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Mind the gap: domestic versus foreign currency sovereign ratings[1]

Over the past decade, it has become common practice for rating agencies to assign a domestic currency rating to the debt of sovereign nationals in addition to a foreign currency one. Often the domestic rating is higher, reflecting the presumed greater ability and willingness of sovereigns to service debt denominated in their own currency. However, the gap between the two ratings is neither omnipresent nor uniform.

These rating differences are likely to have increasingly important implications for the development of global capital markets. Many governments have embraced the goal of developing local currency bond markets as an alternative to inflows of foreign capital,[2] and differential rating policies for foreign and domestic currency debt are likely to reinforce this policy intention through their effect on investor acceptance and market pricing. Rating differences may also be relevant in the light of the expanding use of ratings for regulatory purposes.

This feature begins by reviewing the development of the two types of sovereign ratings. Local currency bond ratings tend to be of newer vintage, in line with the more recent emergence of local currency bond markets. We then examine the frequency and size of the markup of local over foreign currency ratings. Our investigation reveals not only differences among borrowers, but also surprising differences across the agencies themselves, suggestive of greater disagreement among the agencies over the risk assessment of domestic currency denominated obligations.

The growth of domestic and foreign currency ratings

Sovereign ratings are a rapidly growing area within the rating agency business. In 1985, only 17 countries had obtained credit agency bond ratings to borrow in

[1] The views expressed in this article are those of the author and do not necessarily reflect those of the BIS.

[2] For instance, although the newly created Asian Bond Fund is initially investing in dollar-denominated debt, East Asian central banks will study whether to extend its investment mandate to local currency denominated bonds. See EMEAP (2003).

international capital markets.[3] Most of these countries were rated AAA; less financially strong countries relied on bank finance or privately placed bonds (Tables 1 and 2). However, over the past 15–20 years, countries at the lower end of the credit quality spectrum have relied increasingly on bond markets. The issuance of new ratings has been particularly marked over the last decade.

The demand for sovereign ratings grows ...

Initially, most of the new sovereign ratings applied to foreign currency debt, as sovereigns apparently felt little need to obtain a rating for domestic currency obligations. However, an increasing percentage of sovereigns now have domestic currency ratings as well, a likely reflection of efforts to increase the investor base for domestic currency bonds.[4] Within the past eight years, 47 new sovereigns have received foreign currency ratings (45% of all rated sovereigns), as compared to 72 new sovereigns with domestic currency ratings (more than two thirds of all rated sovereigns). The expansion of domestic currency ratings has proceeded rapidly enough that the catch-up is now complete, with the number of sovereigns obtaining domestic currency ratings virtually equal to those receiving foreign currency ratings.

... particularly for domestic currency ratings ...

The growth in demand for domestic currency ratings demonstrates striking parallels with the earlier development in foreign currency ratings, in that lower-quality credits have gradually been brought into the ratings fold. While initially the demand for domestic currency ratings came from borrowers mostly rated AAA, there has been a steady expansion of the market towards lower-quality borrowers; since 2001, the median rating assigned has been below investment grade at BB (Table 2).

... as lower-quality borrowers are brought into the fold

Domestic and foreign currency sovereign ratings

	New foreign currency ratings	New domestic currency ratings
	Number of sovereigns	
Pre-1985	17	0
1986–90	22	3
1991–95	19	31
1996–2000	36	60
2001–03	11	12
Total	105	106

Notes: Sovereigns are deemed to have a rating if one of the three major agencies has a rating outstanding. The United States did not receive a foreign currency rating until 1992.

Sources: Fitch Investors Service; Moody's Investors Service; Standard & Poor's. Table 1

[3] The rating agencies also had an active sovereign rating franchise in the 1920s, and Moody's had rated around 50 sovereigns by 1929. However, international bond markets were much less active during the Great Depression, and virtually disappeared after the Second World War.

[4] Another reason given for the greater demand for local currency ratings is an increase in structured transactions that separate out the risk elements unique to foreign currency debt, such as convertibility and transfer risk.

