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The European Monetary System

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In March 1979, nine major European countries, members of the European Economic Community, launched a new experiment in international monetary cooperation—the European Monetary System. The system consists of a number of special arrangements, including a composite common currency unit similar in structure to the Special Drawing Rights of the International Monetary Fund, detailed rules for the maintenance of relatively fixed exchange rates between currencies of the member countries, and an intricate network of mutual credit facilities that will be ultimately administered by an EC supernational monetary authority. This article traces the historical development of the new system, looks at the details of the underlying arrangements, and evaluates its significance.

Historical background

The launching of the European Monetary System represents yet another step toward close economic cooperation between European nations in the post-World War II period. The first steps in that direction were taken in 1950 with the establishment of the European Payments Union that was designed to facilitate settlements of international trade transactions between European countries. In 1951, efforts to promote trade relations between the European nations through removal of trade barriers led to the creation of the European Coal and Steel Community. Under the arrangement, Germany, France, Belgium, Luxembourg, the Netherlands, and Italy dismantled restrictions on the movement of raw steel and coal. The European Coal and Steel Community provided a nucleus for the establishment of the European Economic Community in 1957. The Treaty of Rome signed by the six nations comprising the European Coal and Steel Community established a framework of cooperation toward the ultimate goal of unrestricted movements of goods, services, capital—and people—between the member nations as a means of increasing the standard of living and political stability of the area. The European Economic Community or the EC, as it has come to be known, made great strides over the years of its existence toward the goals of economic and political integration. The intra-EC tariffs were gradually phased out and common tariffs applicable to trade with non-EC countries were established. A common agricultural policy aimed at stabilization of prices and encouragement of trade in agricultural commodities within the EC was established. Under the auspices of the European Parliament, common budgetary policies are being developed, and common standards in patents and other legal matters are being established.

The goal of establishing a monetary union within the European Community was first approved at a conference of national leaders in 1969. The plan called for the completion of the union by 1980, with a common currency. This was to be achieved by gradually narrowing the extent of day-to-day fluctuations in the exchange values of individual EC countries' currencies in terms of each other. Once the exchange values were stabilized and maintained fixed, it would be a mere technicality to "convert" individual national currencies into a common unit. It was hoped that the stability of exchange rates of the currencies of the member countries would be an important stimulant for trade among them, and (particularly after the goal

of the common currency has been achieved) that it would cement the evolving close economic, political, and social ties between them.

The EC blueprint for progress toward the goal of fixed and stable exchange rates between the member countries was drawn within an already existing framework of relatively fixed exchange rates worldwide. The Bretton Woods international monetary system, which was still in existence at that time, required all participating countries to maintain exchange rates of their currencies within 1 percent of the declared par value in terms of the U.S. dollar. By this arrangement, the exchange rates of the EC currencies were held within 2 percent of each other. Progress toward complete stability called for in the EC blueprint appeared fairly easy from this vantage point. However, in 1971, the Bretton Woods System collapsed, and the new international monetary arrangements that were agreed upon by representatives of IMF member nations after months of intensive negotiations in December 1971 at the Smithsonian Institution in Washington allowed for a much wider range of fluctuation. All currencies were permited to fluctuate within a 4½ percent band relative to the dollar. This meant that the EC currencies would fluctuate relative to each other within a total spread of 9 percent.

In order to return to the path toward stability of their exchange rates, Belgium, Luxembourg, France, Italy, the Netherlands, and West Germany entered into a European Joint Float agreement in April 1972. The arrangement became known as "the snake." Shortly after the launching of the snake arrangement by the six, four at that time non-EC countries (Denmark, Ireland, Norway, and the United Kingdom) joined in. Under that arrangement, the exchange rates of the snake-member currencies were to be maintained within a 2¼ percent spread, and were allowed to move jointly within the 4½ percent limits established by the international agreement. The 4½ percent limit for the joint "twists of the snake" became known as the "tunnel." The European monetary arrangement thus acquired the name the "snake in the tunnel."[1]

In the day-to-day functioning of the snake, the exchange rates of the participating members' currencies were maintained within prescribed limits by official intervention in the foreign exchange markets. For example, as the value of one member's currency would begin to rise on the world's exchange markets due to a strong commercial or speculative demand for that currency, one or a combination of the following measures had to be taken: One, the member whose currency was rising would meet the market demand for its currency by purchasing dollars with its own currency. The resulting increase in supply would reduce the upward pressure on the exchange rate. Two, the central banks of the other snake countries would meet the market's demand for that one member's currency by selling it against their own currencies. The currency sold would be typically acquired by them through borrowing on a short-term basis from the central bank of the member whose currency was rising. This, as well as the third alternative, which involved selling dollars against their own currencies from their reserves, would cause their currencies to rise jointly against the U.S. dollar and the rest of the world currencies. However, the extent of the joint rise of the snake currencies would be limited by the 4½ percent limit set by the international monetary arrangement. Thus, as the snake currencies would jointly approach the ceiling of the tunnel, members would be required to moderate their joint rise relative to the dollar by purchasing dollars with their own currencies. A precisely opposite set of measures would be called for when one member's currency would begin to decline in value.

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[1]The Dutch and the Belgians entered into a special supplementary arrangement with respect to the exchange rates of their currencies that reflected the particularly close relationship between the economies of these two countries. They agreed to maintain the value of the Belgian franc and the Dutch guilder within a 1 percent band relative to each other and to move jointly within the 2¼ percent band established by the snake relative to other participating EC currencies. The Dutch-Belgian arrangement became known as the "worm," and the European monetary arrangement was known as "the worm within the snake within the tunnel."

After several weeks of relatively smooth functioning, the snake came under severe pressures as the basic economic forces that typically underlie the movements in exchange rates began to assert themselves. In early June 1972, the exchange rate of the British pound came under heavy downward pressure due to internal labor unrest that threatened further deterioration of the country's already poor balance-of-payment position. As the pound was pressed down by commercial orders to sell, the Bank of England and the other central banks of the snake countries tried desperately to hold the pound's exchange rate within the snake's skin by official intervention. However, the market pressures proved stronger than the central banks' resolve. After several days of turmoil in the foreign exchange markets, the effort to maintain the pound sterling within the snake was abandoned; the currency was officially withdrawn and permitted to float freely. Market pressures quickly shifted to the Danish krone. After several days of vain efforts to support it, the krone, too, was forced out of the snake's skin. Italy was forced to withdraw under similar circumstances in early 1973, shortly before market pressures on the U.S. dollar caused a complete collapse of the Smithsonian agreement. The remaining snake members continued their effort to maintain the arrangement, functioning in the environment of freely floating exchange rates that followed the collapse of the Smithsonian tunnel. However, divergent economic conditions in the member countries made the sought-after stability of exchange rates an exceedingly elusive goal. Currencies were forced out of the snake by recurring market pressures, and revaluations and/or devaluations of individual members' currencies had to be undertaken to keep the battered snake alive.

Launching of the EMS

The brief history of the efforts of the EC countries to provide for stability of the exchange rates of their currencies was a stormy one, as the achievement of the ideal of EC-wide stability and unity came under repeated attacks of centrifugal forces of economic realities. But the ideal of exchange rate stability as a means to closer political and economic unification of the community persisted. This, together with the growing frustration of Europeans with the worldwide floating exchange rate regime in general and the volatility of the U.S. dollar in particular, kept the search alive.

