

Sovereign Debt and CDS

Moody's Conference

May 2006

New York City

Suresh Sundaresan

Columbia University

Outline

1. **Underlying Sovereign Loan/Bond Markets.**
2. **Sovereign Debt – Overview of Received Theory.**
3. **Sovereign Restructuring. Holdout Problems, UAC versus CAC, Majority amendment clauses, etc.**
4. **Implications & Research Questions**

Underlying Sovereign Loan/Bond Markets.

1. **Size:** A recent study by J.P.Morgan estimates the Emerging Market Debt capitalization at \$1.1 trillion.
2. **Composition:** Latin American issues comprise more than 50% followed by European issues, which account for about 25%. Clearly there is a geographical concentration issue here. This also feeds into the CDS market.

Source: Emerging Markets Debt As An Asset Class, by Jennie Byun and William Oswald, J.P.Morgan (April 2006)

Underlying Sovereign Loan/Bond Markets.

- 3. CDS Concentration** Top five names account for 40% of all quotes. In sharp contrast, top five accounts for less than 8% of all quotes in corporate CDS market.
- 4. Rating Distribution:** The average rating is BB+, with issues rated at or below BBB accounting for more than 80% of the market.

Sources: “Emerging Markets Debt As An Asset Class”, by Jennie Byun and William Oswald, J.P.Morgan (April 2006). “Sovereign CDS”, by Frank Packer and Chamaree Suthiphongchai, BIS Quarterly Review, December 2003.

Underlying Sovereign Loan/Bond Markets.

5. **Bonds versus Loans:** Sovereign bond markets have grown much faster. The trend is a shift from loans to tradable debt securities.
6. **Co-ordination Problems:** The coordination problems associated with financial distress are likely to be more severe with this trend, given the absence of a bankruptcy code.
7. **Sovereign CDS delivery:** CDS calls for delivery of bonds, typically although in some cases loans are also deliverable.

Distinct Features of Sovereign Debt

- 1. Absence of a Bankruptcy Code:** Lenders do not have recourse to a bankruptcy code, and hence do not have the outside option of “liquidation threat.”
- 2. Restructuring:** Pre and post default Exchange offers appear to be the primary ways in which sovereign debt is restructured.

**Source: Financial Stability Review,
Bank of England, June 2005.**

Table 1

Key features of recent sovereign bond restructurings

	Date of exchange offer	Value of bonds (US\$ billions)	Approximate NPV reduction (per cent)	Participation rate (per cent)	Treatment of hold-outs
Post-default restructurings					
Argentina	January 2005	81.8	70	76	Unclear
Ecuador	July 2000	6.5	40	99	Paid in full
Russia	July 2000	31.8	50	99	Offer re-opened
Pre-default restructurings					
Dominican Republic	March 2005	1.1	<5	93	Likely to be paid in full
Pakistan	November 1998	0.6	35	99	Offer re-opened
Ukraine ^(a)	February 2000	2.8	40	99	Paid in full
Uruguay	April 2003	5.3	15	93	Paid in full

(a) Ukraine was technically in default for a short period during the exchange.

Restructuring

- 1. Restructuring as a credit event:** CDS contracts in the corporate sector have had problems in the past with handling this credit event. ISDA documentation has evolved over time to fine-tune the CDS contracts corporate names.
- 2. Contract Design Matters:** Evidence shows that the manner in which restructuring is treated in CDS affects the pricing of CDS via a) the value of CTD option and b) the contingencies that are covered. **Source: Contractual Terms and CDS Pricing, by Frank Packer and Haibin Zhu, BIS Quarterly Review, March 2005.**

Received Theories of Sovereign Debt

1. **Exclusion from Credit Markets:** Eaton and Gersovitz (1981). Need to borrow repeatedly and the Reputation costs of default.
2. **Sanctions:** Bulow and Rogoff (1989). It is costly to default as trade sanctions may ensue following default.
3. **Costs are Wider:** Cole and Kehoe (1996). Reputation in credit markets spills over into reputation in other markets.

Received Theories of Sovereign Debt

4. **Direct Costs to Borrowers:** Dooley (2000).
Economic costs to borrowers are significant.

