Eurocommercial Paper and U.S. Commercial Paper: Converging Money Markets?

The showing of U.S. banks in securities markets abroad has influenced the debate over new powers for banks in the United States. Observers have for some time looked to the Euromarket as an appropriate laboratory for testing the performance of U.S. banks as underwriters. To some, the test results from Eurobond underwriting are positive: in 20 years of existence, with the important participation by U.S. banks, the Eurobond market has proven "orderly and efficient" and underwriters have not taken on excessive risks.[1] To others, the recent record of "huge losses" suggests the possibility of a "disaster" that might prove costly to the federal deposit insurance system.[2]

Attention is now shifting to the Eurocommercial paper (ECP) market because the power of the test provided by the Eurobond market has waned recently. In particular, U.S. banks have fallen in the ranks of Eurobond underwriters in the face of stiff competition from affiliates of Japanese securities firms and Continental banks. At the same time, after years of rapid growth, Eurobond issuance in 1987 is running well behind the 1986 pace. Some investors are avoiding the Eurobond market because of concern over market liquidity.

But even as they have ceded market share in Eurobond underwriting, some U.S. banks have sought to establish themselves as dealers in the rapidly-growing market for short-term Euronotes or Eurocommercial paper. And the performance of U.S. banks in the ECP market, just as in the Eurobond market, can inform the current debate on bank powers.

There is a danger, however, that the debate will take the domestic and offshore paper markets to be basically identical. This article underscores the differences between the Eurocommercial paper market and the U.S. commercial paper (CP) market. We point to significant differences in credit assessment and quality, buyers, liquidity, clearing, and settlement, and we argue that these differences are unlikely to disappear.

Now is an opportune time to contrast and to compare the two markets. While the amount of commercial paper outstanding in London promises to double again in 1987 to over $60 billion,[3] structure and practice in the ECP market are becoming well established. If London is coming through a formative period, New York may be on the eve of a shake-up: banking powers may be expanded to allow bank underwriting of commercial paper.

Some differences between the two markets are likely to persist while others disappear. Ongoing differences include the following:

- Buyers of ECP, coming from a broad range of countries, draw credit distinctions but do not divide issuers consistently by nationality; U.S. investors

[1]Richard M. Levich, "The Experience with Unregulated Underwriting Activities in the Eurobond Market and Recent International Financial Market Innovations," testimony before the Senate Banking Committee, October 13, 1987; see also the same author's "A View from the International Capital Markets," in Ingo Walter, ed., *Deregulating Wall Street* (New York: Wiley, 1985), pp. 255-92.

[2]Testimony of Robert Gerard, Managing Director of Morgan Stanley and Company, before the Subcommittee on Telecommunications, Consumer Protection, and Finance of the House Committee on Energy and Commerce, October 14, 1987.

[3]For data on the growth of Europaper issuance, see "Statistics on Euronotes and Eurocommercial Paper," Bank of England *Quarterly Bulletin*, vol. 27 (November 1987), pp. 533-35.

in CP systematically require foreign issuers to offer higher yields than like-rated U.S. issuers.

- The distribution of U.S. issuers in the ECP market is of significantly lower quality than the distribution of U.S. issuers in the U.S. CP market; foreign issuers in the United States show a distribution of quality significantly better than that of U.S. issuers here.
- Central banks, corporations, and banks are important parts of the investor base for particular segments of the ECP market; the most important holders of U.S. CP, money market funds, are not very important abroad.
- The average maturity of ECP remains about twice as long as the average maturity of U.S. CP.
- ECP continues to be actively traded in the secondary market; most U.S. CP is held to maturity by the original investors.
- Issuing, clearance, and payment of ECP are more dispersed geographically and more time-consuming than those same processes for U.S. CP.

The following differences are likely to prove transitory:

- Dealing is very competitive in the Europaper market; just two firms deal half of dealer-placed U.S. CP.
- To date, all ECP has been placed by third parties; many U.S. CP issuers place paper directly with investors.
- Credit ratings are necessary in the domestic market; in the Euromarket they are common but not required.
- ECP has been and mostly continues to be priced in relation to bank deposit interest rates; pricing in the U.S. is based on absolute rates that vary in relation to rates on Treasury bills and bank certificates of deposit (CDs).

Permanent differences

The foreign premium

A cosmopolitan market, the ECP market brings together issuers and investors from a wide range of nations. Buyers and sellers in the U.S. market, by contrast, are overwhelmingly U.S.-based. Foreign banks, companies and sovereigns and their U.S. affiliates have issued only about one-tenth of outstanding U.S. CP (Chart 1).

Buyers in the U.S. CP market have exacted a yield premium from foreign issuers over like-rated U.S. issuers. The premium started at almost one-half of a percentage point in the mid-1970s and declined to around one-quarter by the early 1980s.[4] In the past year it has reached eight to ten basis points.

The foreign premium in the U.S. CP market may be traced to restrictions on buying foreign paper, to the greater difficulty of analyzing foreign firms, and to differences in name recognition. Some investors are prohibited by articles of incorporation or by boards of directors from buying foreign-issued paper. Most foreign issuers of commercial paper have attempted to circumvent such restrictions by establishing financing corporations, frequently in Delaware.[5] But some investors abide by the spirit of such restrictions and even refrain from buying paper issued by U.S. subsidiaries of foreign entities. Other investors, including insurance companies, have internal limits on foreign assets that, defined broadly rather than legally, constrain their purchase of such paper.

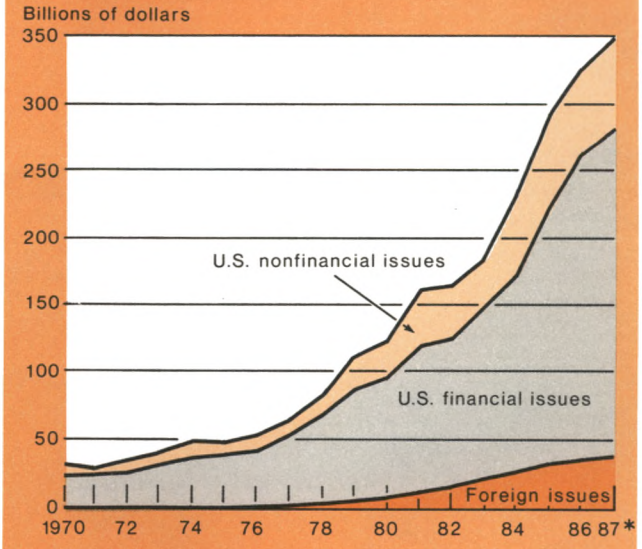
A second source of the foreign premium is the difficulty faced by investors who must perform their own analysis of foreign issuers of paper. Accounting standards differ, disclosure requirements vary, and available information remains less accessible. While the rating

[4]Marcia Stigum, *The Money Market* (Homewood, Illinois: Dow Jones-Irwin, 1983), p. 64.

