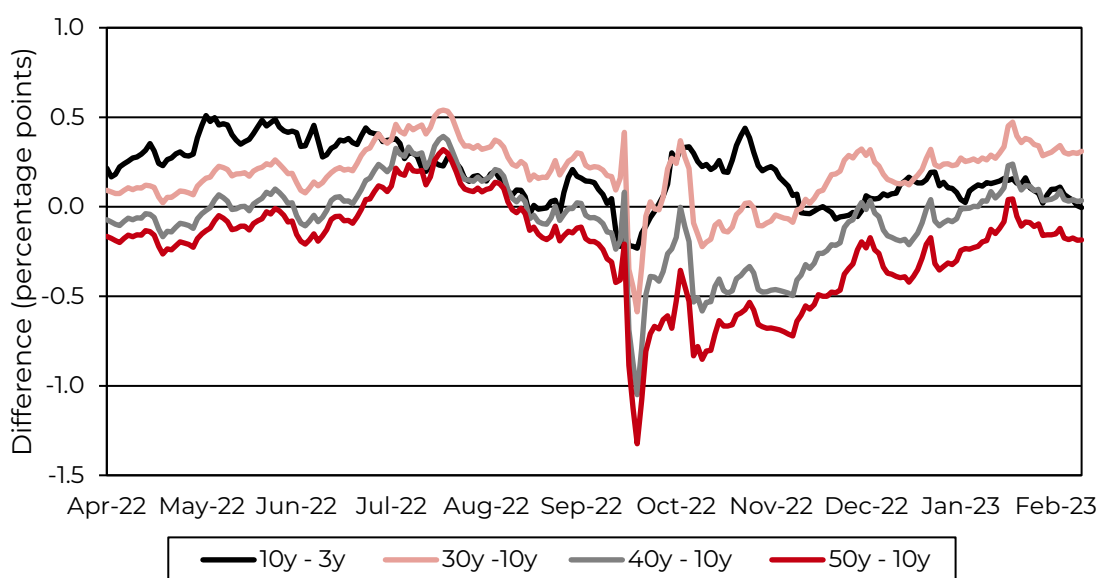
¹Daily spot rates for selected maturities from 1 April 2023 to 27 February 2023.

Source: DMO.

²⁷ The spot rate for any maturity is defined here as the yield on a theoretical zero-coupon gilt which gives a single payment at that maturity. The spot rate reflects the current yield at a particular point in time.

B.11 Since October 2022, there has been a gradual steepening in the curve, with the inversion between the 30-year and 10-year points that was present towards the end of October slowly reversing, as shown in Chart B.2.

Chart B.2 Differences across spot rates of different maturities (to February 2023)¹

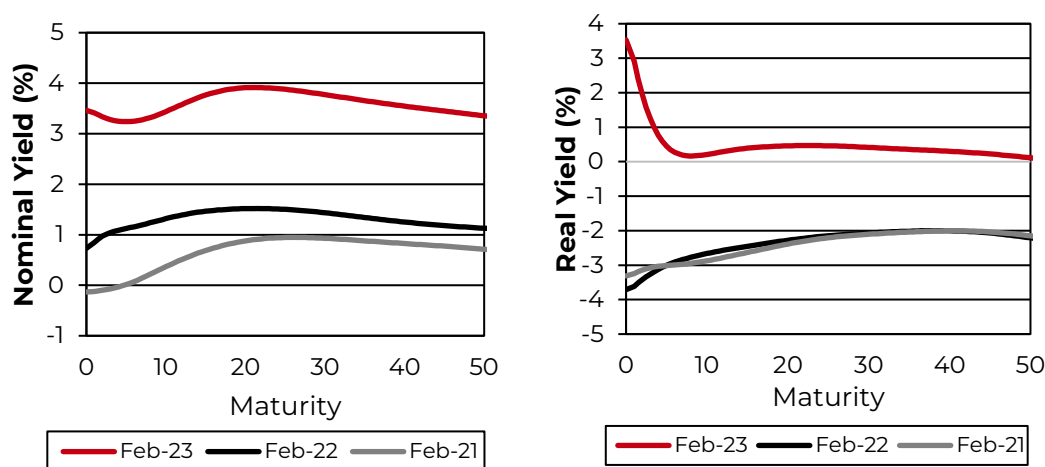


¹The black line shows the difference between 10-year and 3-year spot rates to 27 February 2023. The pink, grey, and red lines show the difference between the 30-, 40-, 50-year spot rates and the 10-year spot rates to 27 February 2023, respectively.

