## Item: 6

**Investments Sub-committee: 24 November 2021.** 

**Temporary Loans.** 

Report by Head of Finance.

## 1. Purpose of Report

To advise of the status of the temporary loan portfolio as at 30 September 2021.

### 2. Recommendation

The Sub-committee is invited to note:

### 2.1.

The status of the temporary loan portfolio as at 30 September 2021, as detailed in section 3 of this report.

### 2.2.

That, for the period 1 April to 30 September 2021, the temporary loans portfolio made a return of £35,636.76 at an average interest rate of 0.23%.

The Sub-committee is invited to scrutinise:

### 2.3.

The temporary loans portfolio, detailed in sections 3 and 4 of this report, in order to obtain assurance that the Treasury Management Strategy is being adhered to by the Finance Service and the temporary loans portfolio is producing an acceptable rate of return.

# 3. Temporary Loan Portfolio

### 3.1.

The temporary loan portfolio as at 30 September 2021 totalled £33,966,950. Further details are provided in the Monthly Investment Analysis Review prepared by Link Asset Services, attached as Appendix 1 to this report.

#### 3.2.

The following transaction has taken place since 30 September 2021:

 Notice placed on £2,000,000 with Santander for 180 days at a reversion rate of 0.38%.

### 3.3.

The value of the temporary loans stood at £32,705,350 as at 31 October 2021.

### 4. Rate of Return

#### 4.1.

For the period 1 April to 30 September 2021, the temporary loans returned an average interest rate of 0.23%, which equates to a return of £35,636.76.

### 4.2.

By comparison, the equivalent 90-day London Inter-Bank Offered Rate of 0.08% is considered to be the target.

### 4.3.

With inflation quoted at 3.1% for September 2021 based on Consumer Price Index (4.9% Retail Price Index), the return on temporary loans equates to a relative loss in value of 2.9% in real terms.

#### 4.4.

The Council is part of an Investment Portfolio Benchmarking Group overseen by its Treasury Advisers, Link Asset Services, and comprising seven other Scottish Local Authorities, as follows:

- Aberdeen City Council.
- Aberdeenshire Council.
- Angus Council.
- Clackmannanshire Council.
- · Midlothian Council.
- · Perth and Kinross Council.
- · Highland Council.

### 4.5.

An extract from the analysis report for the benchmarking group as at 30 September 2021, attached as Appendix 2 to this report, indicates that the Council is performing behind the weighted average rate of return of the benchmarking group and ahead of the Scottish Unitary Authorities.

### 5. Cash Balances

### 5.1.

Recurring slippage continues to be a feature within the approved capital programme. In the current financial year, spend as at 30 September 2021 is only £4,669,000, against an approved annual budget of £27,816,000.

### 5.2.

In addition to this, it should be noted that COVID-19 closedown measures had an adverse impact on delivery of the capital programme for financial year 2020/21, with a total of £8,551,000 being slipped into 2021/22 and beyond. This brings the total slippage on the capital programme over the last 5 financial years to £61,355,000 with some project budgets being reprofiled during each of those 5 years. Not only does this impact on the cost of delivering the capital programme, it also delays the timescale over which the capital finance is required. Uncertainty over the timing of contract payments on capital projects results in additional cash balances being held over the short term. Although these surplus balances are re-invested, the shorter duration and uncertainty does impact on performance.

### 5.3.

On 26 March 2020, the Council borrowed £10,000,000 from the Public Works Loan Board, repayable on 25 March 2070, at an interest rate of 1.28%. This is regarded as an effective way for the Council to manage the risk of interest rate movements over the life of the capital programme by refinancing some debt managed internally, and recognising, for example, the approval of additional housing build projects as exceptions to the capital programme. This also provided short-term cashflow benefits at a time when the full cost of the COVID-19 crisis to the Council is unknown.

### 5.4.

To help put this into context, the main draw on cash balances remains that of the Council's approved capital programme. For example, a planned spend over the next three years of £56,576,000 should result in a capital financing or borrowing requirement of £21,343,000 being realised after allowing for grant income, capital receipts and contributions. However, non-cash direct funding contributions from revenue resources and use of reserves mean that the cash outflow should be nearer to £32,923,000 for the three-year period.

# 6. Corporate Governance

This report relates to the Council complying with its treasury management policies and procedures and therefore does not directly support and contribute to improved outcomes for communities as outlined in the Council Plan and the Local Outcomes Improvement Plan.

# 7. Financial Implications

### 7.1.

The Treasury Policy Statement is being adhered to by the Finance Service and is producing an acceptable rate of return.