[5]See Peter V. Darrow and Michael Gruson, "Establishing a U.S. Commercial Paper Programme," *International Financial Law Review*, April 1985, pp. 8-12.

Chart 1

U.S. Commercial Paper Outstanding by Issuer



*1987 data through end of September.

Sources: Board of Governors of the Federal Reserve System, Flow of Funds.

agencies may be given access to information not publicly available, a buyer of foreign CP cannot easily form an independent judgment.

A final source of the foreign premium is lack of name recognition. Some investors in commercial paper emphasize liquidity and safety; if they are not effortlessly assured of both, they will not buy paper, even from a well-rated issuer.

Some of the same factors that created the foreign premium in the first instance help to account for its decline in recent years. As more information on foreign companies becomes available, paper buyers should require less of an inducement to buy foreign paper. Several forces have worked to increase information over the past twelve years. U.S. banks have widened their relationships with foreign corporations and have thereby given bank trust departments greater access to information on foreign borrowers. In addition, U.S. securities firms have stepped up research on foreign corporations in line with the growing investment by pension funds, mutual funds, and insurance companies in foreign equities. To serve these investors, some foreign firms issue English language annual reports. As for name recognition, the mere presence of Electricité de France in the U.S. CP market for over a dozen years should have an effect.

Another development that has promoted acceptance of foreign names in the U.S. CP market and has helped to reduce the foreign premium is the rise of money market mutual funds (MMMFs) to their current status as the largest single type of CP buyer. The growth of MMMFs has in fact closely paralleled the decline of the foreign premium. MMMFs came out of nowhere in the mid-1970s to comprise a $292 billion portfolio at end-1986; the reduction in the foreign premium took place over the same period.

Although this coincidence suggests a link between the growth of MMMFs and the declining foreign premium, the demonstrated readiness of the funds to buy foreign CP provides more convincing evidence. An analysis of the top ten MMMF portfolios shows that, while they vary considerably in the weight given to foreign CP holdings, in aggregate, they do overweight foreign CP. That is, the top MMMFs have allocated 16 percent of their CP holdings to foreign CP (Table 1). This portfolio share stands quite a bit higher than the 10 percent share of foreign CP in the market as a whole. If the top ten funds, which have about half of all MMMF holdings of CP, are representative, MMMFs hold almost half the foreign CP outstanding, as against less than a third of

Table 1

The Holding of Foreign Commercial Paper by Top Ten Money Market Mutual Funds Investing in Commercial Paper*

	Total Assets	Total CP	Foreign CP	Foreign CP	
	(In Millions of Dollars)			As Percent of Assets	As Percent of Total CP
Merrill Lynch CMA Money Fund†	17,959	5,117	307	1.7	6.0
Merrill Lynch Ready Assets Trust‡	10,578	7,190	284	2.7	3.9
Dreyfus Liquid Assets§	7,235	1,497	1029	14.2	68.7
Dean Witter/Sears Liquid Asset Fund‖	6,869	3,646	25	0.4	0.7
Fidelity Cash Reserves¶	6,604	2,528	1309	19.8	51.8
Temporary Investment Fund**	5,782	5,541	129	2.2	2.3
Cash Equivalent Fund—Money Market Portfolio††	5,556	4,153	1540	27.7	37.1
Institutional Liquid Assets—Prime Portfolio‡‡	5,191	4,008	0	0.0	0.0
Prudential-Bache Moneymart Assets‡‡	4,308	2,653	520	12.1	19.6
Kemper Money Market Fund§§	4,174	3,862	1418	34.0	36.7
Total of top ten	74,256	40,195	6,561	8.8	16.3

* Two funds in the top ten, the Trust for Short-Term Government Securities and the Trust of U.S. Treasury Obligations, are specialized funds that invest only in specific government-backed paper.
† As of March 31, 1986.
‡ As of June 30, 1986.
§ As of March 12, 1986.
‖ As of February 28, 1986.
¶ As of November 30, 1986.
** As of September 30, 1986.
†† As of July 15, 1987.
‡‡ As of December 31, 1986.
§§ As of July 31, 1986.
Sources: Fund Annual and Semiannual Reports.

all CP outstanding. So it seems fair to conclude that the foreign premium fell as more money was channelled to money managers quite prepared to accept a foreign name.

It is understandable that managers of MMMFs have been more willing than the average CP buyer to buy the paper of foreign borrowers. Money fund managers are viewed as more aggressive in seeking yield than many CP buyers. A reason may be that MMMFs are compared and judged exclusively on the basis of their success in managing strictly short-term liquid funds. Managers of insurance companies, bank trust accounts or pension funds, by contrast, pay less attention to the allocation among money-market instruments than to the more consequential weighting of equities and bonds as against money in managed portfolios.

That some sensitivity to foreign paper remains among even MMMF managers is evident from the individual fund portfolio weights. Despite the premium, no MMMF held more than 69 percent of its total commercial paper as foreign CP And only two funds had as much as one-half of their CP in foreign names. At the same time, the sixth-ranked fund, Goldman Sachs' Institutional Liquid Assets-Prime Portfolio, has virtually no foreign CP. In managing the top two funds, Merrill Lynch significantly underweights foreign CP. Thus, the two major dealers in U.S. CP both avoid foreign CP in managing their institutional and individual money funds.

Credit quality

Starting with Electricité de France in 1974, relatively high quality foreign corporations first entered the New York CP market in search of a wider investment base and better pricing. To this day, foreign issuers in the U.S. market still have a significantly better distribution of ratings than U.S. issuers in the U.S. market.

