



Buckinghamshire & Milton Keynes Fire Authority

Meeting and date: Fire Authority, 15 February 2023

Report title: Treasury Management Strategy 2023/24

Lead Member: Councillor Matthew Walsh

Report sponsor: Mark Hemming, Director of Finance & Assets

Author and contact: Marcus Hussey mhussey@bucksfire.gov.uk

Action: Decision.

Recommendations: That the Authority approve the Treasury Management Policy Statement, Treasury Management Strategy Statement and the Annual Investment Strategy for 2023/24

Executive summary:

This report is being presented as the Fire Authority is required to approve the Treasury Management Policy Statement, Treasury Management Strategy Statement and the Annual Investment Strategy. These documents (Appendix 1) all support the Medium-Term Financial Plan.

The current strategy has been operating effectively and outperforming the benchmark targets. The Bank of England's Monetary Policy Committee has increased the interest base rate on nine consecutive occasions since December 2021. This has resulted in an increase in the level of returns from investments for the Authority. Therefore, the investment returns budget for 2023/24 will increase to £0.350m.

There is no significant change from the previous strategy. The Authority will continue to invest surplus funds in short-term deposits, maturing on a frequent basis, while ensuring the Authority is able to maintain adequate liquidity and meet short-term expenditure requirements.

Financial implications:

The proposed budget for 2022/23 is £0.350m. It is anticipated that the budget will be met. Detailed information is shown within Appendix 1.

Risk management:

Making investments in the Authority's own name means that the Authority bears the risk of any counterparty failure. This risk will be managed in accordance with the strategy and with advice from external treasury management advisors.

The Director of Finance and Assets will act in accordance with the Authority's policy statement; treasury management practices and CIPFA's Standard of Professional Practice on Treasury Management.

The risk of counterparty failure is monitored on the directorate level risk register within Finance and Assets.

There are no direct staffing implications.

Legal implications:

The Authority is required by section 15(1) of the Local Government Act 2003 to have regard to the Department for Levelling Up, Housing and Communities Guidance on Local Government Investments; and by regulation 24 of the Local Authorities (Capital Finance and Accounting) (England) Regulations 2003 [SI 3146] to have regard to any prevailing CIPFA Treasury Management Code of Practice.

Under section 12 of the Local Government Act 2003 the Authority has the power to invest for "any purpose relevant to its functions" and "for the purposes of the prudent management of its financial affairs".

However, it must exercise its investment power in accordance with its fiduciary duty, analogous to that of a trustee, owed to those who contribute to the funds of the Authority.

Privacy and security implications:

No direct impact.

Duty to collaborate:

No direct impact.

Health and safety implications:

No direct impact.

Environmental implications:

In discussion with our treasury advisors, Officers have invested in sustainable investments and in 2022/23, the Authority had invested £2m in sustainable investments. Officers will continue to explore sustainable investments, which are sustainable deposits that allow customers to have their capital referenced against sustainable assets, whether existing now or in the future, as verified through the green and sustainable product framework on a net positive basis.

Equality, diversity, and inclusion implications:

No direct impact.

Consultation and communication:

No direct impact.

Background papers:

CIPFA Code of Practice for Treasury Management in the Public Services (CIPFA Code)

Department for Levelling Up, Housing and Communities Guidance on Local Government Investments (DLUHC Guidance)

| Appendix | Title | Protective Marking |
|-----------------|---|---------------------------|
| 1 | Treasury Management Policy Statement, Treasury Management Strategy Statement and Annual Investment Strategy | |
| 2 | Provisional Counterparty List | |
| 3 | Prospects for Interest Rates | |
| 4 | Credit Rating Definitions | |

Appendix 1 – Treasury Management Policy Statement, Treasury Management Strategy Statement and Annual Investment Strategy

Treasury Management Policy Statement

This Authority defines its treasury management activities as:

The management of the Authority's investments and cash flows, its banking, money market and capital market transactions; the effective control of the risks associated with those activities; and the pursuit of optimum performance consistent with those risks.

