

FRBSF WEEKLY LETTER

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Is the Prime Rate Too High?

As open market interest rates have dropped over the past several months, the bank prime rate has not kept pace. For example, although the 90-day commercial paper rate fell by more than 200 basis points between October 1990 and May 1991, the prime rate moved down by only 150 basis points in the same period.

Some observers have argued that this represents an unusually slow adjustment of the prime, and they cite two factors to explain it—first, the tightening of credit standards among banks over the past year and a half and second, the need for banks to cover losses associated with nonperforming assets.

This *Letter* examines the relationship between the bank prime rate and short-term open market interest rates to determine whether the prime has been unusually sticky in recent months. The evidence indicates that through the early part of this year the bank prime rate adjusted about as fast as it had in the past. However, based on its past relationship with open market interest rates, the prime rate should decline even further in coming months.

What is the prime?

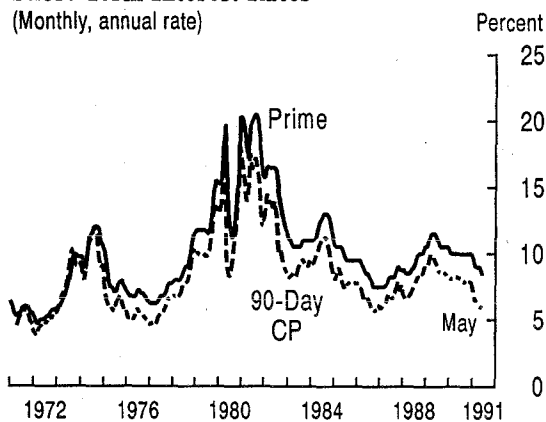
The bank prime rate is most commonly used as a reference rate on floating-rate loans, where the floating rate is set at some premium or discount relative to the prime. In the past, the prime rate represented the interest rate charged to the most creditworthy customers. But today the prime rate is more commonly used for pricing smaller business loans as well as some consumer loans. Large creditworthy borrowers' loans are indexed instead to interest rates representing the marginal cost of bank funds, like CD rates, LIBOR (London Interbank Overnight Rate), and the federal funds rate, a practice that became well-established in the late 1970s and early 1980s.

The shift in the role of the prime rate is reflected in the spread between the prime and open mar-

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ket rates. As Chart 1 shows, the average gap between the prime rate and the commercial paper rate has been larger since the early 1980s.

Chart 1
Short-Term Interest Rates
(Monthly, annual rate)



Why is the prime rate sticky?

Because the prime rate is mainly a reference rate for short-term loans, the prime rate should move with short-term market interest rates, which essentially represent a bank's *marginal* cost of funds to finance such loans. Chart 1 suggests that this generally has been the case. In fact, Laderman (1990) finds that the bank prime rate has become more responsive to open market interest rates since the early 1980s. However, the prime still adjusts more slowly than market rates.

This lagged adjustment has been used to argue that banks set the prime based on their *average* cost rather than their marginal cost of funds. That is, banks set the prime based on the average rate they pay on outstanding liabilities, and not on the rate they have to pay on new and maturing liabilities.

Goldberg (1982) offers some reasons banks would have for using average cost pricing. For example, on floating-rate loans, average cost

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pricing would reduce interest rate risk for a bank if the maturity of its liabilities exceeds the repricing interval of the loan. Goldberg also argues that average cost pricing could serve as an anti-competitive mechanism for enhancing oligopoly discipline among banks and for coordinating price changes without the appearance of collusion.

But lagged adjustment in the bank prime rate also could be consistent with *marginal cost* pricing. The lag could be partly due to administrative delays. It takes time for bank decision-makers to evaluate market conditions and to react to them. The operational cost to a bank of changing the reference rate on loans also would lead to delays in adjusting to changes in the marginal cost of funds. If adjustments are costly, banks are less likely to move the prime rate when they think a change in market interest rates will be reversed soon. In addition, banks are less likely to change the prime rate when the deviation from the normal spread between the prime rate and the marginal cost of funds is small relative to the operating costs associated with altering the reference rate. Adjustment costs also would help to explain why banks change the prime rate in discrete (25 basis points) increments.

Asymmetry in the lag

Whether banks use marginal cost pricing or average cost pricing, the prime rate should track market rates with a lag, which should be more or less the same for periods of increasing or decreasing interest rates. However, it often is argued that the bank prime rate adjusts more slowly when interest rates are falling, because banks try to add to their interest margins by holding up loan rates as the rates on their liabilities fall.