Consequently, it would be natural to assume that high quality U.S. names predominate in the ECP market. After all, the Eurobond market has for years skimmed the cream of U.S. borrowers.[6] In fact, in contrast to the Eurobond market, the ECP market takes only the milk. U.S. issuers in the Euromarket have a significantly worse distribution of ratings than all U.S. issuers in the U.S. CP market.

The contrasting behavior of New York and London provides clues to the development of the ECP market. Since top-rated European corporations always paid more in the U.S. CP market than top-rated U.S. borrowers, they were quick to seize the opportunity offered by the emerging ECP market. This step allowed them to sell paper at or below the London interbank rates in 1985 as those rates fell toward U.S. CP rates.[7] As a consequence, non-U.S. names in the ECP market tended to be among the best. But the first U.S. issuers in London included electric utilities with unfinished or unlicensed nuclear power plants that had found it hard to obtain credit in the United States but found willing lenders in banks across the Atlantic.

Looked at superficially, the ratings of issuers of ECP appear better than those of CP issuers. A statistical comparison[8] of the distribution of ratings of all rated issuers in the CP market to the distribution of ratings in Europe appears to confirm that a better cut of borrowers sells ECP (Table 2).[9] But there is an adverse selection problem: high quality European borrowers may disproportionately pay the cost of recasting their accounts, meeting with the raters and paying for the ratings. Thus, that unrated issuers in Europe are generally worse credits than the rated invalidates the comparison to the U.S. CP market, where all issuers are rated.

More revealing is the comparison of non-U.S. borrowers in the U.S. CP market to U.S. names in the same market (Table 3). Non-U.S. CP issuers exhibit a significantly better distribution of ratings than native issuers. In particular, over 70 percent of the foreign firms have the highest paper rating while less than half the U.S. issuers do.

This skewed distribution is caused by the foreign premium. This has kept most good-quality, as distinct from top-quality, non-U.S. credits out of the U.S. market. The distribution of the foreign names in the U.S. CP market is truncated: since merely good-quality foreign names are treated like medium-quality U.S. names, the former do not go through the expense to enter the market. By contrast, no set of borrowers is consistently foreign to the purchasers of ECP

Also revealing is the comparison of U.S. names in the Euronote/ECP market and the distribution of U.S. CP

[6]See Hendrick J. Kranenburg, "Reaching for 'Quality' Debt," Standard and Poor's *Credit Week International*, Fourth Quarter 1984, pp. 11, 16.

[7]For a discussion of cross-market arbitrage opportunities for U.S. issuers, see Rodney H. Mills, "Euro-Commercial Paper Begins to Compete," *Euromoney*, February 1987, pp. 23-24. The foreign premium renders the ECP market more competitive than Mills reckons.

[8]The statistical test used here and throughout this article is the chi-square test. It determines whether factors—credit quality and nationality of issuer or market of issue—covary. It tests whether the distribution of observations is what one would expect knowing only the marginal totals or whether knowing one factor helps predict the other. In this case, a chi-square statistic comparing ECP issuers to U.S. CP issuers was computed. It allowed us to reject the null hypothesis that the rating of the firm and the market in which it is issuing are independent. The probability of error of the test is less than 0.01.

[9]Note the existence of "junk" CP, rated B and C. Issuers in these rating categories are regarded as having only adequate or doubtful capability for payment on maturity of the paper.

Table 2

Ratings of U.S. and Eurocommercial Paper Issuers*

December 1986

	A-1+	A-1	A-2	A-3	B	C	Total	Percent
U.S. CP issuers	529	301	184	12	2	7	1035	93.2
Eurocommercial paper issuers†	47	16	12	1	0	0	76	6.8
Total	576	317	196	13	2	7	1111	—
Percent	51.8	28.5	17.6	1.2	0.2	0.6	—	—

*The commerical paper ratings used here consist of three categories, ranging from 'A' for the highest quality obligations to 'C' for the lowest. The 'A' category is refined into four subcategories, ranging from 'A1+' for the highest to 'A-3' for the lowest. The universe of U.S. CP issuers excludes those whose credit is supported by bank letters of credit and similar guarantees.

†The ECP sample contains only active programs. Where no ECP rating was available, the U.S. CP rating was substituted.

Computed chi-square statistic: 194.2 (5 degrees of freedom). A statistic in excess of 15.086 allows the rejection of the null hypothesis that the rating of the issuer and the market in which it is issuing are independent factors with a probability of error less than 0.01.

Sources: U.S.: Standard & Poor's *Commercial Paper Ratings Guide*.
Euro: List of active programs was obtained from major market makers.

issuers from which they were selected. U.S. issuers abroad are not representative of the run of U.S. credits in the U.S. CP market (Table 4). U.S. issuers of ECP show a significantly lower distribution of ratings than U.S. CP issuers.

An explanation of this finding may lie in the importance of banks as buyers of less than prime paper in the Euromarket. Some banks take the time to perform their own credit assessment; less careful ones take comfort in the size of a U.S. corporation or familiarity with its name. In addition, unlike many buyers of U.S. CP, few buyers of ECP are required to expose their portfolios to public scrutiny.

A comparison of ECP issuance by the finance companies of General Motors, Ford, and Chrysler supports the conclusion drawn from the distribution of ratings at a point in time. A2/P2-rated Chrysler Financial Corporation started selling ECP as early as 1984, and is one of the largest ECP issuers. A1+/P1-rated General

Table 3

Ratings of U.S. Commercial Paper Issuers

December 1986

	A-1+	A-1	A-2	A-3	Total	Percent
U.S. issuers	391	249	182	12	834	81.3
Non-U.S. issuers	138	52	2	0	192	18.7
Total	529	301	184	12	1026	—
Percent	51.6	29.3	17.9	1.2	—	—

Computed chi-quare statistic: 5194.2 (3 degrees of freedom). A statistic in excess of 11.341 allows the rejection of the null hypothesis that the rating of the issuer and its nationality are independent factors with a probability of error less than 0.01.

Source: U.S.: Standard & Poor's *Commercial Paper Ratings Guide*.

Table 4

Ratings of U.S. Issuers of Eurocommercial and U.S. Commercial Paper

December 1986

	A-1+	A-1	A-2	A-3	Total	Percent
U.S. market	391	249	182	12	834	96.9
Euro-market*	8	6	12	1	27	3.1
Total	399	255	194	13	861	—
Percent	46.3	29.6	22.5	1.5	—	—

*The ECP sample contains only active programs. Where no ECP rating was available, the U.S. CP rating was substituted.