This Authority regards the successful identification, monitoring and control of risk to be the prime criteria by which the effectiveness of its treasury management activities will be measured. Accordingly, the analysis and reporting of treasury management activities will focus on their risk implications for the organisation, and any financial instruments entered into to manage these risks.

This Authority acknowledges that effective treasury management will provide support towards the achievement of its business and service objectives. It is therefore committed to the principles of achieving value for money in treasury management, and to employing suitable comprehensive performance measurement techniques, within the context of effective risk management.

The investment policy objective for this Authority is the prudent investment of its treasury balances. The Authority's investment priorities are the security of capital and liquidity of its investments so that funds are available for expenditure when needed. Both the CIPFA Code and DLUHC guidance require 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 generation of investment income to support the provision of local authority services is an important, but secondary, objective.

The Authority's borrowing objectives are to minimise the revenue costs of debt whilst maintaining a balanced loan portfolio. The Authority will set an affordable borrowing limit each year in compliance with the Local Government Act 2003 and will have regard to the CIPFA Prudential Code for Capital Finance in Local Authorities when setting that limit.

Treasury Management Strategy Statement

Current Portfolio Position

The Authority's treasury portfolio position as at 31 December 2022 comprised:

Borrowing

Fixed Rate Funding: £6.177m, Average Rate: 4.64% and interest payable of £0.283m per annum.

The last repayment of a maturing loan was in May 2022, for a value of £0.620m. The next loan maturity is March 2024, for a value of £1.000m. The repayments do not directly affect the revenue budget, as they simply reflect the use of cash accumulated by setting aside the appropriate minimum revenue provision (MRP) to settle the outstanding liability

Investments

Investment portfolio: £17.598m, Average Rate of interest: 01 April 2022 to 31 December 2022: 1.56%.

The investments have various terms and mature on a frequent basis to ensure the Authority can maintain sufficient liquidity and meet short term expenditure requirements. By 31 March 2023, the investments will be circa £13m, plus current account balances.

Prospects for Interest Rates

Since the two unrepresented emergency interest rate cuts in March 2020 to a base rate record low of 0.10%. The Bank of England's Monetary Policy Committee (MPC) has voted to increase the interest base rate on nine consecutive occasions. The interest base rate as of 6 January 2023 was 3.50%. The Authority has been able to benefit from the interest base rate increases in both short-term investment deals and Money Market Funds. This has resulted in the Authority overachieving against the interest investment target set for 2022/23. There are still uncertainties on interest base rate, due to the persistent inflationary pressures, which could result in the MPC voting to increase the interest base rate for a sustainable return of the inflation to target.

Therefore, projected investment returns have been modelled on an average fund balance of £13.5m against an average rate return of 2.60% for 2023/24, equating to an interest investment target of £0.350m.

For 2023/24, the Authority will continue with Link Asset Services as its external treasury management advisor. Link's view of the prospects for interest rates can be seen in Appendix 3. Link advise that the current benchmark rate of return on investments should be interest base rate, which is currently 3.50%. However, the Authority will continue to set a benchmark rate of return of 2.00%. Based on this interest rate the Authority would achieve an annual return of circa £0.350m on an average portfolio of £13.5m. As at 31 December 2022, the total projected investment return for 2022/23 is in the region of £0.300m.

Since the treasury management function has been managed in-house from 1 April 2013, the Authority have over-achieved regularly against the investment returns budget. 2020/21 was the only year the Authority did not achieve its annual investment target, due to the Covid-19 Pandemic outbreak.

For any type of investment there is a downside risk to the level of return the Authority would obtain due to the uncertainty in the markets and the negative impact they have on the interest rates and therefore historical rates of return may not always provide a realistic indication of returns for the future. This will be closely monitored and reported to Members if the position changes from what Officers are currently projecting.

Borrowing Strategy

The Authority's borrowing objectives are:

- To minimise the revenue costs of debt whilst maintaining a balanced loan portfolio
- To manage the Authority's debt maturity profile, leaving no one future year with a disproportionate level of repayments

No additional borrowing is forecast to take place during the duration of the medium-term financial plan.