Source: DMO.

B.12 The changes described above, together with current demand conditions, have resulted in an upward shift in the nominal yield curve. This can be seen in Chart B.3, which displays the shapes of both the nominal and real spot yield curves as at the end of February 2021, 2022, and 2023.

Chart B.3 Nominal and real spot yield curves (as at start-February 2021, 2022 and 2023)¹



¹The left-hand (right-hand) side panel shows the shape of nominal (real) spot yield curves as of 01 February 2020, 2021, and 2022.

Source: DMO.

B.13 Understanding the market pricing of gilts can be a useful consideration in determining the appropriate composition of maturities to issue. To illustrate, the yield of a long-term, zero-coupon gilt can be decomposed into two components: a 'risk neutral' yield and a risk premium (also called a term premium). The former corresponds to the average expected future short-term interest rates over the life of the gilt. The latter is normally thought of as the additional return that risk-averse investors demand as compensation for the possibility of capital loss if a gilt is sold before maturity and, in the case of conventional gilts, the risk of the bond value being eroded by inflation.

B.14 The risk premium may also be determined by supply and demand imbalances for a specific instrument.²⁸ All else being equal, cost considerations would tend to prompt a government to issue at maturities where the risk premium demanded by investors is lowest relative to other maturities.

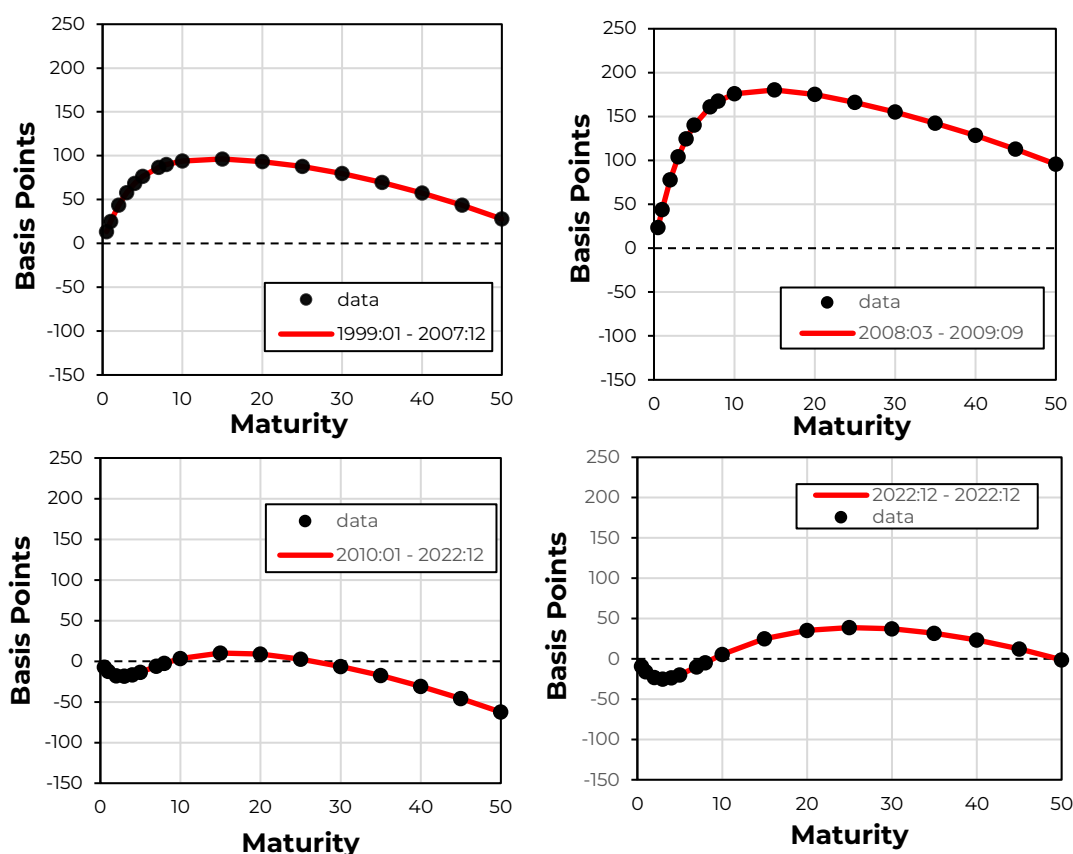
B.15 Risk premia are typically maturity-specific and time-varying. Several factors contribute to the variation and trends in risk premia, among which are changes in investors' risk preferences and expectations, and unanticipated macroeconomic shocks.

