Will Basel II Contribute to Convergence in International Capital Flows?

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Content

1 Presents major elements of Basel II, focus on pillar 1 (capital charges)

2 Investigates potential impact of Basel II
@ on risk weights
@ on banks' risk-adjusted returns
@ on banks' breakeven spread changes

3 Discusses potential impact on volatility of bank credit supply

4 Concludes that Basel II risks to drive a regulatory devide between investment-grade and speculative-grade borrowers =>

Basel II is bad news for most emerging, transition and developing countries.

Table 1. The Current Basel Capital Accord:
Risk Weights by Selected Category of On-Balance-Sheet Assets

Risk Weight, %	Category
0	— Claims on governments dominated and funded in national currency — Other claims on OECD-based central governments and central banks
20	— Claims on banks incorporated in the OECD — Claims on banks outside the OECD with a residual maturity of up to one year
100	— Claims on banks outside the OECD with a residual maturity of over one year — Claims on corporates — Claims on governments outside the OECD

Source: Basel Committee on Banking Supervision, A New Capital Adequacy Framework, First Consultation Paper, Basel, June 1999 (www.bis.org).

Major changes planned now:

- OECD membership no longer a benchmark
- external ratings determine risk weights under standardised approach
- internal risk rating, based on probability of default, loss given default, maturity under IRB

Table 2. The New Basel Capital Accord:
Risk Weight under the Standardised Approach, %

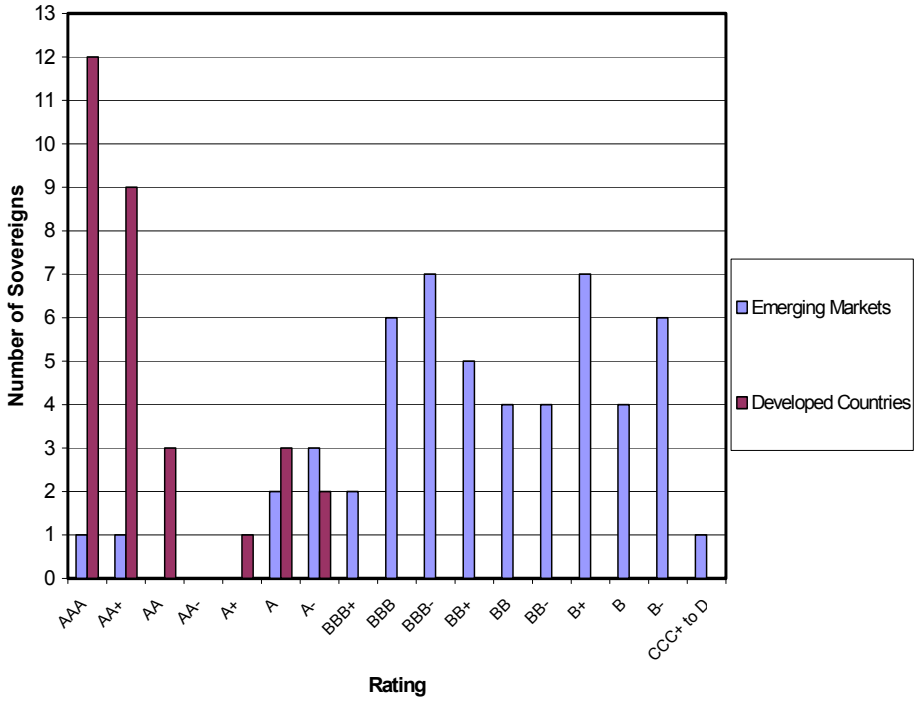
Agency Rating	AAA to AA-	A+ to A-	BBB+ to BBB-	BB+ to BB-	B+ to B-	Below B-
Sovgn. ECA Risk Score	1	2	3	4-6	4-6	7
Sovereigns	0	20	50	100	100	150
Banks - Option 1 (1)	20	50	100	100	100	150
Banks - Option 2 (2)	20	50(3)	50(3)	100(3)	100	150
Corporates	20	50	100	100	150	150

Source: Basel Committee on Banking Supervision, The New Basel Capital Accord: An Explanatory Note, Second Consultative Paper, Basel, January 2001 (www.bis.org)

(1) Risk weighting based on risk weighting of sovereign in which the bank is incorporated. The rating shown thus refers to the sovereign rating.
(2) Risk weighting based on the rating of the individual bank.
(3) Claims on banks with an original maturity of less than 3 months would receive a weighting one category more favourable than the risk weighting shown above subject to a floor of 20%.

