HAVE COMMERCIAL BANKS IGNORED HISTORY?

Sule Ozler

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ABSTRACT

This paper investigates the impact of past defaults, and of recently acquired sovereignty on the terms of bank loans for developing countries in the 1970s. We control for countries' repayment indicators and for a measure of their political stability. Our findings are that: 1) The repayment difficulties of the period prior to the 1930s do not have a statistically significant impact on the credit terms. In contrast, the defaults of the 1930s and the post war defaults and repayment difficulties do have a statistically significant impact on credit terms. These findings are in contrast to those studies that focused on crises periods in these markets. Our results suggest that countries' repayment behaviour influence their later market access. 2) Nations that achieved sovereignty recently were charged higher rates than nations that were sovereign before the 1940s. In fact, recently sovereign borrowers were charged as high rates as the defaulters of the former episodes. This finding suggests that markets attach risk premium for new institutions.

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1.   Introduction

The developing-country debt crisis has raised several questions concerning creditor - debtor relations, in academic as well as policy circles.   In particular, a central issue is whether and how banks can credibly punish badly behaved borrowers, and, thus, why a country has any incentive to repay.[1]   Two distinct explanations for the observed repayment of foreign debt have been suggested.   The first assumes that a debtor's primary incentive to make repayments is to preserve its reputation as a good borrower (the seminal paper on this point is Eaton and Gersovitz (1981)[2]).   The second approach assumes that the primary motivation for repayment is the threat of direct sanctions, such as trade sanctions (Bulow and Rogoff (1989 a,b)[3]).   According to this view having a "good" reputation does not enhance the ability to borrow.

Whether good repayment behaviour enhances the access of borrowers to the credit market (or bad behaviour diminishes it) is an empirical question.   It must be investigated noting that private lending to sovereign borrowers has historically followed waves.   Periods of expansion, during which defaults (or repayment difficulties) of individual countries were isolated events, have been followed by periods of widespread default after which the market entered a stagnation period until the emergence of a new wave some years later.[4]   During crisis periods, markets appear to be completely shut down to all borrowers (see Cardoso and Dornbush (1989), Eichengreen (1989, 1991), Eichengreen and Portes (1989), Jorgensen and Sachs (1989), and Lindert (1989)).   However, as there may be externalities specific to crisis periods, an investigation that focuses on a period of widespread crisis or stagnation may not provide sufficient evidence to reject the presence of reputational considerations in credit market access.   No

enforcement mechanism appears to support new loans, during crisis periods.

In the current study, we empirically investigate the impact of borrowers' repayment history on credit market access. To distinguish the impact of an individual borrower's repayment history from the impact of a widespread panic, we focus on a period of market expansion. The repayment problems considered pertain to the post-war period as well as 1820 through the 1930s. Included in the sample are developing countries that borrowed from commercial banks during the 1970s. The countries in the sample are of two groups: (1) countries that were sovereign borrowers prior to the 1940s, which have a record of either being a good repayer or a defaulter for the former episodes of lending, and (2) countries that acquired sovereignty only after 1945.

The first finding is that countries with histories of repayment difficulties were charged higher interest rates than countries with no repayment difficulty. The second empirical finding pertains to the impact of recently acquired sovereignty. We find that countries that acquired sovereignty in the post-war period were charged higher interest rates. In fact, recently sovereign borrowers were charged rates as high as the defaulters of the former episodes.

In Section 2, the impact of previous defaults on credit terms is investigated. The impact of recently acquired sovereignty is investigated in Section 3. A discussion of our results, the results from the related empirical literature and what we may learn concerning the long term behaviour in these markets is provided in Section 4. Section 5 contains concluding remarks.

