A correction note on "Maximum likelihood estimate of default correlations"

Paul Demey and Thierry Roncalli

Groupe de Recherche Opérationnelle, Risk Management Group, Crédit Agricole SA

Norbert Jobst pointed out to us we have not built correctly the S&P database in [1]. Using correct data, we obtain the results in Table 1. Compared to the results published in Risk Magazine, we obtain significant differences. Nevertheless, the conclusions remain the same.

			Two-factor		Single-factor	
	$\bar{N}_c$	$\bar{\mu}_c$	Asymptotic	Binomial	Asymptotic	Binomial
Aerospace / Automobile	301	2.08%	13.0%	11.2%	13.8%	11.6%
Consumer / Service sector	355	2.37%	10.7%	8.7%	10.8%	7.5%
Energy / Natural ressources	149	2.10%	20.6%	21.3%	13.8%	11.5%
Financial institutions	538	0.57%	16.5%	15.7%	13.3%	12.2%
Forest / Building products	112	1.90%	8.8%	6.8%	14.2%	14.5%
Health	152	1.27%	10.5%	8.3%	10.1%	9.2%
High technology	97	1.66%	11.8%	6.8%	8.2%	4.7%
Insurance	261	0.61%	24.9%	12.2%	17.3%	7.6%
Leisure time / Media	169	3.01%	10.0%	7.0%	11.0%	7.0%
Real estate	61	1.01%	39.3%	35.9%	31.7%	27.7%
Telecoms	120	1.91%	20.0%	27.1%	25.7%	34.3%
Transportation	135	2.02%	10.1%	6.8%	11.2%	8.3%
Utilities	354	0.43%	14.3%	18.3%	15.0%	21.2%
Inter-sector			5.3%	6.8%	✓	✓
Mean			16.2%	14.3%	15.1%	13.6%

Table 1. Asymptotic and binomial MLE2 estimates of the asset correlations extracted from the S&P database

Remark 1 *If we pool all the sector activities to define only one risk class, the 'binomial' and 'asymptotic' estimates of correlation become* 6.3% *and* 7.4%.

Acknowledgment

We would like to thank Norbert Jobst from S&P to draw our attention to the problem.

References

[1] Demey, P., J-F. Jouanin, C. Roget and T. Roncalli [2004], Maximum likelihood estimate of default correlations, *Risk*, **17-11**, November, pages 104-108