Credit quality of newly assigned sovereign ratings		
	New foreign currency ratings	New domestic currency ratings
	Median rating	
Pre-1985	AAA	...
1986–90	A+	AAA
1991–95	BB+	AA–/A+
1996–2000	BB	BBB
2001–03	BBB	BB

Note: Sovereigns are deemed to have a rating if one of the three major agencies has a rating outstanding.

Sources: Fitch Investors Service; Moody's Investors Service; Standard & Poor's. Table 2

For the most part, regulations that key off agency ratings make little distinction between foreign as opposed to domestic currency rated claims. Those exceptions that do exist favour domestic currency ratings and/or domestic currency claims. For instance, under the standardised approach of the New Basel Capital Accord, in the case of foreign currency exposures to multilateral development banks whose convertibility and transfer risk are "considered to be effectively mitigated by national supervisory authorities", the domestic currency rating may be used for risk weighting purposes instead of the foreign currency rating.[5]

The rating gap

A gap exists between domestic currency and foreign currency ratings ...

Rating agencies often give higher ratings to the domestic currency obligations of sovereign states than to their foreign currency ones. The difference is usually justified in terms of the sovereign's ability to tax and appropriate domestic currency assets, which is often assumed to be greater than in the case of foreign currency assets. In addition, while the sovereign must generate foreign exchange to repay foreign currency debts, it can print money to meet domestic currency obligations (see, for example, Fitch Investors Service (2003)).

... though constraints on monetary policy can limit the gap

Following this logic, constraints on the sovereign's ability to print domestic currency would tend to reduce the justification for a rating gap. Prime examples would be sovereigns that use the currencies of foreign countries, such as Panama and El Salvador. The countries of the euro area are also special cases; here the delegation of monetary policy to the ECB has greatly diminished the distinctions drawn between local and foreign currency debt.[6] More generally, the frequent existence of significant political costs

[5] See Basel Committee (2003). In addition, the Accord gives national authorities the general discretion to apply even lower risk weights to banks' exposures to sovereign or central bank domestic currency obligations (provided they are funded in the local currency), which is not the case with foreign currency obligations.

[6] Though there was a difference of approach over whether foreign currency ratings should be upgraded or domestic currency ratings downgraded, the major rating agencies eliminated or

associated with high levels of inflation should limit the applicability of the "printing press" argument for high domestic currency ratings.

Another possible exception would be if foreign currency issuance is small relative to the total debt outstanding of a sovereign. After all, one of the underlying principles of sovereign debt analysis is that sovereign risk always depends on the willingness as well as the ability to pay. Given a small enough burden, the sovereign might conceivably make an extra effort to avoid default on foreign currency obligations. It is likely that the relatively small size of international bonds of emerging market countries in the early 1980s explains why the default experience on bonds at that time was rather limited, despite a range of bank loan restructuring programmes.

The gap by rating distribution

Another factor influencing the size of the gap is a purely technical one: there is no rating higher than AAA (Aaa) in the rating agencies' symbology. The additional credit standing that a foreign currency AAA credit might gain by being denominated in domestic currency is unobservable. In addition, countries that are AA+ can only be raised by one notch, and so forth. The gap should thus become more pronounced and more frequently observed as the foreign currency rating drifts downwards from AAA and AA, which is in fact what we generally see (Table 3).

The gap tends to be highest in the BBB category

On the other hand, it appears that the gap peaks in the mid-grade rating category of BBB. For instance, according to Standard & Poor's ratings, for this rating category three quarters of all rated sovereigns have domestic currency obligations that are rated two notches or more higher than the foreign currency ones. By contrast, the relative advantage of domestic currency obligations is

Domestic vs foreign currency rating gaps by rating (S&P)

Foreign currency rating	No difference	Domestic currency debt rated higher by exactly one notch	Domestic currency debt rated higher by more than one notch
	Number of sovereigns		
AAA	17	0	0
AA	8	2	0
A	4	5	8
BBB	0	3	9
BB	3	8	6
B	9	4	3

Note: Ratings indicate the broad letter grade category, eg AA stands for credits rated AA+, AA and AA–.