Computed chi-square statistic: 119.4 (3 degrees of freedom). A statistic in excess of 11.341 allows the rejection of the null hypothesis that the rating of the issuer and the market in which it issues are independent factors with a probability of error less than 0.01.

Sources: U.S.: Standard & Poor's *Commercial Paper Ratings Guide*.
Euro: List of active programs was obtained from major market makers.

Motors Acceptance Corporation (GMAC) and Ford Motor Credit only started selling ECP in 1986, and outstanding ECP by each has not generally matched that of Chrysler.

That some issuers sell paper without credit enhancement in London but with a guarantee in New York gives further evidence of the quality difference between the markets. For example, buyers of the obligations of the Australian natural resource companies Comalco and CRA in London accept their credit risk, but buyers of the same firms' U.S. commercial paper look to the banks that have written letters of credit as the ultimate obligors.

Investor base

The role of central banks and commercial banks as investors in ECP distinguishes the market from the U.S. CP market. Central banks investing their dollar reserves in a substitute for U.S. Treasury bills or bank CDs have come to dominate one whole segment of the ECP market. It is difficult to know precisely how much ECP commercial banks buy for their own account, since they also buy for their trust accounts and for distribution to their institutional and individual clients. But it is clear that banks take a considerable share of ECP onto their books, although it is also clear that this share has fallen in 1987. By contrast, banks in the United States buy little CP for their own accounts. Also distinguishing the European markets is the very small representation of money funds in Europe; their U.S. counterparts are the largest investors in U.S. CP.

The buyers of ECP differ among the four distinct ECP issuer classes: sovereigns, top-quality corporates, prime corporates and the rest. In the market for high-quality sovereign paper, central banks account for most of the demand, perhaps 80 percent. The rest is split between fund managers and market makers.

Top quality corporate paper, rated A1+/P1, is bought by fund managers and other corporations. Fund managers include managers of pension funds, bank trusts, and insurance companies. Prime quality paper, rated A1/P1, is bought not only by fund managers and corporations but also by financial institutions, mostly banks. The rest of investment grade paper, rated A2/P2, and unrated paper are bought largely by banks.

The quality spectrum corresponds to the pricing spectrum. Sovereign ECP yields the London Interbank Bid Rate (LIBID) less 10 to 25 basis points; A1+/P1 corporate and bank paper yields a bit below LIBID, in general, and rarely above it; A1/P1 paper yields range from LIBID to midway between the interbank bid and offer range rates (usually LIBID plus 6.25 basis points); and A2/P2 paper and unrated paper yield from just below the offered rate, LIBOR, to well above LIBOR.

Banks' own funding costs incline them to buy the less-than-prime ECP. Since most banks can fund themselves only at LIBID or perhaps a bit less, they cannot make money holding A1+/P1 paper. Of course, with overnight or weekly rates lower than three- or six-month rates, banks can add a funding spread to the slim intermediation spread by funding their purchases of longer-maturity ECP with shorter-maturity money, but thereby they expose themselves to interest rate risk.

Maturity

Most ECP matures in 60 to 180 days; most U.S. CP matures in less than 60 days. From the perspective of the Euromarket, this difference may partly reflect the emergence of ECP from the note issuance facility market and, more generally, from syndicated loans. Instead of borrowing from banks that in turn sell CDs to fund loans, ECP issuers offer paper of like maturity directly to investors. From the U.S. perspective, the maturity difference reflects the fact that the U.S. market caters to entities such as automobile finance companies and credit card affiliates of banks that must manage shorter, more predictable cash flow schedules. The well-developed secondary market in ECP makes it difficult to explain the difference from the buyer's side. Secondary market activity suggests that the average holding period of ECP is roughly half of its maturity.

Secondary market

Partly as a result of the maturity difference, the ECP market has an active secondary market, with weekly turnover in a range of 40 to 60 percent of total ECP turnover (Chart 2). As the market has matured, secondary trading has tended to fall in relation to primary market turnover. Formerly, banks with little placing power bid aggressively for paper to impress borrowers, only to dump it into the secondary market. But such behavior neither earned money nor, ultimately, won over issuers. Many borrowers do not like the loss of control over pricing that secondary market trading can bring. And so great is competition in the market that dealers will sometimes report to an issuer another dealer's disposal of recently issued paper in the secondary market.

There is some evidence that the secondary market turnover increases in relative terms when interest rates are falling (Chart 3). Most recently, as interest rates have risen, the secondary market turnover has dropped. Consistent with this pattern is the tendency of market makers and bank treasuries that actively manage their ECP portfolios to buy more paper when interest rates decline and profits can be earned by funding three-month paper with money borrowed overnight.

Liquidity in the U.S. does not much depend on a secondary market. Instead it is maintained by shorter maturities, the undertaking of dealers to buy back paper from customers, and very limited brokering of directly-placed paper.

Issuance, clearing, and settlement

Differences in the complexity of issuance, clearing, and payment between the U.S. and European markets are likely to persist. The Euromarket locates issuance and custody in London, most clearing in the clearing houses in Belgium and Luxembourg, and ultimate dollar settlement in New York. The entire process usually takes two to three days. By contrast, U.S. CP is issued, delivered, and settled the same day in New York. CEDEL, one of the two major European clearing houses, offers same day settlement, but Euroclear, the other major European clearing house, requires at least two days to settle. Two-day settlement may suit Euromarket investors whose other investments settle on this basis. Nevertheless, as the number of issuers with programs in both markets grows, same day settlement of ECP may become more common, since borrowers shifting from the U.S. CP market to the ECP market require same-day funds to pay off maturing CP. Even now, ECP issuers can circumvent the settlement delay by arranging "swinglines," facilities for same-day funds from banks in New York. But however quickly ECP settles in the future, ECP issuance, clearing, and settlement will continue to be spread out over different cities.

Temporary differences

Some of the differences between the markets are clearly subject to change. Indeed, many observers expect that market practices in various paper markets will become more standardized.[10] Those differences between the ECP and U.S. CP markets that are likely to narrow are discussed in detail below.