### 7.2.

The effective management and control of risk are prime objectives of the Council's treasury management activities, with priority given to security and liquidity when investing funds.

# 8. Legal Aspects

Section 69 of the Local Government (Scotland) Act 1973 empowers a local authority to lend and invest surplus funds on a temporary basis where it is calculated to facilitate or is conducive or incidental to the discharge of any of their functions.

### 9. Contact Officers

Colin Kemp, Interim Head of Finance, extension 2106, Email colin.kemp@orkney.gov.uk.

Shonagh Merriman, Interim Corporate Finance Senior Manager, extension 2105, Email shonagh.merriman@orkney.gov.uk.

# 10. Appendices

Appendix 1: Link Asset Services Monthly Investment Analysis Review for September 2021.

Appendix 2: Link Asset Services Investment Portfolio Benchmarking Analysis for September 2021.



Monthly Investment Analysis Review

September 2021

# Monthly Economic Summary

# **General Economy**

The Flash (i.e. provisional) UK Manufacturing PMI dropped to 56.3 in September from 60.3 in August, somewhat lower than market forecasts of 59.0. Although it signalled the weakest pace of expansion in the sector since February, due to supply chain delays, slower new order growth and rising material and labour shortages, the survey remained at levels historically consistent with robust economic growth. Similarly, the Flash Services PMI eased to 54.6 in September from 55.0 in August, also pointing to the slowest growth in the services sector in seven months. Notably, respondents reported that input price inflation accelerated amid reports of higher wage costs, product shortages and increased transportation costs - and that companies raised their own charges at the fastest pace since the series began in 1996. As a result of the falls in both indices, the Flash Composite PMI (which incorporates both sectors), eased to 54.1 in September, from 54.8 in August. Mirroring these developments, the Construction PMI (which is released one month behind), also fell to 55.2 in August from 58.7 in July and below market expectations of 56.9 as a restricted supply of materials, labour and transport began to weigh on overall activity. Input cost inflation, meanwhile, accelerated to the second-fastest rate in the 24-year history of the survey.

The combination of supply chain delays, slower order growth and rising material and labour shortages noted in the PMI surveys may also have weighed on GDP, which expanded by just 0.1% m/m in July compared to forecasts of a 0.7% rise. However, upward revisions to previous releases meant that the economic output was now forecast to be around 1% less than prior to the pandemic compared to 2% previously. Product and labour shortages may also have contributed to the 0.1% m/m decline in exports in July, which caused the UK trade deficit to widen to £3.1 billion compared to £2.5 billion in June.

Unemployment data, meanwhile, also confirmed the tightening of the labour market reported in the PMI surveys. Employment rose by 183,000 in the three months to July, which was the largest rise since January 2020 – and occurred despite firms having to start paying 10% of the wages of their furloughed workers. A fall of 86,000 in unemployed workers, meanwhile, allowed the unemployment rate to ease to 4.6% in July from 4.7% in June. More timely data revealed that PAYE employment increased by a further 241,000 during August, suggesting that labour market strength may continue – although the end of the furlough scheme in September represents a future source of uncertainty. The rise in vacancies to a record 1,034,000, 249,000 above their pre-pandemic level, suggests that labour shortages intensified during August. Against this backdrop, average earnings growth (excluding bonuses) eased to 6.8% y/y in the three months to July compared to 7.3% y/y in the three months to June as compositional and base effects began to fade. However, the Monetary Policy Committee (MPC) noted this month private sector regular pay growth had been around 4%, after accounting for these factors.

UK inflation, as measured by the Consumer Price Index, increased to 3.2% y/y in August from 2% in July and above market forecasts of 2.9%. However, base effects – including last year's Eat Out to Help Out scheme (which artificially depressed prices) - accounted for the majority of the rise. That said, the MPC noted at this month's policy meeting that the scheduled rise in utility prices and further base effects will likely contribute to inflation rising to slightly above 4% later in the year. Against this backdrop, the Committee judged that its existing monetary policy remained appropriate. However, the MPC also noted that some developments since the August Monetary Policy Report appeared to have strengthened the case for a modest tightening of monetary policy. As a result, Gilt yields rose as month-end approached and investors increased the probability attached to Bank Rate being raised in 2022.

Judging by the 0.9% m/m fall in August retail sales, the stalling of the UK's economic recovery in July highlighted by the GDP data has likely continued. However, some of the fall may also be explained by households changing their spending patterns following the expiration of lockdown. As a result, retail sales are now unchanged compared to a year ago. The prospect of looming energy price rises, food costs and tax rises, meanwhile, saw the GfK Consumer Confidence index decline to -13 in September from -8 in August.

