The ABC's of the Prime Rate

by W. F. Mackara

There's been a lot of discussion lately about the prime rate. Just what is it?

Actually there is no such thing as *the* prime rate. Each commercial bank sets its own interest rates, and the rate it charges its most creditworthy business customers is the bank's prime rate. Although size per se is not necessarily related to creditworthiness, large firms with well-established, multiple credit lines fit the textbook mold of the best credit risks. Such firms typically have a demonstrated ability to meet their credit obligations. Equally important, they are valuable as sources of deposits.

Have banks always had a prime rate?

The concept of a prime rate is relatively new. It was born in 1934 in the doldrums of the Great Depression. A weak economy and a low demand for bank loans usually go together, and in 1934 the economy was *very* weak. Many banks failed during the Thirties, but those which managed to survive had plenty of loanable funds though few borrowers. This created a situation many bankers believed could lead to so-called "cutthroat competition" in lending rates, thereby lengthening the obituary list of insolvent banks.

An interest rate of $1^1/_2$ percent then won acceptance as a rate below which banks would incur losses on loans.[1] This minimum became known as the "prime" rate. Thus conceived, it represented a floor protecting banks against losses at a time when they could ill afford them. The prime rate remained at $1^1/_2$ percent for 13 years; it was raised to $1^3/_4$ percent in December 1947.

Is it still sensible to view the prime rate as a protective device?

[1]Of course, banks have always had a "best" rate for their most creditworthy customers, and starting in 1921, large New York banks reported their lowest rate each month to the Federal Reserve. However, it was not until 1934 that the prime rate became a publicized national concept.

As the economy has grown, the need for a minimum interest as a protective floor has become invalid. It is more accurate to view the prime rate almost exclusively as a base upon which to build the rest of a bank's lending rates (often, to be sure, quite loosely).

True, the prime rate is still a minimum for business loans, but it is not always set at a level where the interest yield will exceed the cost of making the loan. This was the case in late 1969, and many banks avoided the problem by charging prime customers a premium over the Eurodollar rate rather than their stated prime rate.

How do banks administer their prime rates?

There are three basic methods used.

The first involves a general consideration of both prevailing and expected credit conditions. Of particular interest are such factors as loan demand, deposit growth, cost of borrowed funds, and the rate on commercial paper (a substitute credit source for large businesses[2]). Expecting to accommodate a growth in loan demand only at rising costs might influence a bank to boost its prime rate; on the other hand, it may lower the rate if it expects the cost of funds to fall.

The second method might be termed "follow-the-leader." Banks employing this system will watch what large banks do with their prime rate and then follow their lead, perhaps after a brief period of observation and review.

The third general method is called the formula or floating prime rate. This method utilizes a mathematical formula which sets the prime rate equal to the average rate of some money market instrument plus a specified mark-up. For example, the First National City Bank bases its prime rate on a formula adding 5/8 of 1 percent to a three-week moving average of the 90-119 day commercial paper rate. Other banks using formulas include the First National Bank of Chicago and Bankers Trust of New York.

One major advantage of a formula-based prime rate is that it permits quick adjustments to money market changes. As credit conditions change, the formula prime rate will "float" with money market rates.

Does the prime rate really move in agreement with other money market rates?

Yes, it has moved in the general direction of other short-term rates, and for good reason. When loan demand rises relative to deposit growth, banks must turn increasingly to other sources, such as certificates of deposit (CD's), Eurodollars, and Federal funds.[3] As a consequence, the rates on these instruments will be bid up, raising the cost of these funds to banks. Likewise, banks may sell assets such as Treasury securities to obtain funds. The resulting fall in prices may cause capital losses for banks selling these assets.

