WPS2363

Would Collective Action Clauses Raise Borrowing Costs?

An Update and Additional Results

Barry Eichengreen
Ashoka Mody

Collective action clauses raise
borrowing costs for low-rated
borrowers and lower them
for high-rated borrowers. This
result holds for all developing
country bonds and also for
the subset of sovereign bond
issuers.

Summary findings

It is easy to say that the International Monetary Fund should not resort to financial rescue for countries in crisis; this is hard to do when there is no alternative. That is where collective action clauses come in.

Collective action clauses are designed to facilitate debt restructuring by the principals — borrowers and lenders — with minimal intervention by international financial institutions.

Despite much discussion of this option, there has been little action. Issuers of bonds fear that collective action clauses would raise borrowing costs.

Eichengreen and Mody update earlier findings about the impact of collective action clauses on borrowing costs. It has been argued that only in the past year or so have investors focused on the presence of these provisions and that, given the international financial institutions' newfound resolve to "bail in" investors, they now regard these clauses with trepidation.

Extending their data to 1999, Eichengreen and Mody find no evidence of such changes but rather the same pattern as before: Collective action clauses raise the costs of borrowing for low-rated issuers but reduce them for issuers with good credit ratings.

Their results hold both for the full set of bonds and for bonds issued only by sovereigns.

They argue that these results should reassure those who regard collective action clauses as an important element in the campaign to strengthen international financial architecture.

Would Collective Action Clauses Raise Borrowing Costs?

An Update and Additional Results

Barry Eichengreen
Department of Economics
University of California at Berkeley

and

Ashoka Mody
The World Bank
Development Prospects Group

1. Introduction

The literature on strengthening the international financial system is replete with proposals for scaling back the role of the international financial institutions and, in particular, limiting their resort to financial rescues of countries in crisis. Whenever IMF money is used to pay off foreign investors in order to prevent their rush for the exits from bringing financial markets crashing down, taxpayers in the crisis country are left holding the bag; since the IMF is paid back, it is the residents of the low-income country who incur the financial and economic costs of the crisis, while foreign investors are let off scot free. As redistribution to the rich from the poor, this outcome is wanting on equity grounds. It is also inefficient: IMF rescues that regularly allow investors to escape crises create moral hazard — they encourage investors to lend without due regard to the risks. And lending without regard to the risks only sets the stage for additional crises.

While it is easy to say that the IMF should not resort to financial rescues, this is hard to do so long as there does not exist an alternative for responding to crises in emerging markets. This is where collective-action clauses come in. Collective-action clauses are designed to facilitate debt restructuring by the principals -- by the borrowers and lenders involved -- with minimal intervention by the international financial institutions. Unfortunately, market-based debt restructuring is difficult when the bonds involved are issued under U.S. law. Most American-style bonds lack sharing clauses to discourage maverick investors from resorting to lawsuits and other ways of obstructing settlements beneficial to the debtor and the majority of creditors. They require the unanimous consent of bondholders to any restructuring, creating almost insurmountable hurdles to orderly negotiations to alter payment terms. They lack clauses specifying who represents the bondholders and making provision for a bondholders committee or

assembly. All this makes market-based debt restructuring extremely difficult to pursue.

The addition of sharing, majority-voting and collective-representation clauses to bond contracts was thus suggested by the G10 following the Mexican crisis and echoed in a series of G7 and G22 reports and declarations (see Group of Ten 1996, Group of Twenty-Two 1998, Group of Seven 1998). The G-7 then placed the issue on its work program for reforming the international financial system. U.S. Treasury Secretary Robert Rubin endorsed it in a speech designed to set the agenda for the spring 1999 meetings of the IMF's Interim Committee (Rubin 1999). G7 finance ministers embraced it in their Cologne Summit report on strengthening the international financial architecture (Group of Seven 1999).