The UK's public sector net borrowing (excluding public sector banks) was estimated to have been £20.5 billion in August - the second-highest August borrowing since monthly records began in 1993 - but £5.5 billion less than in August 2020. Although public sector net borrowing was estimated to have been £93.8 billion in the financial year-to-August 2021, this is £88.9 billion less than in the same period last year and £31.9 billion below that forecast by the OBR.

In the US, non-farm payrolls rose 235,000 in August, the lowest in 7 months and well below forecasts of 750,000 as a surge in COVID-19 infections may have discouraged companies from hiring and workers from actively looking for a job. Nevertheless, the gain saw the unemployment rate fall to 5.2% from 5.4% in July. The US economy, meanwhile, was confirmed to have grown at a 6.7% annualised rate in Q2 compared to the first estimate of 6.3%. Against this backdrop, the Federal Reserve forecast at its September policy meeting that core inflation would remain above 2% until 2023. As a result, the central bank judged that "a moderation in the pace of asset purchases may soon be warranted" and increased their median interest rate projections to 0.3% in 2022 (from 0.1% previously) and 1% in 2023 (from 0.6%).

As in the US, Q2 growth in the Eurozone was also revised higher during the month, to 2.2% q/q from 2% previously. Inflation, meanwhile, was confirmed at 3% y/y in August compared to 2.2% in July and its highest since November 2011. However, the ECB judged at its policy meeting that most of this year's increase in inflation will prove temporary. As expected, the central bank left rates unchanged and, in light of the bloc's recovery, elected to plan PEPP purchases at a "moderately lower pace...than in the previous two guarters."

## Housing

Nationwide reported that house price growth eased to 10% y/y this month compared to 11% y/y in August. On the month, prices rose 0.1%. The Halifax survey, meanwhile, confirmed that prices rose 7.1% y/y and 0.7% m/m in August. According to the Nationwide, house prices are now around 13% higher than when the pandemic began.

### Currency

The prospect of above target inflation and anaemic economic growth saw Sterling fall against both the US Dollar and the Euro this month.

September	Start	End	High	Low
GBP/USD	\$1.3786	\$1.3484	\$1.3872	\$1.3425
GBP/EUR	€1.1630	€1.1635	€1.1727	€1.1558

### **Forecast**

In light of the hawkish nature of the minutes from September's MPC meeting, Link Group has revised its forecast for Bank Rate to bring forward its first rate rise to June 2022.

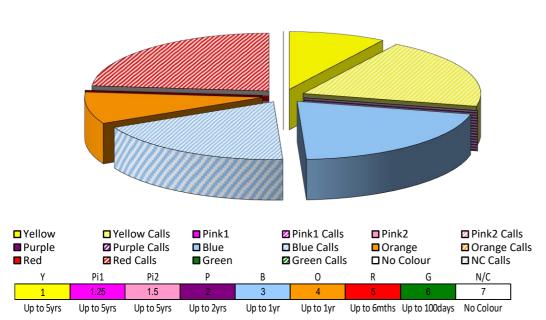
Bank Rate											
	Now	Dec-21	Mar-22	Jun-22	Sep-22	Dec-22	Mar-23	Jun-23	Sep-23	Dec-23	Mar-24
Link Group	0.10%	0.10%	0.10%	0.25%	0.25%	0.25%	0.25%	0.50%	0.50%	0.50%	0.75%
Capital Economics	0.10%	0.10%	0.10%	0.25%	0.25%	0.25%	0.50%	0.50%	0.50%	0.50%	-

