APPENDIX C

METHODOLOGY FOR ESTABLISHING CREDIT CRITERIA

The follow methodology has been used to establish the credit criteria for an organisation or group.

All Countries where investments are placed should have a minimum **Sovereign rating** of AA+

Exposure limit of £25 Million to be placed with any one country except the UK which would be unlimited.

The Council will use all 3 credit rating agencies Fitch, Moody's and Standard & Poor to derive its credit criteria. The methodology has a mathematical basis and gives a score to each of the ratings. An average score is then calculated for each of the constituent rating for Long Term, Short Term, Individual and Support. A sum of the averages is then taken and duration calculated based on this final value. The methodology is completely objective and mathematical, applying equal weight to each credit rating component.

The system also takes into account negative and positive rating watches and outlook.

The methodology applies a ranking and scoring procedure to the credit rating to obtain a number, based on all the credit ratings of every rating agency, which is then compared to the scoring bands.

Scoring procedure for the 3 Credit Rating Agencies

Long Term Ratings

Fitch		Moody's		S&P	
Rating	**Scoring**	**Rating**	**Scoring**	**Rating**	**Scoring**
AAA	1	Aaa	1	AAA	1
AA+	2	Aa1	2	AA+	2
AA	3	Aa2	3	AA	3
AA-	4	Aa3	4	AA-	4
A+	5	A1	5	A+	5
A	6	A2	6	A	6
A-	7	A3	7	A-	7

Short Term Ratings

Fitch		Moody's		S&P	
Rating	**Scoring**	**Rating**	**Scoring**	**Rating**	**Scoring**
F1+	1	-	-	A-1+	1
F1	2	P-1	2	A-1	2
F2	3	P-2	3	A-3	3

Only Fitch and Moody's use Individual Ratings

Individual Ratings

Fitch		Moody's	
Rating	**Scoring**	**Rating**	**Scoring**
-	-	A+	0.5
A	1	A	1
-	-	A-	1.5
A/B	2	B+	2
B	3	B	3
-	-	B-	3.5
B/C	4	C+	4
C	5	C	5

Support Ratings
As only Fitch uses Support ratings, there is no need to create any equivalency tables and we can use the rating directly into the calculation.

We then calculate the scoring for each counterparty on the scoring procedure.

Example

	Fitch				Moody's			S&P	
	Long Term	Short Term	Indiv	Support	Long Term	Short Term	FRS	Long Term	Short Term
Bank									
Australia and New Zealand Banking Group	AA-	F1+	B	1	Aa1	P-1	B	AA	A-1+
Scoring	4	1	3	1	2	2	3	3	1

The Average for Long Term Rating is Fitch 4, Moody's 2 and S&P 3 = 9
9 divided by 3 (the no. of agencies) = 3

The Average for Short Term Rating is Fitch 1, Moody's 2 and S&P 1 = 4
4 divided by 3 (the no. of agencies) = 1.333

The Average for Individual Rating is Fitch 3 and Moody's 3 = 6
6 divided by 2 (the no. of agencies) = 3

The average for Support Rating is Fitch 1 as it is the only agency that uses Support Ratings

The sum total of these averages = 3+1.333+3+1 = 8.333

The score is now placed within the predetermined bands.

Bands

Colour	Lower Boundary	Upper Boundary
Purple	4.00	8.50
Orange	8.50	10.50
Red	10.50	12.50
Green	12.50	14.50
No Colour	14.50	30.00

Where:-
Purple - Exposure limit of £25 Million with a maximum duration of 24 months.
Orange - Exposure limit of £25 Million with a maximum duration of 364 days.
Red – Exposure limit of £20 Million with a maximum duration of 6 months.
Green – Exposure limit of £10 Million with a maximum duration of 3 months
No Colour – 0 months duration

In the example a score of 8.33 would place the bank in the Purple band and gives it a suggested maximum duration of 24 months.

Credit Watch/Outlook Overlay

To take into account credit watch and outlooks from the three credit rating agencies an overlay has been developed which penalises a counterparty's score.

The methodology focuses just on the negative and positive outlooks and watches. Although stable, evolving and developing outlooks are still considered important when looking for a broader credit perspective, they can not be correlated with a direct impact in the change of counterparties score on the credit list.

Watches – are considered short term actions, where as **outlooks** are considered over a longer period of time.

To take account of the effect of a bank being on **negative watch**, one point is added to the score of the relevant credit rating e.g. if Moody's placed a bank's short term rating on negative watch, we would add one point to its score. The opposite is applied for positive watches, 1 point is deducted.