2.   Did previous defaults have an impact on credit terms ?

2.1. Methodology

The relationship between the spread above the interbank rate, s, and the probability of default, p, is given by:

$$(1) \qquad s = \frac{p}{(1-p)} \theta \ ,$$

where θ represents other variables, such as the interbank rate, that affect the spread (see Feder and Just (1977) and Edwards (1984) for earlier applications).[5]

Following convention, we assume that the functional form of p is logistic. Incorporating a dummy variable, D, for prior repayment problems, the estimation equation becomes:

$$(2) \qquad \ln s = a_0 + \Sigma \ a_j x_j + d \ D + w$$

where x = a vector of k variables relevant to the probability, p, and

    w = random error term.

In obtaining (2) from (1) $\ln \theta$ is assumed to be equal to a constant plus a random component.

Estimations are conducted employing time-specific as well as geographic region-specific dummy variables, as there may be variations over time and across regions that are not captured by other variables employed.

2.2. Data and Variable Definitions

The data employed contain information on 1525 commercial bank loan contracts to 26 countries from Eurocurrency credit markets during the 1968-1981 period. The 26 countries in the sample have two important features: 1) they are classified as developing countries by the World Development Report for the period, 2) they have held sovereign loans prior to the post-war period (Lindert and Morton (1989)). A data appendix describes the nature and the sources of the loan data.

Repayment histories of these countries are summarized in the Appendix, Table A.1. Defaults on privately held bonds are presented for three episodes: 1820-1899, 1900-1929 and the 1930s. The repayment problems of the 1958-1968 period are captured by three other indicators: an indicator for problems with privately held bonds, an indicator of multilateral rescheduling agreements with official creditors, and an indicator of IMF Standby Agreements.

Sample characteristics of the spread data on a country basis are also in Table A.1 in the Appendix. The average value of spreads over the contracts during the period is 1.90 for Bolivia (highest among the 26 countries) and .89 for Thailand (lowest among the 26 countries). The ratio of the mean of spreads over the contract to the standard deviation is on the order of .3 for a number of countries in the sample.

For the estimations we pool the cross-section and time-series observations. The contract level data are aggregated annually, using loan amounts as weights for avereging spreads. The time specific dummy variable in this case takes the form of year dummies. As an alternative, contract level data are left unaggregated. In this case the time specific dummy variable is for each month

of each year whenever there is loan contract. A dummy variable for Latin America is also incorporated in either case.

The economic determinants of the spreads in the period under consideration are controlled for by employing variables that are similar to the ones used in the literature. As these variables have been used extensively in studying developing country debt issues, we only provide a brief summary of them in the Data Appendix (see Eaton and Taylor (1986) and Eichengreen (1991) for reviews; see also Eaton and Gersovitz (1981), Edwards (1984), Eichengreen and Portes (1986), Fernandez and Ozler (1991), Ozler (1991), Ozler and Huizinga (1991)).

An important addition to the set of economic variables is the borrowers' political characteristics. The theoretical model considered by Ozler and Tabellini (1991) isolates the degree of political instability, defined as the probability of imminent goverment change, as an important variable in a country's external borrowing. Hence, a political instability variable (described in the Appendix) is also incorporated.

2.3.Results

The sample means of spreads for defaulters versus non-defaulters are compared. For each repayment difficulty indicator, the mean of defaulters is found to be higher than those of non-defaulters (reported in Table A.2.). An "F" test rejects the null hypothesis that the means of the two samples are equal. Furthermore, the finding holds separately for each year of the sample, rejecting the null hypothesis that the means of the two groups are equal in any given year in the sample.

In Table 1, the impact of former defaults is presented. More recent defaults are found to have been more important in influencing the spreads:

Defaults prior to the 1930s do not have any impact on credit terms. Defaults of the 1930s and repayment problems of the post-war period, however, are found to have a statistically significant impact.[6] The impact of the defaults of the 1930s is estimated to be near 0.20 percent and the impact of post-war IMF Standby agreements is estimated to be near 0.30 percent.

