

Leicestershire County Council

Investment Portfolio Benchmarking Analysis March 2020

Group Members:

Amber Valley Borough Council
City Of Lincoln Council
Doncaster Metropolitan Borough Council
Leicestershire County Council
Lincolnshire County Council
Melton Borough Council
North Kesteven District Council
Nottingham City Council
Nottinghamshire Fire And Rescue Service
South Kesteven District Council
The Police And Crime Commissioner For Lincolnshire
West Lindsey District Council

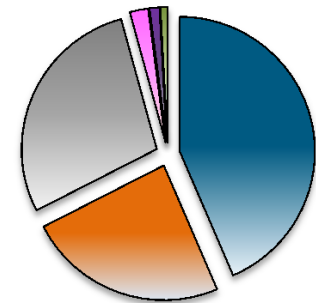
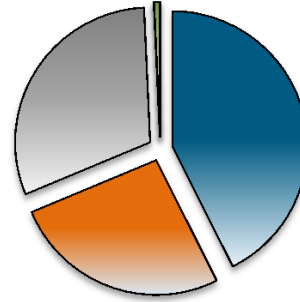
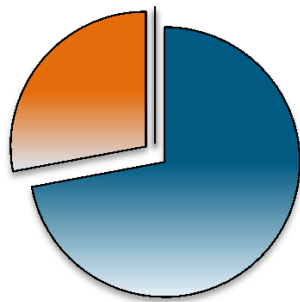
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Summary Sheet

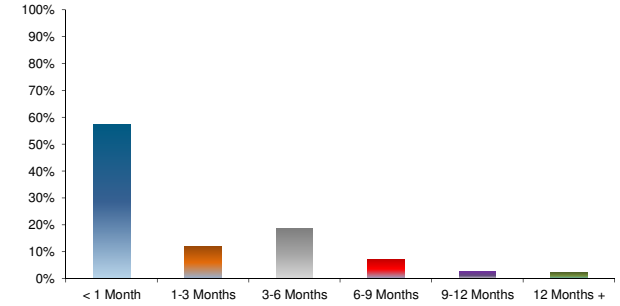
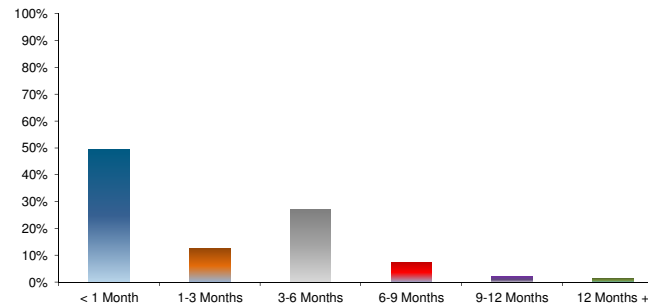
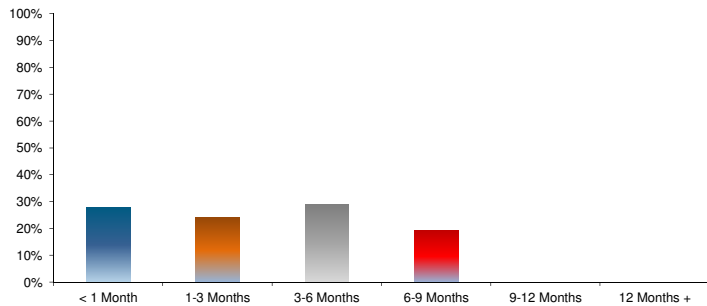
Leicestershire County Council		Benchmarking Group 11 (12) Basic Portfolio Characteristics		English Counties (14)	
WARoR	0.86%		0.73%		0.74%
WAM	105		80		72
WATT	239		150		137
WA Credit Risk	4.13		2.80		2.51
Model WARoR	0.80%		0.71%		0.69%
Difference	0.06%		0.02%		0.05%
Model Band	0.70% - 0.90%		0.61% - 0.81%		0.59% - 0.79%
Performance	Inline		Inline		Inline