B.16 Chart B.4 displays the term structure of risk premia, with each individual panel showing averages over a selected time period.

²⁸ More generally, the risk premium can be decomposed into several components, including: (i) a premium which compensates investors for duration risk that increases for longer maturity investments; (ii) a credit and default risk premium; (iii) a liquidity discount or premium owing to the different levels of liquidity in some bonds or maturities, which enhances or restricts investors' ability to hedge; and (iv) an inflation risk premium to compensate investors in nominal bonds for uncertainty owing to inflation.

The top left panel focuses on the period before the global financial crisis, when yields and risk premia were higher than today. Risk premia increased during the global financial crisis (top right panel). Since then, there has been a steady decline; during COVID and the period of quantitative easing by the Bank of England, risk premia were at historically low levels. Since the beginning of 2022, risk premia have been rising and are now mostly above zero for maturities greater than 10 years (Chart B.5). This return to positive risk premia means investors now demand yields greater than that of the 'risk neutral' yield. Risk premia are, however, still low by historical standards, with risk premia lower at all maturities than the average in the decade before the global financial crisis (most significantly at shorter maturities). Chart B.5 shows that risk premia for all maturities are within a narrower range than they have been in the recent past, suggesting that issuance of conventional gilts across the maturity spectrum are more equal in terms of cost effectiveness.

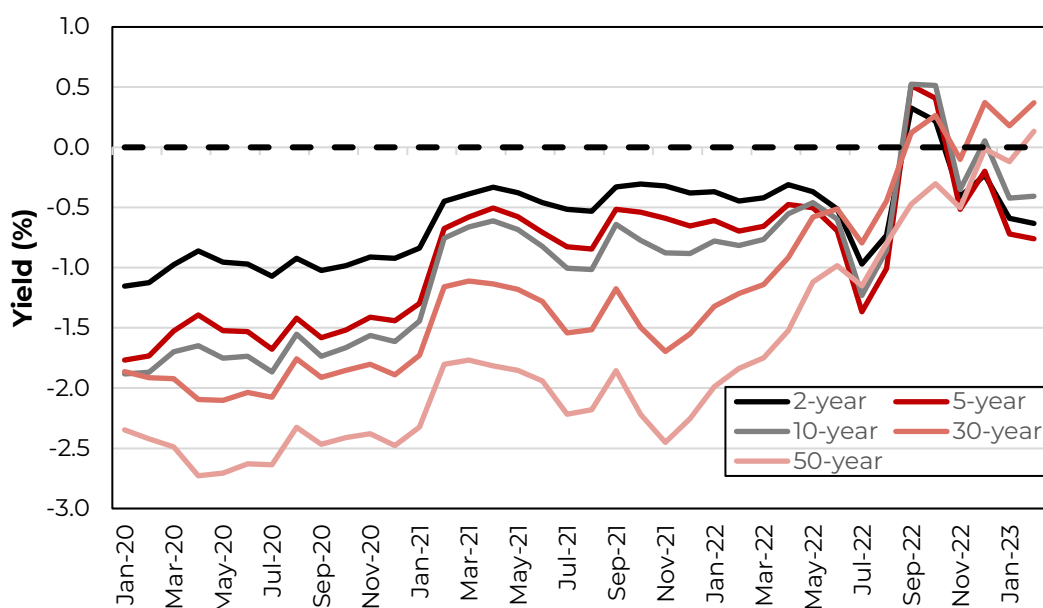
Chart B.4 The term structure of risk premia in the UK conventional gilt market over selected sample periods¹



¹Averages of time-varying risk premia over selected time periods are based on the AFNS model of Christensen, J. H., Diebold, F. X., & Rudebusch, G. D. (2011). "The affine arbitrage-free class of Nelson-Siegel term structure models". *Journal of Econometrics*, 164(1), 4-20.

Source: DMO.