- A more risk sensitive framework, esp. for corporates

Figure 2: Standard and Poor's Sovereign Ratings



- Ratings differ between OECD and non-OECD
- Median OECD is AA, median non-OECD is BB, st.dev. much higher in latter group
- 31/53 non-OECD sovereigns sub-investment grade

Table 3. Proposed IRB Risk Weights for Hypothetical Corporate Exposure with Loss-given-default Equal to 50%

	Agency Rating	Probability of Default, 3 year Maturity, % (1)	Theoretical Risk Weight (2)
Investment Grade	**AAA**	**0**	**0**
	AA+	**0**	**0**
	AA	**0.07**	**7.0**
	AA-	**0.21**	**20.8**
	A+	**0.37**	**36.2**
	A	**0.16**	**15.9**
	A-	**0.28**	**27.6**
	BBB+	**0.59**	**56.9**
	BBB	**0.41**	**40.0**
	BBB-	**1.28**	**118.1**
Speculative Grade	**BB+**	**3.77**	**293.9**
	BB	**5.46**	**378.7**
	BB-	**11.76**	**529.9**
	B+	**15.03**	**559.9**
	B	**19.85**	**630.3**
	B-	**27.79**	**1063.5**
	CCC and below	**31.38**	**1493.1**

Source: **Basel Committee on Banking Supervision (2001), The New Basel Capital Accord: The Internal Ratings-Based Approach, Basel, January 2001 (www.bis.org); Moody's Investors Services (1999), Historical Default Rates of Corporate Bond Issuers, 192- - 1998, New York, January 1999.**

Ouch! That will hurt speculative-grade borrowers : The Committee suggests an exponential, not a linear, translation of default probability into risk weights.

-Triple B rated developing-countries will profit under both the standardised and the IRB approach against current Accord. Terms might soften by 50 bp (see Table 4).

Unlike these investment-grade borrowers, other developing countries will suffer under the IRB approach, because risk weights jump to far above current levels, i.e. far above 100%.

Standardised approach would leave risk weights, regulatory capital charges, risk-adj. return and spreads unchanged, except for corporate borrowers below B and others rated C and below.

Systemic Concerns

1 Rigid capital ratio maintained : amplifies macro fluctuations as banks' habit to extend lending in good times, and contract it in bad times, is reinforced

2 Under standardised approach, risk weights det by agency ratings. Sovereign ratings lag markets, and are determined by GDP & other cyclical var.

3 Under IRB approach, risk weights det by default probabilities. Default risk fluctuates more with lower ratings, mostly due to global shocks (from 1 to 10% for speculative-grade borrowers = 50% vs 500% risk weight)

4 New Accord still encourages short-term interbank lending, tilting capital imports towards short-term debt, the single most important precursor of crises.

Table 5. Regulatory Incentives for Short-Term Interbank Lending

Basel Regulation	Long-term, Option 2					Short-term, Option 2				
	Assumed Libor Spread	Risk Weight (1)	Capital Required per $100	Risk-Adj. Return, % (2)	**Breakeven Spread Change, bp** (3)	Assumed Libor Spread	Risk Weight (1)	Capital Required per $100	Risk-Adj. Return, % (2)	**Breakeven Spread Change, bp** (3)
					Double-A (OECD-based)					
Current	10	20	1.6	6.3		10	20	1.6	6.3	
Standardised		20	1.6	6.3	**-**		20	1.6	6.3	**-**
IRB Approach		7	0.6	16.7	**-6**		0	0	n.a.	**n.a.**
					Triple-B (non-OECD)					
Current	100	100	8.0	12.5		100	20	1.6	62.5	
Standardised		50	4.0	25.0	**-50**		20	1.6	62.5	**-**
IRB Approach		40	3.2	31.3	**-60**		10	0.8	125.0	**-50**
					Double-B (non-OECD)					
Current	400	100	8.0	50.0		400	20	1.6	250.0	
Standardised		100	8.0	50.0	**-**		50	4.0	100.0	**+600**
IRB Approach		379	30.3	13.2	**+1115**		60	4.8	83.3	**+800**
					Single-B (non-OECD)					
Current	700	100	8.0	87.5		700	20	1.6	437.5	
Standardised		100	8.0	87.5			100	8.0	87.5	**+2800**
IRB Approach		630	50.4	13.9	**+3709**		400	32.0	21.9	**+13300**

(1) For the IRB approach, long-term (3 years) risk weights are obtained from the cubic regression estimate given in Figure 1. The underlying default rates for short-term exposures were obtained from Moody's; they are 0% for double-A; 0.1% for triple-B; 0.6% for double-B; and 6.8% for single-B borrowers (Moody's, 2001; exhibit 16). For the standardised approach, claims on banks rated between A+ and BB- with an original maturity of less than 3 months would receive a rating one category more favourable than the risk weight on longer maturities.

(2) Assumes LIBOR flat funding. Risk-adjusted return on capital is 100/regulatory capital required per $100 times spread over LIBOR; quoted as return in excess over LIBOR.

(3) Indicates the amount of spread movement needed (in basis points) to produce the risk-adjusted return achieved under the current Basel I environment. Breakeven spread change is difference in risk adjusted return between 'current' and 'standardised', resp. 'IRB approach' times capital required per $100 in 'standardised', resp. 'IRB approach'.