Investment Strategy

This Authority maintains investments that are placed with reference to cash flow requirements. Investment of the Authority's funds is in accordance with the Annual Investment Strategy.

Debt Rescheduling

The potential for debt rescheduling is monitored in light of interest rate movements. Any rescheduling will be in accordance with the borrowing strategy. The reasons for rescheduling include:

- The generation of cash savings at minimum risk
- Fulfilment of the borrowing strategy
- Enhancement of the maturity profile of the borrowing portfolio

Historically with low levels of interest rates, the level of penalties on the early repayment of borrowing has made it difficult to restructure debt effectively. However, with the significant rise in interest rates over the last 12 months, this makes it more viable to look at restructuring debt. It is recommended that Officers review this with our treasury advisors in 2023/24 and if the opportunity arises, further work be undertaken to investigate debt restructuring.

Annual Investment Strategy (AIS)

A prudent investment policy has two objectives (as defined by the DLUHC guidance):

- achieving first of all security (protecting the capital sum from loss);
- and then liquidity (keeping the money readily available for expenditure when needed);
- only once proper levels of security and liquidity are determined, it will then be reasonable to consider what yield can be obtained consistent with those priorities.

Investment Policy

In accordance with guidance from the Department for Levelling Up, Housing and Communities (DLUHC) and CIPFA, and in order to minimise the risk to investments, the Authority has clearly stipulated below the minimum acceptable credit quality of counterparties for inclusion on the lending list. The creditworthiness methodology used to create the counterparty list fully accounts for the ratings, watches and outlooks published by all three ratings agencies with a full understanding of what these reflect in the eyes of each agency. Using the Link ratings service potential counterparty ratings are monitored on a real time basis with knowledge of any changes notified electronically as the agencies notify modifications.

Continuing regulatory changes in the banking sector are designed to see greater stability, lower risk and the removal of expectations of Government financial support should an institution fail. This withdrawal of implied sovereign support has had an

effect on ratings applied to institutions. This will result in the key ratings used to monitor counterparties being the Short Term and Long Term ratings only. Viability, Financial Strength and Support Ratings previously applied have effectively become redundant. This change does not reflect deterioration in the credit environment but rather a change of method in response to regulatory changes.

As with previous practice, ratings will not be the sole determinant of the quality of an institution and that it is important to continually assess and monitor the financial sector on both a micro and macro basis and in relation to the economic and political environments in which institutions operate. The assessment will also take account of information that reflects the opinion of the markets. To this end the Authority will engage with its advisors to maintain a monitor on market pricing such as credit default swaps (CDS) and overlay that information on top of the credit ratings. This is fully integrated into the credit methodology provided by the advisors, Link in producing its colour coding which show the varying degrees of suggested creditworthiness.

Other information sources used will include the financial press, share price and other such information pertaining to the banking sector in order to establish the most robust scrutiny process on the suitability of potential investment counterparties.

The aim of the strategy is to generate a list of highly creditworthy counterparties which will also enable diversification and thus avoidance of concentration risk.

The intention of the strategy is to provide security of investment and minimisation of risk.

Creditworthiness Policy

This Authority applies the creditworthiness service provided by Link. This service employs a sophisticated modelling approach utilising credit ratings from the three main credit rating agencies - Fitch, Moody's and Standard and Poor's. The credit ratings of counterparties are supplemented with the following overlays:

- Credit watches and credit outlooks from credit rating agencies
- CDS spreads to give early warning of likely changes in credit ratings;
- Sovereign ratings to select counterparties from only the most creditworthy countries.

