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SYNDICATED EUROCURRENCY CREDITS

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I. Introduction and Summary

In the Eurocurrency market the total return to a lending bank on syndicated loans regularly includes two components. One is a continuing return in the form of a spread (also called margin) over a base interest rate, generally either the London interbank offer rate (LIBOR) for the currency involved, the U.S. prime rate or a U.S. CD rate (for a dollar-denominated loan with large participation by U.S. banks), or the Japanese bank long-term lending rate (for a yen-denominated loan with large participation by Japanese banks). The other component is a front-end fee, a payment that is normally made by the borrower in a lump sum soon after the loan agreement is signed.^{1/} The base interest rate to which the spread is added is usually an approximation of the marginal cost of funds to a reference group of banks in the syndicate.

While the spread over the base interest rate constitutes the major part of the total return to the lender on syndicated Eurocurrency credits, the share accounted for by front-end fees is nevertheless important. On syndicated loans arranged in 1981-83 with an interest spread over LIBOR and for which the front-end fee data are available, the front-end fee accounted for an average of almost 20 percent of the combined annual average return to the lender from both

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^{1/} Under certain circumstances, lenders may also earn fees from other sources. For example, if the loan is not disbursed by a given date the bank will usually earn a commitment fee.

spread and fee.^{1/} One of the outstanding characteristics of the terms of these loans is the variability shown by the level of the front-end fee and by the share of the fee in the total return. On an interest-equivalent basis, the annual average level of the fee income ranges from a low of only six basis points per annum to a high of 83 basis points, while as a share of the total return from spread and fee the fee share ranges from a low of nine percent to a high of 43 percent.

The purpose of this study is to explain the factors that determined the levels of the front-end fees on syndicated Euroloans that were arranged in the three years 1981-83. The main findings of the study are as follows:

(1) A close statistical relationship exists between the level of fees and the level of spreads. This relationship indicates that fees are utilized to raise the level of total compensation to banks in a very consistent manner.

(2) Fee income also appears to function as compensation to the syndicate managers for costs associated with their organizational and underwriting activities. The "fixed cost" aspect of this fee income to banks is indicated by the fact that the annualized value of the fee declines as the maturity of the loan increases.

(3) Fees tended to be somewhat lower after the Mexican crisis in 1982-QIII, probably because of increase of competition among syndicate managers for a reduced volume of loan business.

(4) Developing countries outside Latin America tended on average to pay somewhat higher fees than other countries, after taking account of other factors.

^{1/} In this calculation, actual fees have been adjusted to an interest-equivalent basis. As described in more detail below, fees on an interest-equivalent basis are an estimated stream of annual average payments, over the life of the loan, having a present value equal to the fees actually received.

II. The Reasons for Fees

Front-end fees are paid for what appear to be two basic reasons: (1) borrowers or lenders, or both, desire to utilize fees to augment the spread over the base interest rate; and (2) the lending banks in a given loan are not a homogeneous group but perform various functions that require varying rates of compensation.

Borrowers are anxious to receive credit for negotiating loans on the lowest possible terms. Because spreads on Eurocredits receive more publicity than fees, which in fact are not publicized in the majority of cases, borrowers have an interest in concealing the true costs of their loans. Consequently, borrowers place greater emphasis on minimizing spreads, doing so by offering to pay the banks a higher front-end fee than otherwise in return for some reduction in spread.

Bankers themselves may prefer to receive fee income in lieu of some part of an otherwise higher spread. Income received immediately is certain, whereas income scheduled to be received in the future is to some degree uncertain. This risk factor would tend to raise fees relative to spreads. In addition, there is a widespread feeling that bank officers may have had incentives to prefer fee income over spread income because this shifts bank income from the future to the present, to the potential benefit of those officers' personal recognition and rewards.^{1/}

In addition to the general preferences of both borrowers and lenders for a fee structure, some level of fees would be paid because of the diversity of the roles of the various lending banks in the syndicate. The syndicate is organized by one or more lead managers who have negotiated with the borrower

^{1/} For U.S.-chartered banks, new regulations effective in 1984 limit the extent to which, in its accounting, a bank may consider front-end fees as income as soon as received. On restructured loans, beginning March 29, 1984 a bank must amortize over the life of the loan all fees in excess of administrative costs. On other loans, effective June 30, 1984 a bank must amortize over the life of the loan all fees considered as an "adjustment to yield," defined as the largest fee received by a non-managing loan participant.

and have agreed to raise a loan on specific terms. Additional lead managers may have to be brought in subsequently if the loan is to be successfully marketed. The lead managers must decide what other banks to try to bring into the syndicate, either as both underwriters and providers of funds (often called "managers" or "co-managers") or merely as providers of funds (the non-managing "participants").