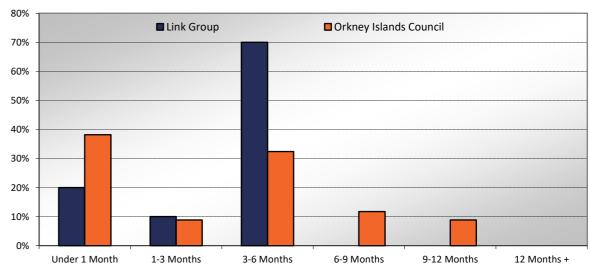
## **Current Investment List**

Borrower	Principal (£)	Interest Rate	Start Date	Maturity Date	Lowest LT / Fund Rating	Historic Risk of Default
The Royal Bank of Scotland Plc (RFB)	6,266,950	0.01%		Call	Α	0.000%
MMF Aberdeen Standard Investments	5,200,000	0.01%		MMF	AAAm	
MMF BlackRock	1,500,000	0.00%		MMF	AAAm	
National Westminster Bank Plc (RFB)	3,000,000	0.14%	30/03/2021	30/12/2021	Α	0.012%
Santander UK PLC	2,000,000	0.38%		Call138	Α	0.018%
National Westminster Bank Plc (RFB)	3,000,000	0.14%	09/06/2021	09/03/2022	Α	0.021%
Santander UK PLC	6,000,000	0.58%		Call180	Α	0.023%
National Westminster Bank Plc (RFB)	1,000,000	0.16%	19/05/2021	18/05/2022	Α	0.030%
Warrington Borough Council	3,000,000	0.10%	09/06/2021	08/06/2022	AA-	0.016%
Toronto Dominion Bank	3,000,000	0.20%	06/09/2021	02/09/2022	AA-	0.022%
Total Investments	£33,966,950	0.18%				0.015%

Note: An historic risk of default is only provided if a counterparty has a counterparty credit rating and is not provided for an MMF or USDBF, for which the rating agencies provide a fund rating. The portfolio's historic risk of default therefore measures the historic risk of default attached only to those investments for which a counterparty has a counterparty credit rating and also does not include investments which are not rated.

# Portfolio Composition by Link Group's Suggested Lending Criteria





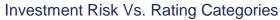
Portfolios weighted average risk number =

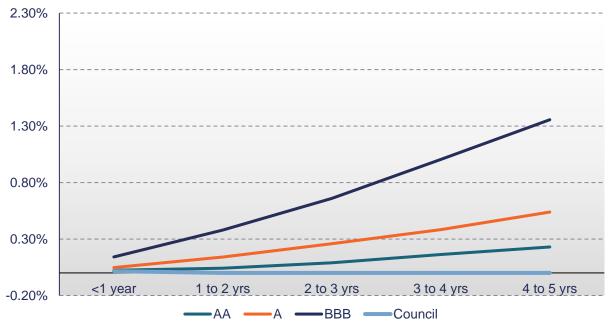
2.99

WARoR = Weighted Average Rate of Return WAM = Weighted Average Time to Maturity

			% of Colour	Amount of	% of Call					Calls/MMFs/USDBFs
	% of Portfolio	Amount	in Calls	<b>Colour in Calls</b>	in Portfolio	WARoR	WAM	WAM at Execution	WAM	WAM at Execution
Yellow	28.56%	£9,700,000	69.07%	£6,700,000	19.73%	0.04%	78	113	251	364
Pink1	0.00%	£0	0.00%	£0	0.00%	0.00%	0	0	0	0
Pink2	0.00%	£0	0.00%	£0	0.00%	0.00%	0	0	0	0
Purple	0.00%	£0	0.00%	£0	0.00%	0.00%	0	0	0	0
Blue	39.06%	£13,266,950	47.24%	£6,266,950	18.45%	0.08%	74	151	140	287
Orange	8.83%	£3,000,000	0.00%	£0	0.00%	0.20%	337	361	337	361
Red	23.55%	£8,000,000	100.00%	£8,000,000	23.55%	0.53%	170	170	0	0
Green	0.00%	£0	0.00%	£0	0.00%	0.00%	0	0	0	0
No Colour	0.00%	£0	0.00%	£0	0.00%	0.00%	0	0	0	0
·	100.00%	£33,966,950	61.73%	£20,966,950	61.73%	0.18%	121	163	211	322

### Investment Risk and Rating Exposure

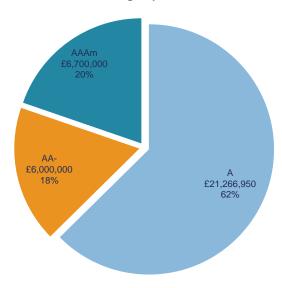




#### Historic Risk of Default

Rating/Years	<1 year	1 to 2 yrs	2 to 3 yrs	3 to 4 yrs	4 to 5 yrs
AA	0.02%	0.04%	0.09%	0.16%	0.23%
Α	0.05%	0.14%	0.26%	0.38%	0.54%
BBB	0.14%	0.38%	0.66%	1.01%	1.36%
Council	0.02%	0.00%	0.00%	0.00%	0.00%

#### **Rating Exposure**



#### **Historic Risk of Default**

This is a proxy for the average % risk for each investment based on over 30 years of data provided by Fitch, Moody's and S&P. It simply provides a calculation of the possibility of average default against the historical default rates, adjusted for the time period within each year according to the maturity of the investment.