Yet all this talk has resulted in little action. Issuers fear that collective-action clauses would raise borrowing costs. Easier restructuring, by heightening the temptation for borrowers to walk away from their debts, would render investors reluctant to lend. On the other hand, clauses which facilitate orderly restructuring in the event of exceptional difficulties could render emerging-market issues more attractive by minimizing acrimonious disputes, difficult negotiations, and extended periods when no debt service is paid and growth is depressed by a suffocating debt overhang. The analogy with domestic bankruptcy procedures can be invoked in support of this more favorable interpretation.

Potential issuers are waiting, it would appear, for more evidence on which argument is correct. The obvious source of evidence is the stock of bonds governed by UK law, and therefore including collective-action clauses, already issued and traded in the markets. Comparisons of the spreads on these bonds with spreads on otherwise equivalent American-style instruments offer a

2

concrete way of evaluating the afore-mentioned arguments.[1]

In a previous paper (Eichengreen and Mody 2000) we analyzed some 2,000 international bonds issued by emerging-market borrowers between 1991 and 1998 in an effort to uncover the answer. The results suggested that while collective-action clauses raise costs of borrowing for low-rated issuers, they reduce them for issuers with high credit ratings. Our interpretation was that while more credit-worthy issuers in fact benefit from being able to avail themselves of orderly restructuring in the event of exceptional circumstances, for less credit-worthy borrowers the advantages of provisions enabling restructuring are offset by the moral hazard and default risk associated with the presence of renegotiation-friendly loan provisions. We argued that this is a promising result from the point of view of the architecture debate. If the goal is to strengthen market discipline by encouraging investors to more generously reward more credit-worthy borrowers and penalize less credit-worthy ones, then the more widespread adoption of collective-action clauses, which would reduce borrowing costs for the more credit-worthy while raising them for their less credit-worthy counterparts, would seem to be a step in the right direction.

This result has met with less than universal acceptance. As Fischer (1999, p.10) has put it, "This is a more subtle outcome than the one I expected." Further results would appear to be needed to reassure the skeptics.

---

[1]The comparison is complicated, as we explain below, since not only does one have to control for borrower characteristics and market conditions, but the choice of governing law is presumably endogenous. And, in addition, there is the fact that not all borrowers will be in the market at all times. But this is still the obvious source of evidence on the question.

In addition, there is the suspicion that the relationship between contractual provisions and spreads may have shifted since the international policy community acknowledged the need for the participation of the private sector in crisis resolution. Provisions which may have been wholly disregarded or may even have been regarded favorably so long as it was assumed that they would only be invoked under extraordinary circumstances may have come to be seen less favorably now that the IFIs are actively seeking to "bail in" the private sector.

Finally, there is the question of whether results that hold for the universe of emerging market issuers hold for sovereigns alone. On the one hand there is the argument that collective-action clauses are especially desirable for sovereign issues, because there do not exist other mechanisms (domestic bankruptcy and insolvency procedures) for orderly restructuring in the event of default, like those which apply to corporate bond issues. On the other hand there is the fear that moral hazard may be a particular problem for sovereigns precisely because they are not subject to the jurisdiction of the bankruptcy court.

The purpose of this note is therefore to update our previous findings on the effects of collective-action provisions. We add 118 additional observations for the first half of 1999. We present separate results for sovereigns (at the same dropping Israel, whose bonds enjoy a special U.S. government guarantee). The results support the robustness of our previous findings. We continue to find that the presence of collective-action clauses raises spreads for borrowers with poor credit ratings while reducing spreads for borrowers with good credit. This pattern is not weakened by the addition of data for 1999. And the same pattern holds for sovereigns as for other issuers.

2. Data and Specification

Our data, drawn from Capital Bondware and augmented for the early 1990s by the International Monetary Fund's Emerging Market Group, is composed of 2774 bonds.[2] 1209 of these bonds were subject to UK governing law, 894 to U.S. law, and the rest to other (mainly Japanese and German) laws.[3] We show the breakdown by governing law, in annual average form for various subperiods, in Table 1.