The distinctive activity of the lead managers, and the additional risk and costs involved in underwriting as opposed to mere provision of funds, require differential returns. This is accomplished through the fee structure. While all the lenders share in the total fee, they do so unequally. In part, of course, the division of the fee depends on the amount of funds each bank provides. But in addition, some portion of the fee is reserved to compensate the lead managers for their particular function as organizers, while another part of the fee compensates all the various levels of managers for bearing the underwriting risk. The extent to which the fees are shared by the lead managers with other banks in the syndicate often depends upon the difficulty the lead managers encounter in marketing the credit to lower-level managers and non-managing participants. Having a pool of fee income to distribute to potential participants is a flexible tool for lead managers to use to increase participation in a loan without having to revise the spread.

III. The Data

The study examines data on 183 syndicated Eurocredits to public-sector borrowers announced in the three years 1981-83. The 183 credits are all those to public-sector borrowers described in AGEFI International Financing Review, for the years covered, that have the following two characteristics: (1) complete information on the total front-end fee is given

in the source publication, and (2) the loan is priced over LIBOR. Complete information on fees is available for only a minority of all loans. Some loans are priced over the U.S. prime rate or a U.S. CD rate, over the long-term bank lending rate in Japan, or in other ways, but these had to be excluded because for the purposes of this study the pricing procedure must be the same from loan to loan and LIBOR is the most commonly used basis.^{1/} The credits examined here amounted to \$74 billion, equivalent to 25 percent of all announced medium-term Eurocredits, in the period covered, shown in Morgan Guaranty Trust Co. World Financial Markets.^{2/}

The data are arranged in Table 1 to show average levels of front-end fees for different countries, and how these compare with the levels of spreads over LIBOR. As noted earlier, the front-end fees are expressed as interest equivalents, i.e., as an estimated annual average flow, over the life of the loan, having a present value equal to that of the fee actually paid. This procedure is used in order to make fees, which are paid up-front, comparable with interest spreads. The discount rate used to make the adjustment to the interest-equivalent basis is as follows: (1) for loans of one and five years, the average Eurodollar deposit rate of comparable maturity in the quarter when the loan was arranged; (2) for other loans, the average yield on the U.S. Treasury bond of closest maturity, adjusted by the amount of the difference between the 5-year bond yield and the 5-year Eurodollar rate, in the quarter when the loan was arranged.

The (unweighted) average front-end fee on the 183 credits under examination was equivalent to .21 percent per annum. But the average for industrial countries (.15 percent) was well below that for developing

1/ Some loans give the lender an option to price over LIBOR or another base rate. Such loans are included in the study and the LIBOR spread is used.

2/ The true percentage of coverage is higher than 25 percent because the \$74 billion is based on initial amounts sought while the Morgan Guaranty figures include changes after syndication is begun, nearly all of which were increases.

Table 1. Front-End Fees and LIBOR Spreads on 183 Eurocurrency Credits Arranged in 1981-83
(percent per annum)

<u>Borrowing Country</u> <u>(number of credits in parentheses)</u>	<u>Interest equivalent annual average fee</u>	<u>Spread over LIBOR</u>	<u>Total return to lender (1) + (2)</u>	<u>Fee as percentage of total return</u>
<u>I. Industrial countries (74)^{1/}</u>				
Average for group	.15	.55	.70	22
Averages for selected countries: ^{2/}				
France (6)	.07	.43	.49	13
Denmark (4)	.13	.45	.69	22
Greece (10)	.14	.55	.58	21
Italy (19)	.16	.55	.76	22
Spain (20)	.17	.59	.71	22
Portugal (5)	.19	.65	.84	23
Others (10)	.17	.55	.72	24
<u>II. Developing countries (109)</u>				
Average for group	.24	1.07	1.32	19
Averages for selected countries: ^{2/}				
Indonesia (4)	.11	.41	.51	21
Colombia (4)	.17	.94	1.11	16
Korea (13)	.18	.62	.80	23
Venezuela (15)	.20	.69	.90	23
Mexico (16)	.21	.72	.93	22
Philippines (4)	.22	.82	1.03	21
Chile (5)	.24	1.31	1.54	15
Peru (3)	.24	1.33	1.57	15
Argentina (8)	.37	1.32	1.68	22
Brazil (22)	.40	2.07	2.47	16
Other non-Latin American countries (12)	.12	.40	.52	23
Other Latin American Countries (3)	.27	1.59	1.85	14
<u>III. All credits in sample (183)</u>				
Average	.21	.86	1.07	19

^{1/} Includes a \$1.3 billion credit to the European Community in June 1983.