This modelling approach combines credit ratings, credit watches and credit outlooks in a weighted scoring system which is then combined with an overlay of CDS spreads for which the end product is a series of colour coded bands which indicate the relative creditworthiness of counterparties. These colour codes have been used by the Authority to determine the suggested duration for investments. It is recommended that the Authority continues to use Link's colour codes plus an additional six months for UK counterparties only. It would be beneficial if the Authority could lend to existing counterparties for a longer duration. This will increase the risk slightly but will offer increased returns. The Authority will therefore use counterparties within the following durational bands:

| Colour Rating (UK Counterparties) | Colour Rating (Non-UK Counterparties) |
|---|--|
| Yellow - 5 Years and 6 Months | Yellow - 5 Years |
| Purple – 2 Years and 6 Months | Purple – 2 Years |
| Colour Rating (UK Counterparties) | Colour Rating (Non-UK Counterparties) |
| Blue – 1 Year and 6 Months (only applies to nationalised or semi nationalised UK Banks) | Blue – 1 Year |
| Orange – 1 Year and 6 Months | Orange – 1 Year |
| Red – 1 Year | Red – 6 Months |
| Green – 9 Months | Green – 3 Months |
| No colour not to be used (except for building societies on our counterparty list which the Authority can invest with for a maximum duration of 365 days limited to a maximum investment of £2 million per counterparty) | No colour not to be used |

The Link creditworthiness service uses a wider array of information than just primary ratings and by using a risk weighted scoring system, does not give undue preponderance to just one agency's ratings.

Typically, the minimum credit ratings criteria the Authority use will be a short-term rating (Fitch or equivalents) of short-term rating F1, long term rating A-, viability rating of A-. There may be occasions when the counterparty ratings from one rating agency are marginally lower than these ratings but may still be used. In these instances, consideration will be given to the whole range of ratings available, or other topical market information, to support their use. Credit rating definitions can be seen in Appendix 4.

All credit ratings will be monitored weekly. The Authority is alerted to changes to ratings of all three agencies through its use of the Link creditworthiness service.

- If a downgrade results in the counterparty/investment scheme no longer meeting the Authority's minimum criteria, its further use as a new investment will be withdrawn immediately.
- In addition to the use of credit ratings the Authority will be advised of information in movements in credit default swap spreads against the iTraxx benchmark and other market data on a weekly basis. Extreme market movements may result in downgrade of an institution or removal from the Authority's lending list.

Sole reliance will not be placed on the use of this external service. In addition, this Authority will also use market data and market information, information on government support for banks and the credit ratings of that supporting government.

Country Limits

In 2017/18, the Authority determined that it would not only use approved counterparties based within the United Kingdom but allowed any counterparty (UK or non-UK based) rated at least 'Green' by Link. Although no counterparty outside UK was used during 2022/23, these will remain on the lending list for 2023/24. The primary purpose of this is not to increase yield, but to provide additional diversity to the portfolio to effectively manage risk. Several non-UK banks are ranked higher than some of the UK banks on the Authority's current counterparty list. Therefore, the Authority proposes to limit the duration of all non-UK investment in line with Link's recommended limits. A list of the proposed counterparties is shown in Appendix 2.

Counterparty Limits

As per the AIS, the Authority has determined that the maximum balance that can be invested with a single counterparty at any point in time will be no more than 30% of the portfolio, up to a limit of £5 million.

The two exceptions to this limit in the AIS will continue to be Lloyds, where the maximum balance that can be invested will be a limit of £7.5 million. Of this £7.5 million, no more than £5 million will be invested in non-instant access (call) accounts.

The rationale for this is that Lloyds are the Authority's main banking provider. This means that:

- The staff time taken to move money between our main bank account and other instant access account is reduced
- The banking charges associated with the movement of the money between accounts is reduced
- The additional risk exposure to the Authority is minimal as all amounts over the current £5 million limit would be available for withdrawal immediately should circumstances require

The other exception relates to building societies on our counterparty listing whereby the maximum balance that can be invested will be limited to £2 million for a maximum duration of 365 days.

Investment Security

Investments are defined as being in one of two categories:

- Specified investments – these are investments with high security and high liquidity. All specified investments are in sterling and have a maturity of no more than one year. They will be with the UK government, a local authority, a parish council or with an investment scheme or body of "high credit quality" (as judged against the Creditworthiness Policy detailed earlier in this paper)
- Non-specified investments – any type of investment that does not meet the specified investment criteria. A maximum of £5 million will be held in aggregate in non-specified investments for longer than 364 days – up to a maximum of five years and 6 months as denoted by the yellow banding on the Link creditworthiness policy detailed earlier in this paper. In addition, property funds are also classified as non-specified investments and a maximum of £3 million will be held in aggregate.