Table 2 presents alternative specifications including a 1930s default variable and IMF Standby variable. We introduce a dummy variable for Latin America, and a political instability indicator, neither of which has a statistically significant impact on spreads. The 1930s default variable, and the IMF Standby variable are jointly employed. They are both statistically significant, and their cumulative impact is near 40 percent. In specification 2 of Table 2 contractual level data and an alternative set of economic indicators as determinants of spreads are employed. The qualitative results concerning the impact of the 1930s default variable and the IMF Standby variable are found to be robust.

Overall, our results suggest that defaulters of the recent past were charged statistically significantly higher rates than non-defaulters, and the behaviour of the distant history did not matter. During the period the average spread for Bolivia was 1.90 and for Portugal .93. Depending upon the alternative repayment difficulty indicator employed (.10 or .40), the impact of default is estimated as 11 to 50 percent of the spreads, evaluated at the mean of our sample (1.32)[7]. If we use the cumulative affect of IMF and 1930 default for Bolivia the sample, we find that the spread would have been 1.27 without this affect. In fact, the empirical results suggest that default history explains an important portion of the difference in the spreads.

3. How did recent sovereignty affect credit terms?

Many countries achieved sovereignty in the post war period and hence did not have a history of sovereign borrowing. How did these countries' access to the market in the 1970s compare to those that had sovereign experience ? To answer this question we included countries that were not sovereign earlier. With this extention, the sample now includes 64 countries with a total of 2170 loans.

Countries that were not sovereign anytime between 1820 and the 1930s contracted spreads of the order of 1.28 percentage points (with a standard error of .48). This number is roughly the same order of magnitude as the spreads that were charged to sovereign defaulters and higher than that of sovereign non-defaulters. In the group of countries which recently acquired sovreignty (38 countries total), African countries (21 countries) were charged the highest spreads. This average spread is 1.41 (with a standard error of .40) compared with 1.20 (with a standard error of .49) for the remaining countries.

Table 3 presents estimates of the impact of recently acquired sovereignty. The estimated equation and specifications employed are as before, except now we have a dummy variable for sovereignty, instead for defaults. The variable "sovereign", is one for countries that were sovereign in the former episodes of lending and zero otherwise. The variable is found to have a negative and statistically significant impact of 0.16 percent on the spreads. Including a political instability indicator does not alter this finding.

To demonstrate the misleading nature of the results one could obtain by assuming that no record is the same as a good record, consider the following: group the countries that were not sovereign during the period (1820-1930s), with the countries that were sovereign and had no repayment problems. Consider a

second group of countries that were sovereign with bad repayment records. The average spreads of the bad record countries is found to be lower than the other, mixed group.[8]

Overall, then, the recently sovereign nations are found to have been charged higher rates than countries that were sovereign borrowers in the period prior to the 1940s.

4.   How do our results compare with those of others ?

The empirical studies concerning the impact of credit history have given support to the view that credit history has no impact on credit market access.

These studies can be grouped in two sets: In the first set, which includes this study, an expansion stage in lending, which is separated from a previous, widespread non-payments crisis is investigated.[9] Lindert and Morton (1989) and Chowdry (1988) conclude that former defaulters (1820s- 1930s) paid less than governments with "unblemished records".[10] The "unblemished record" group is created by assuming that countries that had no record belong to the same risk class as those that had good repayment records. As demonstrated above, this assumption which derives their results is not validated by the data.

The second set of studies investigates the impact of repayment behaviour on later market access by focusing on a period of stagnation in private lending, following a widespread crisis. The overall conclusion of these studies is that there was a general cut-off of lending and the borrowers who behaved 'well' prior to the widespread crisis, suffered from this also (see Cardoso and Dornbush (1989), Eichengreen (1989,1991), Eichengreen and Portes (1989), Jorgensen and Sachs (1989), and Lindert (1989)). These studies, which are very important in

investigating panics, do not, however, provide sufficient evidence to reject the presence of reputational considerations in credit market access. During panics and stagnation, no enforcement mechanisms appear to support the making of new loans.