Since the choice of governing law is plausibly endogenous, we estimate the determinants of spreads using modified instrument variables. We first use a multinominal logit to determine the choice of governing law, where US, UK and other are the three alternatives. (The logit results for choice of governing law are reported in Table 2.) We construct the fitted probability that a particular bond is governed by one of these laws and use the estimated probabilities rather than the actual values in our second-stage regression. Since the spread will be observed only when positive decisions to borrow and lend are made, we estimate (by maximum likelihood) a sample selection model, made up of an issue equation and a spread equation. The two equations are identified by the nonlinearity of the fitted probabilities in the selection equation and by the

---

[2] In principle, this is the universe of all fixed and floating rate bonds issued in the sample period by emerging markets. More detail on the succeeding paragraphs is provided in the data appendix to Eichengreen and Mody (2000).

[3] For a number of bonds, no law was specified. We have included them in the "other" laws category. Also, three bonds had both UK and U.S. laws. We have categorized these as U.S. law bonds (though none of our results is sensitive to this procedure).

5

inclusion of variables determining issuance that do not also influence spreads.

We estimate this model using data for primary spreads for developing-country bonds issued in the period 1991-QI through 1999-QII. We gathered the maturity of each issue, whether it was privately placed, whether the issuer was a private or governmental entity, whether the issue was denominated in dollars, yen or deutschmarks, whether the interest rate was fixed or floating, and the governing law. As measures of creditworthiness we included the external debt relative to GNP, debt service relative to exports, a dummy variable for whether the country had concluded a debt restructuring agreement with private or official creditors in the preceding year, international reserves relative to short-term debt, the ratio of short-term debt to total commercial bank debt, the ratio of outstanding bank credit to the private sector relative to GDP, the growth rate of real GDP, the variance of the export growth rate, the ratio of short-term debt to total commercial bank debt, the ratio of reserves to short-term debt, and the ratio of domestic private credit to GDP. We also included a measure of political risk derived from *Institutional Investor*: the residual from a first-stage regression in which the credit rating was regressed on the ratio of debt to GNP, the debt rescheduling dummy, the ratio of reserves to GNP, the rate of GDP growth, and the variance of export growth. Finally, to proxy for industrial-country credit conditions, we used the yield on ten-year U.S. treasury bonds and the difference between the ten-year and one-year U.S. treasury rates.[4]

Estimating the issuance equation requires information on those who did not issue bonds.

---

[4]Ten-year rates are appropriate since the term to maturity of the underlying asset roughly coincides with that on the international bonds in our sample.

For this purpose, we distinguished three types of issuers: sovereign, public, and private, and for each quarter and country where one of these issuers did not come to the market, we recorded a zero (and where they did we recorded a one).

3. Updating the Basic Results

Table 3 reports the basic results.[5] These estimates differ from those in our previous paper by virtue of the availability of data for 1999 and, therefore, additional observations. In addition, unlike the previous paper, we drop the observations for Israel, since Israeli government bonds enjoy special U.S. government guarantees, which presumably affect their spreads. While dropping these observations strikes us as appropriate, it turns out that none of our results is affected by their inclusion. Given both additions and subtractions, we now have 2306 observations.[6]

Country and borrower characteristics enter with signs and coefficients little changed from those in our previous paper. Borrowers from fast growing-countries with little political risk pay relatively low spreads, as before, while borrowers from countries with a recent history of debt-servicing difficulties pay high ones. The critical variable is the dummy for UK (versus U.S.) law. Its coefficient is negative but insignificantly different from zero at standard confidence levels.

But when we distinguish between more and less credit-worthy borrowers, we obtain

---

[5]These correct for both the endogeneity of the choice of governing law and the selectivity associated with the borrowing decision.

[6]Up from 2217 in our previous paper.