In July 1978, a plan for a new European monetary system was presented to and was approved by the heads of state of the nine EC member countries. The launching date was set for January 2, 1979, but a last minute postponement was made necessary by strife within the EC over certain related aspects of the EC's common agricultural policy.

The system was finally launched in March 1979. Seven of the nine EC members—Belgium, Denmark, France, Germany, Ireland, Luxembourg, and the Netherlands—became full participants. Italy decided to participate under modified conditions, and the United Kingdom, while becoming a member of the EMS, elected not to participate in all the arrangements.

The following are the main features of the new system:

The European Currency Unit (ECU). A newly created monetary unit, the ECU is the linchpin of the new system. The ECU does not exist in the physical sense that currencies of individual countries do. It does serve, however, as a monetary asset that participating central banks can hold as reserves. The central banks can also loan and borrow the unit, and it can be used in settling debts between them. Though use of the unit will be limited initially to countries participating in the EMS, it is expected that the ECU could serve eventually as an international reserve asset similar to the Special Drawing Rights issued by the International Monetary Fund and held and used by central banks worldwide.

In addition to its monetary function, the ECU will serve an accounting function, its

value providing a benchmark against which the central rates of individual currencies of the EMS members will be established. Thus, at the inception of the EMS, each of the participating countries formally defined the value of its currency in terms of the number of units of that currency one ECU would "buy."

Valuation of individual currencies in terms of the ECU serves two purposes: (1) it establishes a "central rate" for every currency in terms of other currencies, these relative rates forming a "bilateral grid" of exchange rates linking all EMS currencies; (2) it provides reference points for establishing a "threshold of divergence" that, once reached, will create a presumption for members to take specific economic measures.

In purely technical terms, the ECU is a composite unit consisting of the EC member currencies. It has been defined as the equivalent of the sum of: 3.66 Belgian francs, 0.217 Danish kroner, 1.15 French francs, 0.00759 Irish pounds, 109 Italian lire, 0.14 Luxembourg francs, 0.286 Dutch guilders, 0.0885 British pounds, and 0.828 German marks.

The weights assigned to each currency in the basket are derived from the relative GNP of each member country and that country's share in intra-European trade. The weights will be reexamined every five years, or if the relative value of any currency changes by 25 percent, the weights will be reexamined on request.

In terms of the dollar, the unit is worth about $1.40. The dollar value can be calculated by multiplying the current dollar "price" (the exchange rate) of the individual EC currencies by the weights of these currencies in the ECU valuation basket. This dollar value will, of course, vary from day to day with fluctuations in the exchange rates of the European currencies relative to the dollar.

"Bilateral grid" of the Central Rates of the EMS currencies

(Based on their par values in terms of the ECU as of March 13, 1979)

Value per/In terms unit of/ of	Bel./Lux. franc	German mark	Dutch guilder	Danish krone	French franc	Italian lira	Irish pound
		0.06506	*.07050*	*0.1836*	*0.1503*	*30.85*	*0.0172*
Bel./Lux. franc	—	**0.06363**	**.06895**	**0.17958**	**0.14695**	**29.1**	**0.0168**
		0.06220	*.06740*	*0.1755*	*0.1436*	*27.35*	*0.01642*
	16.0700		*1.1081*	*2.8859*	*2.3615*	*484.7*	*0.2698*
German mark	**15.7164**	—	**1.0837**	**2.8224**	**2.3095**	**457.3**	**0.2639**
	15.3628		*1.0593*	*2.7589*	*2.2575*	*429.9*	*0.2580*
	14.8289	*0.9435*		*2.6630*	*2.1790*	*447.3*	*0.2490*
Dutch guilder	**14.5026**	**0.92277**	—	**2.6044**	**2.1311**	**422.0**	**0.2435**
	14.1763	*0.9020*		*2.5458*	*1.9832*	*396.7*	*0.2380*
	5.6938	*0.36228*	*0.3926*		*0.8367*	*171.7*	*0.09560*
Danish krone	**5.5685**	**0.35431**	**0.38397**	—	**0.8183**	**162.0**	**0.0935**
	5.4432	*0.34634*	*0.3753*		*0.7999*	*152.3*	*0.0893*
	6.9582	*0.4427*	*0.4798*	*1.2496*		*209.9*	*0.1169*
French franc	**6.8051**	**0.4330**	**0.4692**	**1.2221**	—	**198.0**	**0.1143**
	6.6520	*0.4320*	*0.4586*	*1.1946*		*186.1*	*0.1117*
	0.0365	*0.00232*	*0.00251*	*0.00654*	*0.00535*		*0.000612*
Italian lira	**0.0344**	**0.00219**	**0.00237**	**0.00617**	**0.00505**	—	**0.000577**
	0.0323	*0.00206*	*0.00223*	*0.00580*	*0.00475*		*0.000542*
	60.8869	*3.8742*	*4.1984*	*10.9341*	*8.9472*	*1,836.7*	
Irish pound	**59.5471**	**3.7889**	**4.1060**	**10.6935**	**8.7503**	**1,732.7**	—
	58.2073	*3.7036*	*4.0136*	*10.4529*	*8.5534*	*1,628.7*	

Note: The bold face numbers are the Central Rates of the currency in the left hand column in terms of the currency on the top of each column. The italicized numbers are the maximum permitted deviations above and below the Central Rate.

The Bilateral Grid is used in the day-to-day operations of the EMS and is the same as in the snake. Each country must try to maintain the value of its currency relative to others in the EMS by intervening in foreign exchange markets when the exchange rate of its currency is pushed by the underlying market forces toward the maximum permitted deviation. In principle, the country with a currency that appreciates 2¼ percent (6 percent for Italy) above the central rate of another EMS currency established by the bilateral grid will be required to intervene in foreign exchange markets to alter the supply and demand conditions causing the appreciation.

The Threshold of Divergence. A new provision, called the "threshold of divergence," is designed to guard against conditions that recurred under the snake arrangement and were a source of discord among the members. These conditions arose when the value of one member's currency was pushed up on the world's foreign exchange market because of either internal developments in that member's economy or speculative pressures in the foreign exchange market. The other members had been required to follow the upward trend, at times to the detriment of their own economies.

Because of a large surplus in Germany's international trade accounts, for example, the exchange rate of the mark would rise relative to the dollar on world exchange markets. The rise in the value of the mark was part of a normal adjustment that would eventually lead to the elimination of Germany's trade surplus through increases in the prices of German goods in terms of foreign currencies. As the mark rose, however, other member countries were obliged to intervene in the foreign exchange markets to maintain the required relationship of the exchange rates of their currencies relative to the mark. In effect, their currencies rose with the mark relative to the dollar. The resulting appreciation of their currencies relative to the dollar and other non-snake member currencies was undermining their ability to export and, in many instances, led to a worsening of their trade deficits and to domestic unemployment.

The threshold of divergence feature built into the new EMS is intended to prevent such developments. As the currency of one EMS member is pushed by internal or external economic developments out of line with the exchange rates of other member countries, the threshold-of-divergence safeguard is triggered. Once this happens, the other countries are no longer required to "follow the leader" as far as their exchange rate policies are concerned. Rather, it is entirely up to the government of the member country whose currency is out of line to bring the exchange rate back in line through unilateral corrective measures designed to eliminate the market pressures causing the deviation.