Our results and of those others who studied the collapse period are not inconsistent and in fact, when put together, give us a broader overview of how financial markets operate. Specifically, evidence suggests that financial market behaviour differs during periods of stagnation and buoyancy in terms of its tendency to discriminate among countries according to their past repayment record. During a period of widespread repayment problems, lenders do not pay attention to creditworthiness of particular borrowers. In contrast, in normal times, when defaults are isolated events, the financial markets appear to focus on the creditworthiness of particular countries.[11]

One plausible way of interpreting these facts is to take an approach analogous to that of Sachs (1984) (see also in Krugman (1985)).[12] When defaults become frequent and reach a certain threshold level, banks may develop beliefs that all borrower countries will fail to make payments leading to a general cut-off of lending. From the point of view of the borrower countries, the notion that banks have developed such expectations, and, therefore, that no new loans will be forthcoming, will make generalized defaults more likely. This is because even 'good' countries will find it worthwhile to default since they expect that in the future they will be penalized even if they do not default. Thus, it is rational for each bank to stop lending on the basis of these expectations. In addition, the latter becomes self-confirming, and a widespread crisis emerges with all mechanism for continued lending and repayment breaking down.

5. Conclusions

This paper investigates the impacts of past defaults, and of recently acquired sovereignty on the terms of bank loans for developing countries in the 1970s. Our findings are that: 1) The repayment difficulties of the period prior to the 1930s do not have a statistically significant impact on the credit terms. In contrast, the defaults of the 1930s and the post war defaults and repayment difficulties do have a statistically significant impact on credit terms. 2) Nations that achieved sovereignty recently were charged higher rates than nations that were sovereign before the 1940s. In fact, recently sovereign borrowers were charged as high rates as the defaulters of the former episodes.

The impact of default variables is estimated to be in the range of 0.10 to 0.50 percent of spreads. These are not large numbers in an absolute sense, however, they explain an important component of the difference accross countries for the period. As the 1970s were a period of optimism, the spreads on new loans moved in a relatively narrow range. It is interesting that even during such a period of optimism and expansion, repayment history explains an important portion of the spreads.

It is also interesting that the repayment behaviour of countries as far back as the 1930s matter at all. One may think that the nature of borrower governments and the identity of the lenders would have changed by the time of the surge of lending in the 1970s, and that history would have been forgotten. Even though governments may have changed since the 1930s, different politicians may continue to be the expressions of the same social groups or constituencies. As a consequence, it is not unreasonable that the creditors would punish early defaulters as a deterrent. As for the creditor country institutions, it is not

clear that the 1930s decade is much of a distant history. A number of institutional changes concerning banking in the creditor governments, such as the deposit insurance system, have been developed in response to the crisis of the 1930s.

This investigation contributes to the existing literature in several ways and suggests important areas of future work: First, this paper argues that financial market behaviour may differ during periods of stagnation or buoyancy in terms of its tendency to discriminate among countries according to their past repayment record. Second, the financial markets' tendency to focus on the creditworthiness of particular countries may depend on whether defaults are isolated events or are widespread phenomena.

Third, the evidence indicates that credit market access is influenced by more recent repayment history, but not by distant history. This suggests that harshar penalties may be obtained when the impact of contemporaneous non-payment behaviour on credit market access is investigated.[12]

Finally, the finding that countries that acquired sovereignty recently were charged higher interest rates may suggest that markets attach a risk premium for new institutions.

[1] Contract enforecement problems are ignored in some studies which suggest that there should be a greater integration of world capital markets. For a survey of the empirical evidence on international capital mobility see Obstfeld (1986).

[2] See also Eaton (1989), Eaton, Gersovitz and Stiglitz (1986), English and Cole (1987), Grossman and van Huyk (1988), Kletzer and Wright (1990), and Manuelli (1986).