#### **Chart Relative Risk**

This is the authority's risk weightings compared to the average % risk of default for "AA", "A" and "BBB" rated investments.

#### **Rating Exposures**

This pie chart provides a clear view of your investment exposures to particular ratings.

Note: An historic risk of default is only provided if a counterparty has a counterparty credit rating and is not provided for an MMF or USDBF, for which the rating agencies provide a fund rating. The portfolio's historic risk of default therefore measures the historic risk of default attached only to those investments for which a counterparty has a counterparty credit rating and also does not include investments which are not rated.

# Monthly Credit Rating Changes FITCH

Date	Update Number	Institution	Country	Rating Action
24/09/2021	1844	Deutsche Bank AG		The Long Term Rating was upgraded to 'BBB+' from 'BBB'. At the same time, the Viability Rating was upgraded to 'bbb+' from 'bbb'
24/09/2021	1845	BNP Paribas	France	The Outlook on the Long Term Rating was changed to Stable from Negative.
24/09/2021	1846	Belgium Sovereign Rating	Belgium	The Outlook on the Sovereign Rating was changed to Stable from Negative.

# Monthly Credit Rating Changes MOODY'S

Date	Update Numbe	Institution	Country	Rating Action
				There were no rating changes to report.

# Monthly Credit Rating Changes S&P

Date	Update Number	Institution	Country	Rating Action
				There were no rating changes to report.

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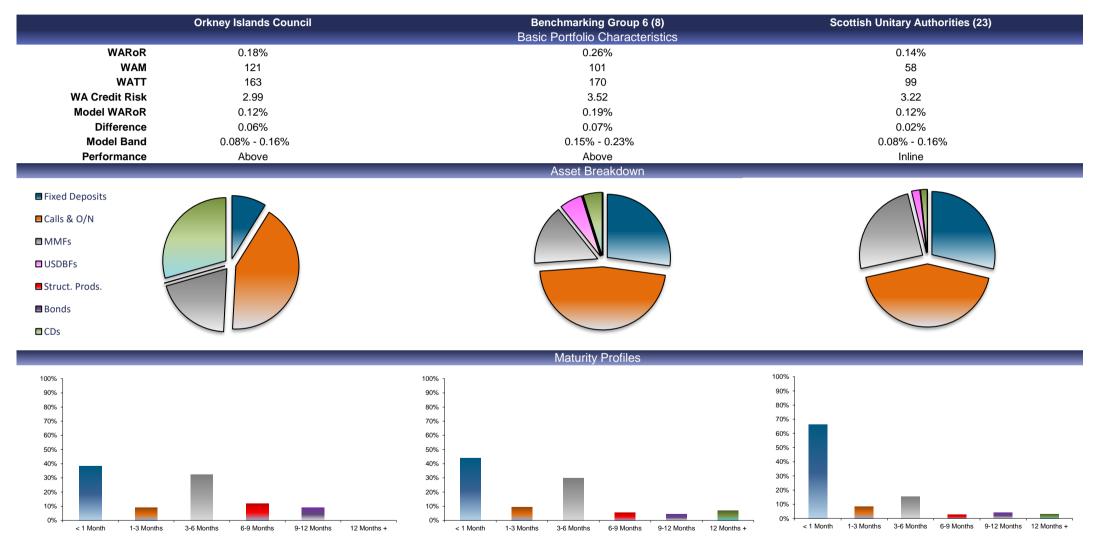