Concentration of dealers

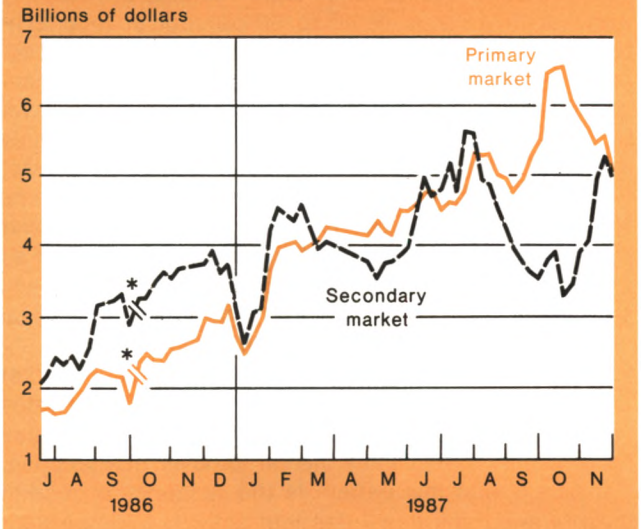
The well-publicized and sharp competition among dealers of ECP may well indicate the future of competition in the CP market. As things stand, about half or more of all dealer-placed paper in the United States is sold by just two market leaders, Merrill Lynch and

[10]See S.L. Topping, "Commercial Paper Markets," Bank of England *Quarterly Bulletin*, vol. 27 (February 1987), pp. 46-53.

Chart 2

Weekly Turnover in Primary and Secondary Eurodollar Commercial Paper Market

Four-Week Moving Average



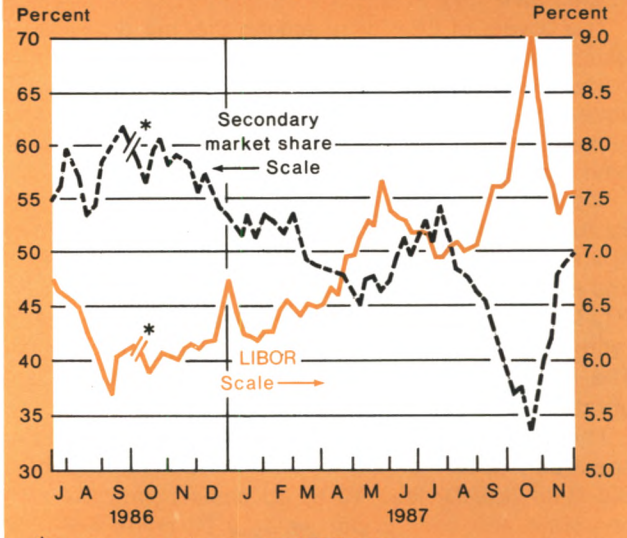
*Break indicates start of CEDEL data.

Sources: Euroclear and CEDEL.

Chart 3

Share of Weekly Eurocommercial Paper Turnover in Secondary Market versus Three-Month Eurodollar Rate

Four-Week Moving Average for Commercial Paper



*Break indicates start of CEDEL data.

Sources: Euroclear, CEDEL, Federal Reserve Bank of New York.

Goldman Sachs.[11] Merrill Lynch officials lay claim to leadership among U.S. dealers, with a market share just short of 30 percent.[12] Merrill's acquisition of A. G. Becker from Paribas in 1984 put it into position to overtake Goldman.

The degree of concentration is much lower in the Euromarket. Estimates vary widely on market shares in the amount of paper issued, but the consensus is that the top six dealers place somewhere around 70 to 75 percent of ECP by value. No dealer can credibly claim a market share much in excess of 20 percent. In terms of number of dealerships for both ECP and Eurodollar certificates of deposit, the top six dealers share less than 50 percent of the market.[13] By either measure, ECP dealing is less concentrated than CP dealing.

The entry of U.S. banks into the U.S. CP market is sharpening competition. Thus far they have acted only as placing agents, finding buyers for CP without buying the paper themselves. But despite their restricted role as agents, banks are seeking to prove themselves reliable placers, at times offering paper to investors at a favorable, slightly higher yield to ensure its sale. At the same time, by charging a very modest placing fee, the banks raise funds for the issuer at a favorable, slightly lower net cost of funds. By early 1987, U.S. banks served as exclusive placers of CP for 65 issuers with over $7 billion in paper outstanding. They shared placing in 70 other programs with over $19 billion outstanding.[14] While these figures indicate a market share for all U.S. banks of about 5 percent or more, they do suggest some measure of success in entry despite ongoing legal restrictions on underwriting. Citicorp's purchase in November 1987 of Paine Webber's CP operation, with paper outstanding in the amount of about $3 billion under about 40 programs, adds clout to an already sizable placer.

[11]Moody's *Short-Term Market Record;* Standard and Poor's *Commercial Paper Rating Guide*. The Federal Reserve Board, noting the concentration of dealerships in the U.S. CP market, adduced the public benefit of fostering competition in explaining its decisions to permit banks to place and to deal in U.S. CP. See "Bankers Trust New York Corporation," and "Citicorp, J.P. Morgan & Co, Incorporated, Bankers Trust New York Corporation," *Federal Reserve Bulletin*, vol. 73 (February 1987 and June 1987), pp. 148 and 490. For a review of the Federal Reserve rulings, see Terrance W. Schwab and Bernard J. Karol, "Underwriting by Bank Affiliates," *Review of Financial Services Regulation*, vol. 3 (May 20, 1987), pp. 93-100.

[12]In computing Merrill's market share, the official excluded paper issued by dealers on behalf of their own affiliates to eliminate the effect of Merrill's sizable fund-raising. See Tom Herman, "Goldman Sachs Abandons Policy It Says Hurt Growth in Commercial Paper Field," *Wall Street Journal*, October 2, 1987, p. 29.

[13]*International Financing Review*, July 4, 1987, p. 2202.

[14]Moody's *Short-Term Market Record*; Standard and Poor's *Commercial Paper Rating Guide*.

In addition, foreign securities firms are entering the U.S. CP market as dealers for foreign issuers. In late 1986, U.S. affiliates of foreign securities firms, mostly Canadian and Japanese, shared placing in 25 programs with approximately $5 billion outstanding. The foreign-based securities firms uniformly deal in paper of borrowers from their home country, probably because long-standing relations incline the borrowers to give their dealers an opening. It should be noted, however, that none of the foreign securities dealers serves as a sole placer of U.S. CP.

