



Arlingclose Ltd:

Independent treasury management services

Epping Forest District Council

HRA Reform - Debt Portfolio Modelling

February 2012

Strictly Confidential

This document and any attachments are strictly confidential and are intended for the officers and Members of Epping Forest DC. The document contains professional and privileged information and should not be disclosed to any third party without the express written permission of Arlingclose Ltd.

HRA Reform - Debt Portfolio Modelling

Contents

	Summary	4
1.	Terms of Reference	6
2.	Epping Forest DC HRA Treasury Strategy Objectives	7
3.	Economic Outlook and Interest Rate Forecast	7
4.	Sources and Structure of Funding	10
5.	Volatility Levels - proportion of variable rate funding	19
6.	HRA Business Plan Review	24
7.	Pooling of Debt	24
8.	Portfolio Structure - Option Analysis	25
9.	Recommendations	31
	Appendix	
A.	HRA PWLB Rate Forecast at 26/3/2012	32
B.	Variable Rate Forecast	33
	CONTINUED...	

HRA Reform - Debt Portfolio Modelling

Contents - Tables and Charts

1	Table: Arlingclose Interest Rate Forecast	8
2	Table: PWLB Loan Options	10
3	Chart: Arlingclose Interest Rate Forecast	11
4	Chart: HRA PWLB Forecast at 26/3/2012	12
5	Balance Sheet Projection Summary	14
6	Table: Cost of Carry Analysis	15
7	Chart: Historic PWLB Variable Rates	17
8	Chart: Indicative Local Authority Bond Spreads	16
7	Chart: Historic PWLB Variable Rates	17
8	Chart: Existing Debt Maturity Profile	22
9	Table: Option 1 Debt Portfolio Structure	25
10	Table: Option 2 Debt Portfolio Structure	26
11	Table: Option Analysis	27
12	Table: Risk Management Matrix	28

Summary

This report considers the most appropriate way to fund the HRA reform settlement of £185m due for payment to the Department for Communities and Local Government (CLG) on 28th March 2012.

The Public Works Loan Board (PWLB) will operate a special facility to assist the funding of HRA settlements. The rates offered during this facility will be approximately 0.88% below regular PWLB levels. This will operate on one day only, the 26th March 2012, after which PWLB funding levels will revert back to current margins of gilts yields plus 1%.

Interest rates are not expected to move significantly between now and the settlement date, although there are risks to this forecast and in the absence of a wider set of available instruments, such as derivatives, this interest rate risk will be effectively un-hedged.

However, given the one-off nature of the PWLB funding window and the advantages offered in terms of rate, loan structure and administration, Arlingclose recommends that the Council's external funding is sourced entirely from the PWLB on 26th March 2012.

A long-term portfolio structure is recommended. Both PWLB fixed rates and margins are expected to be close to historically low levels, the opportunity to secure long dated funding at rates close to between 3% and 3.5% presents an opportunity that we conclude is not to be missed. If future debt repayment is deemed appropriate the Council may be able to generate discounts upon the premature repayment of debt. Alternatively surpluses can be invested.

A limited proportion of variable rate debt exposure will enable the Council to benefit from the current low official bank rate while maintaining flexibility on premature repayment timing. Selecting the maximum ten year maturity will capture the low margin over the maximum available period.

A key decision for Epping Forest DC relates to the use of existing surplus cash resources to help fund the settlement. Arlingclose have worked closely with Council officers and we have concluded that core cash balances of £27m are projected to remain available for investment over the next three years if the full settlement amount is borrowed externally. High credit quality investment rates are projected to remain below 1% during this period. Arlingclose believe that, if the full settlement sum is borrowed, the requirement to adopt proper accounting practice could result in cost of £2.1m being incurred by the GF in the first three years of self financing.

This cost, and corresponding credit default risk, can potentially be reduced by capping fixed rate borrowing at the HRA CFR of £154m, with any additional debt borrowed on a variable rate basis. Gaining regulatory approval to allocate variable rate loans to the GF will be an important component of this cost reduction strategy.

The alternative is to limit debt undertaken at settlement to £154m, utilising internal resources for the balance of the settlement. While Arlingclose project that further borrowing will subsequently be required by the Council, and the favorable HRA PWLB margin will not apply, the analysis in this report indicates the cost impact of this approach over the next three years will be minimal.

The final decision on the level of borrowing undertaken at settlement should be based upon agreement of the required accounting treatments with regulatory bodies including the CLG, CIPFA and external auditors. The extent of debt undertaken will be driven by the Council's projected future borrowing requirement. An appropriate investment strategy, that reflects heightened distress in financial markets and increased probability of credit default, should be maintained.

1 Terms of Reference

- 1.1 This report provides analysis and recommendations with regard to funding the £185m settlement due from Epping Forest DC to the Department for Communities and Local Government as part of the transition to Housing Revenue Account Self-Financing.
- 1.2 The report seeks to establish the most appropriate source and structure of funding and makes recommendations on the timing of borrowing. It will also provide an estimate of funding costs over the 30 year business plan and identify the treasury risks relating to the settlement and the funding proposal.
- 1.3 Appropriate pooling arrangements regarding the ongoing management of the Council's HRA debt will also be covered, as will the impact of these arrangements on the General Fund.
- 1.4 The report has been compiled following detailed discussion with Council officers and Councillors, with reference to the Housing Revenue Account (HRA) business plan, together with the Council's current treasury management position and strategy.
- 1.5 The analysis incorporates the latest guidance on HRA Reform from the Chartered Institute of Public Finance and Accountancy (CIPFA) and the CLG.
- 1.6 This reports builds on previous analysis undertaken by Arlingclose and incorporates the following developments:
- 1.7 The PWLB have announced that discounted borrowing rates will be available on one day for the purpose of funding HRA reform: the 26th March 2012;
- 1.8 Long-term UK interest rates have continued to fall to unusually low levels as a result of the on-going debt crisis in the Eurozone.
- 1.9 The Council has developed a substantial capital programme with regard to building new houses over the first five years of the business plan. This provides limited scope for debt repayment in the first 15 years.

2 Epping Forest DC HRA Treasury Strategy Objectives

- 2.1 The Council has identified the following broad strategy objectives which have been incorporated into the analysis in this report:-
 - 2.1.1 The funding solution must have no detriment to the General Fund;
 - 2.1.2 The Council wishes to adopt a “two pool” approach to the management of both HRA and GF debt under the new self financing HRA arrangements;
 - 2.1.3 While the Council intends to make debt repayments over the course of the 30 year business plan, to generate headroom for future investment, debt repayment is not the primary objective;
 - 2.1.4 The Council has expressed a preference for a longer dated debt portfolio, avoiding the requirement to subsequently replace debt borrowed under the favourable terms of the HRA PWLB funding facility.

3 Economic Outlook

- 3.1 Stress in financial markets is extremely high and has touched levels not seen since the collapse of Lehman Brothers in 2008. Rates within Interbank markets (where banks fund the majority of their day to day operations) continue to climb. This dynamic was a feature of the banking crisis that occurred in 2008 and still provides a key barometer of rising risk within markets.
- 3.2 Inflation moderated back to 4.2% in December, from what is considered to be its peak of 5.2% reached in September. The Bank of England expects domestic inflation to subside markedly in 2012 as the twin effects of the VAT increase and surge in energy prices fall out of the twelve month series.
- 3.3 Economic growth meanwhile remains largely illusive not helped by the considerable uncertainty and expansion of risks presented by the crisis in the Eurozone. Even if a credible and effective policy is implemented, the scale of the problems means that there is likely to be a prolonged period of subdued growth within the euro area. A failure to meet the challenges would almost certainly have significant implications for the global economy.
- 3.4 Recent data and surveys suggest that the risks of the UK economy losing admittedly fragile momentum have increased. Business and consumer surveys point to continued weakness in coming months and the situation in the euro area is likely to further undermine confidence and lead to tighter credit conditions for households and firms.
- 3.5 Against this uncertain backdrop the ability of the economy (government, companies and individual consumers) to accommodate an increase in the cost of money through higher

Bank Rate remains unlikely. In fact, we believe that it is highly unlikely. This will continue to be reflected in low longer-term interest rates and gilt yields.