To take account of the effect of a bank being on **negative outlook**, then 1/2 point is added to the score of the relevant credit rating e.g. if Moody's placed a bank's short term rating on negative outlook, we would add 1/2 point to its score. The opposite is applied for positive outlooks, 1/2 point is deducted.

In the example above for Australia and New Zealand Group if Fitch had placed the bank on negative watch we would have added one point to the Fitch Long Term score to penalise the bank

The Average for Long Term Rating is Fitch 4 +1, Moody's 2 and S&P 3 = 9
9 divided by 3 (the no. of agencies) = 3.333

Then when the sum total had been added together it would have changed from 8.333 to 8.666 which would move it down to a lower band – Orange.

Banks that do not have a four way credit rating

To account for banks that do not have a full 4 way credit rating i.e. Long Term, Short Term, Individual and Support, adjustments will be made to that bank's score.

By not having a full set of ratings it can skew the score for a bank making it higher as only 2 or 3 variables are being taken into account. See example below.

Example

	Fitch				Moody's			S&P	
	Long Term	Short Term	Indiv	Support	Long Term	Short Term	FRS	Long Term	Short Term
Bank									
Jyske Bank					Aa2	P-1	B-		
Scoring					4	2	3.5		

The average score is going to be:-

Long Term - 4, Short Term – 2, Individual 3.5, Support – 0 = 9.5

As this bank is only rated by Moody's and therefore does not have a four way approach. Currently they have a score of 9.5 putting them into the Orange band.

This colour of Orange is biased upwards as only 3 ratings have been taken into account, so it is intended to drop the colour of the bank by one band for every missing rating.

So if an bank only had a Long and Short Term rating, the initial colour would be reduced by 2 bands.

Applying CDS spreads to the credit list

CDS spreads are used as it has been proven that credit rating agencies lag market events and thus do not provide investors with an "up to date" picture of the credit quality of a particular bank.

CDS spreads are used as an overlay to the credit ratings. CDS spreads provide perceived market sentiment regarding the credit quality of an institution. Since they are traded instruments, they reflect the market perception related to that entity's credit quality. Credit ratings look at a firm's fundamentals i.e. balance sheet, income statement etc. and tend to focus on a longer term view of the firm.

It is important to note that not all entities will have an actively traded CDS spread.

Trend analysis

The weekly credit list provided by Sector shows the 1 week, 1 month and 3 month percentage change in a counterparty's CDS spread. This allows Treasury officers to monitor the short, medium and long term trends of CDS spreads.

Benchmark analysis

The benchmark CDS index which measures the "average" level of the most liquid financial CDS spreads in the market is the iTraxx Senior Financials Index. This is an index published by Markit who are the leading company in CDS pricing and valuation. The index is based on an equal weighting of CDS spreads of 25 European financial companies.

The iTraxx can be used to see where an institution's CDS spread is relative to that of the market and judge its creditworthiness in that manner, as well as looking at the credit rating.

Adjusted duration

The methodology employs the rule that if the CDS spread of a bank/building society is below or equal to the level of the iTraxx, then it is deemed "In Range." It retains its' colour and duration.

If the bank/building society's CDS spread is between the iTraxx level and the iTraxx level + 50bps, then it is deemed "Monitoring." When a bank/building society is "Monitoring" its colour and duration is reduced by one band.

If the bank/building society's CDS spread is above the iTraxx level + 50bps, then it is deemed "Out of Range" its colour becomes no colour and is removed from the list.

Exceptions to this methodology

Nationalised and Part Nationalised Banks

See paragraph 11.

In light of this the colour Blue is used, for UK nationalised or part nationalised banks
Exposure limit of £35 Million with a maximum duration of 364 days.

Government

Debt Management Office
Treasury Bills
Government Gilts

No maximum amount because if we have no capacity to place funds with other financial institutions we need to place them with the government.

Public Authorities

Unitary Authorities
Local Authorities
Borough and District Council's
Met. Police
Fire and Police Authorities

These authorities do not have credit ratings but statute (LG Act 2003 s13) suggests that credit risk attached to these authorities is an acceptable one.

Exposure limit of £25 Million with a maximum duration of 364 days.

Money Market Funds

All funds have a AAA credit rating which have a 60 day weighted average maturity. These funds allow instant access to cash, and provide enhanced yield and security.

Exposure limit of £10 Million – no maximum duration as these are instant access funds.