

TREASURY MANAGEMENT STRATEGY 2022/23

1. Introduction

Treasury management is the management of the Authority's cash flows, borrowing and investments, and the associated risks. The Authority has invested substantial sums of money and is therefore exposed to financial risks including the loss of invested funds and the revenue effect of changing interest rates. The successful identification, monitoring and control of financial risk are therefore central to the Authority's prudent financial management.

Treasury risk management at the Authority is conducted within the framework of the Chartered Institute of Public Finance and Accountancy's Treasury Management in the Public Services: Code of Practice 2017 Edition (the CIPFA Code) which requires the Authority to approve a treasury management strategy before the start of each financial year. This report fulfils the Authority's legal obligation under the Local Government Act 2003 to have regard to the CIPFA Code.

Tees Valley Combined Authority are supported by professional advisors Arlingclose Limited in order to ensure that up to date market advice and information on the most appropriate investment / borrowing options are obtained.

Through a service level agreement Stockton Borough Council (SBC) provides the Combined Authority with a treasury management service. The CIPFA code requires that staff with responsibility for treasury management receive adequate training to carry out this role. SBC assess the requirements for training as part of the staff appraisal process and they regularly attend courses and seminars provided by Arlingclose and CIPFA.

2. Economic Context

Economic Background

The ongoing impact on the UK from coronavirus, together with higher inflation, higher interest rates, and the country's trade position post-Brexit, will be major influences on the Authority's treasury management strategy for 2022/23.

The Bank of England (BoE) increased Bank Rate to 0.25% in December 2021 while maintaining its Quantitative Easing programme at £895 billion. The Monetary Policy Committee (MPC) voted 8-1 in favour of raising rates, and unanimously to maintain the asset purchase programme.

Within the announcement the MPC noted that the pace of the global recovery was broadly in line with its November Monetary Policy Report. Prior to the emergence of the Omicron coronavirus variant, the Bank also considered the UK economy to be evolving in line with expectations, however the increased uncertainty and risk to activity the new variant presents, the Bank revised down its estimates for Q4 GDP growth to 0.6% from 1.0%. Inflation was projected to be higher than previously forecast, with CPI likely to remain above 5% throughout the winter and peak at 6% in April 2022. The labour market was generally performing better than previously forecast and the BoE now expects the unemployment rate to fall to 4% compared to 4.5% forecast previously, but notes that Omicron could weaken the demand for labour.

UK CPI for November 2021 registered 5.1% year on year, up from 4.2% in the previous month. Core inflation, which excludes the more volatile components, rose to 4.0% y/y from 3.4%. The most recent labour market data for the three months to October 2021 showed the unemployment rate fell to 4.2% while the employment rate rose to 75.5%.

In October 2021, the headline 3-month average annual growth rate for wages were 4.9% for total pay and 4.3% for regular pay. In real terms, after adjusting for inflation, total pay growth was up 1.7% while regular pay was up 1.0%. The change in pay growth has been affected by a change in composition of employee jobs, where there has been a fall in the number and proportion of lower paid jobs.

Gross domestic product (GDP) grew by 1.3% in the third calendar quarter of 2021 according to the initial estimate, compared to a gain of 5.5% q/q in the previous quarter, with the annual rate slowing to 6.6% from 23.6%. The Q3 gain was modestly below the consensus forecast of a 1.5% q/q rise. During the quarter activity measures were boosted by sectors that reopened following pandemic restrictions, suggesting that wider spending was flat. Looking ahead, while monthly GDP readings suggest there had been some increase in momentum in the latter part of Q3, Q4 growth is expected to be soft.

GDP growth in the euro zone increased by 2.2% in calendar Q3 2021 following a gain of 2.1% in the second quarter and a decline of -0.3% in the first. Headline inflation has been strong, with CPI registering 4.9% year-on-year in November, the fifth successive month of inflation. Core CPI inflation was 2.6% y/y in November, the fourth month of successive increases from July's 0.7% y/y. At these levels, inflation is above the European Central Bank's target of 'below, but close to 2%', putting some pressure on its long-term stance of holding its main interest rate of 0%.