Why wouldn't customers leave such banks and flock to competitors offering lower rates? For one thing, it may be more costly—in terms of time, money, and effort—to set up a relationship with a new bank than it is to pay a higher interest rate at the old bank. In that case, when interest rates are falling, a bank could keep its loan rates up without losing too many of its customers to competitors. On the other hand, when market interest rates are rising, a bank has little incentive to lag the interest rates on its loans and would adjust them quickly, thus producing an asymme-

try in the rate of the lag response of the bank prime rate.

Estimating the response

To find out whether the prime has been adjusting more slowly than normal, we have to be able to say what is normal. To do that, a number of statistical models for determining the prime rate were estimated. The basic feature of the models is that the prime rate adjusts to open market interest rates with a lag. Each model includes the prime rate as a function of a contemporaneous short-term, open market interest rate and the lagged prime rate. Most of the analysis for this *Letter* uses monthly data from 1982 to the present.

The statistical results do not show evidence that the prime rate responded more slowly when interest rates were falling over the period since 1982. This contrasts with previous studies covering periods up to the early 1980s that find evidence of asymmetry in the adjustment of the prime rate. That asymmetry is apparent in the top panel of Chart 1 for the 1970s and early 1980s. However, analysis done for this *Letter* shows that, even for the period before the 1980s, the degree of asymmetry in the adjustment of the prime rate was relatively small. These results suggest that banks' attempts to add to interest margins were not the major factors determining the response of the prime rate during periods of declining open market interest rates.

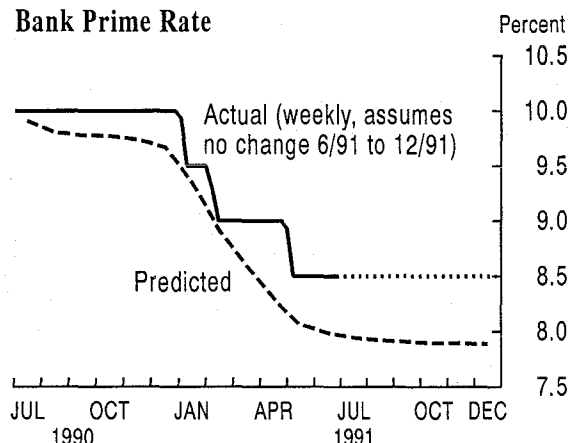
Recent movements in the prime

The statistical results can be used to evaluate whether the recent adjustments in the prime rate have been unusually sluggish by comparing actual values of the bank prime rate to predicted values. (See Chart 2.) The predicted prime rate is based on the historical relationship of the prime rate to the 90-day commercial paper rate. The analysis using other short-term market rates provides similar results.

Through the early part of this year, the adjustment in the bank prime rate closely followed the predicted prime rate. That is, the lag in the response of the prime rate to the decline in open market interest rates was not much different from the average in the past. This says that any tightening of credit standards by banks over the past several quarters was not reflected in a significant and consistent way in an unusually high bank

prime rate. Moreover, the results through February do not support the view that banks consistently keep the prime rate unusually high as part of a strategy to cover losses.

Chart 2
Bank Prime Rate



It is worth noting however, that a gap between the predicted and actual values opened up in March and April of this year. In April, the prime rate was about 70 basis points higher than predicted, given the preceding decline in open market rates, and the difference is statistically significant. With the drop in the bank prime rate in early May, the spread between the predicted and actual rate for the month narrowed to about 40 basis points. While that spread is relatively wide, it is still too soon to conclude that there has been a systematic shift in the behavior of the prime.

Looking ahead

If the underlying relationship between the bank prime rate and short-term open market rates has changed, the shift should be apparent later this year. This is illustrated in Chart 2, which shows that a prime rate of 8½ percent would be about 60 basis points higher than the predicted value in the latter part of this year, assuming short-term market rates remain at their early June levels through December. A spread of that magnitude would not be expected to persist.

Whether the prime will drop further remains to be seen. Given the uncertainty over the economy, some hesitation in lowering the prime rate would be understandable. Moreover, the heightened risk associated with the recession might lead to a somewhat higher than usual prime rate for some period of time. Such considerations could temporarily dampen the tendency banks may have to lower the prime rate.

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