[3] See also Gersovitz (1983) and Kahn (1984) in which default leads to loss of trade. Sachs and Cohen (1985) formalize punishment as a loss to GNP, which is discussed as a consequence of both trade and future credit embargos.

[4] The reoccurence of debt crisis and the mechanisms that trigger them have been pointed out by numerous studies see for example Diaz-Alejandro (1984), Fishlow (1985), Eichengreen and Portes (1986), Kindleberger (1978), Sachs (1985). For a recent recapitulation of some of the issues see (Lindert and Morton (1989).

[5] Data on fees and commissions are not available. Previous studies such as Feder and Just (1977b) and Edwards (1984) also suffer from this inadequacy. It is noted, however, that these costs are low relative to spreads (see Edwards p. 728 and Cline pp. 82-83).

[6] We also investigated the impact of extent of default. A measure of the cost of default to the lenders could be obtained for 4 countries and have a total of 158 observations in our sample (the countries are: Bolivia, Chile, Colombia and Peru.(see Jorgensen and Sachs (1989)) The cost of default for these countries respectively are: 92%, 69%, 37%, and 61%). We estimated equation (2) by replacing the repayment problem dummy variable with this measure of cost. The result is that countries with less costly defaults paid lower spreads. The coefficient for the measure of loss is estimated as .44 with a "t" value of 3.9. The beta coefficient for this parameter, which is estimated as .56 indicates that a one standard deviation increase in the cost of default to the lenders causes the spreads to increase to 1.55 percentage points from 1.29.

[7] The mean for the bad record group is 1.21 but for the mixed group is, 1.25. The results continue to be consistent with this finding if the sample is restricted to the 1976-1980 period, as done by Lindert and Morton (1989).

[8] Note that in the estimation the dependent variable is in logarithmic form.

[9] Our result, that creditors paid attention to repayment record of borrowers, is consistent with that of Eichengreen and Portes (1989). The authors investigate a period of buoyancy (the 1920s) and suggest that in pricing of foreign bonds investors discriminated borrowers according to their past repayment record.

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[10] These authors focus on the 1976-1980 period. The findings of our paper are robust to restricting our sample period to 1976-1980.

[11] Other evidence consistent with this view concerns the impact of reschedulings on the stock market value of lender banks. For example Ozler (1989) demonstrates that the impact of non-payment events on the lender bank values during the 1970 when defaults were isolated events were positive. In contrast the impact in the post 1981 debt crisis period was negative.

[12] In Sachs (1984), a borrower with large outstanding debt to a large number of small creditors, though fundamentally healthy, experiences a liquidity crisis and is unable to obtain loans in a competitive equilibrium. This is because, each individual bank that has an upward sloping schedule of loan supplies to the country, which is itself a consequence of upward sloping cost of funds, develops the expectation that all other banks will stop lending to that country.

[13] A step in this direction is taken by Ozler (1991), suggesting that good repayment behaviour have been rewarded by improved credit terms.

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APPENDIX

DATA APPENDIX

Loan Data

Loan data for the 1973-81 period are obtained from various issues of the
World Bank's Borrowing in International Capital Markets. The data for the prior
period, however, have been obtained through an exhaustive search of the financial
press as well as the central bank reports of the borrower countries. For more
details on this data set see Ozler (1991).

We use LIBOR (London Interbank Offer Rate) as the base rate, and include
only $U.S.-denominated loans that have variable interest rates to avoid
complications that may arise from comparisons across different types of financial
instruments.

Economic Determinants of Spreads

One specification includes the following: reserves to gdp ratio (RES./GDP),
and ratio of exports to major creditors as a share of total exports (EXPRORT
RATIO) are incorporated to measure the vulnerability of a country to non-payment
penalties. Agriculture as a share of gdp (AGRICULT/GDP)is used as an indicator
of economic instability that affects a borrowers capacity to pay. Total debt to
gnp ratio is incorporated as a measure of solvency. Real gdp per capita (R.
GDP/CAPITA) captures the level of development of the economy.