7

sharper results. In columns 2 and 3 we interact the dummy variables for governing law (or the predicted probabilities of issuance under a particular law) with four credit-rating categories.[7] There is a strong negative coefficient on UK law for borrowers from the most credit-worthy countries. The coefficient on the interaction term differs significantly from zero at the 95 per cent confidence level. A chi-squared test indicates that the sum of the coefficients differs from zero at the 95 per cent confidence level.

An explanation for this pattern is as follows. More credit-worthy emerging-market borrowers value their capital-market access and are unlikely to walk away from their debts. Including collective-action clauses in their loan contracts is not a significant source of moral hazard. Indeed, in the exceptional circumstance that they have difficulties in servicing their debts, the fact that they can resort to provisions facilitating the orderly restructuring of their obligations is viewed positively by the markets. For less credit-worthy borrowers, in contrast, the presence of collective-action clauses significantly aggravates moral hazard and increases borrowing costs. Still, the fact that collective-action clauses allow such borrowers to restructure in a more orderly fashion is attractive to their creditors. The two effects tend to work in opposite directions, resulting in a relatively small and insignificant overall impact on borrowing costs.

Based on the regressions in columns 2 and 3, we estimate that the presence of collective action clauses raises spreads by 150 basis points for borrowers from countries with low credit ratings, while lowering them by 53 basis points from countries with high ratings. Both figures are

---

[7]The omitted alternative is the lowest rating category (0-30 on the *Institutional Investor* scale). Note that these are the unadjusted credit ratings, not the residuals from our political-risk regressions.

calculated at the average value of the log of the spread for the respective category. These are not insignificant effects relative to a typical emerging-market spread of 600 basis points.

4. Results for Sovereigns Alone

In our previous paper, we did not estimate the effect of choice of governing law separately for sovereigns. There is an argument that the results should not differ, namely the sovereign ceiling, that spreads on private bonds cannot fall below the ceiling established by spreads on sovereign bonds. Anything which pushes down spreads for private borrowers (e.g. for borrowers with good credit ratings) should also push down the spreads for sovereign borrowers (and conversely for borrowers from countries with poor credit ratings). We suspect that this view takes the notion of the sovereign ceiling too literally; in any case, the sovereign ceiling has been breeched in a growing number of cases in recent quarters.

More interesting are arguments about moral hazard and renegotiation costs specific to sovereign debt. Since those who issue such instruments enjoy sovereign immunity, the moral hazard created by renegotiation-friendly provisions may be even greater than for other borrowers; this should render collective-action clauses less attractive. On the other hand, given the inapplicability of even domestic bankruptcy and insolvency procedures to sovereigns (no provision for cramdown, for example), provisions facilitating orderly restructuring, and therefore collective-action clauses, may be more attractive than in the case of other debts. Again, the question is an empirical one.

The second set of regressions is for sovereigns only (again excluding Israel). Again we

9

distinguish borrowers with credit ratings above 50 and below 50. The coefficient on UK governing law for low-rated sovereigns is 0.39, with a t-statistic of 1.74, significantly different from zero at the 10 per cent confidence level (two-tail test). This is indistinguishable from the previous coefficient (for the sample comprised of sovereigns and other borrowers alike of 0.40). For high-rated sovereigns, the coefficient on UK governing law is -1.11, but has a t-statistic of only 1.11 (not surprisingly given the small number of observations). This is, however, strikingly similar to the full-sample coefficient of 1.04. The impact on spreads, again calculated at the average value of the log of the spread for the respective category, suggests that the presence of collective action clauses raises spreads by 130 basis points for low-rated sovereigns (recall that the full sample equivalent was 150 basis points), while lowering them by 53 basis points for countries with high ratings, the same as before.

The limitation of this test is that we have only 402 observations for low-rated sovereign borrowers and 40 observations for high-rated sovereign borrowers, compared to which the number of parameters to be estimated is large. This suggests an alternative approach: to estimate the model for sovereign and other borrowers together but to allow the coefficients on the governing laws to differ between them (while constraining the other coefficients to be the same for sovereigns and other borrowers, as in Table 3). In other words, we take the specification in Table 3 and add a set of interaction terms between sovereign status and choice of governing law (the fitted value of the latter, as before). If the same results hold for sovereigns as for other borrowers, we expect the coefficients on the governing laws to have the same signs and significance levels to be unchanged and the newly-added interaction terms to enter with

coefficients that differ insignificantly from zero.