Investment Training

Relevant training and updates will be provided to relevant staff by the external treasury management advisors. This will be supplemented by additional training from CIPFA where necessary.

Investment of Money Borrowed in Advance of Need

The Authority does not currently have any money that has been borrowed in advance of need. No further borrowing is planned over the medium term.

Investment Liquidity

In consultation with external treasury advisors, the Authority will review its balance sheet position, level of reserves and cash requirements in order to determine the length of time for which investments can be prudently committed. Investments will be placed at a range of maturities, including having money on-call in order to maintain adequate liquidity.

Appendix 2 – Provisional Counterparty List

This list is based on information provided by Link as at 31 December 2022. Please note that all colours indicated refer to Link's creditworthiness policy (see Appendix 1):

UK Based Counterparties

| UK Based Counterparties | Counterparty | (as rated by Link) |
|--------------------------------|---|---------------------------|
| UK | Bank of Scotland PLC (RFB) | Red - 6 mths |
| UK | Barclays Bank PLC (NRFB) | Red - 6 mths |
| UK | Barclays Bank UK PLC (RFB) | Red - 6 mths |
| UK | Close Brothers Ltd | Red - 6 mths |
| UK | Clydesdale Bank PLC | Green - 100 days |
| UK | Co-operative Bank PLC (The) | No colour - 0 mths |
| UK | Goldman Sachs International Bank | Red - 6 mths |
| UK | Handelsbanken Plc | Orange - 12 mths |
| UK | HSBC Bank PLC (NRFB) | Orange - 12 mths |
| UK | HSBC UK Bank Plc (RFB) | Orange - 12 mths |
| UK | Lloyds Bank Corporate Markets Plc (NRFB) | Red - 6 mths |
| UK | Lloyds Bank Plc (RFB) | Red - 6 mths |
| UK | National Bank Of Kuwait (International) PLC | Red - 6 mths |
| UK | NatWest Markets Plc (NRFB) | Red - 6 mths |
| UK | Santander Financial Services plc (NRFB) | Red - 6 mths |
| UK | Santander UK PLC | Red - 6 mths |
| UK | SMBC Bank International Plc | Red - 6 mths |
| UK | Standard Chartered Bank | Red - 6 mths |
| UK | Debt Management Office | Yellow - 60 mths |
| UK | Other Local Authorities | Yellow - 60 mths |
| UK | Royal Bank of Scotland Group | Blue - 12 mths |
| UK | National Westminster Bank | Blue - 12 mths |

*** This is the duration suggested by Link. As per the updated Creditworthiness Policy (see page 6) these will all be extended by six months, except for building societies rated 'Green', which will have a maximum duration of 12 months for up to £2m.**

The Authority will also have the ability to invest in AAA rated money market funds (MMFs) and enhanced money market funds.

Non-UK Based Counterparties

As noted in Appendix 1, the duration of all non-UK investments will be in line with Links' duration limits.