Here is how the trigger mechanism is intended to work. As explained above, the external value of the new common currency unit, the ECU, is defined as a weighted average of the external values of individual member currencies. Under this arrangement, as EMS currencies rise (or fall), jointly in value relative to the dollar, the external value of the ECU in terms of the dollar rises (or falls). This leaves the central rates of the EMS member currencies undisturbed in terms of the ECU, and no action is necessary.

If, however, the value of only one member's currency rises (or falls) the weighted average is influenced only marginally, depending on the weight of the currency that is moving. As a result, the external value of the ECU remains relatively stable, as the ECU basket is anchored by the stability

Par Values and the "Thresholds of Divergence" of the EMS currencies in terms of the European Currency Unit
(as of March 13, 1979)

	Lower "Threshold of Divergence"	**Par value**	Upper "Threshold of Divergence"
Bel.-Lux. franc	40.0619	**39.4582**	38.8545
German mark	2.53907	**2.51064**	2.48221
Dutch guilder	2.76179	**2.72077**	2.67975
Danish krone	7.20177	**7.08592**	6.97007
French franc	5.87659	**5.79831**	5.72003
Italian lira	1194.91	**1148.15**	1101.39
Irish pound	0.67367	**0.66264**	0.65160

of the other members' currencies. The exchange rate of the currency that is singularly rising (or falling) against the other exchange rates is now also deviating from its ECU central value.

When the rate deviates by 1.69 percent (4.5 percent for Italy) from its ECU value, the threshold of divergence is reached. The authorities must adopt domestic economic policies to stop further drift. Alternatively, they must officially revalue or devalue their currency.

Supporting Credit Facilities. In carrying out market intervention in support of their currencies, EMS members can use their foreign exchange reserves (primarily dollars) or they can avail themselves of special credit facilities. The special credit facilities have been available to EC countries participating in the predecessor to the EMS, the snake, but they were expanded to meet the needs of the EMS. These facilities include three types of credits structured by the maturity of the "loans."

The first tier consists of almost unlimited amounts of members' currencies that can be borrowed from other participants in the EMS to carry out market intervention. Such loans are available to members for up to 45 days following the end of the month they were made. The loans can be extended, within limits, up to three months.

The second tier consists of credits for three to six months, which can be extended to nine months. The amounts that can be borrowed are limited by the size of the pool of credit (about 14 billion ECUs) and by the member's quota, which is determined, in turn, by the relative size of the member's economy. This quota also determines the member's access to the medium-term financial assistance, which is for a term of two to five years. The third-tier pool of funds totals about 11 billion ECUs. However, borrowing under this facility will be conditional on the member's willingness to follow internal economic policies that will reduce the domestic problems that gave rise to the need to borrow.

The European Monetary Cooperation Fund (EMCF). This institution was set up to administer the various EMS credit arrangements. When a country borrows a currency for intervention, its debt is denominated in ECUs. The debtor country can repay the debt either in the currency it borrowed or in ECUs. A creditor country, however, does not have to accept more than half the repayment in the form of ECUs. The rest of the repayment can be made in the currency borrowed or acceptable international reserves, such as dollars or gold.

Countries that hold more ECUs than their quotas will be paid interest on their excess holdings. Countries that hold fewer ECUs than their quotas will be charged interest on their deficiencies. The interest rate will be equal to the weighted average of the discount rates of the EMS countries. To create an initial supply of ECUs, central banks deposited 20 percent of their gold and dollar reserves with the EMCF and received an equivalent amount of ECUs. Until establishment of the EMCF is formally approved by the legislative bodies of the individual countries participating in the EMS, the deposits will be in the form of revolving three-month swaps.

Functioning of the EMS

The EMS was launched in March 1979 amid hopes of greater monetary stability between the members. Only a few weeks later, however, problems began to surface in the form of upward pressure on the exchange rate of the German mark relative to the U.S. dollar. To counter the mark's rise, monetary authorities in Germany sold marks against dollars in the foreign exchange markets. Despite the intervention, the value of the mark kept rising. Other EMS members were required by the rules of the EMS to intervene in their foreign exchange markets to keep the exchange rates of their currencies in step with the mark.

The intervention by German monetary authorities on behalf of the mark relative to the dollar and the intervention of the other EMS members on behalf of their currencies

relative to the mark were adding to Germany's domestic money supply, threatening to fuel further the already rising inflation rate in Germany. To counter this threat, German authorities moved to tighten domestic credit conditions by raising the central bank discount rate. However, higher interest rates began attracting additional foreign funds to Germany from the Eurodollar market as well as from other EMS countries. This further aggravated the pressure on exchange rates both in Germany and in the other EMS countries. To alleviate these pressures, the other EMS countries were forced to boost their interest rates repeatedly even though their sluggish domestic economic conditions called for an easier monetary policy.

The scenario was reminiscent of the one that plagued the functioning of the snake—yet was unfolding under the new EMS that was presumably structured to be immune to it. It was precisely this scenario that the threshold of divergence mechanism of the EMS was supported to protect the system against. Where did the "fail-safe" system of the EMS fail?

In part, the failure was due to technical difficulties with the threshold of divergence mechanism. Since early summer, the British pound and the Italian lira were rising sharply in value relative to the U.S. dollar and other currencies. Although the United Kingdom does not participate in the exchange rate maintenance scheme of the EMS, and although Italy is only loosely associated, they are both full members of the EMS, and the external values of their currencies are used in computing the value of the ECU. Thus, the rise in the external value of their currencies caused the external value of the ECU to rise. This, in effect, moved the anchor point of the system upward, and the rising German mark remained technically within the stipulated threshold of divergence relative to the ECU, a threshold that once reached would have automatically forced Germany to take unilateral measures to bring the mark into line with the other EMS currencies. The upward drift in the ECU, resulting largely from developments outside the exchange rate adjustment process, neutralized the mechanism, leaving the burden of adjustment with weaker currencies.

For three months, between June and September, the participants in the EMS

History of the Snake

1972

April 24 The snake arrangement launched.
May 1 United Kingdom and Denmark join.
May 23 Norway joins.
June 23 United Kingdom withdraws.
June 27 Denmark withdraws.
Oct. 10 Denmark rejoins.

1973

Feb. 13 Italy withdraws.
March 19 Mark revalued 3 percent; general float begins, with snake no longer constrained by the tunnel.
April 3 European Monetary Cooperation Fund established to support snake.
June 29 Mark revalued 5.5 percent.
Sept. 17 Guilder revalued 5.5 percent.
Nov. 16 Norwegian krone revalued 5 percent.

1974

Jan. 19 France withdraws.

1975

July 10 France rejoins.

1976

March 15 France withdraws.
Oct. 18 Danish krone devalued 4 percent, Norwegian krone and Swedish krona devalued 1 percent, mark revalued 2 percent.

1977

Apr. 4 Swedish krona devalued 6 percent, Danish and Norwegian kroner devalued 3 percent.
Aug. 28 Sweden withdraws, and Norwegian and Danish kroner devalued by 5 percent.

1978

Feb. 10 Norwegian krone devalued 8 percent.
Oct. 16 German mark revalued 2 percent, Danish and Norwegian kroner devalued 2 percent.
Dec. 12 Norway withdraws.

wrestled with the problem of reconciling their domestic economic objectives with the conflicting dictates of the EMS. The impass was finally broken in early September, when the British pound weakened sharply in the foreign exchange markets. The declining external value of the pound led to a reduction in the external value of the ECU, since that value is a weighted average of the values of the EC currencies. With the external value of the ECU down by definition, the ECU value of the German mark rose. This finally triggered the threshold of divergence feature of the EMS, leading to a 2 percent revaluation of the German mark and a 3 percent devaluation of the Danish krone, the weakest member of the EMS.