^{2/} Countries shown individually are those arranging three or more credits.

countries (.24 percent). Within the group of industrial countries, the average annual interest-equivalent fee for France (.07 percent) was much lower than that for the others. Among developing countries, the average ranged from .11 percent for Indonesia to .40 percent for Brazil.

The higher fees for developing countries (as a group) compared with industrial countries was associated with a generally higher level of spreads for the former. And within the two groups, from country to country there was some evident correlation between fees and spreads. However, it is also apparent from column 4 of the table that factors other than spreads also affected fee levels. The share of the fee in the total annual return from fee and spread varied greatly. The fee share was lower for the developing countries than for industrial countries. In that group the fee share tended to be lower for the Latin American countries than for the others, while among industrial countries the fee share for France was notably low.

IV. Determinants of Fee Levels

On the basis of the 183 credits under study, 83 percent of the variation in the level of the annual average front-end fee can be explained using five explanatory variables. The regression of the fee (interest-equivalent basis, measured in basis points) on the explanatory variables yields the following results:

	Coefficient		
	Estimated value	t-statistic	Contribution to R ²
Constant (in basis points)	18.88	11.85	-
Explanatory variables:			
1. Spread over LIBOR (in basis points)	0.15	19.09	.59
2. Maturity of loan (in years)	-1.43	7.71	.06
3. Loan arranged in five quarters subsequent to Mexican announce- ment (dummy variable)	-3.91	4.46	.03
4. Developing country outside Latin America (dummy variable)	3.12	2.38	.01
5. Argentine bridge loan (dummy variable)	43.28	9.03	.08

R-squared (corrected) = .83
 Standard error of the regression = 4.83

The estimated coefficient values in this regression are all significant at the .01 level.^{1/}

In terms of its role in explaining the variations in the fee, the most important determinant of the fee was the spread over LIBOR. A rise in the fee was associated with a rise in the spread. Spreads tend to be an indicator of the degree of risk that the lending banks attach to the loan, and their close relationship with fees indicates that fee levels also are a reflection of the risk as perceived by the syndicate members. To an important degree, fees augment total compensation to lenders, which is based largely on lenders' perceptions of risks. The factors that motivate borrowers to hold down highly visible spreads by paying less-visible fees, and that induce

^{1/} This regression was performed under a Cochrane-Orcutt transformation, to eliminate autocorrelation of residuals. Under the transformation the final value of rho is .285, with a t-statistic of 4.01. The measure of multicollinearity among the explanatory variables is less than .05, indicating very little multicollinearity.

bank officers to shift loan returns from the future to the present by the use of fees, are seen to have been of large weight in the determination of fee levels.

The coefficient of the spread variable, amounting to 0.15, indicates that every 100 basis points of spread is associated with a level of fees of 15 basis points. Table 2 is a matrix showing the importance of the spread in determining fees on Eurocredits of three different maturities. At the mean observation, i.e., a credit with a mean spread of 86 basis points and a mean maturity of 7.4 years, the spread accounts for about three-fifths of the estimated level of front-end fees. For credits with higher spreads, the impact of the spread in the determination of the fee is greater, both absolutely and relatively, while with lower spreads the importance of the spread as a determinant of the fee diminishes.

Table 2. Estimated Annual Average Fee
for Selected Maturities and Spreads^{1/}
(in basis points)

	<u>Loan Maturity (years)</u>		
	<u>5</u>	<u>7.4</u>	<u>10</u>
<u>Spread over LIBOR</u>			
<u>50 basis points:</u>			
(1) estimated fee, of which:	19.2	15.8	12.1
(2) contribution of spread	7.5	7.5	7.5
(3) contribution of other factors	11.7	8.3	4.6
<u>86 basis points:</u>			
(1) estimated fee, of which:	24.6	21.2	17.5
(2) contribution of spread	12.9	12.9	12.9
(3) contribution of other factors	11.7	8.3	4.6
<u>125 basis points</u>			
(1) estimated fee, of which:	30.5	27.1	23.4
(2) contribution of spread	18.8	18.8	18.8
(3) contribution of other factors	11.7	8.3	4.6

1/ Fee is on an interest-equivalent basis

The other important economic factors determining the annualized value of front-end fees are (1) the constant term, and (2) the maturity of the loan. The constant term can be interpreted as a measure of the amount of fee required to compensate the syndicate managers for their organizational and underwriting activities, including compensation reserved to be distributed in a flexible manner if terms need to be improved to market a loan. The constant term is close to 20 basis points. This suggests that, for syndicated credits of five years -- a maturity below which few credits are arranged -- the compensation to the syndicate managers might, on average, total close to one percent of the loan. However, the constant and the maturity variable should be evaluated together.