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The New Basel Accord: Bad News for Developing Countries?[1]

On January 16, 2001, the Basel Committee on Banking Supervision released the second consultative package on the New Basel Capital Accord (Basel II). Comments were due on the proposal by May 31, 2001. In view of the many objections raised by various segments of the banking industry, the committee has now accepted that its proposals cannot be adopted in their present form. On June 25, it announced a one-year extension of the original deadline for adoption of the New Accord to end-2002. However, as implementation of Basel II is not expected until at least 2005, near term reaction on capital cost and capital flows discussed here will be limited.

Basel II has been drafted from a supervisory perspective, in particular with the aim that bank carry capital charges that are better aligned with underlying credit risk than under Basel I, the 1988 Basel Accord. But how might Basel II affect the supply of private finance to developing countries? It is to be feared that it would raise capital cost and the volatility of credit supply to sub-investment grade borrowers, the bulk of the developing and emerging markets.

Under the draft proposals, the rigid capital ratio of 8% introduced in the 1988 Basel Accord will be maintained; new is how the risk weights to the capital ratio would be determined. Risk weights determine the banks' loan supply and funding costs, because banks have to acquire a corresponding amount of capital relative to their risk-weighted assets. A 20 per cent risk weight for a given borrower, for example, implies that the bank has to acquire $ 1.60 for $ 100 lent.

The Committee is proposing two main approaches to the calculation of risk weights: a 'standardised' and an 'internal ratings-based' (IRB) approach. One major change compared to the 1988 Basel Accord is that for sovereign and bank exposures, membership in the OECD will no longer provide the benchmark for risk weights.

Under the standardised approach**,** , a sovereign with a AAA rating would receive a 0% risk weight; lower ratings translate into a jump in risk weights via 20, 50, 100 up to 150% for sovereigns weighted below B-. For claims on corporates, a more risk-sensitive framework is now proposed by moving away from the uniform 100% risk weight for all corporate credits under the 1988 Accord.

The internal ratings-based (IRB) approach represents a fundamental shift in the treatment of regulatory bank capital. It builds on internal risk rating practices of leading banks to estimate the amount of capital they believe necessary to support their credit and operational risks. The IRB approach is now expected to be used by the majority of globally active banks once the New Accord is implemented, and therefore should be the prime determinant of risk weights (and hence debt cost to borrowers).

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[1] A full version of the paper presented to the 29th Economics Conference at the Oesterreichische Nationalbank is available on http://www.oenb.co.at/e_p2tagu.htm

The IRB approach is based on mapping risk measures derived from probability of default, loss given default and maturity into risk weight buckets. Representative values for benchmark risk weights as a function of the default probability for corporate exposures are provided in the Committee proposal. Importantly, it does not suggest a linear, but a strongly exponential rise of risk weightings along the spectrum of higher probability of default. This suggestion would have grave consequences.

Simulation exercises show that speculative-grade borrowers, the bulk of emerging and developing countries, will suffer from a dramatic rise in debt costs, if the 'internal ratings-based' approach prevails. A three-year credit to a single-B rated borrower, say from Argentina, could require a risk weight of round 600 per cent, rather than 100 per cent now.

By contrast, the 'standardised' approach, which links risk weights to ratings by eligible external credit assessment institutions, would leave banks' regulatory capital charges, risk-adjusted returns and hence required yield spreads largely unchanged to most developing-country borrowers. The concern that Basel II will raise the volatility of private capital flows to speculative-grade developing countries, and hence their vulnerability to currency crises, is based on four aspects of the New Accord.

First, the rigidity of the 8% minimum capital ratio; linking bank lending to bank equity acts as an automatic amplifier for macroeconomic fluctuations: banks lend more when times are good, and less when times are bad. Rigid capital requirements reinforce that habit.

Second, the lateness and the cyclical determination of agency ratings, which define regulatory capital needs under the 'standardised' approach; this means that during booms ratings improve and capital charges decline, while ratings are lowered during the bust, implying higher capital requirements.

Third, the cyclical nature of the probability of default and of yield spreads, which determine regulatory capital needs and debt costs under the IRB approach; during the 1970-1999 period, one-year default rates for speculative-grade borrowers oscillated between 1% in tranquil times and 10% in crisis years, largely as a result of global, not idiosyncratic, shocks. Such fluctuations in default probability would translate into corresponding pro-cyclical shifts in risk weights, from 100 to 500 % for speculative-grade borrowers.

Finally, the ongoing incentives for short-term rather than long-term interbank lending embedded in the Basel Accord; for speculative-grade developing countries, the regulatory incentives continue to tilt the structure of their capital imports towards short-term debt and makes them vulnerable to capital-flow reversals.

Basel II, if implemented as is, risks to deepen the regulatory devide between investment-grade and many developing-country borrowers; the latter will find it hard to tap debt finance at sustainable cost and at stable terms unless they reach investment-grade status.