An alternative specification of economic charecteristics includes debt
service-to-exports ratio (DEBT. SER./ EXP.) as an indicator of liquidity
problems. Imports to gnp ratio, reserves to gnp ratio are incorporated as
measures of vulnerability to non-payment penalties. Gnp growth (REAL GNP
GROWTH), lagged value of investment to gnp ratio capture future prospects for
payment. Rate of inflation and rate of devaluation are employed as indicators
of larger probability of balance of payments crisis and a countries willingness
to use exhange rate adjustments to avoid balance of payments crisis respectively.
Total debt to gnp ratio is also incorporated.

When contract level data are employed for estimations, we consider some
characteristics of the loan contract as possible determinants of spreads. The
infomation available allows us to employ a dummy variable that indicates whether
the borrowing is public or publicly guaranteed, a dummy variable that indicates
if the loan is syndicated, and maturity of the loan. (A possible problem could
arise from the inclusion of maturity to the extent that banks determine spread
and maturity simultaneously. However, based upon practices in the Eurocurrency
market and the previous literature, loan maturity is assumed to be determined
prior to the spread determination.

Political Determinants of Spreads

The measure of political instability employed here, which is an annual estimate of probability of government change, is the same as in Ozler and Tabellini (1991). Specifically, the political instability variable is obtained from a probit model of government change, that uses time-series and cross-section data over the period of 1955-82. The specifications of the probit regressions contain three broad classes of explanatory variables: economic variables designed to measure the recent economic performance of the government, political variables accounting for significant political events that may signal the imminence of a crisis, and structural variables accounting for institutional differences and country specific factors that do not change or change slowly over-time, such as the nature of their political institutions i.e. democracies, democracies in which the election date is determined by a coalition and democracies ruled by a single majoritarian party.

TABLE 1

Did former repayment difficulties affect credit terms?

Constant	-2.09	-2.15	-2.39	-2.17	-2.39
	(-8.64)	(-11.10)	(-10.16)	(-11.20)	(-12.36)
Resv./GNP	-2.22	-2.19	-2.10	-1.87	-2.29
	(-4.54)	(-4.71)	(-4.58)	(-4.36)	(-5.65)
Export ratio	-0.29	-0.24	-0.21	-0.42	-0.49
	(-1.84)	(-1.61)	(-1.89)	(-2.91)	(-3.40)
Agricult./GDP	0.002	0.003	0.003	0.004	0.04
	(1.24)	(0.96)	(0.50)	(1.54)	(2.05)
R.GDP/Capita	-0.001	-0.001	-0.001	-0.001	-0.001
	(-2.65)	(-3.68)	(-1.94)	(-3.41)	(-2.78)
Debt/GNP	0.29	0.14	0.45	0.45	0.38
	(0.96)	(0.78)	(2.20)	(2.35)	(2.10)
1900-1929	0.004	—	—	—	—
	(0.08)				
1930	—	0.20	—	—	—
		(4.44)			
Offc.	—	—	0.13	—	—
			(2.48)		
Bond	—	—	—	0.17	—
				(4.00)	
Standby	—	—	—	—	0.29
					(5.37)
Adj. R^2	.56	.63	59	.61	.65
Nobs	135	131	144	144	144

<u>Notes:</u>

◆The numbers in parentheses are 't' values.

◆The repayment difficulties indicators 1900-1929, 1930, Offc., Bond, and Standby are defined in the appendix Table 1.A.

◆A data appendix describes all the variables employed.

◆<u>Annualized</u> data (weighted average over contracts over each year) are employed.

◆Not reported are year-specific dummy variables.

◆The countries in the sample are: Argentina, Bolivia, Brazil, Chile, Columbia, Costa-Rica, Ecuador, Egypt, El-Salvador, Greece, Guatemala, Honduras, Liberia, Nicaragua, Panama, Peru, Portugal, Thailand, Uruguay, Venezuela, Yugoslavia.