Asset Breakdown

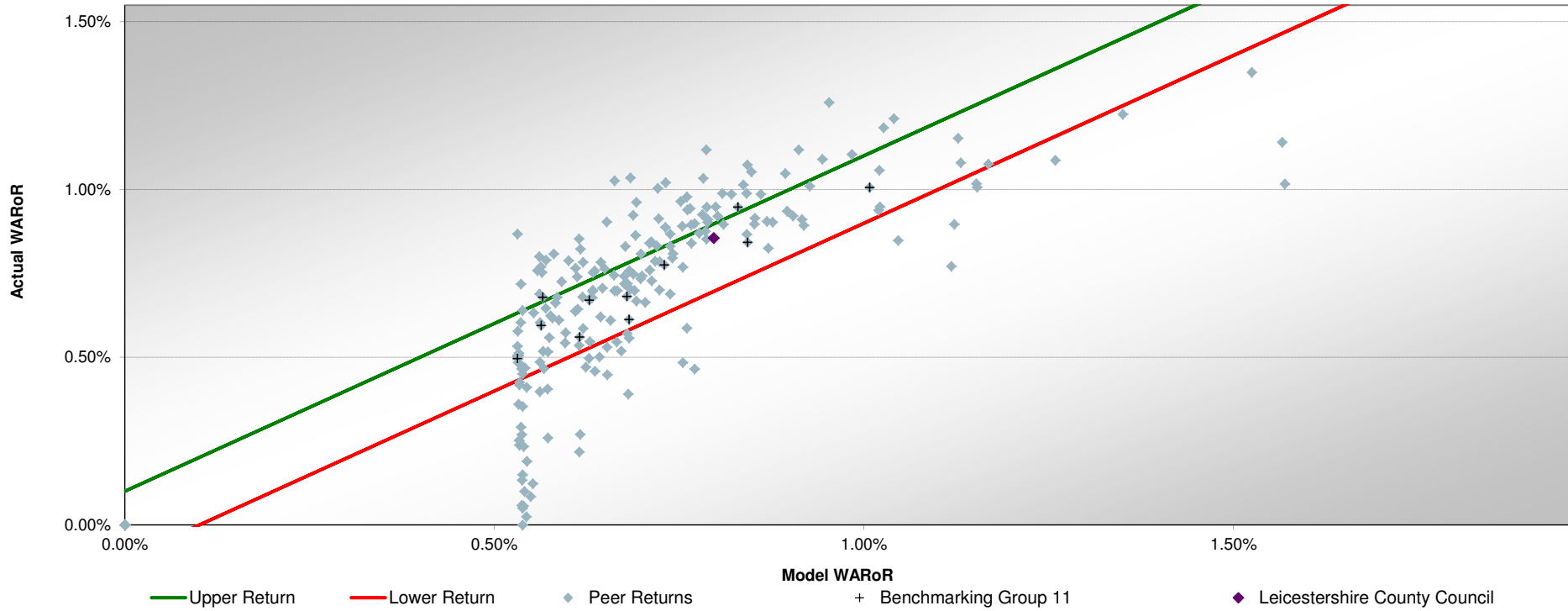
- Fixed Deposits
- Calls & O/N
- MMFs
- USDBFs
- Struct. Prods.
- Bonds
- CDs