Are they credible and powerful enough to explain the size and growth of this market?

Can they explain the rapid growth of bonds relative to loans?

These are some open research questions in the field.

Understanding Sovereign Renegotiations

- 1. Corporate Debt:** Corporate debt is renegotiated in the shadow of Chapter 11 or Chapter 7. Theory and empirical work informs us as to the quantitative importance of such strategic debt service on the pricing of debt.
- 2. Sovereign Debt:** Lenders to Sovereign borrowers do not have these outside options. They must rely on a) costly trade sanctions, b) precluding future access to credit, etc.

Understanding Sovereign Renegotiations

- 3. IMF** The presence of IMF as a co-lender and lending into arrears has further implications for Sovereign debt renegotiations.

There is a clear need to better understand the dynamics of Sovereign debt restructuring and the extent to which they are anticipated and priced into spreads.

Evolution of Contracting

1. **CAC:** CACs apply to specific bond issues. Many recent issues of Sovereign Bonds have CACs. This clause attempts to mitigate the holdout problem by permitting a super-majority of holders of a debt issue to enter into a restructuring agreement that would bind all holders of that issue.
2. **Recent Issues with CAC:** Mexico in April 2003; Argentina, Brazil and Uruguay are other countries that have issued bonds with CACs.

Evolution of Contracting

- 3. Bonds with British and New York Jurisdictions:** They have very different contractual implications in dealing with restructuring and hold-out problems. New York Law bonds are issued with Unanimous Action Clauses (UAC), whereas British Jurisdiction allows for CAC.
- 4. Majority Amendment Clauses:** The use of Majority Amendment Clause has become a standard practice for bonds issued under New York Law since March 2003. **Resolving Sovereign Debt Crises, Financial Stability Review, June (2005), Bank of England.**

Implications for Sovereign CDS

- 1. Heterogeneity:** The underlying Sovereign bonds display a variation in contractual rights conditional on financial distress.
- 2. Pricing Implications:** This may have significant pricing implications for Sovereign CDS, and the basis between the cash and CDS markets.

Implications for Sovereign CDS

- 3. Incentives:** If the initial buyer of Sovereign bonds buys protection, what is the incentive for the protection buyer to participate in exchange offers? It is the seller who will receive the defaulted claims. Are protection sellers better able to participate in exchange offers than the original buyers of sovereign debt? Perhaps, the market sorts out this allocation efficiently.

Range of Recovery Rates

- The average price one month after default has varied from a low of 18% to a high of 69%.
- This substantial range in loss given default may reflect the inherent difficulty in predicting the outcomes in restructuring, without a bankruptcy code, and with holdout problems.
- An interesting issue is the manner in which recovery rates depend on contractual provisions such as a) exit consents, b) CACs, c) Unanimity requirements, etc.

Source: “Emerging Markets External Debt As An Asset Class”, Jennie Byun and William Oswald J.P.Morgan, April 2006.

EM Sovereign Foreign Currency Bond Recovery Rates

Issuer	Date of default	Average price 1 month after default
Russia	April/May 1999 *	18
Ecuador	October 1999	45
Pakistan	December 1999	48
Ukraine	February 2000	69
Ivory Coast	March 2000	18
Moldova	June 2001	65
Argentina	December 2001	28

Source: JP Morgan, Moody's Feb 2003

* The first external debt default for Russia were the RUU lens in April/May '99. Russia defaulted on GKO loans in August 1998.

Conclusions

- **Changes in Contract:** Majority amendment clauses in bonds issued under New York jurisdiction, CAC clauses in recent issues, etc. should have a pricing consequence as they impact the process of restructuring and may influence recovery rates.
- **Basis:** By virtue of these changes, the diversity of bonds with different contractual features should have increased. This should make the CTD option in CDS more valuable, thereby influencing the basis.

Conclusions

- **Size & Composition:** The growth of the Sovereign debt market and especially that of Sovereign bonds need to be reconciled with received theories.
- **Sovereign Restructuring** We need to better models for understanding Sovereign restructuring in order to infer their pricing impact.