# Investment Portfolio Benchmarking Analysis September 2021

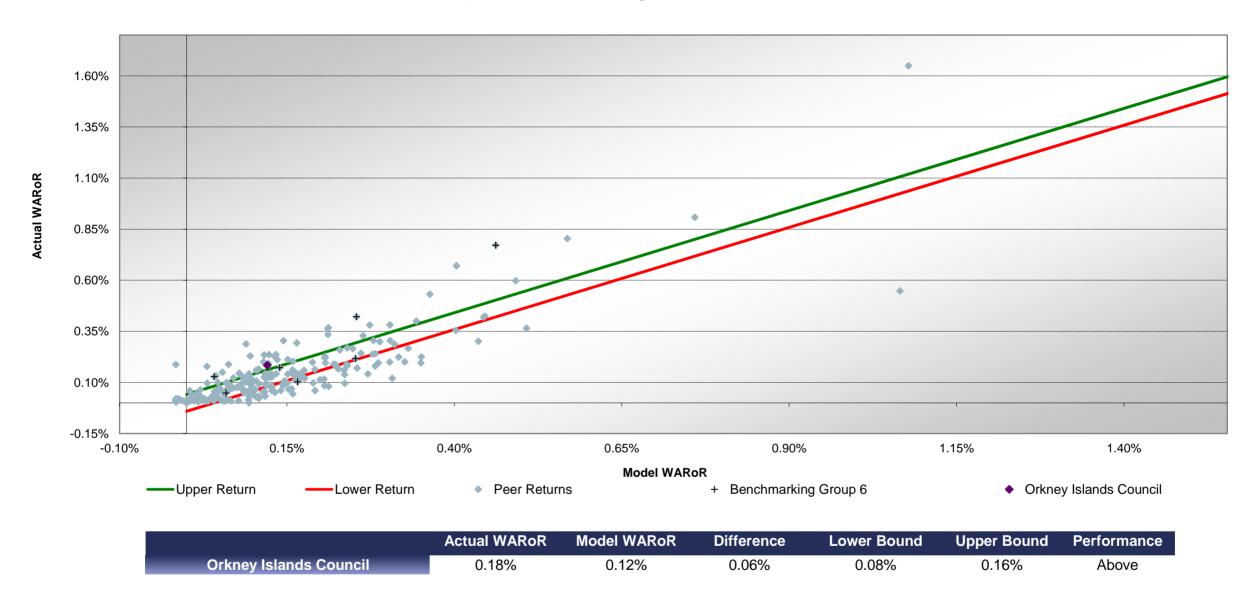
### **Group Members:**

Aberdeen City Council
Aberdeenshire Council
Angus Council
Clackmannanshire Council
Highland Council
Midlothian Council
Orkney Islands Council
Perth & Kinross Council

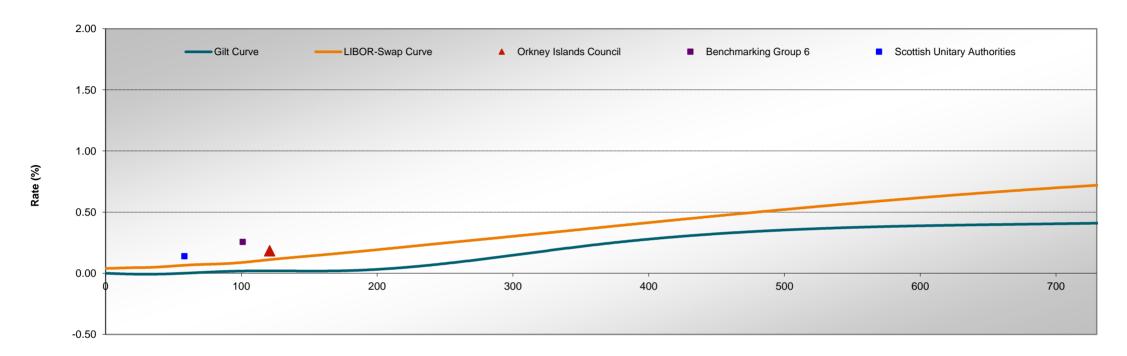
# **Summary Sheet**



# Population Returns against Model Returns



# Returns Comparable Against the Risk-Free Rate and LIBOR Curve



Days/Time Till Maturity

							Dif	ference	Model	
	WARoR	WAM	WATT	WARisk	Gilt	LIBOR-Swap	Gilt	LIBOR-Swap	Bands	Performance
Orkney Islands Council	0.18%	121	163	2.99	0.02%	0.11%	0.16%	0.07%	0.08% - 0.16%	Above
Benchmarking Group 6	0.26%	101	170	3.52	0.02%	0.09%	0.24%	0.17%	0.15% - 0.23%	Above
Scottish Unitary Authorities	0.14%	58	99	3.22	0.00%	0.07%	0.14%	0.07%	0.08% - 0.16%	Inline