Chart B.5 The term structure of risk premia in the UK conventional gilt market since 2020¹



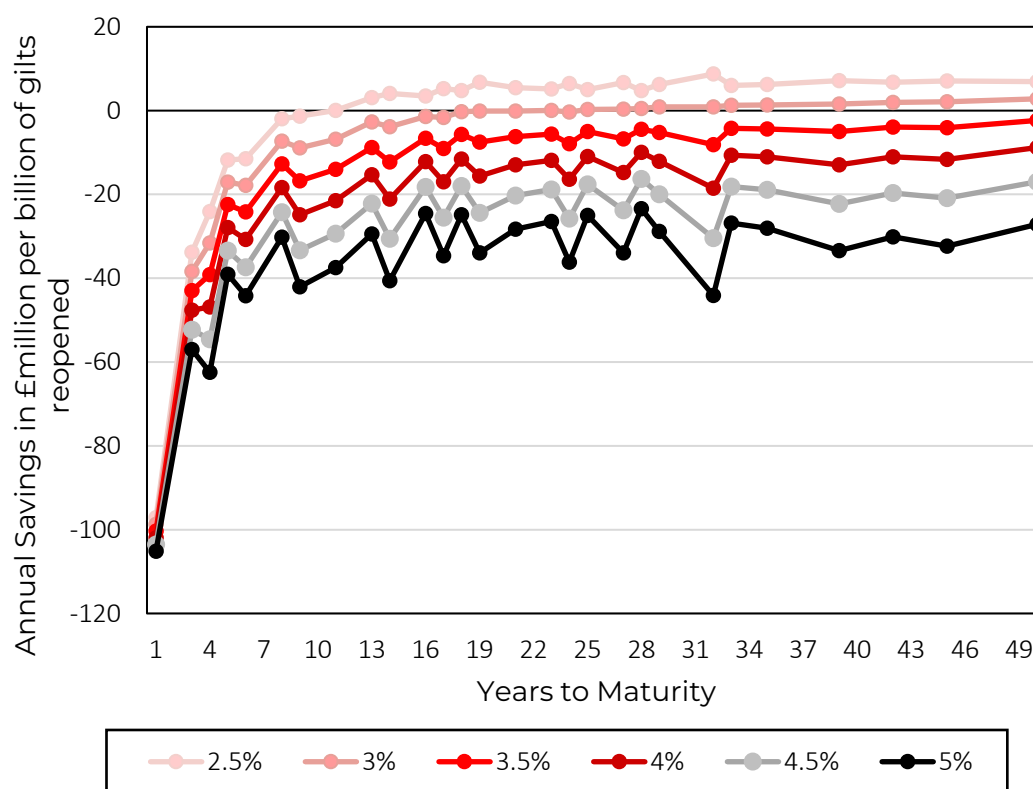
¹Time-varying risk premia are based on the AFNS model of Christensen, J. H., Diebold, F. X., & Rudebusch, G. D. (2011). "The affine arbitrage-free class of Nelson–Siegel term structure models". *Journal of Econometrics*, 164(1), 4-20.

Source: DMO.

- B.17** The government also undertakes an evaluation of the relative cost-effectiveness of index-linked gilts (ILGs), in addition to its analysis of conventional gilts. ILGs differ from conventional gilts as both the principal and coupon payments are indexed to the value of the Retail Prices Index (RPI). One cost consideration for issuing ILGs is whether investors are typically willing to pay an additional premium for the protection from inflation that these securities provide.
- B.18** One way to take account of the cost-effectiveness of ILGs against conventional gilts is to evaluate the break-even inflation rate (BEIR). It is typically calculated as the difference between the yield of a nominal gilt and the yield of an ILG of the same maturity. The BEIR can be seen as the average rate of inflation, over the life of a gilt, at which an issuer should be indifferent on cost grounds between issuing either a conventional gilt or an ILG.
- B.19** The BEIR can be decomposed into an expected inflation component and two additional factors: the additional premium investors are willing to pay for protection against inflation, and the discount they require for holding less liquid bonds. Consequently, one possible way to assess the cost-effectiveness of an ILG relative to a conventional gilt is to compare actual inflation outturn over the life of the gilt with the market-implied BEIR.
- B.20** Chart B.6 illustrates potential costs or savings from ILG issuance relative to conventional issuance under different RPI inflation

scenarios.²⁹ Note that these are purely illustrative and not forecast scenarios. The analysis is expressed in £ millions notionally saved per £ billion of each gilt issued. The analysis shows that issuing an ILG is cost-effective at maturities greater than or equal to 20 years relative to its conventional equivalent in scenarios where RPI does not exceed 3% (on average) over the life of the gilt.³⁰ Conventional issuance has higher cost-effectiveness than ILG issuance at all maturity points when RPI inflation is greater than or equal to 3.5% (on average) over the life of the gilt.