While the exchange rate adjustments represented a departure from the hoped-for stability of exchange rates within the EC, they at least alleviated internal pressures within the EMS—not for long, however. In a few weeks, new pressures began to surface. Continued concern in Germany over incipient inflation led to further tightening of monetary policy in that country. Interest rates in Germany rose, and other EMS members were forced to nudge their interest rates up as protective measures.

The pressures of rising interest rates were felt most keenly in Denmark, whose currency continued close to the floor of the EMS despite the September devaluation. The official discount rate was increased 2 percent in late October, but the pressure continued. The central bank was forced to intervene heavily to keep the exchange rate within the prescribed limits. Finally, in late November, the krone was devalued by 5 percent and a package of economic measures was introduced, designed to bring Denmark's underlying domestic conditions more in line with its EC partners. At the same time, the Netherlands further boosted its discount rate as a protective measure against the pressures on its currency that were expected as a consequence of Denmark's action. It is still not clear how effective these measures will be in preventing further exchange rate adjustments within the EMS.

Conclusion

It is generally believed that stable exchange rates between currencies of the EC member countries will encourage their economic interaction, paving the way for a closer economic and political union. The snake and the subsequently more elaborate European Monetary System represent the mechanism through which countries of the European Community hope to achieve that goal. Exchange rates, however, are only the tip of the iceberg. Hidden underneath are myriads of intricate economic relationships that must be satisfied for a free market to produce a stable relationship between the exchange rates. Divergent trends in economic developments and divergent economic policies that reflect divergent social values are invariably reflected in divergent exchange rates. The forces of the free market will not bow to the will of kings and prime ministers—nor to the confines of man-made mechanisms!

The snake, the predecessor to the EMS, was plagued with problems because the member countries generally pursued independent policies that reflected their own economic priorities. While the EMS incorporates features that force countries to make adjustments intended to correct the divergences, it remains to be seen whether these innovations will be sufficient to achieve that goal.

Other problems may also arise. For example, to the extent that the countries with higher inflation rates adjust their economic policy to conform with those of low-inflation countries, the EMS would result in a slowing in economic growth in Europe. If the low-inflation countries make the adjustments, inflation will increase in Europe.

The success or failure of the EMS will ultimately depend on the willingness of European countries to sacrifice their own divergent economic objectives for the sake of stable exchange rates. Whether that can be achieved within the still rather heterogeneous European Community remains to be seen.

Securities losses—a liquidity trap?

Elijah Brewer

As high market interest rates have eroded savings inflows, banks have bid for funds at increasingly high cost in an effort to meet the continued strong demand for loans. But for all the funding problems of banks, there has been no reduction in their holdings of securities. Commercial banks in the United States held $282 billion in securities in September ($95 billion in Treasury securities), compared with $267 billion at the first of the year.

One reason banks have not tapped this source of funds in the face of liquidity pressures has been the erosion in the book value of bank investments as interest rates climbed. Banks are reluctant to take the losses. When yields rise abruptly—as in October, for example—prices of outstanding issues decline sharply. The quotation on an 8 percent coupon Treasury note maturing in February 1985 fell to $87.84 per $100 par value on October 31, down from a bid price of $94.25 on October 1.

The reaction of banks to declining prices of the securities they hold is important both to bank profits and the functioning of restrictive monetary policy.

A decline in the market value of a bank's investments (which serve partly as liquidity reserves) tends to slow sales of government securities to finance loan expansion. For that reason, a decline in the value of investments is integral to the operation of restrictive credit policies.

Part of the concern of banks over losses on the sale of securities is the effect the losses have on the accumulation of undivided profits and their transfer to capital and surplus accounts. These locking-in effects—capital loss constraints on bank liquidations of securities to meet loan demand—are increased as yields on outstanding government securities rise.

A look at the operations of member banks in the Seventh District in 1978 shows the level and structure of interest rates had far-reaching effects on earnings from bank investment portfolios. These effects were even greater in 1979. Responses of banks to rising yields on outstanding securities brought losses to banks in all sizes. This evidence shows significant difference in reactions of large and small banks.

Bank reluctance to take losses

As banks carry securities at cost, a decline in the market value of securities resulting from an increase in yields does not show up on bank books unless the securities are sold. Not only do banks like to increase the accumulation in capital, surplus, and undivided profits accounts as much as possible, but they are also concerned about losses that depositors or others might see as signs of poor management.

Accumulations of capital, surplus, and undivided profits are important because capital can be used both directly in extending credit and indirectly in attracting additional funds. A sound capital base is needed for a bank to grow and expand its operations. For that reason, banks may try to avoid book losses from the sale of securities in depressed markets. The losses would slow the accumulation of undivided profits and their transfer to capital and surplus accounts. When there are losses on securities, banks absorb them out of current income. Since income represents nothing more than additions to capital, the effect is a reduction in the growth of the bank's capital accounts.

With current earnings playing such a large role in the adjustment to losses on securities, banks are presented with a problem. Losses on the sale of securities

reduce the reported earnings of the bank, directly and visibly. If, by taking the losses, a bank can switch into higher yields or into securities with more potential for appreciation, it can often recover its loss over time while adding to total income over the life of the new assets it buys. It is hard to explain to shareholders that reduced earnings are advantageous. A portfolio strategy that sometimes results in losses in securities, nevertheless, enables management to meet a major portfolio objective: over the long haul, to achieve the highest, most consistent growth in earnings possible.

Need for portfolio flexibility

For purposes of portfolio management, the prices paid for current holdings of, say, government securities do not bear on whether the portfolio represents the best use of funds. If a bank can increase its earnings by selling the securities it holds and putting the proceeds to another use, there is a distinct sacrifice in not making the switch. If, computed on the basis of market prices, two similar government securites have different yields to maturity, a bank holding the lower-yielding security might increase future income on its portfolio by switching to the higher yielding issue. This could be true, regardless of the effect of the switch on the book value of the investments.

A bank also need not be deterred from expanding its loan portfolio simply because of losses that have to be realized when securities are sold to raise funds for loan expansion. The losses have been suffered anyway, whether the bank shows them on its books or not. A decline in the market value of security holdings cannot be avoided by refusing to sell the security.

The question in determining whether a bank should continue holding a security is not the market value of the security itself but whether it has funds equal to the market value available for a more attractive use. If not, income on the bank loans and investments can be improved by selling the security and putting the funds to better use.

A flexible portfolio policy that takes advantage of changes in interest rates results in fairly wide variations in gains and losses on securities from year to year. When loan demand is strong, interest rates high, and monetary policy restrictive, prices of securities tend to be depressed, the market value of many bonds falling below their purchase price. During these times, some banks take losses on their securities and extend the maturities of their investments in the expectation of lower interest rates and higher security prices. Other banks liquidate their securities to expand their loan portfolios.

When interest rates are low, bonds tend to sell at above-average prices. Holdings, especially if the securities were acquired at comparatively low prices during a period of high interest rates, will be selling above their purchase price. That is the time banks often take their gains on securities and concentrate on short-term investments.

In taking a more flexible approach to the management of its investment portfolio, a bank also considers the tax consequences of capital gains and losses on securities. Banks that do not see losses on securities as terrible might be expected to establish such losses through, say, the sale of government securities, even though they do not want to reallocate their resources into loans. This is because the advantage of established losses traces to the immediate tax savings, regardless of how the funds are used after the securities are sold.