The competitive challenge in U.S. CP has led a market leader to change a long-held business policy in favor of practice typical of the ECP market. Heretofore Goldman Sachs insisted on a company's sole use of Goldman to place the company's CP. Now, Goldman is prepared to play co-dealer, particularly on large paper programs where the firm has not played a role to date.[15] Although the previous policy might have spurred the dealer to win wide acceptance of an issuer's paper in order to capture all the business so generated, issuers now seem keen to encourage more direct competition.

While U.S. banks have entered the business of placing CP in New York, a U.S. bank ranks among the top ECP dealers in London. It is generally acknowledged that Citicorp Investment Bank, Limited leads its competitors in the amount of paper placed, although the market share it claims is much disputed. Other leaders are the affiliates of U.S. securities firms—Merrill Lynch, Morgan Stanley, and Shearson Lehman—Swiss Banking Corporation International, and the U.S.-Swiss hybrid Credit Suisse First Boston. Each of these six probably enjoys a market share between 10 and 20 percent. All are trying to secure their positions before Japanese institutions enter the market.

The superior performance of Citicorp Investment Bank, Limited in the ECP market is attributable in part to its strength in a traditional banking activity. Most observers credit its leadership to its mixing dollar paper with forward sales of dollars against a variety of currencies to create "cocktail" paper. In effect, buyers of such mixtures get CP in their currency of choice, although they also expose themselves to Citicorp on the forward transaction.

Other U.S. banks are making serious, if less successful, efforts to compete in ECP dealing. U.S. banks represent no less than 8 of the 20 top dealers of ECP and Euro-CDs. Taken together, U.S. banks probably have carved out a market share of a quarter or more. The resources devoted by U.S. banks to the ECP market must be understood in light of their overall investment banking strategies and, in particular, their

[15]Tom Herman, "Goldman Sachs Abandons Policy."

interest in demonstrating the inappropriateness of Glass-Steagall restrictions.

Greater competition among dealers in the ECP market brings lower prices for their services. U.S. CP dealers used to collect a fee of one-eighth of a percent for buying paper from the issuer and reselling it or, failing that, taking any unsold paper into position. This fee works out to $3.47 per million dollars per day until maturity at issue.[16] More recently, fees have fallen to around ten basis points or even lower. In the Euromarket, the spread between what dealers pay for ECP and sell it for averages three basis points. This spread works out to only $75 for placing $1 million of 90-day paper. When working as agents for some high-quality issuers who do not want anyone but end-investors to own their paper, ECP placers also make a commission of less than five basis points. Little money is being made at these rates. And some dealers have accepted paper at rates lower than they can place it, to gain market share.

Such intense competition for market share may suggest that a great deal of money is at stake. It appears, however, that dealing dollar CP in New York and London produces only modest revenues. If dealing in the U.S. fetches ten basis points per year on placements of $180 billion, only $180 million is earned. If dealing generates three basis points on the roughly $50 billion outstanding in London, only $15 million is at stake, matched, perhaps, by another $10 million in the secondary market. These are estimates of gross revenue out of which overhead and expense must be paid. Only very rapid growth of these markets can justify the resources that financial firms are devoting to them.

The entry of foreign securities firms and U.S. banks as dealers will make the U.S. CP market increasingly competitive. It was this prospect that prompted the exit in October 1987 of Salomon Brothers from the U.S. CP market, where it had achieved a market share in excess of 10 percent. The outlook for the rapidly growing ECP market is less certain: the current competitiveness of the market may continue if heavier future volume is spread out over the current dealing capacity, or it may end in a shake-out that would remove some capacity. Already in 1987, J.H. Shroder Wagg and Salomon Brothers have withdrawn from the ECP market. The more heterogeneous investor base in the ECP market may leave room for more players. In any case, it is likely that the U.S. CP and ECP markets will converge somewhat in the competitive structure of dealing.

Direct issuance

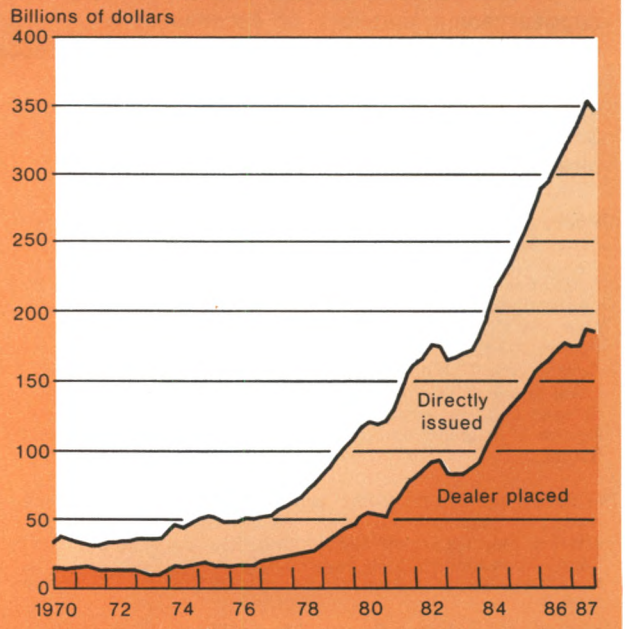
Changes in the degree of concentration of dealers in the two markets may reduce another market difference: the fact that no Europaper issuer issues directly. In the United States, finance companies, representing a substantial share of the market, place their own paper directly with investors (Chart 4); in the smaller, less developed Euromarket, no issuer has yet found it worthwhile to bypass the dealers.

Note that foreign issuers in the U.S. CP market, even those with large and long-standing programs, do not directly place paper. It appears that U.S. buyers demand that dealers sell them the paper. The reason usually given is the desire for the monitoring of the more remote borrower's credit standing by the dealer. For direct issuance to take hold in the Euromarket, the buyer of the paper must not make a similar demand for dealers to monitor the credit of foreign borrowers.

A direct issuer of CP in the U.S. essentially replaces the dealer on commission with in-house dealers. Dealer fees of about one-eighth of a percent can exceed the cost of hiring a full-time staff to manage a program, provided that outstandings are sufficiently large, normally in the $200-250 million range. Thus the concentration of dealers in U.S. CP does not necessarily mean that they have a hold on the business and can exact

Chart 4

U.S. Commercial Paper Outstanding: Dealer Placed versus Directly Issued



Source: Federal Reserve Bank of New York.