Maturity Profiles



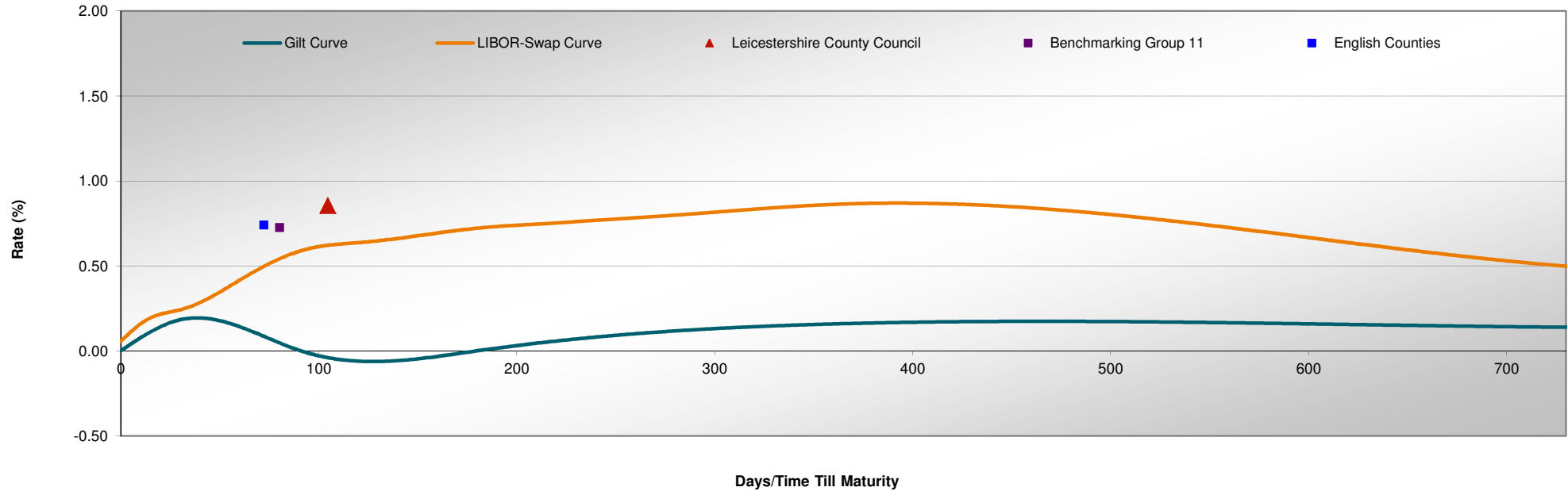
Population Returns against Model Returns



	Actual WARoR	Model WARoR	Difference	Lower Bound	Upper Bound	Performance
Leicestershire County Council	0.86%	0.80%	0.06%	0.70%	0.90%	Inline

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Returns Comparable Against the Risk-Free Rate and LIBOR Curve



	WARoR	WAM	WATT	WARisk	Gilt	LIBOR-Swap	Difference		Model	
							Gilt	LIBOR-Swap	Bands	Performance
Leicestershire County Council	0.86%	105	239	4.13	-0.04%	0.62%	0.90%	0.23%	0.70% - 0.90%	Inline
Benchmarking Group 11	0.73%	80	150	2.80	0.05%	0.54%	0.68%	0.19%	0.61% - 0.81%	Inline
English Counties	0.74%	72	137	2.51	0.09%	0.49%	0.65%	0.25%	0.59% - 0.79%	Inline

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Peer Comparison

Leicestershire County Council	Benchmarking Group 11 (12)		English Counties (14)		Population Average (217)		
Basic Characteristics							
Principal	£208,221,000	£72,633,575	£218,413,695	£74,498,425			
WARoR	0.86%	0.73%	0.74%	0.71%			
WAM	105	80	72	70			
WATT	239	150	137	152			
WA Credit Risk	4.13	2.80	2.51	2.81			
Portfolio Breakdown							
Fixed Deposits	72.04%	42.60%	10	43.54%	12	44.93%	175
Calls & O/N	27.96%	26.09%	11	23.93%	13	26.76%	179
MMFs	0.00%	30.58%	9	28.27%	13	25.01%	144
USDBFs	0.00%	0.00%	0	2.20%	2	1.43%	11
Struct. Prods.	0.00%	0.00%	0	0.00%	0	0.05%	3
Bonds	0.00%	0.00%	0	1.19%	1	0.65%	7
CDs	0.00%	0.72%	1	0.86%	2	1.17%	21
Institution Breakdown							
Banks	92.80%	43.01%	11	41.02%	14	43.38%	201
Building Socs.	7.20%	4.62%	4	1.07%	3	3.92%	52
Government	0.00%	21.79%	8	27.27%	11	25.89%	142
MMFs	0.00%	30.58%	9	28.21%	13	24.92%	143
USDBFs	0.00%	0.00%	0	2.20%	2	1.43%	11
MLDBs	0.00%	0.00%	0	0.00%	0	0.00%	0
Other	0.00%	0.00%	0	0.24%	1	0.48%	10
Domestic/Foreign Exposure							
Domestic	85.59%	63.57%	11	64.91%	14	70.32%	210
Foreign	14.41%	5.85%	4	4.69%	7	3.30%	48
MMFs	0.00%	30.58%	9	28.21%	13	24.95%	143
USDBFs	0.00%	0.00%	0	2.20%	2	1.43%	11
Maturity Structure							
< 1 Month	27.96%	49.46%		57.44%		58.05%	
1-3 Months	24.01%	12.46%		11.94%		12.04%	
3-6 Months	28.82%	27.01%		18.59%		18.83%	
6-9 Months	19.21%	7.42%		7.25%		5.75%	
9-12 Months	0.00%	2.15%		2.53%		3.42%	
12 Months +	0.00%	1.50%		2.24%		1.92%	