This is what we find. The coefficients on UK governing law have the same signs as before (positive for low-rated borrowers, negative for high-rated borrowers) and both differ from zero at the 99 per cent confidence level. Neither interaction term for sovereigns approaches significance at conventional confidence levels.[8]

Thus, we find little difference in the results between sovereigns and other borrowers. It may be that both the attractions of orderly restructuring and problems of moral hazard are in fact more pronounced for sovereigns but that, since they work in opposite directions, their effects cancel out.[9]

4. Conclusions and Policy Implications

This paper has updated and extended our previous findings concerning the impact of collective-action clauses on borrowing costs. Those earlier results are robust to the addition of data for 1999, when the markets plausibly began to focus on possible adverse implications of these provisions in the context of the IFI's new bail-in strategy. And we find that the same results

---

[8]That for high-rated sovereigns has a t-statistic of 0.82, that for low-rated sovereigns a t-statistic of 1.48.

[9]That we find the same results for nonsovereign borrowers alone (which we have verified in additional regressions, not reported here) raises interesting issues of its own. It is sometimes suggested that collective-action clauses should be of interest only to sovereign borrowers, since for nonsovereigns the bankruptcy court has the power to cram down settlement terms on maverick creditors even under U.S. law. On the other hand, actual bankruptcy is likely to be an expensive alternative. The fact that a considerable number of nonsovereigns borrow using instruments subject to UK law suggests that U.S.-style bonds may create problems even for nonsovereigns. Buchheit and Gulati (2000) suggest reasons why this might be the case.

11

obtain for sovereigns as for all borrowers.

If these findings — and our interpretation of them — is correct, then progress in strengthening the international financial architecture should proceed through market behavior at the national level as much as official action at the international level. We should observe a growing number of borrowers with favorable credit ratings, governments in particular, adopting collective action clauses because they recognize these as being in their self interest. At the beginning of 2000, the United Kingdom quietly included a collective-action clause in one of its international bonds. In April Canada announced that it planned to do the same in its future bond issues (Martin 2000). The question now is whether others will follow.

Table 1: Number of bonds by governing law (annual average rate of issuance)

	1991-1997	1998	1999-Q1,Q2
Private issuers			
UK governing law	102	29	46
US governing law	69	66	58
Other governing laws	27	11	20
Public issuers			
UK governing law	35	14	18
US governing law	20	15	10
Other governing laws	26	9	32
Sovereign issuers			
UK governing law	18	30	36
US governing law	15	31	48
Other governing laws	26	28	28

Note: annual rate of issuance derived by dividing total number of issues in the period 1991-1997 by seven and multiplying the number of issues in the first half of 1999 by two.

Source: see text.