[16]Stigum, p. 639.

oligopolistic returns. CP dealers face a potential competitor in each customer.

The U.S. CP market looks much less concentrated if the relevant market is taken to be the CP market as a whole rather than dealer-placed CP. Merrill Lynch and Goldman Sachs together place little more than a quarter of *all* U.S. CP. The fourth-ranked placer is the first-ranked direct issuer, GMAC, with about a 10 percent market share. As a group the top four placers share well less than half the market. On this showing, the U.S. CP market looks much more competitive.

It is reasonable to take the whole CP market as the relevant market for the assessment of concentration even though direct issuance cannot substitute perfectly for hiring a dealer. A direct issuer performs most of the functions that a dealer performs: making arrangements with buyers, assessing the market, posting rates, and closing sales. The direct issuer must set up dealers in a dealing room and buy telephones and screens. The direct issuer cannot, however, free himself of the risk that paper may not be sold in the desired quantity at the posted rates. Still, the direct issuer may fund the shortfall in much the same way that the dealer would fund an overnight CP position, with repos or same-day bank credit. On balance, direct issuance substitutes closely for hiring a dealer; therefore, it makes sense to measure concentration in terms of the CP market as a whole.

Sharpened competition that drives down dealers' fees may over time shift the composition of U.S. CP to more dealer-placed paper. With lower fees, the threshold amount that an issuer must sell regularly before it can break even issuing directly should rise. Over time, one would expect the share of paper directly placed to fall.

Since dealer fees in Europe are currently less than half those in the United States, outstandings of perhaps $1 billion would be required before savings on dealer fees would outweigh direct issuance costs. At this point, even Chrysler generally has less than that amount of ECP outstanding. Again, the more heterogeneous nature of the investor base for ECP may raise the threshold for an issuer to internalize the dealing function. But as the market grows, it seems safe to anticipate the appearance of direct placement in the Euromarket, especially if the exit of current dealers or other factors should cause dealer fees to rise.

Importance of credit ratings

Euromarket practice should converge to U.S. market practice in requiring paper to be rated. Only about 45 percent of active ECP issuers at end-1986 were rated, while credit ratings are ubiquitous in the United States. There are two plausible explanations for this difference. First, Euromarket investors generally have not relied on credit agencies and their ratings. This year, an agency called EuroRatings was set up by Fitch Investors Service and Compagnie Beige d'Assurance Credit to serve the Euromarket exclusively. As of September, 1987, EuroRatings advertises 67 short-term ratios, of which 9 are for U.S. firms. By contrast, buyers of U.S. corporate debt have consulted credit ratings for generations. In the United States, regulation has reinforced tradition: prime quality paper, distinguished by a high rating, need not be registered with the Securities and Exchange Commission.[17] Second, borrowers in the Euromarket have not encountered severe liquidity problems or defaulted on their paper. It was only in the wake of the largest shock to the U.S. CP market, Penn Central's default on $82 million of outstanding paper, that multiple ratings became as widespread in the United States as they are today.[18] But even though Europe has not witnessed such an episode, ratings are becoming more important there as well, as investors become accustomed to the concept.

Tough competition among paper dealers is paralleled by competition among raters. While the third-ranked U.S. CP rater, Fitch, has teamed up with a European partner, the two major raters in the United States have both adopted strategies to establish their position in the Euromarket. Standard and Poor charges an entity with a U.S. rating only $5000 for an ECP rating on top of the $25,000 annual U.S. fee. Moody's has gone a step further by making its CP ratings global paper ratings, applicable in any market or currency.

Increasing reliance by Euromarket investors on ratings will undermine the distinction between ECP and Euronotes. Euronotes are said to be underwritten, meaning that the contract governing their issuance also contains an undertaking by a group of banks to buy the paper in the event that it cannot be sold at a yield less than LIBOR plus an agreed spread. For years, however, the U.S. rating firms have required that an issuer of commercial paper have sufficient access to bank credit to repay maturing paper in the event that new paper could not be sold. So rated issuers of ECP must have access to bank credit, even if that access is not contractually bundled with the paper issuance. A rating thus substitutes for an announced, "underwritten" program of paper issuance, and ratings have gained in Europe even as the announcement of Euronote programs has fallen off.

[17]Low-rated paper is issued under the private placement exemption that restricts sales to a limited number of sophisticated investors, at the cost of market width and higher yields. See Darrow and Grusen, "Establishing a U.S. Commercial Paper Programme," pp. 10-11.

[18]See Thomas M. Timlen, "Commercial Paper—Penn Central and Others," in Edward I. Altman and Arnold W. Sametz, eds., *Financial Crises: Institutions and Markets in a Fragile Environment* (New York: John Wiley, 1977), pp. 220-25.

Pricing base

Pricing differences between the two markets persist but are showing signs of erosion. CP dealers in the U.S. market post absolute rates, while the Euromarket has traditionally based pricing on LIBID or LIBOR, plus or minus a spread. Specifically, a rise in the yield spread between U.S. Treasury bills and Eurodollars would lead ECP rates to rise with the Eurodollar rates one-for-one. U.S. CP rates, by contrast, vary with respect to both Treasury bill rates and Eurodollar rates and generally split the difference when the latter two diverge.[19]

But yields on some ECP, that issued by sovereigns, have developed in 1987 a noticeable independence from bank deposit rates. At the beginning of the year, dollar paper for Sweden and Spain gave a return to investors generally 0-10 basis points below the bid rate for Eurodollar deposits with banks (Chart 5). In the spring the Treasury cut back on its issuance of Treasury bills in response to unanticipated tax revenue and recurring approaches to the legislated debt limit. Reduced supply met an increased demand, as central banks sought to invest reserves acquired in support of the dollar, and, consequently, Treasury bill rates hardly rose as three-month Eurodollar rates rose through 7 percent in April. Sovereign ECP rates, however, did not quite rise in step with bank deposit rates. In late April and early May, sovereign ECP offered investors 10-20 basis points less than Eurodollar deposits in banks. When Treasury bill rates rose in late July and Eurodollar rates remained steady, the difference between the yields of sovereign ECP and bank deposits narrowed again.