| <u>Non-UK Based Counterparties</u> | <u>Country Counterparty</u> | <u>(as rated by Link)</u> |
|---|---|----------------------------------|
| Australia | Australia and New Zealand Banking Group Ltd. | Orange - 12 mths |
| Australia | Commonwealth Bank of Australia | Orange - 12 mths |
| Australia | Macquarie Bank Ltd. | Red - 6 mths |
| Australia | National Australia Bank Ltd. | Orange - 12 mths |
| Australia | Westpac Banking Corp. | Orange - 12 mths |
| Belgium | BNP Paribas Fortis | Red - 6 mths |
| Belgium | KBC Bank N.V. | Red - 6 mths |
| Canada | Bank of Montreal | Orange - 12 mths |
| Canada | Bank of Nova Scotia | Orange - 12 mths |
| Canada | Canadian Imperial Bank of Commerce | Orange - 12 mths |
| Canada | National Bank of Canada | Red - 6 mths |
| Canada | Royal Bank of Canada | Orange - 12 mths |
| Canada | Toronto-Dominion Bank | Orange - 12 mths |
| Denmark | Danske A/S | Red - 6 mths |
| Finland | Nordea Bank Abp | Orange - 12 mths |
| Finland | OP Corporate Bank plc | Orange - 12 mths |
| France | BNP Paribas | Orange - 12 mths |
| France | Credit Agricole Corporate and Investment Bank | Orange - 12 mths |
| France | Credit Agricole S.A. | Orange - 12 mths |
| France | Credit Industriel et Commercial | Orange - 12 mths |
| France | Societe Generale | Red - 6 mths |
| Germany | Bayerische Landesbank | Red - 6 mths |
| Germany | Commerzbank AG | Green - 100 days |
| Germany | Deutsche Bank AG | Green - 100 days |
| Germany | DZ BANK AG Deutsche Zentral-Genossenschaftsbank | Orange - 12 mths |
| Germany | Landesbank Baden-Wuerttemberg | Red - 6 mths |
| Germany | Landesbank Berlin AG | Orange - 12 mths |
| Germany | Landesbank Hessen-Thueringen Girozentrale | Orange - 12 mths |
| Germany | Landwirtschaftliche Rentenbank | Purple - 24 mths |
| Germany | Norddeutsche Landesbank Girozentrale | Green - 100 days |
| Germany | NRW.BANK | Purple - 24 mths |
| Netherlands | ABN AMRO Bank N.V. | Red - 6 mths |
| Netherlands | Bank Nederlandse Gemeenten N.V. | Purple - 24 mths |
| Netherlands | Cooperatieve Rabobank U.A. | Orange - 12 mths |
| Netherlands | ING Bank N.V. | Orange - 12 mths |
| Netherlands | Nederlandse Waterschapsbank N.V. | Purple - 24 mths |
| Norway | DNB Bank ASA | Orange - 12 mths |
| Qatar | Qatar National Bank | Red - 6 mths |
| Singapore | DBS Bank Ltd. | Orange - 12 mths |
| Singapore | Oversea-Chinese Banking Corp. Ltd. | Orange - 12 mths |
| Singapore | United Overseas Bank Ltd. | Orange - 12 mths |
| Sweden | Skandinaviska Enskilda Banken AB | Orange - 12 mths |
| Sweden | Svenska Handelsbanken AB | Orange - 12 mths |
| Sweden | Swedbank AB | Orange - 12 mths |
| Switzerland | Credit Suisse AG | Green - 100 days |
| Switzerland | UBS AG | Orange - 12 mths |

| | | |
|----------------------|------------------------------|------------------|
| United Arab Emirates | First Abu Dhabi Bank PJSC | Orange - 12 mths |
| United States | Bank of America N.A. | Orange - 12 mths |
| United States | Bank of New York Mellon, The | Purple - 24 mths |
| United States | Citibank N.A. | Orange - 12 mths |
| United States | JPMorgan Chase Bank N.A. | Orange - 12 mths |
| United States | Wells Fargo Bank, NA | Orange - 12 mths |

Counterparties Rated 'No Colour' by Link

As noted in Appendix 1, sole reliance will not be placed on the use of Link ratings. The Authority will also use market data and market information, information on government support for banks and the credit ratings of that supporting government. The Authority added four building societies to its counterparty list in 2014/15, at which time they were all rated 'No Colour'. These are all now rated by Link and appear on our Provisional Counterparty Listing above. In 2018/19 the Authority increased the number of building societies in our counterparty list to ten. The top-ten building societies (by net assets) were added to the counterparty list. The duration of investment will continue to be limited to 365 days and the maximum amount invested with any building society at any point in time will not exceed £2 million.