THE PRIME RATE 1934 - 1974*

1934		1½%
1947	December	1¾
1948	August	2
1950	September 22	2¼
1951	January 8	2½
	October 17	2¾
	December 19	3
1953	April 27	3¼
1954	March 17	3
1955	August 4	3¼
	October 14	3½
1956	April 13	3¾
	August 21	4
1957	August 6	4½
1958	January 22	4
	April 21	3½
	September 11	4
1959	May 18	4½
	September 1	5
1960	August 23	4½
1965	December 6	5
1966	March 10	5½
	June 29	5¾
	August 16	6
1967	January 27	5¾
	March 27	5½
	November 20	6
1968	April 19	6½
	September 25	6¼
	December 2	6½
	December 18	6¾
1969	January 7	7
	March 17	7½
	June 9	8½
1970	March 25	8
	September 21	7½
	November 12	7¼
	November 23	7
	December 22	6¾
1971	January 6	6½
	January 15	6¼
	January 18	6
	February 16	5¾
	March 11	5¼
	April 23	5½
	July 7	6
	October 20	5¾
	November 4	5½
	December 31	5¼
1972	January 24	5
	January 31	4¾
	April 5	5
	June 26	5¼
	August 29	5½
	October 4	5¾
	December 27	6
1973	February 27	6¼
	March 26	6½
	April 18	6¾
	May 7	7
	May 25	7¼
	June 8	7½
	June 25	7¾
	July 3	8
	July 9	8¼
	July 18	8½
	July 30	8¾
	August 6	9
	August 13	9¼
	August 22	9½
	August 28	9¾
	September 18	10
	October 24	9¾
1974	January 29	9½
	February 11	9¼
	February 19	9
	February 25	8¾
	March 22	9
	March 29	9¼
	April 3	9½
	April 5	9¾
	April 11	10
	April 19	10¼
	April 25	10½

Sources: Federal Reserve **Bulletin** and Edward J. Kane, "The Economist's Corner: Politicians Against the Prime—The Dual Rate Fiasco," **The Bankers Magazine**, Spring 1974, p. 89.

*This table gives the most common prevailing prime rate to large business borrowers.

[2]It should also be noted that many banks sell commercial paper through affiliates to raise funds. Thus, a rise in commercial paper rates also represents a higher cost of funds to these banks.

[3]CD's are a form of time deposits. Eurodollars are dollar deposits in foreign banks. Federal funds are short-term loans, largely between banks.

If the bank loan demand is part of an amplified demand for credit in general, businesses will also seek funds through commercial paper sales, pushing up rates in that market. As the commercial paper rate approaches the prime rate, bank loans become a relatively cheaper credit source, further intensifying bank loan demand.

Faced with growing loan demand, banks will be tempted to raise lending rates, including the prime rate. This will compensate them for the increased costs of loanable funds and, at the same time, allocate loans to those willing and able to pay a higher rate.[4]

Why is the prime rate "sticky"?

As mentioned, the prime rate does move in the same general direction as money market rates. However, historically the prime rate has usually lagged somewhat behind market fluctuations. That's where the "stickiness" comes in.

It is often difficult to tell if a change in market rates or loan demand is an aberration that will correct itself shortly or whether it represents a change in trend. If the former, it would be impractical to adjust the prime rate, as the bank would only have to reverse the move in the next week or so. Instead, decisions on the prime rate are made on the basis of long-term expectations of loan demand and money market rates. If these behave consistently for several weeks, banks might consider changing their prime rates. On occasion, banks have waited a long time before making such changes.

Another factor which has long discouraged frequent prime rate adjustment has been the critical review such changes receive from the news media and political leaders. The visibility of the prime rate and its role as the keystone for banks' other lending rates have directed changes in it to public attention and concern.

But haven't banks changed the prime rate more often in recent years?

Yes, the earlier inertia of the prime rate has diminished in recent years. The advent of the floating prime rate in 1971 and, interdependently, the closer scrutiny given the cost of funds have made banks more sensitive to changes in credit conditions.[5] Thus adjustments in the prime rate have been temporally closer to movements in money market rates. Now banks can rely more on rate changes and less on nonprice terms and conditions to attract or discourage loan demand.

What are these "nonprice terms and conditions"?

One traditional tool is the compensating balance requirement. When a large borrower negotiates a loan, the bank usually requires that he keep a certain sum on deposit. This increases the cost of the loan over and above the interest cost because the borrower cannot use all the proceeds.

To decrease the number of prime loans, banks can also raise the standards of qualification; in other words, they become more selective to whom they will lend at the prime rate. To increase prime loans, banks can lower qualifying standards.

These adjustments are easier said than done, however. Because prime borrowers are literally a bank's best customers, loan officers are reluctant to do anything that would lose such clients. Informing established prime customers that they no longer meet new, higher standards of creditworthiness could do irreparable damage to customer relations.

Changing compensating balance requirements may not only be imprudent; it may be impossible. Prime customers generally borrow through lines of credit and commitments[6] whose terms, including compensating balance requirements, are negotiated in advance and may be altered only with great difficulty.

Just how effective are these nonprice terms?

Though of limited applicability, they are not totally useless. Revised credit standards can be used to screen new loan applicants, and compensating balance requirements can be changed when expired credit lines are renegotiated. In this way banks can influence loan demand without changing their prime rate, even if this influence is only limited.

Why don't banks relieve pressures caused by heavy loan demand and rising costs of funds by just refusing to grant loan requests?