Table 2: Multinominal logits for choice of governing law

Variable	UK governing law	Other governing laws
Log Amount	-0.47	-0.71
	(-6.04)	(-7.24)
Maturity	-0.12	-0.13
	(-6.92)	(-6.26)
Private placement	-0.32	-0.82
	(-2.89)	(-5.13)
Log of 10 year US. Treasury Rate	0.54	1.17
	(0.94)	(1.57)
Log (10 year - 1 year) Treasury Rate	0.38	0.76
	(4.20)	(5.97)
Credit Rating Residual	-0.02	0.006
	(-2.55)	(0.65)
Debt/GNP	-1.86	-0.63
	(-3.89)	(-1.01)
Debt Service/Exports	0.42	1.28
	(0.88)	(1.92)
GDP Growth	-6.22	-25.88
	(-0.79)	(-2.63)
Standard Deviation of Export Growth	-1.18	-0.02
	(-1.32)	(-0.02)
Ratio of Short Term Debt to Total Debt	1.94	-0.32
	(2.59)	(-0.34)
Reserves/Short Term Debt	-0.09	0.02
	(-1.31)	(-0.29)
Reserves/Import	0.28	0.08
	(4.17)	(0.91)
Ratio of Domestic Credit to GDP	-0.22	0.23
	(-3.26)	(2.72)
Dummy for :		
Public Borrower	-0.77	-0.92
	(-1.89)	(-2.09)
Private Borrower	-1.19	-1.58
	(-2.80)	(-3.36)
Supranational borrower	0.03	-1.04
	(0.04)	(-0.98)
Latin America	-1.43	-1.33
	(-6.03)	(-4.21)
Japanese Yen issue	2.18	4.05
	(6.45)	(11.74)
Deutch Mark issue	2.25	5.30
	(5.71)	(13.38)
Other currencies' issue	2.12	3.58
	(7.82)	(12.16)
Fixed rate issue	-1.90	-0.65
	(-11.00)	(-2.81)
Manufacturing Sector	0.24	-0.21
	(0.94)	(-0.62)
Financial Services Sector	0.34	-0.14
	(2.07)	(-0.63)
Other Services	-0.06	0.36
	(-0.21)	(1.01)
Government entities	-0.52	-0.68
	(-1.27)	(-1.51)
Constant	4.73	2.78
	(3.48)	(1.60)
Number of bonds	2660	2660
Pseudo R-square	0.35	0.35
Log of Likelihood	-1833.77	-1833.77

* US. Governing law is used as the base.

14

Table 3: Impact of governing laws for different credit rating categories

Variable	Full Sample			Sovereign Borrowers Only		
	All	Credit rating <50	Credit rating >50	All	Credit rating <50	Credit rating >50
Log Amount	-0.05	-0.05	-0.11	0.02	0.01	-0.40
	(-2.74)	(-2.65)	(-2.99)	(0.57)	(0.48)	(-1.83)
Maturity	-0.0007	.0046	0.0002	0.01	0.005	-0.02
	(-0.29)	(1.85)	(0.06)	(1.63)	(1.35)	(-0.98)
Private placement	0.09	0.06	0.08	0.08	0.08	-0.91
	(2.85)	(2.17)	(1.37)	(1.72)	(1.72)	(-3.55)
Log of 10 year US. Treasury Rate	-0.37	-0.43	-0.27	-0.28	-0.39	1.55
	(-2.55)	(-3.04)	(-0.95)	(-1.13)	(-1.56)	(1.55)
Log (10 year - 1 year) Treasury Rate	-0.04	-0.03	-0.03	-0.02	-0.02	-0.08
	(-1.40)	(-1.43)	(-0.51)	(-0.54)	(-0.36)	(-0.48)
Credit Rating Residual	-0.04	-0.03	-0.08	-0.03	-0.04	-0.06
	(-16.63)	(-11.11)	(-15.89)	(-6.52)	(-8.17)	(-1.75)
Debt/GNP	1.37	1.62	1.02	0.86	1.29	1.45
	(12.53)	(12.72)	(5.12)	(4.61)	(6.30)	(1.34)
Debt Rescheduled in Previous Year	0.17	0.10		-0.04	-0.02	
	(3.88)	(2.71)		(-0.47)	(-0.24)	
GDP Growth	-13.05	-7.07	-39.30	-11.47	-12.83	-29.08
	(-6.84)	(-3.88)	(-7.24)	(-4.09)	(-4.60)	(-1.73)
Standard Deviation of Export Growth	2.07	1.76	4.05	1.40	1.39	11.32
	(10.00)	(9.26)	(5.67)	(5.31)	(5.43)	(5.33)
Short Term to Total Debt	0.69	0.65	0.81	0.25	0.50	-1.27
	(3.88)	(3.53)	(1.89)	(0.93)	(1.89)	(-0.85)
Reserves/Short Term Debt	-0.0007	-0.05	0.08	-0.05	-0.06	0.06
	(-0.05)	(-4.05)	(2.53)	(-2.58)	(-3.15)	(0.65)
Ratio of Domestic Credit to GDP	-0.07	-0.18	-0.16	-0.06	-0.10	0.19
	(-3.69)	(-7.26)	(-4.30)	(-1.58)	(-2.27)	(1.19)
Dummy for :						
UK Governing Law*	-0.08	0.40	-1.04	0.22	0.39	-1.11
	(-0.54)	(2.86)	(-3.49)	(0.88)	(1.74)	(-1.11)
UK Governing Law Interactions With:						
Rating 30-50	-0.08			0.14		
	(-0.88)			(0.86)		
Rating 50-70	0.15			-0.34		
	(1.20)			(-0.89)		
Rating 70-90	-0.34					
	(-2.32)					
Other Governing Law*	0.12	0.01	-0.91	-0.11	-0.26	-4.93
	(0.44)	(0.06)	(-2.20)	(-0.24)	(-0.90)	(-2.41)
Other Governing Law Interactions With:						
Rating 30-50	-0.28			-0.24		
	(-1.53)			(-0.81)		
Rating 50-70	-0.82			-0.98		
	-3.98			(-2.80)		
Rating 70-90	-0.65					
	(-2.70)					
Constant	5.76	5.47	7.57	5.64	5.50	5.18
	(16.41)	(14.80)	(10.76)	(9.48)	(8.96)	(2.73)
Lambda	-0.58	-0.50	-0.53	-0.54	-0.52	0.03
	(-25.22)	(-21.17)	(-10.36)	(-12.82)	(-13.02)	(0.10)
Number of bonds	2306	1467	839	442	402	40
Adjusted R-square						
Log of Likelihood	-4637.078	-2651.377	-1500.81	-960.14	-770.49	-99.38