- 3.6** The UK's status as a safe haven for investment remains for now and alongside the Bank of England's asset purchase programme (Quantitative Easing) ensures gilt yields, effectively the UK Government's cost of borrowing, continue to be suppressed.
- 3.7** That the UK has become a safe haven for funds is indicative of the severe problems facing Eurozone Governments at this time. Given the extent of the UK Government deficit and the deteriorating finances outlined in the Chancellor's Autumn Speech, there are concerns that international investors could start to question the UK's credit quality, causing a sharp spike up in borrowing costs. Until we have a strong resolution in Europe we believe UK borrowing costs will continue to trade at suppressed levels. As the problems in the Eurozone will remain complex to resolve, perhaps involving national referenda in some member states, we expect UK bonds will continue to have a relatively attractive allure. However, financial markets remain volatile and investor sentiment could change suddenly, particularly if the UK were to lose its AAA rating status.
- 3.8** The Bank of England's Monetary Policy Committee has returned to unconventional monetary policy and embarked on a further round of Quantitative Easing. There will be more to come. Conventional monetary policy has become largely redundant; the Bank of England and the US Federal Reserve have signalled their respective official interest rates will be on hold through to the end of 2012. We think that it could be 2015 before official interest rates rise.

3.9 The Arlingclose central case for interest rates is shown below:-

Table 1 - Arlingclose Interest Rate Forecast

	Mar-12	Jun-12	Sep-12	Dec-12	Mar-13	Jun-13	Sep-13	Dec-13	Mar-14	Jun-14	Sep-14	Dec-14	Mar-15
Official Bank Rate													
Upside risk					0.25	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Central case	0.50	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													
3-month LIBID													
Upside risk	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Central case	1.00	1.00	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Downside risk	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25
1-yr LIBID													
Upside risk	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Central case	1.75	1.75	1.75	1.75	1.80	1.85	1.95	2.00	2.10	2.20	2.30	2.40	2.40
Downside risk	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25
5-yr gilt													
Upside risk	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Central case	1.30	1.35	1.40	1.50	1.60	1.70	1.80	2.00	2.10	2.30	2.40	2.50	2.50
Downside risk	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25
10-yr gilt													
Upside risk	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
Central case	2.30	2.40	2.45	2.50	2.55	2.60	2.70	2.75	2.80	2.85	2.90	3.00	3.00
Downside risk	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25
20-yr gilt													
Upside risk	0.25	0.25	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Central case	3.05	3.05	3.10	3.20	3.25	3.30	3.35	3.40	3.45	3.50	3.60	3.75	3.75
Downside risk	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25
50-yr gilt													
Upside risk	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Central case	3.40	3.50	3.60	3.70	3.80	3.90	4.00	4.00	4.00	4.10	4.20	4.25	4.25
Downside risk	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25

4 Sources and Structure of Funding

Arlingclose believe the vast majority of funding for HRA settlements will come from the PWLB. Below we briefly run through the most likely alternative options:

4.1 PWLB

4.1 The benefits of PWLB borrowing are outlined below:

- A reduced margin, for HRA purposes, of approximately 0.12% above gilts (the UK Government's cost of borrowing);
- The ability to track rates and secure a quoted rate immediately, for delivery of funds within 2 business days;
- No prejudice with regard to credit standing of individual Local Authorities;
- No minimum size on deals;
- Low arrangement fees;
- A product range covering 100 different maturity brackets;
- A choice of repayment methods;
- The choice of fixed or variable rates, with the ability to switch between the two;
- Transparent redemptions terms, which can be agreed and transacted within 48 hours (although these are relatively penal and subject to change without notice).

4.2 The value of the above should not be lost in a discussion on achieving a lower rate of borrowing.

4.3 The PWLB announced that the low margin PWLB HRA loan facility will only be available on 26th March 2012. This will concentrate interest rate risk on one particular day with limited practical ways of mitigating this. However, given the substantial rate saving (estimated to be approximately 0.88%) and the relatively flat profile for interest rates, Arlingclose believe it will be beneficial to draw the PWLB HRA funding requirement on this date.

4.4 The PWLB offers three different repayment methods as follows:-

4.5 **Maturity Loans** - the entire principal is repaid in one "bullet" repayment at the end of the life of the loan. Interest costs are based on the same outstanding balance throughout the life of the loan.

4.6 **Equal Instalment of Principal (EIP) Loans** - as the name implies, these loans make regular repayments of principal on the interest payment dates. As such, the outstanding loan balance reduces, as do interest costs.

4.7 **Annuity Loans** - the combined total amount of principal and interest repaid on each interest payment date is constant throughout the life of the loan. The repayment profile shows principal being repaid at an increasing pace over the life of the loan.

Interest costs move in the opposite direction, as the outstanding balance of debt reduces.

4.8 PWLB maturity dates can be selected from 1 year through to 50 years, with half yearly tenors also available. The table below show the options:-

Table 2: PWLB Loan Structures

	Fixed Rate Loans		Variable Rate Loans	
	Minimum Life	Maximum Life	Minimum Life	Maximum Life
Maturity	1yr	50yr	1yr	10yr
EIP	18mth	50yr	18mth	10yr
Annuity	18mth	50yr	N/A	N/A

4.9 The annuity and EIP loan structures have a shorter weighted life than maturity loans with the same final repayment date, as EIP and annuity loans contain a contractual obligation to make regular repayments of principal. While the interest rates offered by the PWLB may initially look lower for EIP and Annuity rates, this is due to the fact they have a shorter average life and is a reflection of the positively sloping yield curve. As all of the PWLB’s fixed rates are derived from the same underlying gilt yield curve, there is little benefit in selecting one repayment method over another in terms of rate when considering the average life of debt.

4.10 As Epping DC’s HRA surplus balances take a number of years to accrue to significant levels there is little scope for repayment of principle in the early years. As the Council would not want to replace maturing debt at higher PWLB margins, Arlingclose therefore recommend that maturity loans are used, as these do not contain any contractual obligation to repay debt in the early years.

