

CD Wars: Part Two . Valuing Depositor Relationships

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If you've heard it once, you've heard it a thousand times, sometimes you have to pay more for the depositor than for alternative sources of funds. After all, the depositor provides a long-term source of funds for the retail institution. Those long-term relationships create franchise value. And the institution has already invested considerable marketing dollars in these relationships.

Whenever we discussed marginal cost pricing strategies, as in the last issue of F&P, the discussion has invariably turned toward the value of depositor retention. There can be no doubt that customer relationships have some positive value. It's also true that this value is not infinite. It's very difficult to estimate one of the major values of a long-term customer relationship - the opportunity to cross-sell other products and services. The other long-term value, the willingness of the customer to roll over existing relationships at maturity is more easily calculated. So, let's try estimating the value of the depositor relationship without considering the opportunity to cross-sell to the customer. This will at least give us an idea about how significant cross-sale opportunities will have to be to make a difference in our decisions among alternative sources of funding.

The Borrower As A Source of Sub-Treasury Funding

The value of a retail depository franchise is dependent on the ability to raise retail deposits at a lower rate than the alternative cost of wholesale borrowing. In effect, the retail institution trades a lower interest expense for the fixed costs of providing such non-rate features as service and convenience which can be amortized over a large number of deposits. The depositor relationship, therefore, represents a continuing opportunity to tap into a sub-Treasury priced funding source. In fact, the franchise value of a retail depository is defined as the difference between the market value and book value of its deposits.

This thought process is used all the time to place a value on deposits in branch sales transactions. If the approach is valid in valuing a branch you're going to sell, it's also valid in valuing deposits we're trying to keep!

My belief is that by pricing efficiently at the margin, we maximize the market value of the institution's deposits. Put bluntly, I'd rather have \$80 million of deposits at 3.0%, supplemented by \$20 million of borrowings at 7.5%, than \$100 million of deposits at 5.0%. And if you tell me that I'd go through hell regaining the \$20 million in deposits that I ran off, I'd respond that at least I'd survive and be profitable enough to be able to afford to do so.

Ok, ok, enough of this pedantic banter. Let's get right to some examples. Actually, we're going to use the same alternative pricing strategies introduced in the last issue of F&P's CD Wars article. In this article we'll broaden the marginal cost comparisons in the first article to include the effect

of the alternative pricing strategies on the market value of the deposits. Last issue, we examined an institution with \$200 million in deposits evenly distributed between Passbooks (or any immediately repricable transaction account) and CDs. We determined that there was plenty of room to price deposits aggressively to retain existing balances and still keep the marginal cost of deposit rate increases below the cost of wholesale alternatives. We got into trouble with the rising marginal costs of retail funding when we attempted to grow the balance sheet by escalating deposit rates. The rising marginal costs from our growth strategies were compounded when the competition retaliated with their own rate increases, reducing the amount of new money attracted by our aggressive pricing strategies.

However, in spite of our seemingly logical conclusion that the institution should choose lower marginal cost wholesale over higher marginal cost retail funding, the ghost of lost depositor relationships seems to haunt our recommendations. And since I, for one, don't want ectoplasm on my face, let's see if a little market value analysis results in conclusions that are materially different than those gained through marginal cost pricing.

Figuring Out Market Values

In our base case, Strategy One, when interest rates rise by 1.0%, we don't respond by raising deposit rates. \$20 million in passbooks and \$50 million in CDs roll off and are replaced with \$90 million in FHLB advances (including the \$20 million needed to grow funding to keep up with our 10% annual growth in assets). Note that I really don't expect any institution to permit such an extreme erosion of its deposit base. But this base case is needed to estimate the relative performance of alternative pricing strategies.

In order to estimate the market values of the deposits:

- 1) We estimated the average rate at which the renewing deposits could be re-booked (the roll rate) for their remaining life on the balance sheet; and
- 2) We estimated the remaining lives of the deposits (using the decay rate). The generic decay rate assumptions used are national assumptions applied by the Office for Thrift Supervision in their market value analyses; and
- 3) We discounted the projected deposit principal and interest cash flows using the current yield curve.

Pricing To Retain Existing Balances

With Strategy One we were left with \$80 million in passbooks which can be kept on the books at 3.0% for a period of time approximated by OTS's decay rates. Their market value equals \$74.433 million. Note that when measuring the market value of liabilities a lower dollar figure represents

an increase in the institution's market value relative to book value. After all, we subtract the market value of our liabilities from the market value of the assets in figuring what we're worth. The \$50 million in six month CDs are estimated to have a market value of \$37.131 million. This value is influenced by the assumption that if the depositor provides funds at a sub-Treasury rate, he will renew at a sub-treasury rate until the deposit decays off the books. The \$90 million in advances are valued at par. So the market value of all the liabilities totals \$201.564 million, \$18.436 million under the \$220 million liability book value. From now on we'll refer to this difference between liability book and market value as the franchise value of the liabilities.