Source: Standard & Poor's. Table 3

narrowed outstanding domestic/foreign currency rating gaps for euro area countries ahead of and during the transition to the euro (for further discussion, see McCauley and White (1997)).

much smaller for countries that are below the investment grade cutoff than for countries above. The hump-shaped pattern in notching is evident in the distribution of rating gaps among the other agencies as well.

Why the sovereign rating gap should have this second particular feature is not immediately obvious. If the differences were in any way related to demand from issuers to achieve an investment grade rating for domestic obligations, we would expect to see greater gaps at the BB (foreign currency) rating level, but this is not the case. For its part, Standard & Poor's posits that low-rated countries face risks, such as high degrees of social and political stress, that would also impair their ability to keep servicing domestic obligations in circumstances where foreign currency debts were allowed to default (Standard & Poor's (2002)).

Sovereign defaults on rated debt

The track record of defaults on rated debt is limited

In the best of all possible worlds, we could rely on default statistics to check whether the domestic rated debt that is often presumed to be safer has in fact been so in the past. However, because the number of sovereign ratings only

Rated bond defaults by sovereigns

	Foreign currency	Domestic currency	Total amount[1]	Comment
	Year of default (prior rating)			
Argentina	2001 (Caa3)	2001 (Caa3)	$82.3 billion	Simultaneous default
Ecuador	1999 (B3)	1999 (B3)	$6.6 billion	Foreign currency default one month prior to domestic
Moldova	2001 (B3) 2002 (Caa1)	.	$145 million	Only foreign currency debt rated
Pakistan	1998 (Caa1)	.	$750 million	Only foreign currency debt rated
Peru	2000 (Ba3)	.	$4.9 billion	Defaulted only on foreign currency debt
Russia	1998 (B1)	1998 (B2)	$73.4 billion	Domestic currency default one week prior to foreign
Ukraine	1998 (B3) 2000 (Caa1)	.	$1.4 billion $1.1 billion	Only foreign currency debt rated
Uruguay	2003 (B3)	.		Only foreign currency debt rated
Venezuela	.	1998 (B3)	$270 million	Defaulted only on domestic currency debt

[1] The total amount sums defaulted local and foreign currency debt using the exchange rate at or around the time of default.

Source: Moody's Investors Service (2003a). Table 4

took off in the late 1980s, and because there are a limited number of sovereigns more generally, the track record for defaults on rated debt is quite slim. Since 1985, Moody's Investors Service counts only nine sovereigns that have defaulted on rated bonds, and all of these were from 1998 or later (Table 4). Of these, only five had *both* foreign and domestic currency rated debt at the time of default.

Foreign currency debt has not always been the first to default

The limited sample indicates no uniform relationship between the denomination of debt and the likelihood of default.[7] In one case (Peru), the sovereign only defaulted on foreign currency debt, while in another (Ecuador), default occurred first on foreign currency debt and only later on domestic debt. But Venezuela defaulted only on domestic currency debt, while Russia defaulted on its domestic currency debt before its foreign currency debt. In the case of the largest sovereign default to date, Argentina, the defaults were simultaneous.

Differences among the rating agencies

The rating agencies differ with respect to the frequency and degree of notching

There are surprisingly sharp differences among the rating agencies with respect to the frequency and degree to which domestic obligations are given favourable ratings. In particular, Moody's tends to notch up its domestic currency rating much less frequently than the other agencies; for instance, it gives a higher domestic currency rating on only 28% of its rated universe of sovereigns, compared with well over 50% for both S&P and Fitch (Table 5).

Domestic vs foreign currency rating gaps

Differential	Moody's	S&P	Fitch
	Number of sovereigns		
4 notches	–	2	–
3 notches	7	11	3
2 notches	8	14	20
1 notch	11	22	20
No difference	61	43	29
– 1 notch	2	–	1
– 2 notches	1	–	–
– 3 notches	0	–	–
– 4 notches	1	–	–
Total	91	92	73

Sources: Fitch Investors Service; Moody's Investors Service; Standard & Poor's. Table 5

[7] The sample has been constructed based on Moody's definition of default and ratings. As the definition for default on sovereign debt and the number of assigned ratings can differ among the major rating agencies, the sample and related comments would not necessarily be identical to that based on other agency ratings and default records.