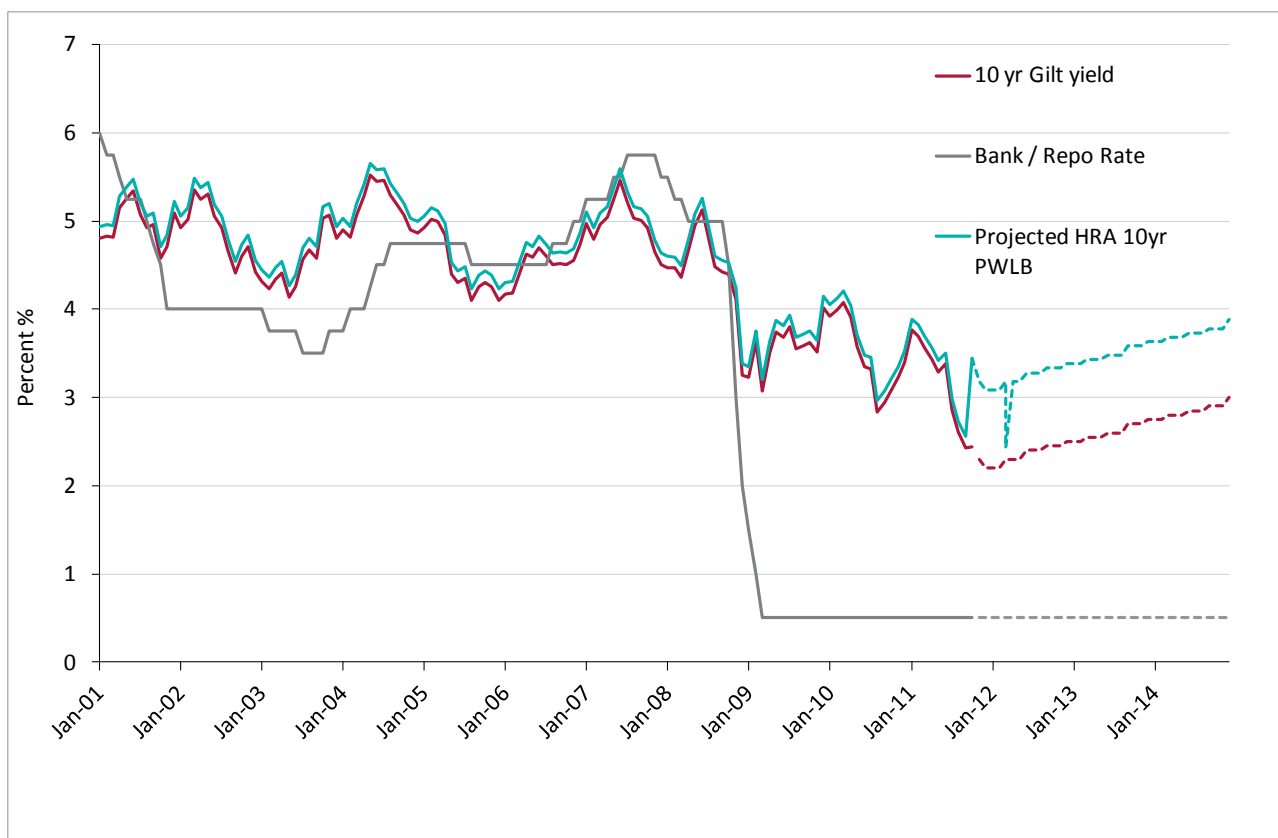
4.11 PWLB loan products provide the opportunity to structure a myriad of maturity permutations, with the added bonus of transparent pricing and a low cost, flat fee structure (0.035% for fixed rate, 0.045% for variable).

4.12 The PWLB currently offer premature repayment terms, with a transparent methodology for calculating premiums and discounts. However, these may be subject to changes in policy without prior notice.

4.13 While no guarantees can be made, following recent meetings with the CLG and HM Treasury, Arlingclose would not expect additional borrowing controls or increases in the HRA PWLB margin to be announced before March 2012.

4.14 Projected PWLB rates

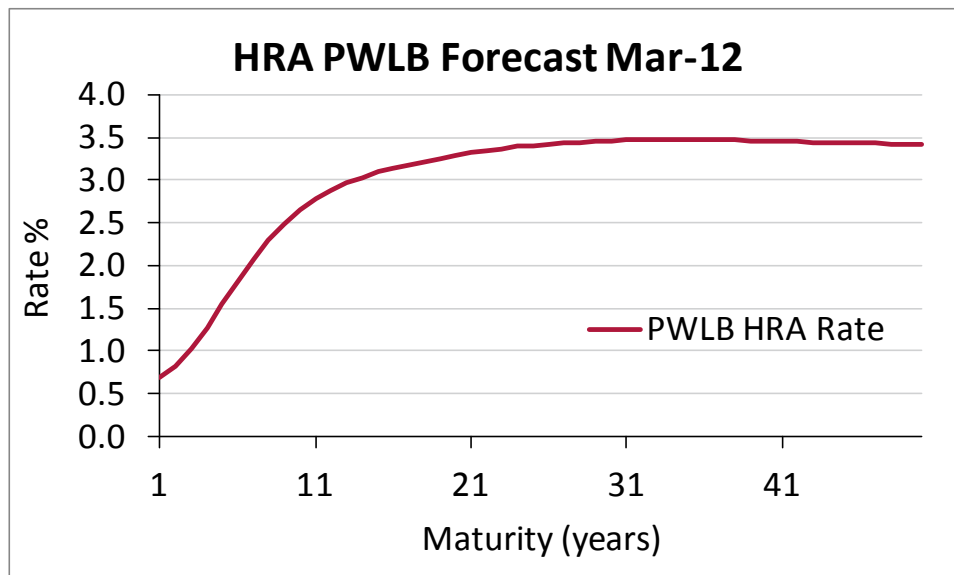
Table 3 - Interest Rate Forecast Chart



4.15 We have used the projected PWLB be rates shown in appendix A in the analysis contained within this report. These are based on our projection for gilt yields at 26th March 2012 and an estimated PWLB margin of 0.15%.

4.16 The following graph shows the PWLB forecast at 26th March 2012 across the yield curve:-

Chart 4: HRA PWLB Maturity Rate Forecast at 26th March 2012



4.17 Following the HRA PWLB funding window all further PWLB HRA borrowing transactions will be at the prevailing PWLB margin (currently about 1%) above gilt yields. As any subsequent replacement PWLB borrowing or debt restructuring, including replacing variable rate loans with fixed, will be undertaken at a significantly higher margin there is an incentive for the Council to ensure certainty of rate and margin by selecting sufficiently long-dated debt in the first instance. The risk to this strategy is that if rates subsequently fall, the Council will have debt fixed in at a higher rate. In this scenario premature redemption would also prove expensive. The combination of these two factors neatly encapsulates interest rate risk.

4.18 Based on current forecasts, both projected gilt yields and the margin on PWLB debt will be close to historically low levels at the settlement date. Arlingclose believe there will be an attractive opportunity to secure a significant proportion of funding at long-term levels of around 3% - 3.5%. This will provide certainty of rate with limited downside risk. Should debt repayment become an attractive option at a later stage the low initial borrowing margin and rate, close to gilt yields, increases the likelihood of obtaining favourable premature redemption terms. As longer-term interest rates are expected to increase gradually in coming months and years, Arlingclose believe that discounts could be generated on future fixed rate premature redemptions (assuming current PWLB methodology is maintained).

- 4.19** If debt reduction is required in the first 10 years, the Council can either prematurely repay a proportion of variable rate debt (at no premium cost) or repay fixed rate debt (we would expect a discount to be due). The business plan only factors in £4.3m of repayment in total in the first 10 years; Epping Forest DC will be able to proactively managed premature redemptions in this period. Of course, plans may well change over this period, Arlingclose have concluded, at prevailing low rates, it would be more beneficial to have excess debt and prematurely repay, than face the prospect of replacing loans at higher rates.
- 4.20** If long-term debt is undertaken and HRA balances accrue, the alternative to premature repayment would be to invest surplus resources; holding debt and corresponding investments. The decision here will be dependent on projected cash flows and the on-going level of capital funding required. However, if the Council built substantial cash resources it would need to justify why these were being held, rather than invested in the housing stock or used to repay debt.
- 4.21** Arlingclose believe there is a strong chance that long-term discount rates will increase over the next ten years. The Council should be able to prematurely repay with a discount - this can be applied to either a loan in its entirety or a partial repayment of a loan. This should provide the flexibility to adjust debt to match the business plan requirements. This will also allow Epping Forest DC to reduce surplus cash resources and reduce credit risk - which we hope will diminish over the next decade.
- 4.22** Additionally, it should be possible to transfer any unwanted HRA loans to the GF at a later date. With the GF borrowing requirement set to increase Arlingclose believe it would be useful to leave this option open - particularly as the HRA loans will be at such attractive levels.
- 4.23** Investment returns are expected to remain subdued for a long period, potentially creating a cost of carry whereby investment returns are lower than the corresponding cost of holding debt.
- 4.24** Credit risk regarding the on-going turmoil in financial markets is expected to remain high. This supports a policy whereby large cash balances are not accumulated, at least in the short to medium term. Epping Forest DC's HRA business plan indicates a relatively limited capacity for debt repayment over the first five years.