Credit Outlook

Since the start of 2021, relatively benign credit conditions have led to credit default swap (CDS) prices for the larger UK banks to remain low and had steadily edged down throughout the year up until mid-November when the emergence of Omicron has caused them to rise modestly. However, the generally improved economic outlook during 2021 helped bank profitability and reduced the level of impairments many had made as provisions for bad loans. However, the relatively recent removal of coronavirus-related business support measures by the government means the full impact on bank balance sheets may not be known for some time.

The improved economic picture during 2021 led the credit rating agencies to reflect this in their assessment of the outlook for the UK sovereign as well as several financial institutions, revising them from negative to stable and even making a handful of rating upgrades.

Looking ahead, while there is still the chance of bank losses from bad loans as government and central bank support is removed, the institutions on the Authority's counterparty list are well-capitalised and general credit conditions across the sector are expected to remain benign. Duration limits for counterparties on the Authority's lending list are under regular review and will continue to reflect economic conditions and the credit outlook.

Interest Rate Forecast

The Authority's treasury management adviser Arlingclose is forecasting that Bank Rate will continue to rise in calendar Q1 2022 to subdue inflationary pressures and the perceived desire by the BoE to move away from emergency levels of interest rates.

Investors continue to price in multiple rises in Bank Rate over the next forecast horizon, and Arlingclose believes that although interest rates will rise again, the increases will not be to the extent predicted by financial markets. In the near-term, the risks around Arlingclose's central case are to the upside while over the medium-term the risks become more balanced.

Yields are expected to remain broadly at current levels over the medium-term, with the 5, 10 and 20 year gilt yields expected to average around 0.65%, 0.90%, and 1.15% respectively. The risks around for short and medium-term yields are initially to the upside but shifts lower later, while for long-term yields the risk is to the upside. However, as ever there will almost certainly be short-term volatility due to economic and political uncertainty and events.

A more detailed economic and interest rate forecast provided by Arlingclose is attached at Appendix A.

3. Borrowing Strategy

In the Autumn Statement 2016, the government announced that it would give Mayoral Combined Authorities powers to borrow for their new functions subject to agreeing a borrowing cap with HM Treasury. This will align the Combined Authorities' financial powers with their new responsibilities, and give them the ability to invest in important priorities such as economic development and regeneration.

In November 2017 the borrowing cap was agreed between the Authority and Treasury (set out in the table below) and the Tees Valley Combined Authority (Borrowing) Regulations 2018' Statutory Instrument was laid before and approved by a resolution of each House of Parliament at the end of 2017. In March 2021 it was agreed between parties that the cap would remain at its current levels for 2021-22 and beyond, however it was agreed that should the Authority wish to review this for future years and could supply sufficient evidence of need and affordability then dialogue would be opened between parties.

	2020-21	2021-22	2022-23
TVCA long-term external debt	£774,800,000	£774,800,000	£774,800,000

The Authority's chief objective when borrowing money will be to strike an appropriately low risk balance between securing low interest costs and achieving certainty of those costs over the period for which funds are required. The flexibility to renegotiate loans should the Authority's long-term plans change is a secondary objective.

The Authority's borrowing strategy will address the key issue of affordability without compromising the longer-term stability of the debt portfolio. With short-term interest rates currently much lower than long-term rates, it is likely to be more cost effective in the short-term to either use internal resources or to borrow short-term loans.

By following the borrowing strategy, the Authority will be able to reduce net borrowing costs and reduce overall treasury risk. The benefits of internal / short-term borrowing will be monitored regularly against the potential for incurring additional costs by deferring borrowing into future years when long-term borrowing rates are forecast to rise modestly. Arlingclose will assist the Authority with this 'cost of carry' and breakeven analysis. Its output may determine whether the Authority borrows sums at long-term fixed rates in future years with a view to keeping future interest costs low, even if this causes additional cost in the short-term.

