
FRBSF WEEKLY LETTER

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The Changing Role of the Prime Rate

Changes in the prime lending rate receive considerable publicity as a barometer of credit market conditions. It is not clear, however, that this attention is warranted, particularly since the role of the prime rate in lending has diminished over the last 15 years. For example, although the prime rate now is used as a benchmark rate for certain types of consumer loans, its use as a benchmark for business and agricultural loans has declined. It is now only one option among several which borrowers may choose. These other benchmarks include such market-determined rates as the London Interbank Offer Rate (LIBOR), the rate on bank certificates of deposit (CDs), and Treasury bill rates. Moreover, because banks are faced with increasing competition from direct issue markets like the commercial paper market, they have had to change their prime-based loan pricing strategies. This *Letter* explores the changing role of the prime rate, with a focus on the way competition has influenced its behavior in recent years.

The role of the prime rate

Historically, the prime lending rate has served as the benchmark rate on short-term business and agricultural loans. This benchmark, or base rate, was the rate a bank charged its best, most credit-worthy customers; all other borrowers typically were quoted rates at a spread over prime, depending on their risk characteristics and those of the projects being financed.

The level of the prime rate quoted by a given bank depends on the bank's costs, including its operating costs and its cost of funds, which is closely tied to the level of market interest rates. The prime rate also reflects the bank's competitive circumstances, including the level of competition from other intermediaries as well as from the commercial paper market and other direct issue markets.

As noted above, alternatives to the prime rate are used as benchmarks now; however, it is important to note that banks still quote benchmark rates, in part to assure bank borrowers that when

banks reprice their loans upward, the repricing will apply to all borrowers, not just a given borrower. Moreover, banks use the prime rate to give *potential* borrowers information regarding the basic cost of loan funds. It is not expensive to publicize the prime rate, whereas it would be infeasible to post a "menu" of interest rates for borrowers and loans of all possible types.

An anticompetitive rate?

Although banks may have always used benchmark rates in their loan contracting, the concept of a uniform, national prime rate was not introduced until the 1930s, in the midst of the Great Depression. Faced with relatively abundant reserves, bankers feared cutthroat competition for scarce borrowers. In September, 1933, an article appeared in a banking journal promoting the setting of a uniform prime rate, which would serve as a floor for lending rates. The idea took hold. Originally, then, the prime rate appears to have been an anticompetitive device. A natural question is to what degree the prime rate remains anticompetitive.

Some argue that it still is an anticompetitive device in the sense that it is sufficiently high to generate profits in excess of a competitive return on bank equity. They point to the limited variation in the prime rate across banks. Only occasionally do the 30 large banks that announce their prime rate on a regular basis have different rates for any significant length of time. In fact, this has happened only three times; once in 1967, once in 1968, and once in 1989, one of the major banks made larger changes in its prime than the others did, leaving a split prime for an extended period.

Likewise, the prime rate charged by smaller banks generally does not vary much from the "prevailing prime rate" (that is, the most common rate posted by the 30 large banks mentioned above). Specifically, in the past four years, the average prime rate has never varied from the prevailing prime rate by more than 30 basis points or so.

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The high uniformity of the prime across banks means that if one bank changes its prime rate, either up or down, other banks will quickly follow suit. The result is that changes in the prime appear to be initiated by a "leader" bank, with other banks in a "follower" role. This is particularly evident among the 30 large banks that regularly announce their prime rate.

Observers who argue that the prime is an anti-competitive device interpret this leader/follower set-up as a sign of market power on the part of banks. In support of this view, they point to leader/follower models of price-setting, which show that such a set-up facilitates coordination and discipline among implicitly colluding firms.

They also point out that the prime rate is relatively stable compared with market interest rates, and that it is slower to change when market rates are falling than when market rates are rising. Consequently, the prime is nearly always at or above market rates. Proponents of the anti-competitive school contend that this suggests that implicit collusion leads to a prime rate that exceeds funding costs to a degree that affords banks excess profits.

Competitive dynamics

Many question this interpretation, however, arguing that in competitive markets, collusion, whether explicit or implicit, cannot succeed. According to this view, even if banks as a group were able to hold the line against the competition that would drive the prime rate to a level consistent with normal profits, they would not be able to prevent individual banks from taking advantage of the opportunity to fully compete on the loan rates charged individual borrowers.

Proponents of this view point out that as banks have faced additional competition in loan markets in recent years, they have had to become more competitive in their rate setting. For example, in the mid-1970s, in the face of vigorous competition from the commercial paper market, banks began to grant some very short-term loans to large borrowers at rates below the prime. There is general agreement among observers that most below-prime lending is aimed specifically at preventing the defection of large and highly creditworthy customers in search of very short-term credits. So, the prime is no longer an absolute floor for loan rates.