Note: Dummy variables for public, private, supranational, fixed, Latin America, currencies, and industrial sectors are included in the regression but not reported here.

References

Buchheit, Lee C. and G. Mitu Gulati (2000), "Exit Consents in Sovereign Bond Exchanges," *UCLA Law Review* (forthcoming).

Eichengreen, Barry and Ashoka Mody (2000), "Would Collective Action Clauses Raise Borrowing Costs?" NBER Working Paper no.7458 (January).

Fischer, Stanley (1999), "Learning the Lessons of Financial Crises: The Roles of the Public and Private Sectors,' Speech to the Emerging Market Traders' Association Annual Meeting, New York (December 9), http://www.imf.org/external/np/speeches/1999/120999.HTM.

Group of Seven (1998), *Declaration of G-7 Finance Ministers and Central Bank Governors*, http://www.imf.org/external/np/g7/103098dc.htm.

Group of Seven (1999), "Strengthening the International Financial Architecture," Report of G7 Finance Ministers to the Koln Economic Summit, Cologne, 18-20 June 1999, http://www.ustreas.gov/press/releases/pr3210b.htm.

Group of Ten (1996), *Resolving Sovereign Liquidity Crises*, Washington, D.C.: Group of Ten.

Group of Twenty-Two (1998), *Report of the Working Group on International Financial Crises*, Washington, D.C.: Group of Twenty Two.

Martin, Paul (2000), "The Honourable Paul Martin, Minister of Financial and Governor of the IMF for Canada, Speaking on Behalf of Antigua and Barurda, The Bahamas, Barbados, Belize, Canada, Dominica, Grenada, Ireland, Jamaica, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines," http://www.imf.org/external/spring/2000/imfc/can.htm (16 April).

Rubin, Robert (1999), "Remarks on Reform of the International Financial Architecture to the School of Advanced International Studies," *Treasury News* (21 April), RR-3093.