Tax considerations

Although the unwillingness of banks to sell their government securities when the price is depressed may stand in the way of more flexible management of investment portfolio, the tax treatment of bank losses on securities may encourage banks to take the losses. Unlike other business, banks have to treat both short-term and long-term capital gains as ordinary taxable income—which means any capital losses can be used without limit to reduce taxable income.

Losses can be profitable if they offset tax-

able income. Take, for example, a bank that owns 20-year bonds it bought at $1,000 par when rates were lower several years earlier. Because of the rise in interest rates, the bonds now sell at $800. For every $1 million of the bonds the bank sells, it takes a $200,000 loss. But if the bank is in the 50 percent tax bracket, its net loss is only $100,000. By reinvesting the proceeds in bonds of comparable quality and maturity, and the same price of $800, the bank will have a built-in future appreciation of $200,000 at maturity.

As the bank will also have realized a tax saving of $100,000 for every million in bonds it sold, it will have that amount to invest at the higher yields. The return on this additional investment resulting from the tax saving will appreciably increase the bank's income over the investment period.

Banks without current taxable income that offsets losses on securities can carry unused losses forward five years. Losses can be offset against taxable income not only this year but the four years following. Losses on securities are valuable only to the extent that they reduce tax liabilities. Banks have limited their trading in securities in recent years because of their small taxable incomes. Because of other factors, such as equipment leasing and foreign tax credits, the tax positions of some banks, especially large ones, are fairly small, leaving them little reason to make use of tax deductions.

The tax treatment of gains and losses on securities has allowed banks, however, to moderate fluctuations in operating income. They can take losses on securities in years of sharply rising income and realize gains on securities in years of declines in operating income.

Losses at district banks

It will be sometime yet before loss-taking in 1979 can be measured. However, evidence from 1978 income reports of member banks in the Seventh District indicate that rising interest rates and declining prices of the securities sold brought losses on securities to banks in all sizes. Net losses on securities at banks in the district averaged 0.16 percent of operating income. Averages varied widely, however, from 0.11 percent for banks with total assets of less than $10 million to 0.26 percent for banks with assets of more than $300 million and foreign branches and subsidiaries.

Reflected in the difference was the faster growth in profitability at large banks. Generally, the more profitable the bank, the more losses it can take before its capital position is threatened. As a percentage of equity capital, income (after taxes and before adjustment for transactions of securities) rose an average of about 210 basis points for banks with over $300 million in assets and foreign branches and subsidiaries. Profitability of the smallest banks, those with assets totaling less than $10 million, declined in 1978.

Net losses on securities relative to the average investment portfolio were also greater at large banks with foreign offices. Net losses on securities averaged 0.12 percent of the value of the investmet portfolios shown in condition reports of the largest banks for March, June, and September. The smallest banks had net losses on securities amounting to 0.03 percent of their investments on the three call dates.

Investments represent a residual use of funds at some banks, especially large ones.

Net gains on securities (after taxes) at Seventh District member banks relative to operating income
(by size of bank)

Asset size	1976	1977	1978
Less than $10 million	.52	.29	-.11
$10-25 million	.66	.25	-.14
$25-50 million	.48	.28	-.11
$50-100 million	.39	.28	-.22
$100-300 million	.46	.29	-.26
$300 million and over with domestic offices only	.08	.20	-.13
$300 million and over with foreign offices	.32	.17	-.26

When loan demands are weak, interest rates low, and bond prices high, the usual lagged response of large banks is to buy securities. When loan demands strengthen, drawing bank funds into loan markets, banks become less willing to hold securities. But interest rates have risen and bond prices fallen, offering banks fewer opportunities for capital gains on securities bought when interest rates were low.

At other banks, investment portfolios are not only a primary source of liquidity but also an important source of income. This does not mean these banks are less willing to stand losses on securities. It means more of their losses on transactions in securities are the result of switches in securities made in response to changes in economic and credit conditions. For that reason, small banks are likely to operate with smaller losses relative to their investment portfolios than large banks.

Interest rates govern transactions

Losses on sales of securities varied with interest rates. Rising rates and increased demand for bank loans brought on losses in securities for banks of all sizes in 1978. With interest rates rising all year, market values of securities depreciated, affording less opportunity for capital gains on securities bought when rates were lower. This was in contrast to 1976 and 1977, when gains probably reflected the sale of securities bought near the peak in interest rates in 1974.

Although gains relative to investment portfolios were about the same for all banks, net gains on securities were usually higher at the small banks. Loan demands had been strong at small banks in 1976 and 1977, when rates on securities were well below the peak of the previous interest rate cycle. Loan demands at large banks were comparatively weak. With interest rates rising in 1978 and loan demands increasing, large banks were willing to take losses on their securities. While some large banks liquidated securities to meet loan demands, others switched their securities to higher yielding investments. Small banks, facing tighter liquidity positions and reductions in the value of their investment portfolios, were less willing to take a loss.

Business loans at large commercial banks: policies and practices

Randall C. Merris

Commercial bank lending was once a fairly simple business. Business loans were nearly all short term and carried fixed interest rates. Any other details, except possibly collateral requirements, were left to informal agreements between a bank and its customers.

Business lending began getting more complex in the 1930s as many banks started making term loans—loans with maturities of more than a year. Relations between banks and business borrowers have been growing more complex—and more formal—ever since, the formality of term loans now being applied to many short-term loans as well.

Part of the push for more complicated loan arrangements—and, therefore, a greater variety in the kinds of agreements—has been the need for banks and borrowers to protect themselves from movements in interest rates over the credit cycle. Increases in market rates boost bank costs of funding outstanding loans. They also increase the opportunities for more lucrative new credits elsewhere. Reductions in market rates lower the interest costs of other debt financing available to bank loan customers.

Floating rates have probably been the most important innovation in bank lending since the advent of the term loan. Provisions for adjusting loan rates periodically give banks and borrowers some protection against market rate fluctuations. By combining some of the advantages of term and short-term loans, floating rates have allowed banks to compete effectively for their share of the business credit market—even in the face of increased competition from the commercial paper market and other nonbank credit suppliers. At the same time, use of floating rates has encouraged changes in the other terms and conditions of business lending.

This article examines business lending practices at large banks, especially toward commercial and industrial loans. These loans to businesses other than financial institutions most clearly reflect the recent directions in bank lending policy. Pricing, maturities, and other lending terms depend on the particular bank and borrower negotiating the credit, as well as the use of the loan proceeds—such as, to provide working capital, cover accounts receivable, or finance expenditures on plant and equipment.

Term loans

Term loans range in maturity from just over a year to more than ten years. Banks once held loans with maximum maturities of five to seven years. For customers that needed longer terms, banks participated with other lenders. A bank might, for example, take the first five years of credit, with an insurance company taking the rest to maturity, often under different terms and conditions. Banks are more inclined now to take all the term credits themselves or to participate with other banks, each taking part of the loan for the whole maturity.

With the future always uncertain, lengthening the maturity structure of bank loan portfolios might seem to mean banks were taking more risks. But at least half the term lending at large banks calls for periodic adjustment of loan rates.

Costs are nearly always higher for initiating term loans than short-term loans. Considerable negotiation is required, usually at top levels of management and often with legal staffs representing the bank and the

borrower. And voluminous documentation is needed to cover both the terms and conditions of the loan. Administrative costs are also high, especially in the frequent situations where the bank and borrower need to keep in touch throughout the life of the loan.