The Authority has previously raised the majority of its long-term borrowing from the PWLB but will consider long-term loans from other sources including banks, pensions and local authorities, and will investigate the possibility of issuing bonds and similar instruments, in order to lower interest costs and reduce over-reliance on one source of funding in line with the CIPFA Code. PWLB loans are no longer available to local authorities planning to buy investment assets primarily for yield; the Authority intends to avoid this activity in order to retain its access to PWLB loans.

Alternatively, the Authority may arrange forward starting loans during 2022/23, where the interest rate is fixed in advance, but the cash is received in later years. This would enable certainty of cost to be achieved without suffering a cost of carry in the intervening period.

In addition, the Authority may borrow short-term loans to cover unplanned cash flow.

Sources of Borrowing

The approved sources of long-term and short-term borrowing are:

- HM Treasury's PWLB lending facility (formerly the Public Works Loan Board)
- UK Infrastructure Bank
- any institution approved for investments
- any other bank or building society authorised to operate in the UK
- any other UK public sector body
- UK public and private sector pension funds
- capital market bond investors
- UK Municipal Bonds Agency plc and other special purpose companies created to enable local authority bond issues.

Other Sources of Debt Finance

Capital finance may be raised by the following methods that are not borrowing, but may be classed other debt liabilities:

- leasing
- hire purchase
- Private Finance Initiative
- sale and leaseback

The Authority when borrowing will investigate all available sources of finance, such as local authority loans and bank loans, to achieve the most favourable rates.

The Prudential Code for Capital Finance in Local Authorities (Prudential Code) has been developed by the Chartered Institute of Public Finance and Accountancy to underpin the system of capital finance embodied in Part 1 of the Local Government Act 2003.

The key objectives of the Prudential Code are to ensure that capital investment plans are affordable, prudent and sustainable. The Prudential Code supports a system of self-regulation that is achieved by the setting and monitoring of a suite of Prudential Indicators that directly relate to each other.

The Prudential Indicators which the Authority will follow and the minimum revenue provision statement are set out in the capital strategy report (Appendix 2)

4. Investment Strategy

The Authority currently holds significant invested funds, representing income received in advance of expenditure plus balances and reserves held. In the past 9 months, the Authority's investment balance has ranged between £85.75 million and £196.87 million. The new 10 year Combined Authority Investment Plan was approved in January 2019 setting out a forecasted expenditure profile over the period. The increased spending plans will reduce the previously held balances significantly and as such the invested funds will reduce to a minimal amount reserved for unforeseen circumstances during 2022/23.

The CIPFA Code requires the Authority to invest its funds prudently, and to have regard to the security and liquidity of its investments before seeking the highest rate of return, or yield. The Authority's objective when investing money is to strike an appropriate balance between risk and return, minimising the risk of incurring losses from defaults and the risk of receiving unsuitably low investment income. Where balances are expected to be invested for more than one year, the Authority will aim to achieve a total return that is equal or higher than the prevailing rate of inflation, in order to maintain the spending power of the sum invested.

All of the Authority's surplus cash is currently invested in short-term unsecured bank deposits, with other local authorities and money market funds. As a result of the anticipated increased expenditure in the coming year the Authority will continue with this approach, maximising interest returns through a managed cashflow process.

The Authority may invest its surplus funds with any of the counterparty types in the table below, subject to the cash limits (per counterparty) and the time limits shown.

Approved investment counterparties and limits

Credit rating	Banks unsecured	Banks secured	Government	Corporates	Registered Providers
UK Govt	n/a	n/a	£ Unlimited 10 years	n/a	n/a
AAA	£7,500,000 5 years	£15,000,000 10 years	£15,000,000 10 years	£7,500,000 10 years	£7,500,000 10 years
AA+	£7,500,000 5 years	£15,000,000 10 years	£15,000,000 10 years	£7,500,000 10 years	£7,500,000 10 years
AA	£7,500,000 4 years	£15,000,000 5 years	£15,000,000 10 years	£7,500,000 5 years	£7,500,000 10 years
AA-	£7,500,000 3 years	£15,000,000 4 years	£15,000,000 10 years	£7,500,000 4 years	£7,500,000 10 years
A+	£7,500,000 2 years	£15,000,000 3 years	£7,500,000 5 years	£7,500,000 3 years	£7,500,000 5 years
A	£7,500,000 13 months	£15,000,000 2 years	£7,500,000 5 years	£7,500,000 2 years	£7,500,000 5 years
A-	£7,500,000 6 months	£15,000,000 13 months	£7,500,000 5 years	£7,500,000 13 months	£7,500,000 5 years
None	n/a	n/a	£15,000,000 10 years	£5,000,000 5 years	£7,500,000 5 years
Pooled funds and real estate investment trusts		£15m per fund			