	Title	Author	Date	Contact for paper
WPS2340	Currency Substitution in Latin America: Lessons from the 1990s	Pere Gomis-Porqueras Carlos Serrano Alejandro Somuano	May 2000	M. Puentes 39621
WPS2341	The Tyranny of Concepts: CUDIE (Cumulated, Depreciated Investment Effort) Is *Not* Capital	Lant Pritchett	May 2000	R. Widuri
WPS2342	What Can We Learn about Country Performance from Conditional Comparisons across Countries?	Martin Ravallion	May 2000	P. Sader 33902
WPS2343	Ownership and Performance of Lithuanian Enterprises	David A. Grigorian	May 2000	D. Brown 33542
WPS2344	Designing Direct Subsidies for Water and Sanitation Services: Panama—A Case Study	Vivien Foster Andrés Gómez-Lobo Jonathan Halpern	May 2000	S. Delgado 37840
WPS2345	Information and Modeling Issues in Designing Water and Sanitation Subsidy Schemes	Andrés Gómez-Lobo Vivien Foster Jonathan Halpern	May 2000	S. Delgado 37840
WPS2346	The Middle Class Consensus and Economic Development	William Easterly	May 2000	K. Labrie 31001
WPS2347	Terror as a Bargaining Instrument: A Case Study of Dowry Violence in Rural India	Francis Bloch Vijayendra Rao	May 2000	P. Sader 33902
WPS2348	Taxing Issues with Privatization: A Checklist	Jack M. Mintz Duanjie Chen Evangelia Zorotheos	May 2000	G. Chenet-Smith 36370
WPS2349	Trade, Foreign Direct Investment, and International Technology Transfer: A Survey	Kamal Saggi	May 2000	R. Bonfield 31248
WPS2350	Multilateral Trade Liberalization and Political Disintegration: Implications for the Evolution of Free Trade Areas and Customs Unions	Maurice Schiff	May 2000	L. Tabada 36896
WPS2351	Environmental Policy and Time Consistency: Emissions Taxes and Emissions Trading	Peter W. Kennedy Benoît Laplante	May 2000	Y. D'Souza 31449

Policy Research Working Paper Series

	Title	Author	Date	Contact for paper
WPS2352	How Stronger Patent Protection in India Might Affect the Behavior of Transnational Pharmaceutical Industries	Carsten Fink	May 2000	L. Tabada 36896
WPS2353	The São Mateus-Jabaquara Trolleybusway Concession in Brazil	Jorge Rebelo Pedro Machado	May 2000	S. Van Veldhuizen 38722
WPS2354	When the Bureaucrats Move out of Business: A Cost-Benefit Assessment of Labor Retrenchment in China	Yi Chen Ishac Diwan	May 2000	M. Yafi 34649
WPS2355	Greed and Grievance in Civil War	Paul Collier Anke Hoeffler	May 2000	A. Kitson-Walters 33712
WPS2356	Bureaucratic Delegation and Political Institutions: When Are Independent Central Banks Irrelevant?	Philip Keefer David Stasavage	June 2000	P. Sintim-Aboagye 37644
WPS2357	Evaluating Carbon Offsets from Forestry and Energy Projects: How Do They Compare?	Kenneth M. Chomitz	June 2000	J. Ancrum 33512
WPS2358	Why Infrastructure Financing Facilities Often Fall Short of Their Objectives	Daniela Klingebiel Jeff Ruster	June 2000	M. Salehi 37157
WPS2359	Reducing Carbon Dioxide Emissions Through Joint Implementation of Projects	Will Martin	June 2000	L. Tabada 36896
WPS2360	Corruption and the Composition of Foreign Direct Investment: Firm-Level Evidence	Beata K. Smarzynska Shang-Jin Wei	June 2000	H. Sladovich 37698
WPS2361	The Welfare Effects of Private Sector Participation in Guinea's Urban Water Supply	George Clarke Claude Ménard Ana Maria Zuluaga	June 2000	H. Sladovich 37698
WPS2362	A Transitory Regime: Water Supply In Conakry, Guinea	Claude Ménard George Clarke	June 2000	H. Sladovich 37698