Chart B.6 The cost effectiveness of index-linked gilts relative to conventional gilts under different RPI scenarios (as of end-February 2023)¹



¹Data markers in each line on the chart represent results from specific index-linked gilts maturing at each point in time illustrated. The jagged path of the lines in Chart B.6 reflects the fact that gilts with higher coupons have a greater sensitivity to the Index Ratio. In such cases, a greater saving or cost occurs in comparison with gilts of the same maturity but with a smaller coupon. As can be seen in the chart, the effect also grows in scenarios with higher average levels of RPI (e.g. 5% (black line) versus 3.5% (red line)).

Source: DMO.

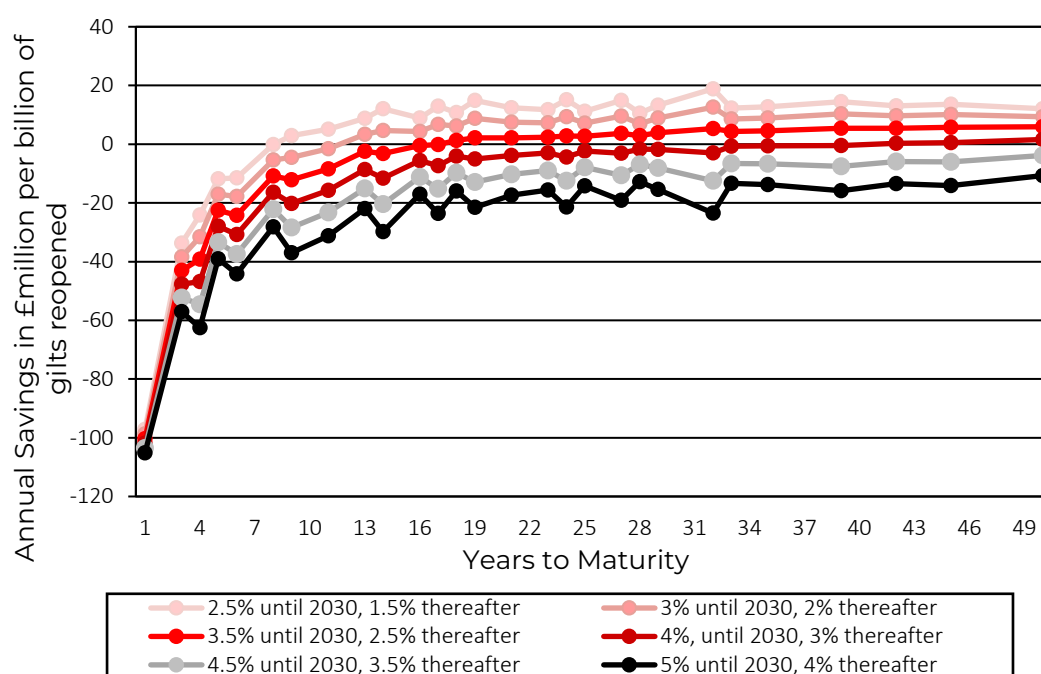
B.21 This analysis can be complemented by one which factors in the reform to RPI which is planned to take place in 2030, when the

²⁹ In each case an assumption is made that RPI inflation reaches the long term scenario rate over a two-year period. The analysis summarised in the charts is sensitive to the assumed time period over which inflation converges on the scenario rate, particularly for shorter maturities.

³⁰ In the period after inflation has converged to the scenario rate (in each of these illustrative examples).

methodology and data sources of CPIH will be brought into RPI. To take this into account, for each RPI scenario, a simple adjustment can be made to illustrate the effect if RPI were one percentage point lower from 2030 onwards. This simplified assumption is for illustrative purposes and not a forecast. As shown in Chart B.7, with these changes, ILG issuance would be more cost-effective for maturities greater than 12 years relative to conventional gilts in scenarios where RPI stayed below approximately 3% (on average) during the period up to 2030.

Chart B.7 The cost effectiveness of index-linked gilts relative to conventional gilts under different RPI scenarios and RPI reform (as of end-February 2023)



Source: DMO.

Risk

B.22 In the context of the long-term focus of the debt management objective, the other key determinant in the government's decisions on debt issuance by maturity and type of instrument is its assessment of risk. In reaching a decision on the overall structure of the remit, the government considers the risks to which the Exchequer is exposed through its debt issuance decisions, and assesses the relative importance of each risk in accordance with its risk appetite.

B.23 The government places a high weight on minimising near-term exposure to refinancing risk. This exposure is managed partly by maintaining a sizeable proportion of long-dated debt in the

portfolio, which reduces the need to refinance debt frequently. As part of this, all else equal, doing so also reduces exposure to interest rate risk in the near term. The government places importance on avoiding, when practicable, large concentrations of redemptions in any one year. To achieve this, the government will issue debt across a range of maturities, smoothing the profile of gilt redemptions.