Loan denial, particularly when it involves prime customers, is not really practical because prime customers generally borrow through prearranged loan commitments or lines of credit.

The problem that banks face during a period of high credit demand and rising costs of funds is not

[4]Conversely a drop in loan demand and falling market rates will eventually induce banks to lower their prime rates.

[5]See "Liability Management Banking: Its Growth and Impact," Arnold Dill, this **Review,** February 1971 and "Liability Management Banking: Its Practice in the Sixth District," Arnold Dill, this **Review,** December 1971.

[6]A loan commitment is a formal arrangement between the bank and the borrower; all terms and conditions are agreed upon and specified. The bank usually charges a commitment fee and is legally obligated to meet all terms of the contract. A line of credit is a more informal scheme under which the customer may borrow up to a stated limit.

so much demand by new customers, but rather the increased use of existing commitments and credit lines. Customers who have commitments and credit lines will seek more of their credit needs through bank loans. This is especially true when the spread between the prime rate and the commercial paper rate narrows, making bank loans cheaper relative to alternate credit sources. Though not every line of credit agreement is binding to banks, they try to honor such arrangements lest they damage customer relations.

Why is there such uniformity among banks in their prime rates?

Firms which are eligible for prime rate status often do business on a national basis and thus have connections with several banks across the country. Because they borrow large sums of money, it is to their benefit to borrow at the bank with the lowest prime rate. Their many banking connections allow them to take advantage of any differentials in the prime rates. There is thus considerable competition for such customers, fostering uniformity of the prime rate.

Another factor working in the same direction is the competition banks themselves face in obtaining lendable funds. They all bid in the same markets for Federal funds, CD's, and Eurodollars and are more or less subject to the same changes in the cost of these funds.

Finally it must be recalled that banks not only compete with each other for prime customers but also with alternative sources of credit, particularly commercial paper. This, too, is a national money market, and changes in that market will be felt by these banks.

In short, competition among banks for prime customers and for sources of funds and competition between banks and other credit instruments limit differences in prime rates. Some differences do exist, however, because these competitive forces are not perfect and changes in the costs of funds and substitute instruments do not affect each bank equally.

Doesn't this uniformity hurt smaller business borrowers, whose access to nonlocal banks is limited?

The plight of the local business borrower has long been a thorn in the side of the prime rate system. A small business or farm may have established itself as a most creditworthy borrower and valuable deposit source with one or more banks in its local market but have no such connections outside that area. Banks' prime rates will be tied to national rather than local conditions. When these differ, the prime rate may be too high or too low to equate the local supply and demand for prime loans.

The banking industry has wrestled with this problem for many years. Some banks tried using a double prime rate system. Large business borrowers with access to banks throughout the U. S. and to money market instruments would pay one "best" rate. The most creditworthy local businesses, who were more limited in their credit sources, would pay a different "best" rate.

On April 16, 1973, the Committee on Interest and Dividends (CID) gave official status to such a two-tiered mechanism. In its statement of criteria for lending rates, the CID asked banks to set up a dual prime rate system. The traditional prime rate would apply to the most creditworthy large business customers. The second prime rate would apply to those smaller local businesses and farms with the highest credit standing. For classificatory purposes, the CID defined a small business or farm borrower as one whose total borrowings in the preceding 12 months were not above $350,000 (not counting long-term real-estate mortgage liabilities) and whose assets were not more than $1 million. This plan was to allow banks to adjust their large business prime rate to national interest rate developments without affecting local customers.[7]

In the final analysis, what does a change in the prime rate signify?

A change in the prime rate is a signal of both what has happened to credit conditions and what will be happening to bank lending policies.

As mentioned, the prime rate has historically been sticky in response to money market developments. Before the advent of formulas, any one bank was reluctant to risk changing its prime rate for fear that if it misread the market signals, it would gain or lose too many loans. Banks resorted to greater use of nonprice terms and conditions, and a decision to alter the prime rate occurred only when the need to do so stood a test of time. As such, a change in the prime rate was a sign that credit conditions *had* changed.

The floating prime rate (more correctly, the large-business prime rate) is more responsive to changes in the money markets. This removes some stickiness from prime rate adjustments, but it does not eliminate the lag factor completely. Since most of the formulas use a multiweek moving average of one or more money market rates, changes will not be reflected in the formulas until several weeks after the rates change.

Because a change in the prime rate comes about *after* credit conditions have changed, adjustment of

[7]When the legislation under which the wage-price control program had operated did expire, the CID was eliminated. Soon thereafter, several banks abolished their small-business prime rate.

the prime rate can be viewed as a lagged indicator of credit conditions.