The coefficient of the maturity variable reflects the impact of two influences working in opposite directions. First, it reflects the effect of spreading, over the number of years of the loan, the fee payment that compensates the managers for their activity. The impact on the annual average fee of this spreading effect is of course negative -- the longer the maturity of the loan, the lower the annual average compensation for managerial activity. Second, the coefficient of the maturity variable reflects the increasing risk, as the maturity lengthens, of being committed to provide funds to the borrower. The impact on the annual average fee of this risk effect of the maturity is positive, i.e., the fee tends to rise as the maturity lengthens. The risk associated with fluctuating interest rates is of course largely eliminated by use of the base interest rate, which is reset at periodic intervals.

In the regression results, the maturity variable (measured in years) has a coefficient of -1.43. The negative sign shows that the effect of

spreading the "fixed" fee for managerial activity over an increasing number of years dominated the effect of increasing risk associated with lengthening maturity. The constant term amounts to 18.9 basis points. The combined impact on the annual average fee of these two factors was as follows for loans of 5, 7.4 (sample average), and 10 years maturity (measured in basis points):

	Maturity (years)		
	5	7.4	10
Impact of constant	18.9	18.9	18.9
Impact of maturity variable	-6.2	-10.6	14.3
Combined impact	11.7	8.3	4.6

As can be seen, for the average maturity of 7.4 years the estimated portion of the overall annual average fee accounted for by factors other than the spread was 8.3 basis points. As was shown in Table 2, for loans of that average maturity that carried an average spread over LIBOR of 86 basis points, the estimated total annual average fee was 21.2 basis points, of which the factors other than the spread contributed about 40 percent. The contribution of these factors decreases as the maturity lengthens and increases as the maturity shortens.

The final three explanatory factors represented by dummies variables, relate to special loan circumstances. The first dummy variable is for loans made after the third quarter of 1982. The estimated coefficient of this dummy is about -3.9 basis points, indicating that, after allowing for the effect of the other variables, the fee tended to be 3.9 basis points lower in the final five quarters of the 1981-83 observation period than on average over the twelve quarters. The apparent difference in behavior in the final five quarters may have been a consequence of the Mexican liquidity crisis in the summer of 1982, and the beginning of banks' reduced enthusiasm for lending to developing countries, especially Latin America. As banks' attitudes changed,

smaller banks reduced their participation in syndicated loans. The syndicates became smaller, and the portion of the syndicates made up of lower-level managers and non-managing participants tended to diminish considerably while the share of lead managers grew. Competition among prospective lead managers (generally the larger banks) for the reduced volume of syndication business probably had the effect of reducing the fees paid to them for their particular managerial activity, thus reducing fees as a whole. It is true that the new loans to Latin American borrowers since the Mexican crisis have involved increased administrative costs, because they have been part of "packages" that included reschedulings, maintenance of trade credits, or IMF drawings, but these added administrative costs have been charged to the borrowers separately in addition to front-end fees.

The second dummy variable is for loans to developing countries outside Latin America. The estimated coefficient of about 3.1 basis points indicates that loans to that group of countries tended, ceteris paribus, to have slightly higher fees than average. These countries in general, over the full three years covered by the data, may have felt greater need than the other countries to "disguise" their true borrowing costs by offering to pay higher fees than otherwise in return for some reduction of spreads.

The last dummy variable applies to only one loan, the \$1.1 billion 14-month "bridge loan" to Argentina on which terms were definitively arranged in December 1982. The loan carried a spread over LIBOR of 1-5/8 percent, with front-end fees of 83 basis points on an interest-equivalent basis. The regression estimates a fee for this loan of only 42 points. The very high fee actually paid apparently reflected an exaggerated substitution of fee income for spread income caused by unusual considerations, since the next highest difference between actual and estimated fee on the remaining 182 credits was only 17 points.