Agreement has to be reached not only on the amount of the loan and its price but also any number of other points:

Loan commitment—an arrangement for the borrower to draw down loans and sometimes even a schedule for disbursing the funds. As the funds are made available to the borrower whether he uses them or not, a fee is sometimes charged on the amount of the commitment not used.

Fall of the Real Bills Doctrine . . .

Though term loans were sometimes made for special purposes, most banks offered only short-term credit until well into this century. This was because bank policies were based on the commercial loan theory of credit, an American adaptation of the Real Bills Doctrine in England.

According to this doctrine, the only appropriate bank loans were short-term, self-liquidating notes. By self-liquidating, bankers meant loans that led to enough increase in sales and near-term profits to cover repayment. Loans for plant and equipment did not usually qualify, the reasoning being that several years might be needed before returns on fixed capital were enough to retire the debt.

Some business loans were renewed routinely, even as early as the 1830s, with the result that nominally short-term credit arrangements were actually long term. Not until the 1920s, however, was the commercial loan theory seriously challenged. The idea that loans needed to be self-liquidating began losing credibility for several reasons:

- The realization that the commercial loan theory did not provide the monetary policy advantages its proponents claimed.
- The practice of financing long-term projects by borrowing from one bank to pay off another—sequential bank financing.
- The emergence of the view that banks could gain liquidity better from their non-loan assets and their liabilities.

Proponents of the Real Bills Doctrine had long argued that the requirement that bank loans be self-liquidating made the money supply expand and contract with the needs of business. However, bankers became increasingly aware, especially in looking back on the Panic of 1907, that the policy did not prevent severe contractions, bank deposit runs, or bank failures.

Many banks, meanwhile, had imposed the rule that customers had to have all their loans at the bank paid up sometime during the year. This clean-up rule, meant to strengthen the commercial loan theory, actually had the opposite effect. Annual clean-ups tended to encourage short-term borrowing first at one bank, then another, and then back at the first bank—all to extend effective credit periods for fixed-capital purposes.

Renewals, sequential financing across banks, and the clean-up rule together debased the short-term loan doctrine. It took a new theory of bank management, however, to utterly discredit the commercial loan theory.

The new theory took the view that as most business loans were not actually liquid, they did not serve as a funding cushion against unexpected deposit withdrawals. In place of short-term loans, the theory turned for liquidity to other assets—such as government and corporate securities, bankers' acceptances, and commercial paper—that could be sold with little loss of their capital value. A forerunner to modern liability management, the new theory also noted that banks could acquire liquidity through Federal Reserve borrowings and interbank sale of bonds under repurchase agreements.

Together, these changes both in attitude and in the structure of banks' short-term investment portfolios helped foster some growth of term lending in the 1920s.

Instalment schedule—a timetable for paying down the principal and interest. Payments are most often due monthly, quarterly, or semiannually.

Supporting balance requirement—the borrower's obligation to maintain demand deposits that help offset the cost of funding the loan. A bank may require that even a loan commitment be backed by demand deposits.

Collateral—property put up against a loan. Banker and borrower must agree on the physical nature of the collateral, its value, and the care to be taken in its handling and protection.

Protective covenants—a requirement that the borrower do certain things, as for example, keep working capital above some minimum level during the credit term or furnish the bank periodic financial reports. Covenants can also require that the borrower not do certain things without the bank's approval—for example, expand its fixed assets, undertake further external financing, enter a merger, or acquire an affiliate.

Some of the costs of initiating and administering term loans are charged directly to borrowers as fees. But there is, of course, an interest rate at which banks are willing to absorb the remaining costs of term lending.

Revolving credits

Revolving credits were once treated as short-term loans, which followed the banking convention that all loans had to be paid up sometime during the year—the annual clean-up rule. They now fall somewhere between term loans and short-term loans. Customers with revolving credits can borrow and repay repeatedly over the life of the agreement (usually two or three years) as long as the debt outstanding does not exceed the amount originally agreed on.

. . . and rise of term lending

Although Real Bills persisted into the 1930s, events gave impetus to term lending.

- The slack demand for short-term loans during the Depression—even at a prime rate of 1½ percent from 1933 on—gave banks incentives and opportunities to shift into some higher yielding term loans.
- The Banking Acts of 1933 and 1935 limited bank activities in corporate security markets, leading banks to substitute term lending.
- The establishment of deposit insurance in 1933 reduced the likelihood of financial panics and deposit runs, encouraging some lengthening of the maturity of bank loan portfolios.
- A change in Federal Reserve rules in 1933 allowing loans of all maturities to be used as assets for discounts and advances at Federal Reserve banks increased the liquidity of term loans.
- Under the revision of bank examination standards in 1934, term loans were no longer routinely classified as "slow."
- With modern amortization gaining general acceptance, term loans, which had usually called for payment of principal and interest at maturity, were made payable in annual, semiannual, quarterly, or monthly instalments. Instalment payments smoothed the flow of interest and principal back to the bank and, by demonstrating a borrower's ability to repay, helped banks monitor term loans and identify problem credits.
- Banks were encouraged to help finance the recovery, and followed the examples set by the Federal Reserve and Reconstruction Finance Corporation in making direct term loans to business.

The change was marked. A Federal Reserve survey in 1939 showed term loans accounted for a fourth of the dollar volume of business loans at the banks sampled—39 percent at the banks sampled in New York. More than a third of the banks, however, showed no more than five term loans on their books. A 1946 survey of member banks showed term lending accounting for more than a third of the dollar volume of business loans.

As many banks have relaxed the clean-up rule, however, allowing continuous indebtedness, revolving credits often qualify now as an intermediate form of term lending. Some contracts, in fact, include conversion clauses that allow credits to continue as term loans when the revolving credit agreement expires. Under such contracts, the period of revolving credit is often viewed as the first years of a term loan.

Short-term and term loans as substitutes

Distinctions between term and short-term loans have sometimes been misleading. The most detailed survey of continuous indebtedness through renewal of short-term loans was conducted nearly 25 years ago in the Cleveland Federal Reserve District. The survey showed that half of the dollar holdings of short-term business loans outstanding at member banks in the district were obligations of borrowers continuously in debt to the same bank for at least two years. A fourth of the short-term credit was owed by businesses in debt to the same bank continuously for at least five years. Only 8 percent of this credit was to customers in debt to the same bank no longer than three months.

As long as loans are renewable, some borrowers with long-term financing needs might actually prefer short-term loans. Initiation costs are lower. And as the contracts are less detailed, they are less likely to put operating constraints on the borrower.

Continuous indebtedness of this kind may not be to the bank's advantage, however, especially if it has to renew credit to prevent a loan default or bolster future demand for loans or other bank services. The prospects of renewal requests increase uncertainties for the bank. A borrower may feel that the loan can be renewed. But the bank cannot be sure renewal will be requested. Even if a bank has done very well in predicting renewal requests and sorting out the loans it feels obligated to renew, this ability is a poor second for certain knowledge of the length of indebtedness agreed on when the credit was first made.

Short-term loan renewals can, of course, be appropriate at times, as for example, when the need for longer-term credit was not anticipated. But the flexibility of term loans nowadays reduces the need for renewals. The term loan itself can be written to capture one of the main advantages of short-term loan renewal—periodic adjustment in the interest rate. Floating rates substitute directly for the

Floating loan rates . . .