Sovereign ECP yields thus stray from Eurodollar deposit rates to stay closer to Treasury bill rates when the Treasury and Eurodollar rates diverge; ECP yields approach Eurodollar deposit rates when Treasury and Eurodollar rates converge. When the Treasury-Eurodollar spread has been less than 100 basis points this year through September, the Kingdom of Sweden's ECP has yielded an average of about 5 basis points less than LIBID; when the Treasury-Eurodollar spread has reached over 100 basis points, Sweden's ECP has yielded an average of 14 basis points less.

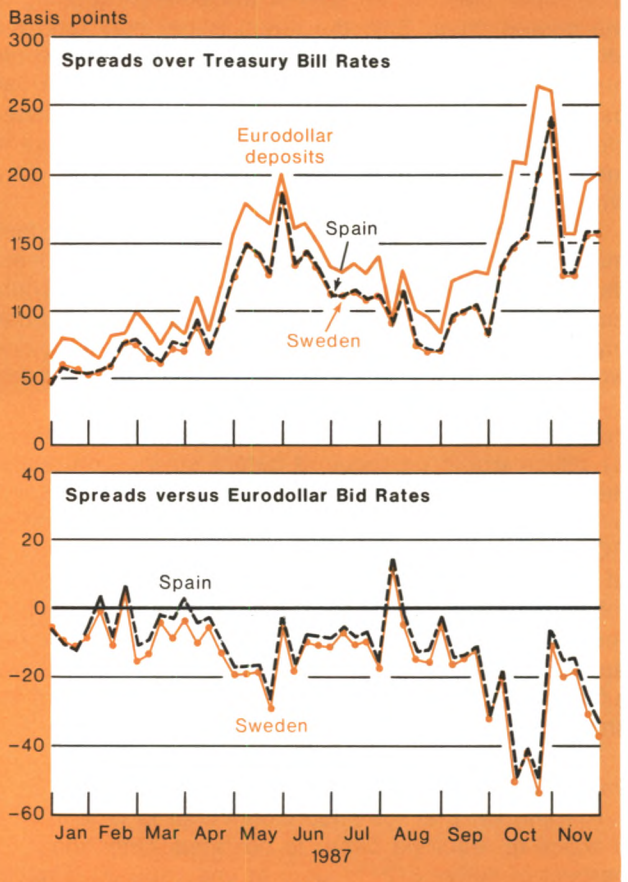
The investment behavior of central banks lies behind these changing rate relations. Formerly, U.S. CP sold by either French state corporations or banks with a government guarantee competed with U.S. Treasury bills in offering sovereign risk on dollar paper. Now central banks can spread their dollars across paper issued by or guaranteed by most of the governments of Western Europe. By investing in sovereign ECP, central banks can pick up more than 100 basis points while sacrificing liquidity only modestly: for this reason, such investments are becoming increasingly common.

The pricing of other ECP has not similarly diverged from interbank rates. The ECP yield index that the Bank of England has published just since late August 1987 shows little independence of ECP rates. In particular, the rates published for three-month ECP prime corporate and bank holding company borrowers range narrowly from 0-3 basis points above the London Interbank Bid Rate.

Convergence of rates in the two markets would require ECP rates to fall relative to Eurodollar bank deposit rates. Alternatively, U.S. CP rates could rise relative to domestic bank CD rates. Indeed, with heavy

Chart 5

Rates on Sovereign Eurocommercial Paper of Sweden and Spain and on Eurodollar Deposits*



* London Interbank Offered Rate.

Sources: Federal Reserve Bank of New York, Merrill Lynch.

[19]See Nancy J. Kimmelman and Gioia M. Parente, "The TED Spread—Outlook and Implications," Salomon Brothers Bond Market Research Memorandum, July 15, 1987.

issuance of CP, CP rates have approached and sometimes have exceeded domestic CD rates. But since a domestic reserve requirement and a Federal Deposit Insurance Corporation insurance premium drive a wedge of 30 basis points or so between domestic bank rates and Eurodollar deposit rates, considerable distance still generally separates pricing in the two markets, especially for direct issuers in the U.S. market.[20] The experience of GMAC, which has not been able to maintain $1 billion of ECP outstanding at prices no higher than at home, underscores this point. Along the way to convergence, foreign issuers could be expected to exit from the U.S. market, given the foreign premium. Thus, convergence of rates might well be associated with greater specialization by nationality of issuance in the two markets.

Conclusion

This article argues that the Eurocommercial paper market and the U.S. commercial paper market are likely to continue to differ in some important respects. In particular, the U.S. market will probably remain less cosmopolitan than the ECP market, requiring foreign issuers to pay a higher interest rate than U.S. issuers of like quality. As a consequence of the diminished but persistent foreign premium in the U.S. market, the U.S. market funds a prime selection of foreign credits. Conversely, the less quality-conscious ECP market offers funds to a distribution of U.S. borrowers of lower quality than the general run of U.S. issuers of CP. In addition, the ECP market is likely to remain a market for longer-maturity paper with much greater reliance on secondary market trading to provide liquidity. Issuance, clearance and settlement of ECP span half the globe and take two days while these same processes in the U.S. CP market are carried out in one city in the course of a day.

Other differences are likely to prove transitory. Although dealing in ECP appears much more competitive than dealing in U.S. CP, the entry of U.S. banks serving as placing agents and of foreign securities firms is increasing competition among U.S. dealers in New York. And if direct issuers are recognized as competitors of U.S. securities firms, the market appears even more competitive. In addition, ratings are likely to become as necessary in Europe as they are in the United States. Finally, both pricing methods and levels are likely to converge in the two markets, although this convergence may coincide with greater segmentation by nationality of issuers in the two markets.

Out of these differences come three useful points for the ongoing debate over banks' underwriting in the U.S. CP market. First, dealing in the U.S. CP market is less competitive than dealing in ECP, but the difference is both easy to overstate and already narrowing. Second, foreign issuers of U.S. CP and smaller U.S. firms that do not have programs large enough to warrant direct issuance would be the principal beneficiaries of further competition and lower dealing rates in the United States. Third, since the total revenues at stake, particularly in the competitive circumstances characteristic of the ECP market, do not seem large, only explosive growth of CP issuance would make the policy question at hand decisive for commercial bank revenues or profitability.

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[20]See Lawrence L. Kreicher, "Eurodollar Arbitrage," this *Quarterly Review*, Summer 1982, pp.10-21.