This table must be read in conjunction with the notes below

Credit rating: Investment limits are set by reference to the lowest published long-term credit rating from a selection of external rating agencies. Where available, the credit rating relevant to the specific investment or class of investment is used, otherwise the counterparty credit rating is used. However, investment decisions are never made solely based on credit ratings, and all other relevant factors including external advice will be taken into account.

Banks unsecured: Accounts, deposits, certificates of deposit and senior unsecured bonds with banks and building societies, other than multilateral development banks. These investments are subject to the risk of credit loss via a bail-in should the regulator determine that the bank is failing or likely to fail. See below for arrangements relating to operational bank accounts.

Banks secured: Covered bonds, reverse repurchase agreements and other collateralised arrangements with banks and building societies. These investments are secured on the bank's assets, which limits the potential losses in the unlikely event of insolvency, and means that they are exempt from bail-in. Where there is no investment specific credit rating, but the collateral upon which the investment is secured has a credit rating, the higher of the collateral credit rating and the counterparty credit rating will be used to determine cash and time limits. The combined secured and unsecured investments in any one bank will not exceed the cash limit for secured investments.

Government: Loans, bonds and bills issued or guaranteed by national governments, regional and local authorities and multilateral development banks. These investments are not subject to bail-in, and there is generally a lower risk of insolvency, although they are not zero risk. Investments with the UK Central Government may be made in unlimited amounts for up to 50 years.

Corporates: Loans, bonds and commercial paper issued by companies other than banks and registered providers. These investments are not subject to bail-in, but are exposed to the risk of the company going insolvent.

Registered providers: Loans and bonds issued by, guaranteed by or secured on the assets of registered providers of social housing and registered social landlords, formerly known as housing associations. These bodies are tightly regulated by the Regulator of Social Housing (in England), the Scottish Housing Regulator, the Welsh Government and the Department for Communities (in Northern Ireland). As providers of public services, they retain the likelihood of receiving government support if needed.

Pooled funds: Shares or units in diversified investment vehicles consisting of the any of the above investment types, plus equity shares and property. These funds have the advantage of providing wide diversification of investment risks, coupled with the services of a professional fund manager in return for a fee. Short-term Money Market Funds that offer same-day liquidity and very low or no volatility will be used as an alternative to instant access bank accounts, while pooled funds whose value changes with market prices and/or have a notice period will be used for longer investment periods.

Bond, equity and property funds offer enhanced returns over the longer term, but are more volatile in the short term. These allow the Authority to diversify into asset classes other than cash without the need to own and manage the underlying investments. Because these funds have no defined maturity date, but are available for withdrawal after a notice period, their performance and continued suitability in meeting the Authority's investment objectives will be monitored regularly.

Real estate investment trusts: Shares in companies that invest mainly in real estate and pay the majority of their rental income to investors in a similar manner to pooled property funds. As with property funds, REITs offer enhanced returns over the longer term, but are more volatile especially as the share price reflects changing demand for the shares as well as changes in the value of the underlying properties.

Operational bank accounts: The Authority may incur operational exposures, for example through current accounts, collection accounts and merchant acquiring services, to any UK bank with credit ratings no lower than BBB- and with assets greater than £25 billion. These are not classed as investments, but are still subject to the risk of a bank bail-in, and balances will therefore be kept below £25 million per bank. The Bank of England has stated that in the event of failure, banks with assets greater than £25 billion are more likely to be bailed-in than made insolvent, increasing the chance of the Authority maintaining operational continuity.