Banks have been devising alternatives to fixed-rate pricing of business loans for decades. Graduated rates on some term loans appeared in the late 1930s. This scheme, applying progressively higher rates to later years of maturity, did not provide floating rates, of course. Term premiums to be added to the loan rate for later years were set when the loan was originated. The loan rate did not move with market rates, and the bank had no influence on it over the life of the loan.

Floating rates came into use in the late 1940s, with the introduction of formulas involving the addition of a quarter of a percentage point or more to the Federal Reserve discount rate. Floating rates were not widely used, however, as long as the discount rate and other rates remained fairly stable.

When the discount rate began changing more often in the early 1950s—and lagging hikes in the prime rate—banks switched the floating-rate base to the prime, a rate more closely reflecting market forces. Floating rate provisions, limited almost entirely to term loans, were not nearly as common as today.

The big change came in the mid-1960s, with the advent of modern bank liability management, growth of money-market funds, and more changes in short-term rates. Floating rates gave banks a way of making sure returns on outstanding loans—both long and short-term—moved with the costs of funds.

. . . and the formulas for computing them

Essentially two types of prime-based formulas are used in calculating floating rates:

- Prime-plus. The more conventional of the two, this method calls for an add-on factor to adjust for default risk and provide a term premium for long-term credit. An example is the prime rate plus 2 percentage points—"prime *plus* 2."
- Times-prime. Becoming more common, this method calls for multiplication of the prime by a factor to adjust for credit risk and a term premium. An example is the prime multiplied by 1.2—"1.2 *times* prime."

With either example, a prime rate set initially at 10 percent results in a floating loan rate of 12 percent.

Differences follow, however, if the prime rate is any rate other than 10 percent. With reductions in the prime rate, floating rates based on times-prime pricing decline faster than plus-prime rates. And increments in the prime result in faster increases in times-prime rates than in plus-prime rates.

Suppose, for instance, that an initial 10 percent prime is hiked to 12 percent. The prime-plus-2 loan rate moves from 12 percent to 14. The 1.2-times-prime rate moves from 12 percent to 14.4. If the prime is lowered from 10 percent to 8, the plus-prime rate falls from 12 percent to 10, but the times-prime rate drops to 9.6 percent.

Banks sometimes combine the two methods. An example is 1.09 times the *sum* of prime plus 1 percentage point—a floating rate equal to 1.09 *times* the prime plus 1.09 percentage points. Again, if the prime rate is set initially at 10 percent, the combination method leads to about the same floating rate as the basic methods—for example, 1.09 times 10 percent plus 1.09 percentage points, or roughly 12 percent. Effects for the combination method at any other prime, however, are the same as times-prime pricing, given the same multiplicative factors in the formulas.

As times-prime rates vary more than plus-prime rates over the interest-rate cycle, they have greater implications for changing bank loan revenue and, therefore, total profits.

One of the main reasons for times-prime pricing is that when the prime rate is raised, bank costs of funding outstanding loans in interest-sensitive markets may go up faster than the prime. The greater-than-proportional increase in the loan rate from times-prime pricing helps compensate banks for lagged upward responses of the prime rate.

The drift away from compensating balances also helps explain the growing use of times-prime pricing. The trend toward higher loan rates and lower required demand-deposit balances has, in fact, been a major factor in the use of more complicated floating-rate formulas.

The idea is to raise the loan rate enough to offset the loss of loanable funds when compensating balance requirements are eased. But the cost to a bank of foregoing these balances varies over interest-rate and credit cycles. When credit demand rises and banks scramble for ever more costly money-market funds, earlier reductions in compensating balances become increasingly costly. If rates are adjusted by the times-prime formula, explicit reimbursement to the bank increases as the prime rate rises. That is, an escalating rate premium replaces the supporting deposit balances.

Against these advantages of floating rates must be set the main disadvantage—the greater variation in loan revenue over the credit cycle. The disadvantage of floating rates becomes most apparent when market rates are falling. If formula loan rates are geared to fall as fast as money market rates, or even faster, bank profit margins on outstanding loans can be squeezed. Banks can immunize part of their business-loan portfolios from movements in money-market rates and the prime by continuing to make fixed-rate loans to customers interested primarily in loan-rate certainty.

privilege of banks to change the interest rate when a short-term loan is renegotiated at maturity.

Both bank and borrower find advantages in negotiating the *effective* maturity at the outset instead of a *nominal* maturity that can be renewed. Sure of the maturity of a loan, a bank can absorb some of the other risks elsewhere in a loan agreement or lower the average loan rate. Assured of credit for the full term, a borrower is spared the real (albeit sometimes small) risk that a renewal request might be denied.

Loan commitments

Loan commitments, once informal credit lines available to customers that kept adequate balances at a bank, are now more apt to be firm agreements laying out a bank's obligation to provide credit in the future (including the amount of the credit and the rate to be charged) and often the customer's obligation to pay fees on the credit availability. The change has come with the growth of both term loans and revolving credits and the greater use made of formal commitments for short-term lending.

The Federal Reserve Survey of Loan Commitments at Selected Large Banks for April 1979 showed $68 billion outstanding in unused formal agreements. Of these unused formal commitments, 16 percent was for term loans, 71 percent was for revolving credits, and the remaining 13 percent was mostly for short-term credits. Loans that had been made under formal commitments totaled $76 billion.

Despite the trend toward formalization of loan commitments, informal but confirmed lines of credit still accounted for much of the unused commitments. A total of $95 billion in unused credit was available to business borrowers under informal but confirmed lines, compared with the $68 billion in formal commitments. Use of informal lines was much less, however. Loans outstanding under confirmed lines amounted to $29 billion, compared with the $76 billion in loans that had been made under formal commitments.

Compensating balances

Although many banks still require compensating (or supporting) balances, with the trend toward explicit pricing of bank services, less emphasis is put on these balances than in the past. As a result, required balances are being replaced in many cases by explicit fees and increases in lending rates.