4.25 “Internal” Borrowing

4.26 Epping Forest DC has significant cash resources available to help fund the HRA settlement. The following balance sheet summary and projection indicates the level of available cash resources over the next three years (assuming the full HRA settlement sum is borrowed).

Table 5: Balance Sheet Analysis

Epping Forest DC					
Gross to Net Borrowing Requirement (Projections)					
	31-Mar-11	31-Mar-12	31-Mar-13	31-Mar-14	31-Mar-15
	£000s	£000s	£000s	£000s	£000s
CFR (Underlying Need to Borrow for Capital Purposes)	-784	184,672	184,672	184,672	184,672
External Borrowing & Other Long Term Liabilities (at Nominal Value)	0	-185,456	-185,456	-185,456	-185,456
Gross Borrowing Requirement / Internal Borrowing	-784	-784	-784	-784	-784
Usable Reserves	-47,824	-42,413	-35,129	-29,934	-26,241
Net Borrowing Requirement/ -Investment Capacity	-48,608	-43,197	-35,913	-30,718	-27,025
HRA:					
Epping Forest DC					
Gross to Net Borrowing Requirement (Projections)					
	31-Mar-11	31-Mar-12	31-Mar-13	31-Mar-14	31-Mar-15
	£000s	£000s	£000s	£000s	£000s
CFR (Underlying Need to Borrow for Capital Purposes)	-29,433	153,575	153,575	153,575	153,575
External Borrowing & Other Long Term Liabilities (at Nominal Value)	0	-185,456	-185,456	-185,456	-185,456
Gross Borrowing Requirement / Internal Borrowing	-29,433	-31,881	-31,881	-31,881	-31,881
Usable Reserves:					
Capital Grants Unapplied	0	0	0	0	0
Usable Capital Receipts	0	-155	-329	-513	-757
Earmarked Reserves	-4,121	-3,964	-3,514	-2,925	-2,293
HRA Balances	-5,886	-4,937	-4,638	-3,580	-2,971
Major Repairs Reserve	-6,540	-6,612	-5,931	-3,828	-2,533
	-16,547	-15,668	-14,412	-10,846	-8,554
Net Borrowing Requirement/ -Investment Capacity	-45,980	-47,549	-46,293	-42,727	-40,435
GF:					
Epping Forest DC					
Gross to Net Borrowing Requirement (Projections)					
	31-Mar-11	31-Mar-12	31-Mar-13	31-Mar-14	31-Mar-15
CFR (Underlying Need to Borrow for Capital Purposes)	28,649	31,097	31,097	31,097	31,097
External Borrowing & Other Long Term Liabilities (at Nominal Value)	0	0	0	0	0
Gross Borrowing Requirement / Internal Borrowing	28,649	31,097	31,097	31,097	31,097
Usable Reserves:					
Capital Grants Unapplied	-186	-186	-186	-186	-186
Usable Capital Receipts	-18,694	-14,457	-9,547	-8,707	-7,878
GF Balances	-8,570	-8,639	-8,652	-8,241	-7,777
Earmarked Reserves	-3,827	-3,463	-2,332	-1,954	-1,846
	-31,277	-26,745	-20,717	-19,088	-17,687
Net Borrowing Requirement/ -Investment Capacity	-2,628	4,352	10,380	12,009	13,410

- 4.27 The analysis on the previous page shows a balance sheet projection for the Council overall but also breaks this down between the HRA and GF. It indicates that the Council is expected to hold overall usable reserves of £42m at March 2012, reducing to £26m by March 2015, as a result of the anticipated use of these reserves.
- 4.28 Epping Forest DC currently has no existing external debt and had a usable reserves balance of £47.8m at 31st March 2011, most of which were cash-backed. (Separate analysis shows the actual cash position was £2m higher at March 2011 due to a positive working capital position as the Council collected money due in from debtors faster than it paid creditors).
- 4.29 The analysis also highlights how the HRA currently has a negative borrowing requirement of £29m. This is broadly matched by a GF borrowing requirement of £29m. In effect, the HRA is lending to the GF, avoiding the need for the Council to borrow externally. In addition to this both the HRA and GF have usable balances of £16.5m and £31.3m respectively, it is these reserves that are allowing one fund to borrow from the other.
- 4.30 Borrowing the full £185m settlement due to the CLG will be neutral in cash terms. The Council could borrow the full £185m amount from the PWLB, which will be paid on the 28th March, and then the Council will make a corresponding payment of £185m to the CLG. The Council's level of cash will remain unchanged in this scenario. The Council will however be exposed to the "cost of carry" whereby debt costs are approximately 3%, but corresponding investment balances will be only be around 0.7%.
- 4.31 In cash terms - we can forecast the cost of carry and anticipated cost to the Council overall, based on projections over the next three years, as shown below:-

Table 6: Cost of Carry Analysis

Financial Year Ending	31-Mar-13	31-Mar-14	31-Mar-15	Total
Projected Investment balances '000s	-35,913	-30,718	-27,025	-93,656
Projected Investment rate	0.70%	0.70%	0.70%	
Projected Investment return '000s	251	215	189	656
Interest rate on debt (Average pooled funding rate)	3.00%	3.00%	3.00%	
Projected debt cost '000s	-1,077	-922	-811	-2,810
Net cost of carry '000s	-826	-707	-622	-2,154

- 4.32 The cost of carry will have a direct impact on the income and expenditure account. Additionally, although the self financing determinations are still at the consultation stage, the current references in the determinations to proper accounting practice imply the GF could incur a significant proportion of the above costs. Potentially, as the HRA CFR post reform is only £154m, due to the current negative CFR, debt cost will only be charged to the HRA at this level. The remaining debt costs, and implicit cost of carry, will be transferred to the GF. Arlingclose have previously outlined to the Council the

impact of borrowing the full amount on the GF and have illustrated how the GF can be protected from any negative impact through the use of existing resources to fund an element of the settlement payment. It is acknowledged by the Council that at some point it will be required to externalise its GF internal borrowing position and this will have a cost to the GF in terms of increased interest costs but this additional cost to the GF should not be a direct consequence of the HRA settlement transaction.