# Peer Comparison

	rkney Islands Council		Group 6 (8) aracteristics	Scottish Unitary A	utnorities (23)	Population Average (215)		
Principal	£33,966,950	£94,617	7,723	£87,930,	,108	£111,256,	212	
WARoR	0.18%	0.269	0.14%	6	0.15%			
WAM	121	101		58		74		
WATT	163	170	)	99		133		
WA Credit Risk	2.99	3.52	2	3.22		3.03		
		Portfolio	Breakdown					
Fixed Deposits	8.83%	27.15%	6	28.65%	17	41.37%	186	
Calls & O/N	42.00%	46.74%	8	42.93%	20	29.09%	192	
MMFs	19.73%	15.40%	6	24.61%	16	25.92%	165	
USDBFs	0.00%	5.84%	2	2.12%	3	1.26%	19	
Struct. Prods.	0.00%	0.00%	0	0.00%	0	0.38%	6	
Bonds	0.00%	0.00%	0	0.00%	0	0.61%	9	
CDs	29.44%	4.87%	3	1.69%	3	1.38%	18	
		Institution	n Breakdown					
Banks	71.44%	65.10%	8	53.24%	21	46.35%	204	
Building Socs.	0.00%	0.00%	0	3.62%	3	6.12%	69	
Government	8.83%	13.66%	4	16.41%	11	19.79%	127	
MMFs	19.73%	15.40%	6	24.61%	16	25.82%	166	
USDBFs	0.00%	5.84%	2	2.12%	3	1.26%	19	
MLDBs	0.00%	0.00%	0	0.00%	0	0.03%	2	
Other	0.00%	0.00%	0	0.00%	0	0.62%	15	
		Domestic/Fo	oreign Exposure					
Domestic	71.44%	75.18%	8	71.00%	21	68.03%	209	
Foreign	8.83%	3.58%	3	2.27%	4	4.80%	66	
MMFs	19.73%	15.40%	6	24.61%	16	25.90%	166	
USDBFs	0.00%	5.84%	2	2.12%	3	1.26%	19	
		Maturity	y Structure					
< 1 Month	38.18%	44.03%		66.13%		55.28%		
1-3 Months	8.83%	9.28%		8.42%		13.96%		
3-6 Months	32.38%	29.70%		15.36%		19.64%		
6-9 Months	11.78%	5.46%		2.72%		4.89%		
9-12 Months	8.83%	4.57%		4.22%		4.05%		
12 Months +	0.00%	6.96%		3.14%		2.19%		

# **Detailed Peer Comparison**

		Orkney Islar	nds Council				Benchmai	king Grou	p 6 (8)				Scottish U	Initary Au	thorities (23)	
	%	WARoR	WAM	WATT		%	WARoR	WAM	WATT	n		%	WARoR	WAM	WATT	n
			_		_		sset Breako			_	_	_		_		_
Fixed Deposits	8.83%	0.10%	251	364		27.15%	0.48%	151	317	6		28.65%	0.26%	98	193	17
Calls	42.00%	0.30%	95	95		46.74%	0.22%	71	71	8		42.93%	0.13%	34	34	20
Overnight	0.00%	0.00%	0	0		0.00%	0.00%	0	0	0		0.00%	0.00%	0	0	0
MMFs	19.73%	0.01%	0	0		15.40%	0.01%	0	0	6		24.61%	0.01%	0	0	16
USDBFs	0.00%	0.00%	0	0		5.84%	0.12%	0	0	2		2.12%	0.19%	0	0	3
Structured Prods.	0.00%	0.00%	0	0		0.00%	0.00%	0	0	0		0.00%	0.00%	0	0	0
Cert.of Deposit	29.44%	0.16%	199	309		4.87%	0.15%	106	130	3		1.69%	0.15%	37	45	3
Gov. Bonds	0.00%	0.00%	0	0		0.00%	0.00%	0	0	0		0.00%	0.00%	0	0	0
Corp. Bonds	0.00%	0.00%	0	0		0.00%	0.00%	0	0	0		0.00%	0.00%	0	0	0
MLDB Bonds	0.00%	0.00%	0	0		0.00%	0.00%	0	0	0		0.00%	0.00%	0	0	0
	_	_	_	_	_		utional Bre		_	_	_	_	_	_	_	_
Banks	71.44%	0.24%	138	183		65.10%	0.21%	100	121	8		53.24%	0.13%	52	67	21
Building Socs.	0.00%	0.00%	0	0		0.00%	0.00%	0	0	0		3.62%	0.04%	8	17	3
Government	8.83%	0.10%	251	364		13.66%	0.65%	113	272	4		16.41%	0.37%	69	153	11
MMFs	19.73%	0.01%	0	0		15.40%	0.01%	0	0	6		24.61%	0.01%	0	0	16
USDBFs	0.00%	0.00%	0	0		5.84%	0.12%	0	0	2		2.12%	0.19%	0	0	3
MLDBs	0.00%	0.00%	0	0		0.00%	0.00%	0	0	0		0.00%	0.00%	0	0	0
Other	0.00%	0.00%	0	0		0.00%	0.00%	0	0	0		0.00%	0.00%	0	0	0
						Го	raious Draak	al exces								
<b>.</b>	74.440/	0.000/	407	10.1	_		reign Break		000	_	_	74.000/	0.400/		400	0.4
Domestic	71.44%	0.23%	127	184		75.18%	0.33%	121	208	8		71.00%	0.18%	69	120	21
Foreign	8.83%	0.20%	337	361		3.58%	0.07%	89	102	3		2.27%	0.14%	34	40	4
MMF	19.73%	0.01%	0	0		15.40%	0.01%	0	0	6		24.61%	0.01%	0	0	16
USDBFs	0.00%	0.00%	0	0		5.84%	0.12%	0	0	2		2.12%	0.19%	0	0	3
111/	74.440/	0.000/	407	10.1	1.11.4		ign State B			_	1.11.7	74.000/	0.400/		400	0.4
UK	71.44%	0.23%	127	184	UK	75.18%	0.33%	121	208	8	UK	71.00%	0.18%	69	120	21
CAN	8.83%	0.20%	337	361	AUS	2.05%	0.04%	42	55	2	AUS	0.71%	0.02%	15	19	2
					CAN	1.52%	0.05%	86	91	2	CAN	0.53%	0.02%	30	31	2
											GER	0.34%	0.00%	1	1	1
											QAT	0.34%	0.01%	3	4	1
											UAE	0.34%	0.01%	7	8	1
							gn Rating E	Breakdow	n							
AA-	71.44%				AA-	75.18%					AA-	71.34%				
AA+	8.83%				AAA	2.05%					AAA	1.06%				
					AA+	1.52%					AA+	0.53%				
											AA	0.34%				