Risk assessment and credit ratings: Credit ratings are obtained and monitored by the Authority's treasury advisers, who will notify changes in ratings as they occur. Where an entity has its credit rating downgraded so that it fails to meet the approved investment criteria then:

- no new investments will be made,
- any existing investments that can be recalled or sold at no cost will be, and
- full consideration will be given to the recall or sale of all other existing investments with the affected counterparty.

Where a credit rating agency announces that a credit rating is on review for possible downgrade (also known as “rating watch negative” or “credit watch negative”) so that it may fall below the approved rating criteria, then only investments that can be made with that organisation until the outcome of the review is announced. This policy will not apply to negative outlooks, which indicate a long-term direction of travel rather than an imminent change of rating.

Other information on the security of investments: The Authority understands that credit ratings are good, but not perfect, predictors of investment default. Full regard will therefore be given to other available information on the credit quality of the organisations in which it invests, including credit default swap prices, financial statements, information on potential government support, reports in the quality financial press and analysis and advice from the Authority’s treasury management adviser. No investments will be made with an organisation if there are substantive doubts about its credit quality, even though it may otherwise meet the above criteria.

When deteriorating financial market conditions affect the creditworthiness of all organisations, as happened in 2008 and 2011, this is not generally reflected in credit ratings, but can be seen in other market measures. In these circumstances, the Authority will restrict its investments to those organisations of higher credit quality and reduce the maximum duration of its investments to maintain the required level of security. The extent of these restrictions will be in line with prevailing financial market conditions. If these restrictions mean that insufficient commercial organisations of high credit quality are available to invest the Authority’s cash balances, then the surplus will be deposited with the UK Government via the Debt Management Office or invested in government treasury bills for example, or with other local authorities. This will cause a reduction in the level of investment income earned, but will protect the principal sum invested.

Investment limits: The Authority’s revenue reserves available to cover investment losses are forecast to be £1,058k on 31st March 2022. The maximum that will be lent to any one organisation (other than the UK Government) will be £15 million. A group of banks under the same ownership will be treated as a single organisation for limit purposes. Limits will also be placed on fund managers, investments in brokers’ nominee accounts, foreign countries and industry sectors as below. Investments in pooled funds and multilateral development banks do not count against the limit for any single foreign country, since the risk is diversified over many countries.

Investment limits

	Cash limit
Any single organisation, except the UK Central Government	£15,000,000
UK Central Government	unlimited
Any group of organisations under the same ownership	£15,000,000
Any group of pooled funds under the same management	£37,500,000
Negotiable instruments held in a broker's nominee account	£37,500,000
Foreign countries	£15,000,000
Registered providers and registered social landlords	£37,500,000
Unsecured investments with building societies	£15,000,000
Loans to unrated corporates	£15,000,000
Money Market Funds	Unlimited
Real estate investment trusts	£37,500,000

Liquidity management: The Authority uses cash flow forecasting to determine the maximum period for which funds may prudently be committed. The forecast is compiled on a prudent basis to minimise the risk of the Authority being forced to borrow on unfavourable terms to meet its financial commitments. Limits on long-term investments are set by reference to the Authority's investment plan and cash flow forecast.

5. Treasury Management Indicators

The Authority measures and manages its exposures to treasury management risks using the following indicators.

Liquidity: The Authority has adopted a voluntary measure of its exposure to liquidity risk by monitoring the amount of cash available to meet unexpected payments within a rolling three month period, without borrowing.

Liquidity risk indicator	Target
Total cash available within 3 months	£1m

Interest rate exposures: This indicator is set to control the Authority's exposure to interest rate risk. Based on the current level of investments held the one-year revenue impact of a 1% rise or fall in interest rates will be:

Interest rate risk indicator	Limit
One-year revenue impact of a 1% <u>rise</u> in interest rates	£1,520,000
One-year revenue impact of a 1% <u>fall</u> in interest rates	-£1,520,000

The impact of a change in interest rates is calculated on the assumption that investments will be replaced at current rates.