- 4.33** Recent revisions to the Council's CFR figures have resulted in a reduced HRA CFR and higher GF CFR. To avoid any detriment to the GF, via a cost of carry, the Council would need to fund £31m of the HRA settlement via the use of current reserves and balances. However, the balance sheet projection indicates that only £27m is available for investment by March 2015. The implication here is that some debt charges will inevitably fall on the GF as it spends reserves and balances. The key question is whether the Council borrows now, and accepts the GF cost of carry, or delays borrowing until cash reserves are depleted.
- 4.34** One of CIPFA's guiding principles regarding HRA reform is that there is no detriment to the GF. As this cost of carry does impact on the GF the Council is exploring ways of mitigating this with the CLG.
- 4.35** The above also raises issues with regard to the pooling of debt. If the Council borrows the full settlement amount, analysis of the CFRs will indicate that some of this debt relates to the GF. This raises the issues of how actual loans will be allocated or apportioned to the GF.
- 4.36** Arlingclose have identified 2 potential solutions to alleviate the cost of carry issue:
- 4.37** Option 1: Incorporate an element of variable rate debt within the funding to offset the low rate of investment. Variable rate funding will be available at levels around 0.4 to 0.7%, a rate close to the return received from Money Market Funds - in which the Council currently invests. However, potential problems include the reducing level of investment balances as reserves are used. The Council will be left with "unmatched" variable rate borrowing which will create some exposure to interest rates. More significantly, the Council would need to question the merit of holding variable rate debt and investments simultaneously. The current financial crisis would make it difficult to ensure investment returns exceed the cost of borrowing, without taking additional credit risk. Money market funds will have underlying exposure to bank credit risk.
- 4.38** Option 2: The most appropriate solution may be to net off the variable rate debt and investments by reducing the level of borrowing undertaken at settlement. This will alleviate the cost of carry, reduce counterparty credit risk and avoid a detrimental impact on the GF. The balance sheet analysis shown above indicates the Council would need to use £31.8m of internal resources to fund the settlement. This would ensure that the level of external debt is equated to the HRA CFR of £154m, with no residual debt

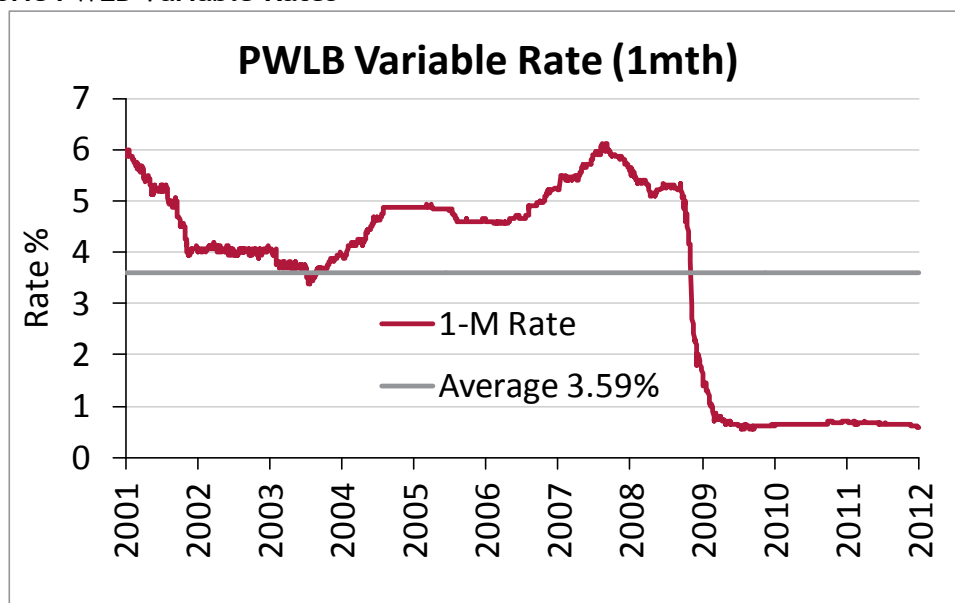
charges falling on the GF. The Council would only need to borrow £154 of PWLB HRA at settlement debt. This position can only be maintained whilst the GF is able to remain internally borrowed. However, the balance sheet projection indicates the Council would be forced to borrow a further £4.8m by March 2015 if this level of internal funding is applied at the settlement date.

4.39 The Council is projected to have sufficient investments (excluding working capital) to allow this cash to be utilised to fund the settlement.

4.40 There is potentially an opportunity cost relating to borrowing a reduced amount at settlement. The opportunity to borrow PWLB debt at the reduced margin appears unlikely to be repeated. If the Council did subsequently require borrowing this will be incurred at higher PWLB margins. However, it is difficult to justify undertaking additional borrowing against the current economic backdrop of low investment returns and heightened credit risk.

5 Volatility Levels - How much debt should be borrowed on a variable rate basis?

Chart 7: Historic PWLB Variable Rates



5.1 Over the last ten years PWLB 1 month variable rates have averaged 3.59%. Admittedly, this has coincided with a period during which rates have been held at an ultra low level for over two years, but even over a longer term horizon, the average is lower than might initially be suspected. Although the variable rate borrower might be subjected to higher costs during upswings in economic activity, this is countered by low rates during the downturns.

5.2 We are not forecasting bank rate to move above 0.5% before the end of 2015 - four years hence. This profile is broadly consistent with the market's view on rates, precisely why we have such low short-term fixed PWLB rates, with implied 5yr PWLB HRA funding currently well below 1.50%. The point is if the Council does not have to borrow fixed rate debt to achieve this cost of funding and, assuming the market is pricing interest rates correctly (which we think it is), variable rate borrowing is a valid option for an element of the portfolio.

5.3 The uncertain interest rate outlook further supports the case for variable rate debt. As the economy is still susceptible to economic shocks and growth remains insipid, it may not take much to tip the recovery into reverse. An exposure to variable rates would allow the Council to participate in lower debt cost if rates stay low for longer. It also mitigates the risk inherent in fixing in loans at the wrong point of the curve or at the wrong time. A proportion of debt on variable rates of interest therefore presents an effective solution to the management of interest rate risk.

5.4 Variable debt also makes sense from an affordability and budgetary perspective as rates are expected to remain at rock bottom levels in the early years of HRA self financing.

5.5 Additionally, variable rate debt is flexible. It can be repaid at minimal costs in terms of premium, which is useful if the Council wishes to accelerate debt repayment or restructure the portfolio.

5.6 If variable rate debt is to be considered we would recommend selecting the maximum 10 year maturity period available from the PWLB. This enables the low HRA PWLB margin to be secured long-term, as a contingency should debt be required for longer than is currently anticipated. If and when repayment is desired the Council will be able to prematurely repay a proportion of debt with no penalty at any interest rate reset date (assuming PWLB arrangements in relation to the premature repayment of debt remain unchanged).

5.7 The point above is worth thinking about in the context of fixed rate loans with a maturity period of less than 10 years. Here, if additional debt is subsequently required the Council will be exposed to refinancing risk, at the higher PWLB margin. To mitigate this, longer term PWLB fixed rate could be borrowed, but if premature redemption is required there is a risk this will incur a premium. Conversely, the variable rate option enables the Council to secure a low margin for 10 years and retain premature repayment flexibility.

5.8 The nature of the PWLB's HRA funding window makes variable rate borrowing problematic. Should interest rates deviate from the forecast it will be possible to mitigate risk by replacing variable rate loans from the PWLB with fixed rate PWLB loans. However, loans will be fixed at gilt yields plus the prevailing margin. We expect this margin to revert to 1% from the 27th March for HRA purposes. This makes the cost of subsequently "fixing in" variable rate debt relatively expensive.

5.9 The absolute levels of fixed rate funding should also be considered. Given the ultra low levels of fixed rates there is potentially only so much further they can fall unless a "Japanese" scenario is followed, where 10 year bond yields have remained below 2% for over a decade. With most of the risk on the upside, fixed rate funding offers the added benefit of certainty of funding costs. These are factors that also need consideration when setting the exposure to variable rates.

5.10 Local Authority Offers

5.11 We expect Local Authorities with surplus cash resources will continue to make competitive funding offers available, particularly given the scarcity of highly rated investment counterparties. Liquidity will continue to be patchy and rates and availability will be volatile around the settlement date. We expect the majority of offers to be on a short-term basis.

5.12 Currently, some short-term offers have been as low as 0.35% below implied HRA PWLB variable rate levels. (Note, the PWLB does not offer borrowing rates for less than one year).