A changed prime rate also signals that banks have revised their willingness to make loans. A new rate may signal a revamping of the spectrum of interest rates, loan conditions, and willingness to lend to nonprime customers. Viewed in this context, a change in the prime rate is a portent. That is, it represents a leading indicator of the bank's general lending policies.

Appendix

Compensating Balances and Effective Lending Rates

Compensating balance requirements increase the effective interest rate a borrower pays over and above the stated interest rate on the loan. They do so by reducing the amount of a given loan which the borrower can actually use.[8] A numerical example might help in understanding this concept.

Suppose a business wants to borrow $100,000 on a credit line for one year at 9-percent interest and the bank requires a 10-percent compensating balance. The amount of interest paid would be $9,000, but the borrower will have use of only $90,000 of the loan ($100,000 minus the $10,000 compensating balance). Thus the effective interest rate is not 9 percent, but 10 percent (=$9,000/$90,000). If the compensating balance had been 15 percent, the effective interest rate would be 10.59 percent (=$9,000/$85,000). By adjusting the compensating balance requirement, a bank can change its effective lending rate without altering its prime rate.

In our example, we used what is known as a "straight" compensating balance requirement, which puts a single compensating balance requirement on the whole line of credit. A formula for the computation of the effective rate under this requirement may be expressed as:

$$R = \frac{(r/12)\, m_1 L + (r/12)\, m_2 cL}{(L-cL)\, m_1/12} = r + \frac{rc}{(1-c)m}$$

where

R = the effective interest rate,
r = stated interest rate,
L = line of credit in dollars,
c = the compensating balance requirement in percentage terms,
m_1 = number of months the line is actually used,
$m_2 = 12 - m_1$,
$m = m_1/12$.

Note that the fewer months the line is used, the higher the effective rate.

There are two more complicated but widely used compensating balance requirements. One requires a balance on the whole line, plus an additional balance for the net amount actually used. In mathematical terms, assuming the basic balance and additional balance are equal percentagewise, this may be expressed as:

$$R = \frac{(r/12)\, m_1 L + (r/12)\, m_2 cL}{(1-c)\,(L-cL)\,(m_1/12)} = \frac{1}{1-c}\left(r + \frac{rc}{(1-c)m}\right).$$

In the example above, if the basic balance and additional balance were 10 percent of the line, the total compensating balance would be $19,000. The effective rate would be 11.11 percent (= $9,000/$81,000).

A third form of the compensating balance requirement consists of a basic balance on the whole line, plus an additional balance on the whole line, if it is used. Under the assumption these two balances are equal percentagewise, the formula for the effective rate is given by:

$$R = \frac{(r/12)\, m_1 L + (r/12)\, m_2 cL}{(L - 2\,cL)\,(m_1/12)} = \frac{1-c}{1-2c}\left(r + \frac{rc}{(1-c)m}\right).$$

In our numerical example, if both the basic and additional balance requirements are 10 percent, the total compensating balance would be $20,000

[8] See Jack M. Guttentag and Richard G. Davis, "Compensating Balances," **Essays in Money and Credit,** Federal Reserve Bank of New York, December 1964, pp. 57-61, for a modification of this point.

and the effective rate would be 11.25 percent (= $9,000/$80,000).

The effective interest rate as calculated by these equations measures the rate the borrower pays on a loan. But they do not measure the effective yield the bank receives. The reason is that the bank must hold part of the compensating balance as required reserves.

For simplicity, let us return to the effective rate when the straight compensating balance requirement is used. As noted, the borrower actually pays 10 percent on a loan with a nominal interest rate of 9 percent and a 10-percent compensating balance requirement. The bank lends out $100,000. It requires the borrower to maintain $10,000 in deposits. Assuming the bank must hold 13.5 percent of deposits as required reserves, the bank holds $1,350 of the compensating balance in reserves.

The borrower has use of $90,000; this is the base amount on which his effective interest cost is calculated. However, the base on which a bank's interest income is calculated is not $90,000, but $91,350, the size of the effective loan plus the reserves it must hold against the compensating balance. As a result, the interest income to the bank is not 10 percent, but 9.85 percent ($9,000/$91,350). The difference between the borrower's effective interest rate, 10 percent, and the bank's effective yield, 9.85 percent, is absorbed by required reserves.

In formula terms, the bank's effective yield is given by

$$y = \frac{(1-c)L}{L + scL - cL} = \frac{1-c}{1 + c(s-1)},$$

where

y = effective yield to the bank,

s = required reserve ratio,

and the other terms are defined above.