- B.24** The government is mindful of the long-term inflation exposure in the public finances and gives due consideration to ensuring inflation risk is prudently managed. The government will manage this exposure through its decisions on the appropriate balance between index-linked and conventional gilts in its debt issuance in the coming years.
- B.25** Prudent debt management is also served by promoting sustainable market access, which the remit is designed to support. The government places significant importance on encouraging the development of a deep, liquid, and efficient gilt market, and a diverse investor base, in order to maintain continuous access to cost-effective financing in all market conditions.
- B.26** Promoting these features of the gilt market will also serve to minimise debt costs to the government over the long term, because investors reward an issuer for providing a continuous and ready market and a globally recognised benchmark product.

Gilt distribution

- B.27** Auctions will remain the primary method of issuance in 2023-24. The use of syndications will continue in 2023-24. Any type and maturity of gilt can be sold through syndication and the Debt Management Office (DMO) will announce on a quarterly basis its planned syndication programme.
- B.28** Gilt tenders may be used in 2023-24 to issue any type and maturity of gilt. Further details are set out in the DMO's 2023-24 financing remit announcement.
- B.29** The scheduling of gilt operations throughout 2023-24 will, as usual, take into account the timing of gilt redemptions in the financial year.
- B.30** The government remains committed to the GEMM model to distribute gilts through auctions, syndications, and gilt tenders, and the government recognises that GEMMs play an important role in helping to facilitate liquidity in the secondary market.

Gilt issuance by maturity and type in 2023-24

- B.31** In determining the split of gilt issuance, the government has taken into account its analysis of the relative cost-effectiveness of the different gilt types and maturities, its risk preferences (including for the portfolio as well as the issuance programme), the market feedback it has received, and operational viability.

- B.32** Continuing strong demand for short conventional gilts is anticipated in 2023-24, which has been balanced against managing the government's near-term exposure to refinancing risk. Relative to the 2022-23 programme from Spring Statement 2022, a 6.2 percentage point proportional increase in the issuance of short-dated conventional gilts is planned in 2023-24 (at 36.0%).
- B.33** In deciding the proportion of medium conventional gilts to issue, the government recognises the important role that medium-dated conventional gilts (particularly at the 10-year maturity) play in facilitating the hedging of a wide range of gilt market exposures through the futures market, which helps to underpin liquidity in the sector. Relative to the 2022-23 programme from Spring Statement 2022, a 5.8 percentage point proportional increase in the issuance of medium-dated conventional gilts is planned in 2023-24 (at 27.1%).
- B.34** Market feedback also suggests ongoing demand exists for long conventional gilts from domestic investors in particular. Additionally, in determining the amount of long-dated conventional gilts to issue, the government has taken into account the role of long conventional issuance in mitigating its near-term exposure to refinancing risk. Relative to the 2022-23 programme from Spring Statement 2022, a 7.4 percentage point proportional decrease in the issuance of long-dated conventional gilts is planned in 2023-24 (at 21.1%).
- B.35** Issuing index-linked gilts has historically brought cost advantages for the government due to strong demand from the domestic pensions sector in particular, and market feedback suggests that this is ongoing.
- B.36** Relative to the 2022-23 programme from Spring Statement 2022, a 4.0 percentage point proportional decrease in the issuance of index-linked gilts is planned in 2023-24 (at 10.9%). Details on the government's current policy position in relation to index-linked gilt issuance, as well as the specific decisions in respect of the 2023-24 remit, are provided in Chapter 2.
- B.37** A 5.0% proportion and £12.0 billion absolute amount of issuance will be initially unallocated in 2023-24. The existing purposes of the unallocated portion of issuance will continue to apply – namely, to give increased flexibility to the DMO to issue any type or maturity of gilt by any issuance method, while remaining consistent with the principles of openness, predictability, and transparency.

Treasury bill issuance in 2023-24

- B.38** Treasury bills are used for both debt and cash management purposes. With regard to the former, changes to the Treasury bill stock have historically offered an efficient way to accommodate in-year changes to the financing requirement.
- B.39** The government does not have a target for the planned end-year total Treasury bill stock (i.e. including Treasury bills issued for cash

management purposes). Information on the outstanding stock of Treasury bills will continue to be published monthly in arrears on the DMO's website.³¹

B.40 It is expected that net issuance of Treasury bills will make a contribution to debt financing in 2023-24 of £5 billion.

³¹ www.dmo.gov.uk/data/treasury-bills