Erhvervs-, Vækst- og Eksportudvalget 2012-13
ERU alm. del , endeligt svar på spørgsmål 91
Offentligt

13 January 2009 **Strictly private and confidential**

Project Horizon: Supplementary materials on pricing

ROTHSCHILD

1. Further thoughts on pricing

1.1 Overview

As requested, we summarize below few considerations for the approach to pricing

Our approach is based on a combination of:

- **A. ECB guidelines for equity like instruments**
  - the required rate of return for equity like instruments is: *Benchmark Government rate (3.3%) + 500bp equity risk premium + 100bp margin*

  If we apply the formula above the resulting pricing is 9.3% (**Base Pricing**)

- **B. Risk premium.** This is derived from an analysis of the spread on Euro-denominated Tier 1 securities issued by European banks with different credit rating for the period 1/1/2007 - 31/8/2008 (period consistent with the ECB guidelines for the CDS analysis). The purpose is to assess the implicit risk premium that the market requires for banks with a higher risk and hence to determine the additional risk premium to be applied on top of the Base Pricing

We have then identified 3 groups of banks based on rating (taking into account all the main rating agencies)

1. **Group A**: top rated banks (rating AA- or above)
2. **Group B**: Mid rated banks (A- to A+)
3. **Group C**: Low rated banks (BBB+ or below)

We have then calculated the differential spread (**Risk Premium**) of Group B and Group C versus the top rated banks (Group A)

Credit rating is a key indicator when considering the pricing of the instruments

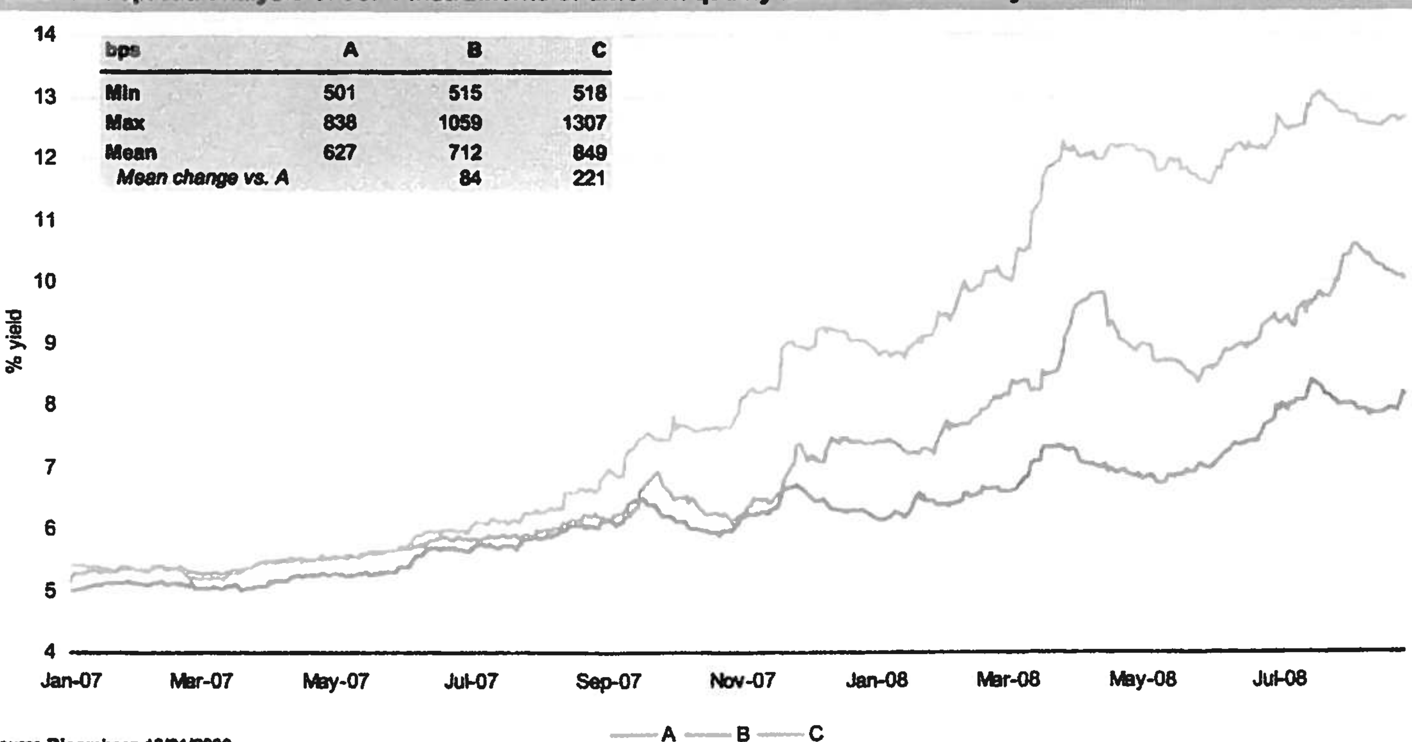
1. Further thoughts on pricing

1.2 Yield and spread analysis

We estimated that the risk premium for Group B is c. 0.8% and for Group C is 2.2% (1.4% above B)

The chart below sets out the results of the analysis and the range of Risk Premium for banks belonging to Group B and Group C

Yield and spread analysis of tier 1 instruments of different quality banks since January 2007



bps	A	B	C
Min	501	515	518
Max	838	1059	1307
Mean	627	712	849
Mean change vs. A		84	221