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Detailed Peer Comparison

	Leicestershire County Council				Benchmarking Group 11 (12)					English Counties (14)						
	%	WARoR	WAM	WATT	%	WARoR	WAM	WATT	n	%	WARoR	WAM	WATT	n		
Asset Breakdown																
Fixed Deposits	72.04%	0.98%	103	289	42.60%	0.92%	104	234	10	43.54%	0.98%	97	206	12		
Calls	27.96%	0.54%	109	109	26.09%	0.57%	70	70	11	23.93%	0.57%	52	52	13		
Overnight	0.00%	0.00%	0	0	0.00%	0.00%	0	0	0	0.00%	0.00%	0	0	0		
MMFs	0.00%	0.00%	0	0	30.58%	0.51%	0	0	9	28.27%	0.49%	0	0	13		
USDBFs	0.00%	0.00%	0	0	0.00%	0.00%	0	0	0	2.20%	0.26%	0	0	2		
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	0.00%	0.00%	0	0	0.72%	0.99%	7	30	1	0.86%	0.94%	9	39	2		
Gov. Bonds	0.00%	0.00%	0	0	0.00%	0.00%	0	0	0	1.19%	0.08%	0	1	1		
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		
Institutional Breakdown																
Banks	92.80%	0.86%	112	243	43.01%	0.83%	101	180	11	41.02%	0.74%	57	139	14		
Building Socs.	7.20%	0.80%	15	183	4.62%	0.93%	32	80	4	1.07%	0.69%	67	104	3		
Government	0.00%	0.00%	0	0	21.79%	0.83%	91	169	8	27.27%	0.98%	117	200	11		
MMFs	0.00%	0.00%	0	0	30.58%	0.51%	0	0	9	28.21%	0.49%	0	0	13		
USDBFs	0.00%	0.00%	0	0	0.00%	0.00%	0	0	0	2.20%	0.26%	0	0	2		
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	0.24%	1.40%	37	52	1		
Foreign Breakdown																
Domestic	85.59%	0.85%	99	238	63.57%	0.77%	109	203	11	64.91%	0.82%	88	162	14		
Foreign	14.41%	0.86%	135	245	5.85%	0.33%	37	93	4	4.69%	0.74%	52	157	7		
MMF	0.00%	0.00%	0	0	30.58%	0.51%	0	0	9	28.21%	0.49%	0	0	13		
USDBFs	0.00%	0.00%	0	0	0.00%	0.00%	0	0	0	2.20%	0.26%	0	0	2		
Sovereign State Breakdown																
UK	85.59%	0.85%	99	238	UK	63.57%	0.77%	109	203	11	UK	64.91%	0.82%	88	162	14
AUS	9.61%	0.76%	119	275	QAT	3.03%	0.19%	18	46	2	AUS	2.84%	0.41%	33	135	6
DEN	4.80%	1.06%	167	185	AUS	1.52%	0.15%	18	53	2	SING	1.07%	0.13%	19	49	2
					SING	0.76%	0.15%	11	39	2	GER	0.44%	0.12%	25	52	2
					DEN	0.40%	0.09%	14	15	1	DEN	0.34%	0.08%	12	13	1
					GER	0.14%	0.07%	13	30	1						
Sovereign Rating Breakdown																
AA-	85.59%				AA-	66.60%					AA-	64.91%				
AAA	14.41%				AAA	2.83%					AAA	4.69%				

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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

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