Now, we review the impact of four additional pricing strategies on franchise value. We'll be watching especially closely the franchise values in those situations where the marginal cost of retail funding exceeds the cost of wholesale alternatives.

In Strategy Two, rates on existing deposit accounts are raised enough to retain existing balances, with the \$20 million growth supplied by wholesale funds. The marginal cost of retaining the \$70 million in retail funds lost in Strategy One is 6.18%. The franchise value of the liabilities increases to \$25.950 million. This result might surprise some who think that analysis comparing the marginal cost of retail deposits and wholesale funds inevitably leads to 100% wholesale-funded institutions. Not so Example Two shows that we achieve a greater franchise value by not allowing the \$70 million in deposits to run off. This occurs because the marginal cost of retail funding (6.18%) is less than the cost of wholesale funding alternatives (7.06%).

Determining Market Value of Alternative Funds Acquisition State
GOAL to GROW BANK FROM \$200 - \$220 MIL.

STRATEGY ONE

Let all Retail Funds Roll-Out. Replace With Borrowings

Balance	Start Rate	Roll Rate	Market Value
\$80 mil. P.B.	3%	3.0%	\$74,433.00
\$50 mil. 6mo. C.D.	4.5%	4.5%	\$37,131.00
\$90 mil. 9mo. FHLB ADV	7.00%	7.00%	\$90,000.00
\$220 mil. Total			\$201,564.00

FRANCHISE VALUE = \$18,436

STRATEGY TWO

Raise Rate on Existing 6mo. C.D. to Retain Bal. Use \$20 mil. in Advances to Grow

Balance	Start Rate	Roll Rate	Market Value
\$80 mil. P.B.	3.25%	3.25%	\$83,737.00
\$110 mil. 6mo. C.D.	5.5%	5.5%	\$80,313.00
\$20 mil. ADV.	7.06%	7.06%	\$20,000.00
\$220 mil. Total			\$194,050.00

FRANCHISE VALUE = \$25,950

STRATEGY THREE

Use Off-Maturity 9mo. C.D. to Retain Deposits. Use \$20 mil. in Advances to Grow

Balance	Start Rate	Roll Rate	Market Value
\$80 mil. P.B.	3.25%	3.25%	\$83,737.00
\$60 mil. 6mo. C.D.	4.5%	4.5%	\$37,131.00
\$60 mil. 9mo. C.D.	5.8%	5.48% (75% @ 5.8 + 25% @ 4.5%)	\$46,290.00
\$20 mil. ADV.	7.06%	7.06%	\$20,000.00
\$220 mil. Total			\$187,008.00

FRANCHISE VALUE = \$32,872

* Decay rates: transaction accounts: 60% within 1st year, remainder decayed @ 18.72% per yr.
C.D.'s 18.72% decay per year.

Source: Office of Thrift Supervision

The use of off-maturity CDs in Strategy Three yields even greater franchise value. The marginal cost of retaining the \$70 million in retail funding has been reduced to 5.72% resulting in an improvement in franchise value to \$32.872 million. One of the reasons for the significant improvement in franchise value is that the off-maturity 5.8% 9-month CD is designed to

automatically roll back into the existing 6-month CD at maturity. We assumed that 25% of the maturing balances would roll back into the 6-month CD at 4.5% while 75% would continue to chase promotional CD rates at 5.80%. The resulting average roll rate is 5.48%.

Both Strategies Two and Three only attempt to retain existing retail balances. They do not involve purposely raising retail rates high enough to meet the growth objectives of the institution. In fact, the franchise value of \$32.872 million reached via Strategy Three represents a key market value which will have to be beaten by any alternative pricing strategy.

Pricing To Grow The Balance Sheet

Strategies Four and Five examine the franchise value impact of retail pricing tactics designed to aggressively grow deposits. Different assumptions are made concerning the continuing cost of retail deposits and the intensity of the competitive response.

Strategy Four A uses a 9 month CD priced up an additional 25 basis points to 6.05%. The marginal cost of the additional \$20 million in retail funding is initially 6.8%. As in Strategy Three, the 9-month CD is designed to roll back into the 4.5% 6-month CD at maturity. At this point we make two different assumptions about the continuing cost of the promotional deposit balances.

Our first assumption postulates that 25% of the maturing 9-month CD balances will roll into the lesser-rate 6-month CD, while the remaining 75% of the maturing balances must continue to be bribed to remain with the institution at the rate of 6.05%. Thus, as the exhibit shows, the resulting average roll rate equals 5.66%. In this situation the franchise value improves to \$36.263 million. This makes sense. We've been able to gain the \$20 million in new balances with my CD special, at a lower marginal cost than the wholesale alternatives. I was even able to get some of the 9-month balances to roll back into the lower priced regular 6-month CD.