TABLE 2

Did defaults of 1930s affect credit terms: Alternative Specifications

Specification (1)

Constant	-2.45	-2.40	-2.32
	(-12.67)	(-11.93)	(-10.30)
Resv./GNP	-2.68	-2.43	-2.26
	(-5.68)	(-5.23)	(-4.07)
Export Ratio	-0.28	-0.38	-0.51
	(-1.99)	(-2.27)	(-2.33)
Agricult./GDP	0.003	0.002	0.008
	(0.10)	(0.06)	(0.15)
R. GDP/Capita	-0.001	-0.001	-0.001
	(-2.98)	(-3.16)	(-3.20)
Debt/GNP	0.20	0.10	0.15
	(1.12)	(1.07)	(1.56)
Instability		___	-0.16
			(-0.14)
Standby	0.31	0.30	0.32
	(4.97)	(3.50)	(2.73)
1930s		0.11	0.10
		(2.40)	(2.50)
Latin	0.06	0.08	0.12
	(0.81)	(0.98)	(0.66)
Adj R^2	.66	.69	.68
Nobs	131	131	122

Specification (2)

Constant	0.30
	(2.85)
Syndicate	-0.01
	(-0.56)
Public	-0.13
	(-6.78)
Debt/GNP	0.66
	(5.20)
Resv./GNP	-0.16
	(-5.67)
Debt Ser./Exp.	0.003
	(0.78)
Maturity	0.08
	(18.75)
Investment/GNP	-0.40
	(-2.01)
Real GNP Growth	-0.37
	(-2.92)
Imports/GNP	-0.15
	(-1.14)
Inflation	0.48
	(3.71)
Devaluation	-0.02
	(-0.77)
Standby	0.15
	(2.75)
1930s	0.09
	(4.00)
Latin	0.04
	(1.09)
Adj R^2	.49
Nobs	1323

<u>Notes</u>:

◆Specification (1) is as described in Table 1.

◆Specification (2): contract level data are employed.

Not reported are <u>time-specific</u> dummy variables that correspond to each month with a loan contract.

In addition to the countries in specification (1) the following countries are included in the sample: South Africa, Spain, Taiwan.

TABLE 3

Did recent sovereignty affect credit terms?

Constant	-2.08 (-12.80)	-2.25 (-13.17)	Constant	0.98 (11.50)
Resv./GNP	-1.82 (-6.06)	-1.52 (-4.97)	Syndicate	-0.00 (-0.25)
Exports Ratio	-0.11 (-2.76)	-0.05 (-1.84)	Public	-0.13 (-7.80)
Agricult./GDP	-0.006 (-0.09)	0.06 (0.37)	Debt/GNP	0.91 (11.74)
R. GDP/Capita	-0.001 (-3.43)	-0.001 (-3.70)	Res./GNP	-0.04 (-3.05)
Debt/GNP	0.19 (1.22)	0.15 (0.89)	Debt Ser./Exp.	0.004 (1.03)
Instability	____	-0.15 (-1.18)	Maturity	0.09 (24.72)
			Investment/GNP	-1.15 (-8.53)
			Real GNP Growth	-0.04 (-1.03)
			Imports/GNP	-0.02 (-0.64)
			Inflation	0.14 (1.62)
			Devaluation	-0.008 (-0.30)
Standby	0.09 (1.79)	0.07 (1.89)	Standby	0.05 (1.90)
Sovereign	-0.16 (-2.39)	-0.17 (-2.40)	Sovereign	-0.13 (-3.80)
Latin	(0.40) (0.02)	0.03 (0.03)	Latin	0.78 (0.02)
Adj R^2	.53	.52	Adj R^2	.40
Nobs	293	263	Nobs	2169

<u>Notes</u>:

◆See notes to Table 1 and Table 2.