| <u>UK Based Counterparties</u> | <u>Country Counterparty</u> | <u>(as rated by Link)</u> |
|---------------------------------------|------------------------------------|----------------------------------|
| UK | Coventry Building Society | Red - 6 mths |
| UK | Cumberland Building Society | No colour - 0 mths |
| UK | Leeds Building Society | Green - 100 days |
| UK | Nationwide Building Society | Red - 6 mths |
| UK | Newcastle Building Society | No colour - 0 mths |
| UK | Nottingham Building Society | No colour - 0 mths |
| UK | Principality Building Society | No colour - 0 mths |
| UK | Skipton Building Society | Red - 6 mths |
| UK | West Bromwich Building Society | No colour - 0 mths |
| UK | Yorkshire Building Society | Green - 100 days |

Appendix 3 – Prospects for Interest Rates

The following table gives the Link central view as per 31 December 2022:

| Interest Rate Forecasts | | | | | | | | |
|-------------------------|--------|--------|--------|--------|--------|--------|--------|--------|
| Bank Rate | Dec-22 | Mar-23 | Jun-23 | Sep-23 | Dec-23 | Mar-24 | Jun-24 | Sep-24 |
| Link | 3.50% | 4.25% | 4.50% | 4.50% | 4.50% | 4.00% | 3.75% | 3.50% |
| Cap Econ | 3.50% | 4.50% | 4.50% | 4.50% | 4.50% | 4.25% | 4.00% | 3.50% |
| 5Y PWLB RATE | | | | | | | | |
| Link | 4.20% | 4.20% | 4.20% | 4.10% | 4.00% | 3.90% | 3.80% | 3.60% |
| Cap Econ | 4.10% | 4.00% | 3.80% | 3.70% | 3.50% | 3.50% | 3.40% | 3.30% |
| 10Y PWLB RATE | | | | | | | | |
| Link | 4.30% | 4.40% | 4.40% | 4.30% | 4.10% | 4.00% | 3.90% | 3.80% |
| Cap Econ | 4.10% | 4.00% | 3.80% | 3.70% | 3.60% | 3.50% | 3.40% | 3.40% |
| 25Y PWLB RATE | | | | | | | | |
| Link | 4.60% | 4.60% | 4.60% | 4.50% | 4.40% | 4.20% | 4.10% | 4.00% |
| Cap Econ | 4.60% | 4.40% | 4.20% | 4.00% | 3.80% | 3.80% | 3.70% | 3.60% |
| 50Y PWLB RATE | | | | | | | | |
| Link | 4.30% | 4.30% | 4.30% | 4.20% | 4.10% | 3.90% | 3.80% | 3.70% |
| Cap Econ | 4.20% | 4.10% | 4.00% | 3.90% | 3.80% | 3.80% | 3.70% | 3.60% |

Appendix 4 – Credit Rating Definitions

Below are the rating definitions for each rating agency:

Fitch:

| Short Term | Long Term | Rating Definition |
|------------|------------|----------------------------|
| F1 | AAA, AA, A | Highest Credit Quality |
| F2 | A, BBB | Good Credit Quality |
| F3 | BBB | Fair Credit Quality |
| B | BB, B | Speculative Credit Quality |
| C | CCC, CC, C | High Default Risk |
| RD | RD | Restricted Default |
| D | D | Default |

Moody's:

| Short Term | Long Term | Rating Definition |
|------------|-------------------|---|
| P-1 | Aaa, Aa, A | Superior ability to repay debt obligation |
| P-2 | A, Baa | Strong ability to repay debt obligation |
| P-3 | Baa | Acceptable ability to repay debt obligation |
| NP | Ba, B, Caa, Ca, C | do not fall within any prime rating |

Standard & Poor's:

| Short Term | Long Term | Rating Definition |
|------------|------------|---|
| A1 | AAA, AA, A | Extremely Strong |
| A2 | A, BBB | Satisfactory |
| A3 | BBB | Adequate |
| B | BB, B | Vulnerable and has significant speculative characteristics. |
| C | CCC, CC, C | Vulnerable to non-payment |
| D | RD | Restricted Default |
| D | D | Default |