5.13 Conventional Bank Loans and Funding Facilities

5.14 These instruments are not expected to be available at sub HRA PWLB levels. Banks continue to suffer from a combination of high funding costs and reduced capital available for investment, in part due to regulations requiring them to hold higher levels of capital in reserve. As a result, bank lending margins have increased in order to improve profitability on reduced levels of banking activity. Bank liquidity considerations result in a limited appetite for lending beyond 5 years. As banks' funding costs are well in excess of that of the UK Government, it is simply not economically viable for them to make loans available at sub PWLB HRA levels.

5.15 Lender's Option Borrower's Option (LOBO) Loans

5.16 These loans contain an embedded derivative that enables the lender to increase the rate at preset intervals; any proposed rate increase triggers a borrower's option to repay at no penalty. Few banks are in a position to make these products available, for the reasons highlighted above. Some pension fund investors have been active in the market recently, offering loans that may appear to be competitive with PWLB terms (at gilts plus 1%). However, these loans provide no opportunity for the Local Authority to participate if market rates fall. Arlingclose do not believe that Local Authorities are adequately compensated for the loss of flexibility and upside interest rate risk associated with LOBOs.

5.17 Bonds

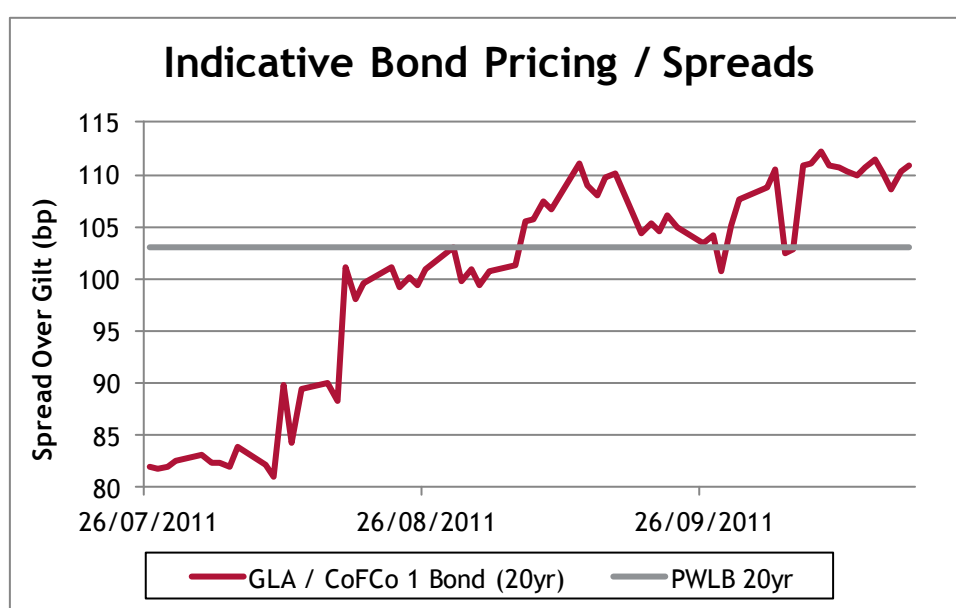
5.18 The capital markets provide Local Authorities with the potential to tap investors directly for funds, either via a publically quoted issue, be it as a single name or part of a group of Local Authorities, or a bilateral arrangement with a particular investor. This negates the issues on bank lending, as funds will come directly from investors, such as pension and insurance funds. This type of funding is relatively inflexible, in terms of minimum size, repayment type and maturity date. Investors will demand an additional margin above gilt yield for Local Authority debt, to compensate for the reduced liquidity and additional credit risk associated with regional as opposed to central Government bonds. The Council may require a credit rating prior to bond issuance which would, in turn, influence the pricing of the bond issued.

5.19 We can gauge implied bond pricing by observing the level at which the limited number of existing Local Authority bonds are traded in the secondary market. The graph below tracks

the margin over gilts on a 20 year bond issued by the Greater London Authority (GLA). The GLA is rated as AA+ by the Standard & Poor’s credit rating agency. It shows that while the bond was issued at around 0.80% over the equivalent gilt, it now trades at a “spread” of over 1.0% above the gilt. This reflects investors’ reduced appetite for riskier assets, a result of the on-going financial crisis, and unwillingness to chase long-term yields much below 5%.

5.20 The conclusion is that currently, a Local Authority bond, either issued as part of a group, a single name issue or a private placement, will not be at a level lower than the equivalent rates offered by the PWLB.

Chart 8: Indicative Local Authority Bond Spreads (Greater London Authority) Chart



5.24 Premature Redemption of PWLB Debt

5.25 The PWLB currently offer premature repayment terms, with a transparent methodology for calculating premiums and discounts. The Board has discretion to accept repayment of a loan, in whole or in part, in advance of the date on which the repayment is due to be made. This facility is frequently used by Local Authorities with limited restrictions.

5.26 The total amount payable in order to redeem a debt is the present value (PV) of the remaining payments of principal and interest, calculated on normal actuarial principles using published discount rates. The result of the calculation is a settlement sum representing a discount or premium on the outstanding principal according to whether the discount rate is respectively higher or lower than the loan rate, plus interest accrued from the previous scheduled repayment date if applicable.

- 5.27** The discount rate for a variable rate loan is the rate of interest that would have been applicable to a new loan, with the same interest payment period as the loan being repaid prematurely - this effectively results in minimal premiums or discount upon the premature redemption of variable rate debt.
- 5.28** The discount rates applied to premature redemptions are penal when viewed in the context of new borrowing rates. The “spread” between the two is in the region of 1% to 1.2%, quite unusual in financial markets and designed to deter speculative debt restructuring activity. However, if debt is no longer required and repayment is undertaken without replacement the “spread” becomes less relevant.
- 5.29** With long-term interest rates at historically low levels it may be possible to generate substantial discounts, payable to the Council, should interest rates rise in the future. The contra is that if discount rates fall premiums will be due upon premature redemption. Based on borrowing £185m over 30 years at 3.45% the premium / discount sensitivity to a 1% movement in interest rates is approximately £28m.
- 5.30** Longer dated loans display more sensitivity to movements in discount rates. Given the low absolute levels, Arlingclose views the balance of risk to be that discounts may be more likely on the subsequent premature repayment of HRA PWLB loans than premiums.
- 5.31** The PWLB has enacted various policy changes with regard to premature redemption terms historically. Recently, PWLB policy in general has entered a less stable and predictable phase. As the PWLB reserve the right to alter premature redemption terms the risk of an adverse policy change cannot be ruled out.

6 HRA Business Plan Review

- 6.1 Arlingclose has undertaken a review of the treasury management aspects of the HRA business plan prepared by the Council. We recommend adjusting the data in the following areas:-
- 6.2 Initial debt costs - the average rate on external debt can be updated to incorporate the projected costs outlined in section 9 of this report
- 6.3 We have projected variable rate interest costs over the next 30 years. These can be applied to the assumption regarding the investment of surplus balances.

7 Pooling of Debt

- 7.1 CIPFA have defined the key principles upon which the allocation of loans should be based as follows:
- The underlying principle for the splitting of loans, at transition, must be that of no detriment to the General Fund.
 - Local authorities are required to deliver a solution that is broadly equitable between the HRA and the General Fund.
 - Future charges to the HRA in relation to borrowing are not influenced by General Fund decisions, giving a greater degree of independence, certainty and control.
 - Un-invested balance sheet resources which allow borrowing to be below the CFR are properly identified between General Fund and HRA.
 - Any other principles relevant to the authority.
- 7.2 The fact that the HRA is currently lending to the GF creates some issues with regard to the pooling of debt. If the Council chooses to use internal balances to fund £31.8m (equating to the negative HRA CFR) it will be easy to identify all settlement debt as HRA debt. In this instance we would recommend a two pool approach, with any new debt added to the relevant pool.
- 7.3 Should the Council decide to borrow the full settlement amount, the result will be to effectively externalise existing “internal” GF borrowing. There would need to be some mechanism put in place to apportion or allocate some of the debt to the GF.
- 7.4 It is worth noting that, under a “two pool” approach, it will still be possible to transfer loans between the GF and HRA, based on locally approved principles. This also promotes managing treasury risk, such as refinancing risk, across the Council as a whole. For

example, if the HRA no longer requires debt as surplus balances accrue and allow repayment, and the GF requires borrowing, it would be sensible to transfer the loan from the HRA to the GF.