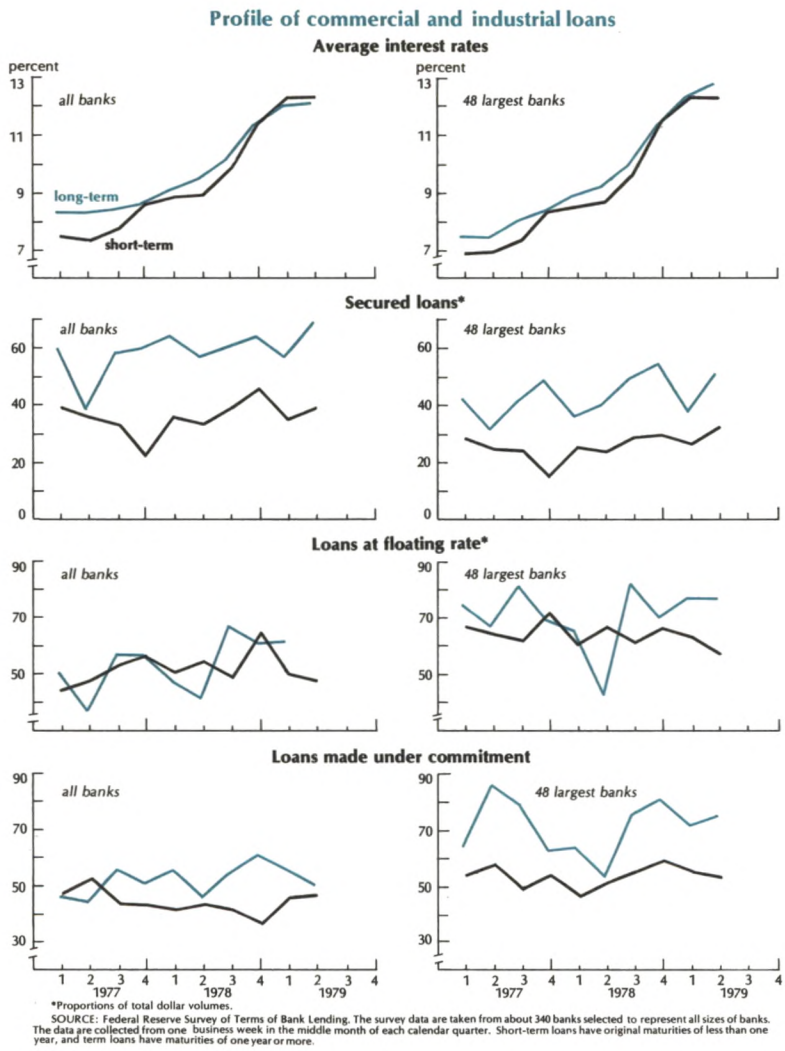
Where demand-deposit balances are still used, the requirement is usually stated as an average deposit balance equal to a percentage of the loan or commitment. A typical requirement is an average balance of 15 percent of the loan. Another is 10 percent of the loan, plus 10 percent of the unused commitment—10 percent of the total commitment.

Negotiations sometimes result in higher requirements on the loan commitments than on the loans themselves. In other cases, balance requirements are set higher on loans than on commitments.

Pressure from a credit customer to shift the balance requirement one way or the other gives a bank some indication of how the commitment is to be used. If the borrower wants the balance requirement on the commitment reduced enough to have the loan requirement raised an equal amount, he clearly expects to make little use of the loan commitment—less than half of it on average. If he expected to use most of the commitment, he would want the opposite, with more of the balance requirement on the unused commitment.

Loan prepayments

Prepayment provisions in loan contracts spell out the penalty costs (premiums) charged for paying a loan before it matures. Until the 1960s, banks usually did not charge premiums when loans were paid off (or paid down) before maturity, provided the funds came from operating earnings or other internal sources. Although substantial premiums were often imposed on prepayments financed from other borrowing, especially from other banks, many banks in the 1950s actually encouraged prepayments from a firm's retained earnings.



Banks today often impose substantial penalties on the prepayment of fixed-rate loans, the intentions being to hold borrowers to the full terms of their contracts in return for the banks' having to risk a rise in interest rates.

If term borrowers could prepay their loans at will, with no direct or implied costs, they would in effect control maturities. As banks could not be sure of the repayment dates, prime-setting decisions would have to be based on probable prepayments, with banks undoubtedly charging more to compensate for the uncertainty.

Prepayment of floating-rate loans is seldom a problem. Borrowers have little incentive to prepay loans when the rates move with the costs of credit generally. Even if other interest rates fall a little faster than the floating rate, or rise a little slower, the substantial costs of originating other credit are apt to lock a customer into the existing loan.

Whether the rates are fixed or floating, then, most term loans run to maturity. And as a result, outstanding term loans are essentially immune to changes in the prime rate.

There are limits, of course, to the changes that can be made in prime rates. If floating rates went up too much or did not respond to drastic reductions in market rates, borrowers would stand the prepayment penalties and term loans outstanding would fall.

Secured loans

Although large corporations with top credit ratings routinely receive unsecured bank loans, many business borrowers have to post collateral. The amount of collateral and the type depend on the customer's credit rating, the size and maturity of the loan, and the purpose of the credit. Because of risk factors involved in some types of term credit, term loans are more apt to be secured than are short-term loans.

The most recent trend in secured bank lending is the kind of asset-based lending long handled by commercial finance companies. Large banks and their holding companies have become active in this specialized

form of secured lending by acquiring existing finance companies, establishing new commercial-finance affiliates, and restructuring their own lending policies for closer management and monitoring of the collateral behind secured loans. The inroads large banks have made into asset-based lending represent a competitive response—especially to attract small business borrowers—and awareness of the need for adequate collateralization as an adjunct to the risk-bearing business of modern bank lending.

Recent pricing tactics

When loan demand eases and money-market rates fall, large money-center banks come under pressure to lower their prime-rate quotations in an effort to attract more new business loan customers. This was the situation in 1976 and 1977. Because of floating-rate provisions in outstanding business loans, however, reductions in the prime rate aimed at bolstering new loans call for forfeitures of revenue on floating-rate loans already on the books. Bank concern over loss of this revenue can slow the lowering of the prime.

When two large banks in a money-center have significantly different proportions of their loan portfolios in floating-rate loans—especially if the loans are priced by different formulas (see box)—the one with the larger proportion may well be at a disadvantage in lowering its prime. These interbank differences in floating-rate loans help to explain split-rate primes—different prime rates at various money-center banks.

Large banks have tried several loan pricing policies aimed at bolstering loan demand and at the same time protecting profit margins on outstanding loans. One policy, dating from the 1950s, specifies ranges in which floating rates can be revised, as for example, an initial loan rate of 6 percent with the rate floating from 4 percent to 8 percent.

Some banks redesigned the cap-rate feature a few years ago by offering floating rates that would not average more than an agreed-on rate over the life of the loan. Because these cap rates combined the borrowing advantages of both fixed rates and floating rates, they gained some customer acceptance in 1971 and 1972.

When open-market rates rose, in 1973 and 1974, however, pushing up funding costs, profit margins on outstanding cap-rate loans dwindled. The upper limit on average interest costs became a ceiling that made further rate increases impossible. Banks have paid little attention to this type loan since. They have also shown few inclinations to adopt minimum-rate features that would limit the decline in loan rates when the prime was lowered.

Another technique for bolstering loan demand while protecting bank loan income has been floating rates tied to base rates other than the prime. This pricing feature is often tailored to the needs (and competitive environment) of large multinational corporations with access to credit markets abroad.

One of the rates that moves somewhat independently of the regular prime rate quotations governing other floating rates is the London Interbank Offering Rate (LIBOR), a short-term European money-market rate. Although this is the most common formula rate for these loans, such U.S. money-market rates as the commercial paper rate and secondary certificate of deposit rate are also used. In some cases, large banks have revised their overseas lending policies to provide credit in the European market at rates tied either to their U.S. prime rate or to LIBOR, depending on the expected changes in the prime-LIBOR rate spread.

Business lending strategies refined at large banks during a time of rising interest rates will be tested when demand for loans eases and interest rates fall. As pressures build for banks to lower their prime rates from the above-15 percent levels of recent months, a large part of their current loan portfolios will still be on the books.

Banks have been preparing for an eventual downturn by diversifying their business loans, interspersing fixed-rate loans with loans written to various formula rates based

on prime and other rates. Their success in pursuing this diversification strategy will be reflected in how well their prime rates follow declines in market rates.

Since revisions in prime rates usually lag behind changes in market rates, the tendency is for the spread to widen when rates fall rapidly. If, after adjustment for the lag, the prime rate still responds sluggishly to easing market conditions, banks may have to rethink some of their explicit pricing methods for business lending.

ECONOMIC PERSPECTIVES
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