Proponents of this view also argue that although the prime rate is fairly stable relative to money market rates, it *is* responsive to *sustained* upward or downward movements in these rates. The uniformity of the prime rate is merely a consequence of the same competitive forces that dictate uniform prices for a single commodity in any competitive market. In this case the commodity is a generic short-term business, consumer, or agricultural loan. The leader/follower set-up apparent in prime rate changes is, in this view, simply a consequence of one bank having to move first when market rates have changed.

In addition, newspaper reports indicate that the prime rate's popularity as a benchmark for commercial loan rates is eroding. Large corporate customers, and even small- and mid-sized firms, more often than in the past favor other base rates such as LIBOR or a reference rate based on 30-day certificates of deposit. With such market-determined alternatives available, it is difficult to argue that the prime offers banks much opportunity to collude. This evidence seems to say that the prime rate has become more sensitive to competition from various sources.

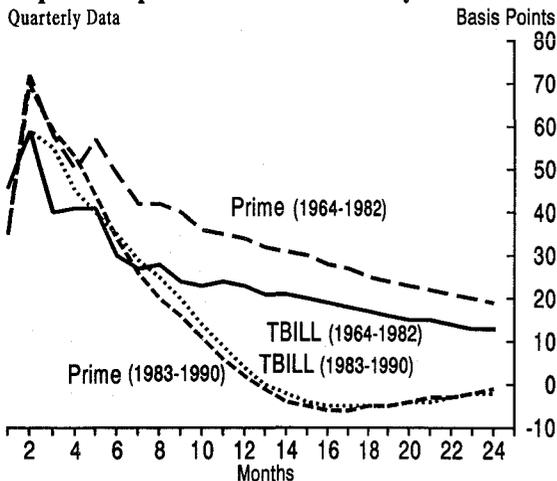
A more responsive prime rate

The question whether the prime rate is competitive or not can be investigated empirically. The key issue is whether changes in loan (and deposit) markets in recent years, such as the extensive financial deregulation that occurred in the early 1980s, have made the prime rate more responsive to market pressures. If so, the prime rate likely has become more competitive. Thus, changes over time in the relationship between the prime rate and an open market rate, such as the three-month Treasury bill rate, should provide evidence on this issue.

In my investigation of this issue, a statistical procedure known as vector autoregression (VAR) was used. This method relates the current level of each of the rates to the current level of the other, as well as to past values of both of the rates. From this, "impulse response functions" were calculated for the prime rate and the Treasury bill rate, showing the responses to a "typical" shock to the Treasury bill rate. (The "typical" shock was 47 basis points, the average amount by which the Treasury bill rate deviated from its average level during the 1983 to 1990 period.) Two sets of impulse response functions were calculated, one

with data from 1964 to 1982 and the other with data from 1983 to 1990, and these are shown in the chart. The chart shows, for example, that a positive shock to Treasury bill rates would be associated with a simultaneous rise in the prime rate of about 37 basis points, and that the effects of this shock would linger in both rates for many months afterward.

Impulse Response to Shock in Treasury Bill Rate



Most importantly, though, the impulse response functions are consistent with the view that the prime rate is more responsive to changes in the Treasury bill rate in the later period than in the earlier period. The average spread between the two response series is greater in absolute value in the earlier period than in the later period, by a statistically significant amount (10 basis points in the earlier period versus negative 0.3 basis points in the later period).

Of course, it is possible that this change in the apparent sensitivity of the prime rate to market rates merely is due to changes in the behavior of the Treasury bill rate, and not to any changes in the way banks set the prime rate. For example, if banks continued to set the prime rate at a given percentage mark-up over the Treasury bill rate, but the average level of the Treasury bill rate had

risen and its volatility had fallen in the later period, the spread between the two rates would have changed. However, this explanation seems unlikely, since the average spread between the prime rate and Treasury bill rate impulse response functions is negative in the later period. Moreover, the spread in the later period is only 0.04 percent of the average Treasury bill rate, whereas the spread in the earlier period was 1.43 percent of the average Treasury bill rate.

These findings suggest that by linking banks' own cost of funds more closely with market interest rates, the financial deregulation that occurred in the early 1980s caused the prime rate to become more closely linked with market interest rates. The change appears to be significant, suggesting that the mark-up has declined or even disappeared. Intensified competition from the commercial paper market in recent years, as well as advances in technology that have lowered the costs of credit evaluation and loan monitoring, probably have played a role in this change.

Still a useful tool?

Some of the characteristics of the prime rate that have been mentioned, such as its uniformity, the infrequency with which it changes, and its existence as a separate rate from other, wholly market-determined, benchmark rates, may to some degree be vestiges of the past. The empirical evidence discussed above, which appears to show that the prime rate has become more closely linked with market interest rates than in the past, suggests that the familiar characteristics of the prime rate may begin to disappear. In fact, some banking industry officials even question its remaining usefulness and are puzzled by the attention given to it in the press and by the public. However, as one choice among several benchmark options available to borrowers, the prime rate continues to offer an important tool with which banks can tailor lending terms to meet the specific needs of a given borrower.

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