Maturity structure of borrowing: This indicator is set to control the Authority's exposure to refinancing risk. The upper and lower limits on the maturity structure of borrowing will be:

Refinancing rate risk indicator	Upper limit	Lower limit
Under 12 months	100%	0%
12 months and within 24 months	100%	0%
24 months and within 5 years	100%	0%
5 years and within 10 years	100%	0%
10 years and above	100%	0%

The upper limits have been set as wide as possible as this is necessary as the Authority currently has no debt portfolio and therefore setting the indicators more narrowly could be prohibitive. The limits will be reviewed and amended to be more meaningful if the authority takes out any borrowing.

Principal sums invested for periods longer than a year: The purpose of this indicator is to control the Authority's exposure to the risk of incurring losses by seeking early repayment of its investments. The limits on the long-term principal sum invested to final maturities beyond the period end will be:

Price risk indicator	2021/22	2022/23	2023/24
Limit on principal invested beyond year end	£15m	£10m	£5m

6. Related Matters

The CIPFA Code requires the Authority to include the following in its treasury management strategy.

Financial Derivatives: In the absence of any explicit legal power to do so, the Authority will not use standalone financial derivatives (such as swaps, forwards, futures and options). Derivatives embedded into loans and investments, including pooled funds and forward starting transactions, may be used, and the risks that they present will be managed in line with the overall treasury risk management strategy.

Markets in Financial Instruments Directive: The Authority has opted up to professional client status with its providers of financial services, including advisers, banks, brokers and fund managers, allowing it access to a greater range of services but without the greater regulatory protections afforded to

individuals and small companies. Given the size and range of the Authority’s treasury management activities, the Director of Finance believes this to be the most

The CIPFA Code does not prescribe any particular treasury management strategy for local authorities to adopt. The Section 73 officer, believes that the above strategy represents an appropriate balance between risk management and cost effectiveness. Some alternative strategies, with their financial and risk management implications, are listed below and will be considered if circumstance significantly change.

Alternative	Impact on income and expenditure	Impact on risk management
Invest in a narrower range of counterparties and/or for shorter times	Interest income will be lower	Lower chance of losses from credit related defaults, but any such losses may be greater
Invest in a wider range of counterparties and/or for longer times	Interest income will be higher	Increased risk of losses from credit related defaults, but any such losses may be smaller
Borrow additional sums at long-term fixed interest rates	Debt interest costs will rise; this is unlikely to be offset by higher investment income	Higher investment balance leading to a higher impact in the event of a default; however long-term interest costs may be more certain
Borrow short-term or variable loans instead of long-term fixed rates	Debt interest costs will initially be lower	Increases in debt interest costs will be broadly offset by rising investment income in the medium term, but long-term costs may be less certain
Reduce level of borrowing	Saving on debt interest is likely to exceed lost investment income	Reduced investment balance leading to a lower impact in the event of a default; however long-term interest costs may be less certain

Appendix A – Arlingclose Economic & Interest Rate Forecast – December 2021

Underlying assumptions:

- The global recovery from the pandemic has entered a more challenging phase. The resurgence in demand has led to the expected rise in inflationary pressure, but disrupted factors of supply are amplifying the effects, increasing the likelihood of lower growth rates ahead. The advent of the Omicron variant of coronavirus is affecting activity and is also a reminder of the potential downside risks.
- Despite relatively buoyant activity survey data, official GDP data indicates that growth was weakening into Q4 2021. Other data, however, suggested continued momentum, particularly for November. Retail sales volumes rose 1.4%, PMIs increased, and the labour market continued to strengthen. The end of furlough did not appear to have had a significant impact on unemployment. Wage growth is elevated.
- The CPI inflation rate rose to 5.1% for November and will rise higher in the near term. While the transitory factors affecting inflation are expected to unwind over time, policymakers' concern is persistent medium term price pressure.
- These factors prompted the MPC to raise Bank Rate to 0.25% at the December meeting. Short term interest rate expectations remain elevated.
- The outlook, however, appears weaker. Household spending faces pressures from a combination of higher prices and tax rises. In the immediate term, the Omicron variant has already affected growth – Q4 and Q1 activity could be weak at best.
- Longer-term government bond yields remain relatively low despite the more hawkish signals from the BoE and the Federal Reserve. Investors are concerned that significant policy tightening in the near term will slow growth and prompt the need for looser policy later. Geo-political and coronavirus risks are also driving safe haven buying. The result is a much flatter yield curve, as short-term yields rise even as long-term yields fall.
- The rise in Bank Rate despite the Omicron variant signals that the MPC will act to bring inflation down whatever the environment. It has also made clear its intentions to tighten policy further. While the economic outlook will be challenging, the signals from policymakers suggest their preference is to tighten policy unless data indicates a more severe slowdown.