Mean sovereign rating differences among agencies			
	Moody's/S&P	Moody's/Fitch	S&P/Fitch
Foreign currency rating (A)	0.34	0.31	–0.01
Domestic currency rating (B)	–0.34	–0.33	0.04
(A) – (B)	–0.68	–0.64	0.05

Note: A positive number in the first two rows indicates that the first rating agency rates higher.

Sources: Fitch Investors Service; Moody's Investors Service; Standard & Poor's. Table 6

Moody's also assigns a higher foreign currency rating than domestic currency rating in four cases,[8] with a relatively small proportion of outstanding foreign currency debt relative to foreign exchange reserves always cited as a reason (Moody's (2003b,c)).

The end result of these differences is that domestic currency ratings of S&P and Fitch are each around two thirds of a notch higher on average than they would be if the gaps between foreign and domestic currency ratings were identical to those assigned by Moody's (Table 6).[9] Needless to say, were the 15 or so countries with AAA foreign currency ratings removed from the sample, the mean differences would be even greater.

There also appears to be disagreement over the ordering of domestic currency risks

The disagreement over the appropriate domestic currency rating may also apply to the agencies' ranking of risks. As agencies argue that ratings should be interpreted as measures of the relative risk of default, the rank-order correlation coefficient is arguably a more precise measure of agency consensus. In Table 7, we document consistently lower rank-order correlation coefficients among the rating agencies' domestic currency ratings than among their foreign currency ratings. Though the small sample size limits the strength

Inter-agency correlations of domestic and foreign currency ratings		
	Foreign currency rating	Domestic currency rating
Moody's/S&P	0.958	0.937
Moody's/Fitch	0.951	0.926
S&P/Fitch	0.986	0.937

Note: Spearman rank-order correlations were calculated only for sovereigns with foreign currency ratings lower than AAA (Aaa).

Sources: Fitch Investors Service; Moody's Investors Service; Standard & Poor's. Table 7

[8] The four countries are India, Lebanon (one notch), Turkey (two notches) and Japan (four notches). By contrast, Standard & Poor's does not assign a higher foreign currency rating to any sovereign, while Fitch assigns a higher foreign currency rating only in the case of Japan.

[9] For the purpose of the calculations of Tables 6 and 7, the ratings have been transformed as follows: AAA (Aaa) = 1, AA+ (Aa1) = 2, B– (B3) = 16.

of the statistical inference, the evidence is suggestive of greater disagreement among the agencies over the ordering of domestic currency ratings.[10]

Conclusion and implications

Local currency ratings, a relatively new development, will take on increasing importance as local currency bond markets grow. In fact, many policymakers believe that domestic currency bond markets can provide insurance against the volatile flows of foreign currency based investors, and thus should be developed further (BIS (2001), IMF (2003)). A number of regional initiatives seek to build on such a consensus.

Rating agency policies often treat domestic currency obligations relatively favourably owing to the fact that the sovereign can generally tax domestic subjects to meet domestic currency obligations or, even more fundamentally, print money. This favourable treatment may serve to encourage the development of local bond markets, both by increasing market acceptance of domestic currency credits and by lowering regulatory capital charges to the extent they are determined by ratings.

However, as this note has documented, the gaps between foreign and domestic currency ratings are far from uniform among the major rating agencies, leading frequently to striking disagreements. One rating agency tends to place less weight on whether obligations are in domestic currency, and in fact occasionally rates foreign currency credits higher. Meanwhile, the evidence is suggestive of less agreement among the major agencies over the ordering of the risks of domestic currency obligations.

Given the evolution of global capital markets and the relative paucity of sovereign default history, diversity in rating policies is to some extent natural and even welcome. However, the differences may also be indicative of an added degree of uncertainty concerning the appropriate distinction to be made between domestic and foreign currency obligations. Further research using market data may shed light on the degree to which investors price this uncertainty.

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[10] The p-value for the z-statistic for testing the null hypothesis of no difference in rank-order correlations is less than 0.01 for the S&P/Fitch pair, but 0.116 for the Moody's/S&P pair and 0.156 for the Moody's/Fitch pair.

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