◆The expanded country sample includes 38 <u>new</u> countries: Algeria,
Bahamas, Barbados, Botswana, Burma, Cameroon, Cyprus, Fiji, Gabon,
Ghana, Guyana, India, Indonesia, Iran, Ivory-Coast, Jamaica, Jordan,
Kenya, Madagascar, Malawi, Malaysia, Mauritius, Morocco, Niger, Nigeria,
Pakistan, Papua-New Guinee, Philippines, Senegal, Singapore, South-
Korea, Sri-Lanka, Sudan, Trinidad-Tobago, Tunisia, Zaire, Zambia,
Zimbabwe. (11 from Asia, 21 from Africa, 5 from Latin America)

TABLE A.1

	1820-1900	1900-29	1930s	Offc	Bonds	Mean	St.Deviation
Argentina	1	1	0	1	0	1.15	.49
Bolivia	1	0	1	0	1	1.90	.26
Brazil	1	1	1	1	1	1.47	.50
Chile	1	0	1	1	1	1.22	.47
Colombia	1	0	1	0	1	1.00	.36
Costa Rica	1	0	1	0	1	1.34	.39
Ecuador	1	1	1	0	1	1.10	.40
Egypt	1	0	0	0	0	1.54	.41
El Salvador	1	1	1	0	1	1.73	.10
Greece	1	0	1	0	1	.93	.42
Guatemala	1	1	1	0	0	1.25	.12
Honduras	1	1	0	0	0	1.19	.21
Liberia	1	0	0	1	0	1.87	.21
Mexico	1	1	◆	0	1	1.08	.44
Nicaragua	1	1	0	0	0	1.65	.31
Panama	◆	◆	1	0	0	1.57	.33
Peru	1	0	1	1	1	1.43	.37
Portugal	0	0	0	0	0	.93	.35
South Africa	0	0	0	0	0	1.32	.45
Spain	1	0	0	0	0	1.05	.43
Taiwan	0	1	1	0	0	1.16	.46
Thailand	0	0	0	0	0	.89	.29
Turkey	1	1	◆	1	0	1.56	.30
Uruguay	1	0	1	0	1	1.32	.45
Venezuela	1	0	0	0	0	1.16	.38
Yugoslavia	0	0	1	0	1	1.25	.20

Notes:

◆The 0, 1 variables in column 1-5 are dummy variables that take the value 1 when there was a repayment difficulty.

◆The difficulties for 1820-1930s correspond to defaults or negotiations at concessionairy terms on national privately held bond debt. (Source: Lindert and Morton (1989))

◆Offc indicates the presence of a rescheduling agreement of debt to official creditors during 1956-1968 (Source: Hardy (1982))

◆Bonds indicates default or continued adjusted services of bond debt during 1958-1967 (Source: Foreign Bondholders Protective Council Annual Reports)

◆Egypt, Greece, Portugal, Taiwan and Thailand are the countries that did not have any Standby Agreements with the IMF during 1955-1968.

◆ "◆": Panama was not a sovereign state during the entire 1820-1929, and there were no private loans to Mexico and Turkey in the 1930s.

◆Mean is the mean value of spreads over all the loan contracts during 1968-81 period. St. Deviation is the corresponding standard deviation.

TABLE A.2

Sample Characteristics

Sample Characteristics (Means and Standard Errors of the Spreads)

Period	0	1	Variable	0	1
1820-1900	1.12 (0.38)	1.21 (0.48)	Bonds	1.11 (0.45)	1.28 (0.48)
1900-1929	1.13 (0.44)	1.28 (0.49)	Offc	1.12 (0.44)	1.39 (0.50)
1930s	1.08 (0.44)	1.33 (0.47)	Offc or Bonds	1.09 (0.44)	1.27 (0.48)

Notes:

Sources and definitions of all the variables are in Table A.1.