Source Bloomberg 12/01/2009

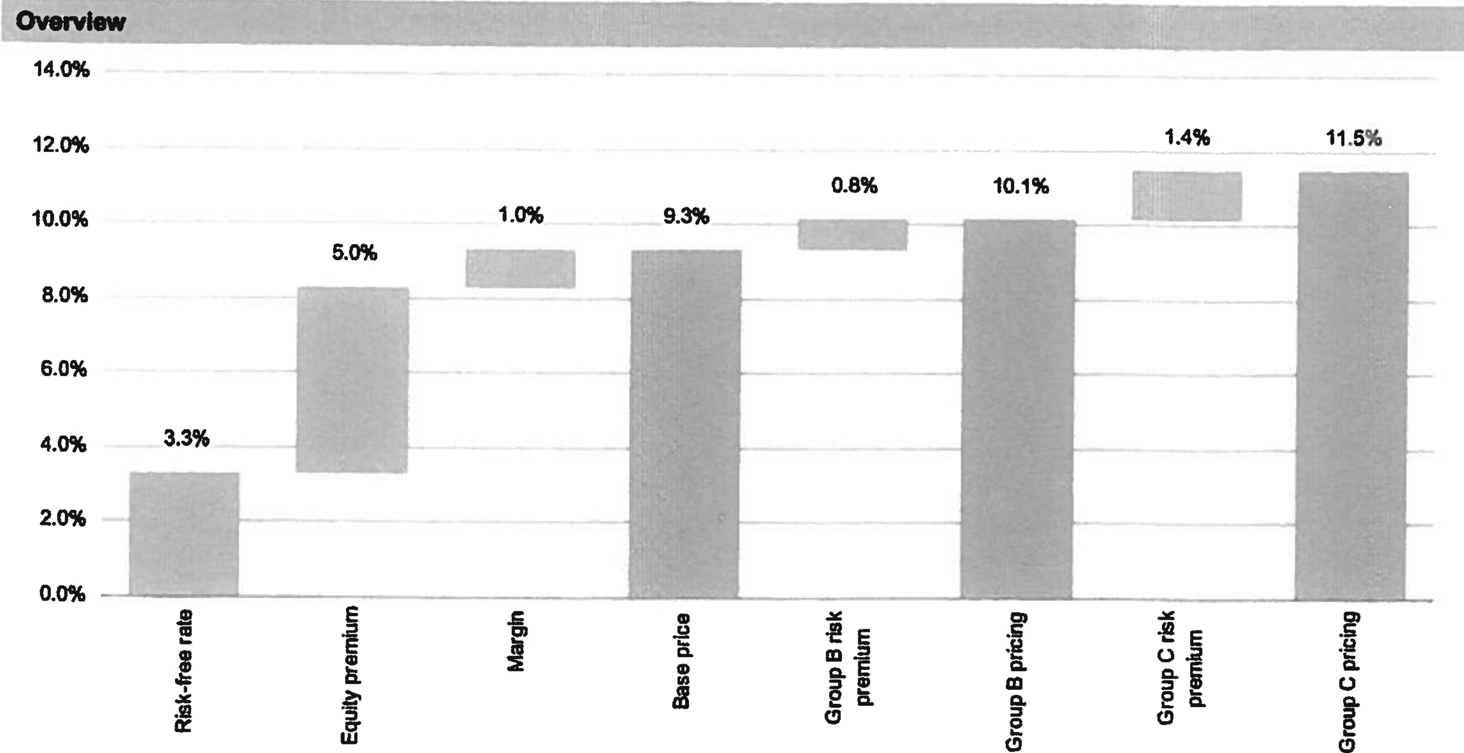
Group A: BBVA, BNP Paribas, Deutsche Bank, ING, RBS
Group B: Banco Popolare, Fortis, SNS
Group C: OTP, Bancaja

1. Further thoughts on pricing

1.3 *Preliminary pricing analysis*

The chart below summarizes our approach to price setting

Overview



Source Bloomberg 12/01/2009
Note The risk-free rate is for 5 to 10years maturity, i.e. when the security is expected to be called. For longer term maturity the risk-free rate is 3.8 / 3.9%

Group A: BBVA, BNP Paribas, Deutsche Bank, Handelsbanken, ING, RBS
Group B: Banco Popolare, Fortis, SNS
Group C: OTP, Bancaja

1. Further thoughts on pricing

1.4 Matrix of key indicators to consider

Comments

In assessing the Risk Premium to apply, the MoF and FSA would also take into account a number of financial factors. For illustrative purposes we set out below a matrix of indicators for assessment of risk. This matrix could then also be used to derive the Risk Premium for listed / unlisted banks without a credit rating

Indicator	Group B (Mean risk premium +81bps)	Group C (Risk premium +218bps)
Capital adequacy[1]	Tier 1 ratio > 8%	Tier 1 ratio < 8%
Leverage	Tangibile equity / total assets > 2%	Tangibile equity / total assets < 2%
Funding risk	Loan / deposit ratio < 150%	Loan / deposit ratio > 150%
Liquidity risk	3m assets > 3m liabilities	3m assets < 3m liabilities
Profitability	ROE > 0%	ROE ≤ 0%
Credit quality **To be defined – in accordance to FSA parameters**	Non-performing loans as a % of total lending (NPL ratio) Loan loss provision as % of total lending Coverage ratio of NPL (Writedowns / gross NPL)	
FSA also looks at the following parameters	Concentration risk (geography, size and sector)	

FOR ILLUSTRATIVE PURPOSES ONLY - TO BE DISCUSSED WITH FSA

Based on the individual analysis, a bank should be classified in the group where the majority of parameters fall

[1] Actual capital base is reviewed by FSA in light of the financial position of parent (less capital required if well-capitalised parent). FSA Model based on Pillar II (Basel II) and has been developed over the last three years.