Using the second assumption, the roll rate of 6.05% is required on all maturing CD balances. The increased roll rate of 6.05%, reduces franchise value to \$33.046 million. Over the life of the deposit relationship the institution is still marginally better off with the higher roll rate than it was using wholesale borrowings to gain the \$20 million under Strategy Three. The improved franchise value in Strategy Four A is consistent with the marginal cost of retail funding being less than the cost of the wholesale funding alternative.

STRATEGY FOUR A			
Use Off-Maturity 9mo. C.D. to Both Retail & Grow Deposits. With NO RETALIATION.			
Balance	Start Rate	Roll Rate	Market Value
\$90 mil. P.D.	3.25%	3.25%	\$83,737.00
\$50 mil. 9mo. C.D.	4.2%	4.2%	\$37,131.00
\$80 mil. 9mo. C.D.	6.05%	5.60% (75% x 6.05 + 25% x 4.5)	\$62,160.00
		6.05% (100% x 6.05)	\$60,086.00
\$220 mil. Total			\$183,068.00 \$186,954.00
		FRANCHISE VALUE =	\$36,263.00 \$33,046.00

STRATEGY FOUR B			
Use Off-Maturity 9mo. C.D. to Both Retail & Grow Deposits. With Retaliation.			
Balance	Start Rate	Roll Rate	Market Value
\$90 mil. P.D.	3.25%	3.25%	\$83,737.00
\$50 mil. 9mo. C.D.	4.2%	4.2%	\$37,131.00
\$70 mil. 9mo. C.D.	6.05%	5.60% (75% x 6.05 + 25% x 4.5)	\$55,265.00
		6.05% (100% x 6.05)	\$57,826.00
\$10 mil. 9mo. ADV.	7.00%	7.00%	\$10,500.00
\$220 mil. Total			\$186,983.00 \$185,694.00
		FRANCHISE VALUE =	\$33,907.00 \$31,306.00

Competitive Response Is A Key

Strategy Four B, however, assumes that a competitive response to our rate increase cuts the amount of new money raised from \$20 million to \$10 million. This, of course, raises the marginal cost of the additional retail deposits to 7.55%, 49 bp higher than the 7.06% cost of wholesale funds. If we need to continue to pay 6.05% for the CD balances when they mature, franchise value declines to \$3 1.306 million. The institution would be better off using wholesale funding to raise the \$20 million needed to fund growth.

However, even considering the competitive response, if 25% of the balances in the CD special roll into a lower rate account at maturity, the franchise value increases to \$33.907 million. In this circumstance, while the marginal cost analysis points to the wholesale funding alternative, franchise value calculations suggest that it would be better to use retail pricing to raise the \$20 million.

We enter into this gray area between the results of marginal cost and franchise value calculations precisely because of the uncertainty about the long-term cost associated with the renewing promotional CD balances. If the institution can temporarily pay up for deposits, and then get some of these deposits re-booked at a wider spread to the Treasury, then franchise value may be increased. If they must continue to pay up for all renewing funds, franchise value may be damaged. Interesting, very interesting.

Strategy Five A & B demonstrates that regardless of competitive response and all-rates, an institution can wind up paying a significantly higher marginal cost for retail deposits than their wholesale funding alternative. Along with a higher interest expense, they will see a significantly reduced franchise value. The marginal cost of retail funding in strategy is 9.60% in Five A and is 12.45% in Five B.

STRATEGY FIVE A			
Pay-Up for 3yr. C.D. to Retain & Grow Deposits. Without Retaliation.			
Balance	Start Rate	Roll Rate	Market Value
890 mil. P.B.	3.25%	3.25%	883,737.00
850 mil. 6mo. C.D.	4.5%	4.5%	837,131.00
880 mil. 3yr. C.D.	6.75%	6.37% (50% x 6.75% + 50% x 6.0%)	871,277.00
8220 mil. Total			8192,145.00
FRANCHISE VALUE = 827,855.00			
STRATEGY FIVE B			
Pay-Up for 3yr. C.D. to Retain & Grow Deposits. With Retaliation.			
Balance	Start Rate	Roll Rate	Market Value
890 mil. P.B.	3.25%	3.25%	883,737.00
850 mil. 6mo. C.D.	4.5%	4.5%	837,131.00
870 mil. 3yr. C.D.	6.75%	6.37% (50% x 6.75 + 50% x 6.0%)	862,968.00
810 mil. 6mo. ADV.	7.00%	7.00%	810,000.00
8220 mil. Total			8190,336.00
FRANCHISE VALUE = 826,764.00			

Ahh! My faith in finance is confirmed. Using marginal cost analysis in making pricing decisions is indeed consistent with maximizing franchise value. However, both the extent of competitive response and longer-term deposit pricing tactics leave ample room for creative, aggressive retail pricing strategies.

Nonetheless, growing the institution in a rising rate environment will usually require using wholesale funding alternatives. So relax Federal Home Loan Banks, relax.