8 Portfolio Structure - Options Analysis

8.1 We have modelled two borrowing solutions based on the following portfolio structures:-

Option 1 - this is based borrowing a balanced portfolio of long dated debt. The portfolio also incorporates a proportion of variable rate debt equating to 16% of the overall debt. We have assumed that the full settlement sum of £185.4m is borrowed. The variable rate element of debt is designed to partially offset interest rate risk relating to corresponding variable rate investments, as discusses in section 4.2.

The table below details the debt portfolio structure and estimated rates at settlement:-

Table 9: Option 1 Debt Portfolio Structure

Loans						
Interest Calculation	Repayment Method		Principal	Period	*Rate	
Variable	Maturity	-	31,800	10	0.70%	
Fixed	Maturity	-	30,000	26	3.42%	
Fixed	Maturity	-	30,000	27	3.43%	
Fixed	Maturity	-	30,000	28	3.44%	
Fixed	Maturity	-	30,000	29	3.45%	
Fixed	Maturity	-	33,656	30	3.45%	
TOTAL / WEIGHTED AVERAGE			-	185,456	25.0	3.42%

*The average rate shown is weighted and projected over the life of the portfolio.

8.2 Option 2 - this portfolio is based on option 1 but incorporates a reduced level of borrowing, with £31.8m funded via the use of internal resources leaving a total debt of £153.6m. The variable rate borrowing has been adjusted down accordingly, equating to 4% of the overall portfolio. The interest rate shown is weighted over the life of the portfolio.

Table 11: Option 2 Debt Portfolio Structure

Loans				
Interest Calculation	Repayment Method	Principal	Period	Rate
Variable	Maturity	-	10	0.70%
Fixed	Maturity	- 30,000	26	3.42%
Fixed	Maturity	- 30,000	27	3.43%
Fixed	Maturity	- 30,000	28	3.44%
Fixed	Maturity	- 30,000	29	3.45%
Fixed	Maturity	- 33,575	30	3.45%
TOTAL / WEIGHTED AVERAGE		- 153,575	28.0	3.44%

8.3 Option Appraisal

8.4 The portfolios above are both similar in nature; the main difference is the level of debt, and extent of variable rate funding. Interest costs relating to option one are higher than option 2, reflecting the higher overall debt level. The variable rate debt pulls the average rate of option 1 down below option 2.

8.5 The key is the impact of interest costs on both the GF and HRA. The HRA debt charge may potentially be based on the HRA CFR, with any remaining debt charged to the GF.

8.6 A comparison of the impact on the GF of the two options is shown below. This table is based on the two options shown above but with variations in how debt charges are applied to the GF. Option 1a assumes the full amount of debt is borrowed and interest charges are based on the GF CFR at the average pooled rate of debt. Option 1b assumes that the full settlement sum is borrowed but £31.8m of variable rate debt is allocated to the GF. We also show the current position.-

8.7 Table 11: Option Analysis

General Fund Treasury Implications											
	2012/13			2013/14			2014/15				
	Debt Cost	Investment Income	Net Cost / (Income)	Debt Cost	Investment Income	Net Cost / (Income)	Debt Cost	Investment Income	Net Cost / (Income)	Total Net Cost	Net Cost Relative to Current Position
Current Position	£73,000	£0	£73,000	£84,000	£0	£84,000	£94,000	£0	£94,000	£251,000	N/A
1a. Borrow £185.4m (Pooled Debt Cost)	£946,000	£150,000	£796,000	£946,000	£139,000	£807,000	£946,000	£129,000	£817,000	£2,420,000	£2,169,000
1b. Borrow £185.4m (GF Allocated £31.8m Variable Loans)	£223,000	£150,000	£73,000	£223,000	£139,000	£84,000	£223,000	£129,000	£94,000	£251,000	£0
2. Borrow £154m	£73,000	£0	£73,000	£91,000	£0	£91,000	£123,000	£0	£123,000	£286,000	£35,000

8.8 In option 1b above, the additional £31.8m of borrowing, at a variable rate of 0.7% in year 1, will be matched by an additional £31.8m of investment interest - also at 0.7%. But while the overall cost to the Council of this option is neutral, there are two key considerations: -

- The cost to the GF could be disproportionate - proper accounting practice may result in the GF being charged interest at the pooled rate (as shown in 1a), not the variable rate element of debt. The alternative would be to allocate individual loans to the GF CFR. In this scenario variable rate loans could be allocated to the GF (using the “two pool” methodology for splitting debt), negating the cost of carry. However, it is unclear how external auditors would interpret this, particularly if the GF was seen to be allocated the lowest coupon HRA loans.
- If the full settlement sum is borrowed the Council will be exposed to credit risk as exposure to financial markets is maintained, with limited economic benefit in the first 3 years. While there may be a longer-term benefit, as investment rates increase above the average cost of debt, it is difficult to profile the impact with accuracy, as we would need to project CFR and use of reserves over a 30 year period to gauge the impact on the level of balances.

8.9 The above analysis shows that the HRA self financing system will eliminate the capacity for the GF to borrow internally. Currently, the GF is borrowing from the HRA at the average rate of interest on balances (the average investment rate). As reserves and balances are expected to be utilised this source of funding will require replacement with external debt. The balance sheet analysis in section 4.26 implies the Council will need to borrow £1.1m in 2013/14 and a further £3.7m in 2014/15. Assuming that the GF will borrow variable rate debt at 0.5% above investment rates this results in a cost to the GF.

8.10 If borrowing is equated to the HRA CFR of £154, the subsequent externalisation of debt will have a £35k cost to the Council over the next three years. This cost can be mitigated by equating the sum borrowed at settlement to the HRA CFR of £154m plus a further £4.8m to cover the additional borrowing requirement projected over the next 3 years. By borrowing the £4.8m on a variable rate basis the council can hedge interest rate risk. Ideally, this £4.8m should be allocated to the GF debt pool (using a two pool approach), although it is

unclear if this approach will meet with auditor / regulatory approval at this stage. The council is currently seeking guidance and approval in this regard from the relevant bodies (external auditors / CIPFA / CLG).

- 8.11 The Council will need to consider the credit risk associated with externalising debt and holding corresponding investments. The main threat to the financial system emanates from the on-going crisis in the Euro-Zone. While the signs of financial distress have reduced from the levels seen towards the end of 2011 the threat of further turmoil triggering credit defaults remains high. While the eventual outcome for the Euro Zone remains uncertain Arlingclose expect markets to remain volatile with bouts of severe financial distress re-emerging.
- 8.12 While the low margin associated with the HRA funding facility is alluring, the prospect of credit default should be addressed. Finding a secure counterparty for investment is increasingly difficult but a portfolio of fixed-term deposits with other Local Authorities is one option that could provide the required combination of security, liquidity and yield.
- 8.13 The alternative is to select the lower funding level and eliminate the counterparty risk. The net three year cost of this strategy is relatively benign at a projected £35k. It may yet be possible to eliminate the need for external funding altogether (eliminating this cost), in the following scenarios:-
- Reserves are not used at the projected rate;
 - Positive working capital allows internal borrowing to continue;
 - A reduction in capital expenditure reduces the CFR and need to borrow;
 - Funding continues to be available at sub HRA PWLB levels from other Local Authorities (as is currently the case);
 - The generation of surpluses on the HRA allows the HRA to lend to the GF.