Since MMFs are ring-fenced institutions and do not belong to a specific country, the sovereign breakdowns will exclude them from the analysis. As a result the "% of Portfolio" may not add up to 100%.

## Benchmarking Rationale and Methodology

The aim of this benchmarking model is to compare portfolio weighted average rate of returns (WAROR) by adjusting for the risks inherent in the portfolio. The main risks in cash portfolios are:

Maturity Risk Credit Risk

As such, the model must normalise WARoRs by adjusting for these risks so as to calculate risk-adjusted returns, or "Model WAROR". The risks the model looks at include:

Maturity Risk Credit Risk

Change in the shape of the yield curve

This will account for the majority of all risk in the portfolio, however, there will still be some "model uncertainty" as no model can fully explain each WARoR. The difference in model WARoR and actual WARoR may be due to the following reasons:

Timing differences Higher diversification

Tilt towards a particular asset type or institution type that is extraordinarily paying an above market rate (e.g. special tranche rates)

As a result, the model will build "Standard Error Bands" around the model WARoR calculated so as to adjust for this model uncertainty. This gives us a range for where the actual WARoR should fall. If the actual WARoR is above this upper band, then we would say the client is above on a risk-adjusted basis given the risks inherent in the portfolio. If the actual WARoR is below the lower band, then we would say the client is below on a risk-adjusted basis given the risks inherent in the portfolio.

#### Model Band

Some values when compared to the Model Band will fall outside the range even if the value appears to be equal to the minimum or maximum. This is due to rounding the data to two decimal places within Excel.

For example:

The value returned is 0.9512 and the range is 0.9541 – 1.2321. When rounded the data will be represented as 0.95 and a range of 0.95 – 1.23, although this appears to be in line with the range the underlying data will actually fall outside.

#### **Definitions**

WARoR	Weighted Average Rate of Return	This is the average annualised rate of return weighted by the principal amount in each rate.
WAM	Weighted Average Time to Maturity	This is the average time, in days, till the portfolio matures, weighted by principal amount.
WATT	Weighted Average Total Time	This is the average time, in days, that deposits are lent out for, weighted by principal amount.
WA Risk	Weighted Average Credit Risk Number	Each institution is assigned a colour corresponding to a suggested duration using Link Asset Services' Suggested Credit Methodology. 1 = Yellow; 1.25 = Pink 1; 1.5 = Pink 2, 2 = Purple; 3 = Blue; 4 = Orange; 5 = Red; 6 = Green; 7 = No Colour
Model WARoR	Model Weighted Average Rate of Return	This is the WARoR that the model produces by taking into account the risks inherent in the portfolio.
Difference	Difference	This is the difference between the actual WARoR and the model WARoR; Actual WARoR minus Model WARoR