Forecast:

- The MPC will want to build on the strong message it delivered this month by tightening policy despite Omicron uncertainty.

- Arlingclose therefore expects Bank Rate to rise to 0.50% in Q1 2022, but then remain there. Risks to the forecast are initially weighted to the upside, but becoming more balanced over time. The Arlingclose central forecast remains below the market forward curve.
- Gilt yields will remain broadly flat from current levels. Yields have fallen sharply at the longer end of the yield curve, but expectations of a rise in Bank Rate have maintained short term gilt yields at higher levels.
- Easing expectations for Bank Rate over time could prompt the yield curve to steepen, as investors build in higher inflation expectations.
- The risks around the gilt yield forecasts vary. The risk for short and medium term yields is initially on the upside but shifts lower later. The risk for long-term yields is weighted to the upside.

	Dec-21	Mar-22	Jun-22	Sep-22	Dec-22	Mar-23	Jun-23	Sep-23	Dec-23	Mar-24	Jun-24	Sep-24	Dec-24
Official Bank Rate													
Upside risk	0.00	0.00	0.25	0.25	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Arlingclose Central Case	0.25	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Downside risk	0.00	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25
3-month money market rate													
Upside risk	0.05	0.05	0.25	0.35	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Arlingclose Central Case	0.25	0.55	0.55	0.60	0.60	0.60	0.60	0.65	0.65	0.65	0.65	0.65	0.65
Downside risk	0.00	-0.25	-0.25	-0.30	-0.30	-0.30	-0.30	-0.35	-0.35	-0.35	-0.35	-0.35	-0.35
5yr gilt yield													
Upside risk	0.00	0.35	0.45	0.55	0.55	0.55	0.55	0.55	0.55	0.50	0.50	0.45	0.45
Arlingclose Central Case	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.65	0.70	0.75	0.75
Downside risk	-0.10	-0.20	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25	-0.30	-0.35	-0.40	-0.40
10yr gilt yield													
Upside risk	0.10	0.25	0.35	0.40	0.45	0.50	0.50	0.50	0.50	0.50	0.55	0.55	0.55
Arlingclose Central Case	0.80	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.90	0.90	0.95	0.95
Downside risk	-0.10	-0.25	-0.30	-0.35	-0.35	-0.35	-0.35	-0.35	-0.35	-0.40	-0.40	-0.40	-0.40
20yr gilt yield													
Upside risk	0.30	0.40	0.45	0.45	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Arlingclose Central Case	1.00	1.05	1.10	1.10	1.10	1.10	1.15	1.15	1.15	1.20	1.20	1.20	1.20
Downside risk	-0.15	-0.30	-0.35	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.45	-0.45	-0.45	-0.45
50yr gilt yield													
Upside risk	0.25	0.30	0.40	0.45	0.45	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Arlingclose Central Case	0.70	0.75	0.80	0.85	0.90	0.95	1.00	1.05	1.05	1.10	1.10	1.15	1.15
Downside risk	-0.15	-0.30	-0.35	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.45	-0.45	-0.45	-0.45

PWLB Standard Rate (Maturity Loans) = Gilt yield + 1.00%
PWLB Certainty Rate (Maturity Loans) = Gilt yield + 0.80%
PWLB Infrastructure Rate (Maturity Loans) = Gilt yield + 0.60%