8.14 Risk Management

- The following matrix highlights a variety of different risks associated with the treasury management aspects of HRA self financing, together with a gauge regarding the level of risk associated with each option.

Table12: Risk Management Matrix

Risk	Comment / Potential Source	Option 1	Option 2
Credit & Counterparty	Holding debt & corresponding investment simultaneously	High (3)	Low (1)
Liquidity	Shortfall of cash	Low (1)	Medium (2)
Refinancing	Potential problem regarding replacing debt at appropriate rates, either due to anticipated refinancing or as a result of an unexpected budgetary shortfall	Low (1)	Medium (2)
Interest Rate - Borrowing the Settlement	The nature of the HRA PWLB funding window concentrates risk on the 26 th March 2012 when initial funding rates will be agreed.	High (3)	High (3)
Interest Rate - on-going Borrowing	Exposure to an adverse movement in interest rates (upwards).	Low (1)	Low (1)
Interest Rate - Investments	Exposure to an adverse movement in interest rates (downwards)	Low (1)	Low (1)
Political / Policy	Adverse change in PWLB lending / repayment / interest rate policy	Low (1)	Low (1)
Inflation	HRA income (rent) is explicitly linked to inflation. Risk that lower inflation results in lower rental income, particularly if debt costs are fixed.	Medium (2)	Medium (2)
Market	Relating to premature repayment of debt / adverse premium levels	Medium (2)	Medium (2)

Legal & Regulatory	Compliance with relevant statutes, Codes of Practice and the approved Treasury Management Strategy	Low (1)	Low (1)
Operational, Fraud , Error, Corruption & Contingency	The size of the settlement sum and transacting on one day increase risk	Low (1)	Low (1)
	Sum of Risk Scores	17	17

- In the above analysis, the two options appear to have very similar risk profiles. The key difference is that option 1 contains a higher degree of credit risk, while option 2 has potential refinancing risk. However, Arlingclose believe that the threat posed by credit risk is more immediate, and the impact would be more detrimental, than potential refinancing risk. While risk can never be completely extinguished, a balanced approach to the debt structure will help ensure that the Council is not exposed to concentrated risk arising from unforeseen changes in circumstances.

9 Recommendations

- 9.1 A long dated debt structure is recommended. Maturity loans with a duration of 26 to 30 years have been identified as providing fixed rate funding at historical low rates while securing the benefit of the PWLB HRA funding window;
- 9.2 Arlingclose recommend undertaking fixed rate funding equating to the HRA CFR of £154m;
- 9.3 Variable rate funding should be considered for the remainder of the portfolio, with the proportion determined via reference to the level of outstanding cash balances to help mitigate any cost of carry across the council as a whole;
- 9.4 Variable rate funding will also provide flexibility with regard to premature repayment;
- 9.5 Based on the analysis in this report Arlingclose recommend that £4.8m is undertaken on a variable rate basis;
- 9.6 The key question for Epping Forest DC relates to the level of funding secured. The current negative HRA CFR, and impact of externalising debt on the GF, support reducing the borrowing requirement and funding £27mm via existing cash resources. This will also reduce credit risk;
- 9.7 Should Epping Forest DC consider that this report understates the level of debt required over the next three years it may be appropriate to extend the level of total borrowing by increasing the amount of variable rate debt. However, the strategy regarding investment of this cash until it is required, in an environment where credit risk is heightened, needs careful consideration;
- 9.8 There are also potentially substantial short-term cost to the GF regarding the “cost of carry”, running to £2.1m over the first three years of self financing, based on the analysis in this report. The Council should satisfy itself that the accounting treatment required to mitigate this cost meet regulatory approval;
- 9.9 The Council will need to modify 2011/12 and 2012/13 strategy documentation to revise Prudential Indicators and approved strategy, in advance of the settlement;
- 9.10 Banking limits will need to be reviewed to facilitate a smooth flow of cash on the settlement date (28th March 2012).

Appendix A - Estimated PWLB New Maturity Rates 26 March 2012

Maturity Period	PWLB HRA Rate %		Maturity Period	PWLB HRA Rate %
1	0.68		26	3.42
2	0.82		27	3.43
3	1.02		28	3.44
4	1.27		29	3.45
5	1.54		30	3.45
6	1.81		31	3.47
7	2.07		32	3.47
8	2.30		33	3.47
9	2.49		34	3.47
10	2.65		35	3.47
11	2.78		36	3.47
12	2.88		37	3.47
13	2.96		38	3.47
14	3.03		39	3.46
15	3.09		40	3.46
16	3.14		41	3.45
17	3.18		42	3.45
18	3.22		43	3.44
19	3.25		44	3.44
20	3.29		45	3.43
21	3.32		46	3.43
22	3.34		47	3.43
23	3.37		48	3.42
24	3.39		49	3.42
25	3.40		50	3.41

Appendix B - 6mth Variable PWLB Interest Rate Forecast

Year	Underlying Forecast	Variable Rate Borrowing	Annual Average Investment Returns	Year	Underlying Forecast	Variable Rate Borrowing	Annual Average Investment Returns
1.0	0.50%	0.70%	0.50%	16.0	5.00%	5.20%	5.00%
1.5	0.50%	0.70%		16.5	5.00%	5.20%	
2.0	0.50%	0.70%	0.50%	17.0	5.00%	5.20%	5.00%
2.5	0.50%	0.70%		17.5	5.00%	5.20%	
3.0	0.50%	0.70%	0.50%	18.0	5.00%	5.20%	5.00%
3.5	0.50%	0.70%		18.5	5.00%	5.20%	
4.0	1.25%	1.45%	1.63%	19.0	5.00%	5.20%	5.00%
4.5	2.00%	2.20%		19.5	5.00%	5.20%	
5.0	2.50%	2.70%	2.75%	20.0	5.00%	5.20%	5.00%
5.5	3.00%	3.20%		20.5	5.00%	5.20%	
6.0	3.50%	3.70%	3.75%	21.0	5.00%	5.20%	5.00%
6.5	4.00%	4.20%		21.5	5.00%	5.20%	
7.0	4.50%	4.70%	4.75%	22.0	5.00%	5.20%	5.00%
7.5	5.00%	5.20%		22.5	5.00%	5.20%	
8.0	5.00%	5.20%	5.00%	23.0	5.00%	5.20%	5.00%
8.5	5.00%	5.20%		23.5	5.00%	5.20%	
9.0	5.00%	5.20%	5.00%	24.0	5.00%	5.20%	5.00%
9.5	5.00%	5.20%		24.5	5.00%	5.20%	
10.0	5.00%	5.20%	5.00%	25.0	5.00%	5.20%	5.00%
10.5	5.00%	5.20%		25.5	5.00%	5.20%	
11.0	5.00%	5.20%	5.00%	26.0	5.00%	5.20%	5.00%
11.5	5.00%	5.20%		26.5	5.00%	5.20%	
12.0	5.00%	5.20%	5.00%	27.0	5.00%	5.20%	5.00%
12.5	5.00%	5.20%		27.5	5.00%	5.20%	
13.0	5.00%	5.20%	5.00%	28.0	5.00%	5.20%	5.00%
13.5	5.00%	5.20%		28.5	5.00%	5.20%	
14.0	5.00%	5.20%	5.00%	29.0	5.00%	5.20%	5.00%
14.5	5.00%	5.20%		29.5	5.00%	5.20%	
15.0	5.00%	5.20%	5.00%	30.0	5.00%	5.20%	5.00%
15.5	5.00%	5.20%					