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We will focus on the four conceptual approaches to loan pricing, incorporate a relationship pricing example, and throw a product idea or two on the table. The session will be recorded so if you are unable to attend or read this after the event date, contact us for a link to the recording.

Installing an Effective Loan Pricing Process

By: Tom Farin

I think nearly everyone realizes that the industry has not effectively priced loans to cover credit risk. A long period of economic expansion along with the practice of basing reserves on fairly recent loss experience caused the industry to be under-reserved for the losses experienced since 2008. We are likely to see a regulatory agency initiated changes in reserve coverage requirements that force us to consider losses in both good and bad times in setting reserves for loan losses in the future.

General Approach to Loan Pricing

The same philosophy applied in establishing reserves should also be incorporated in adjusting for credit risk in loan pricing decisions. Of course, covering loan losses is only one of the elements of effective loan pricing. Rates on loans should reflect risk free returns along with adjustments for credit risk, interest rate risk, option risk and origination/servicing costs. Way too many institutions are pricing without giving adequate consideration to all the risk and cost adjustments.

Yes, you need to consider competitive rates in making pricing decisions. But if the competition is pricing in such a way they can't cover their risks and costs, you just can't afford to match their rates. In a conversation with a customer last week I became aware that a competitor was making new car loans at 2.99%. There is no way a new car loan can be priced at a 2.99% rate and cover risks and costs, even if credit losses are close to zero and the term is as short as 48 months. When you are up against a competitor like that, you just can't afford to match their rates.

Use of Loan Pricing Models

So how do you determine when it makes sense to match competitive rates and when it doesn't? Most think loan pricing models are used to price loans. That may be true when pricing commercial loans. But the majority of time, pricing models are used to help you decide when it makes sense to compete and when it doesn't.

I don't think the issue is, "Should I use a loan pricing model?" Rather it is, "What loan pricing model should I use and how should I use it?" I believe you will see increasing regulatory pressure in the next few years to document how and why you priced loans the way you did.



Think about the changes that have occurred in the interest rate risk and liquidity risk area in just the last six months. Can you imagine the same thing not happening with loan pricing?

Selecting a Loan Pricing Model

The issue of which loan pricing model to use is two separate issues:

1. Which conceptual approach to loan pricing makes the most sense?
2. Should you choose between the commercial vendor offerings or build a model yourself?

Because we offer the iPrice Loan model, I want to limit my responses to the second issue to whether to buy or build. I've always believed a pricing model puts an asset-liability wrapper around an individual loan or relationship or a category of loans. When you price a loan you are pricing a bundle of cash flows. If you feel comfortable building a model that effectively projects cash flows and repricing for individual loans and you have a vision for accurately considering all the risks and costs in a loan, then building your own model is an option. But I'm not sure building and maintaining your own model is very cost effective. On the other hand, development costs and maintenance expenses for a commercial loan pricing product are spread across many users.

Conceptual Approaches to Loan Pricing

There are at least four different conceptual approaches that might be relevant to making effective loan pricing decisions.

1. Evaluating a loan's price in relationship to investment alternatives. This comparison is always relevant when you are sitting with cash as your alternatives will generally break down between those two choices.
2. Determining whether the market value of a loan is above book at origination. This is most relevant when you plan to sell the loan shortly after origination. But well priced loans when placed in your portfolio add to your institution's economic value (EVE, NPV, or NEV).
3. Determining whether a loan will provide an adequate return on the capital supporting the loan. This is most relevant when capital is a scarce commodity and has nothing to do with whether you are a stock or mutually held institution. With the hits the industry is currently taking to earnings and the fact capital regulations are likely to be heading up, nearly all of you are operating under a capital constraint.
4. Determining whether a loan will provide an adequate return on assets. This measure is most relevant when capital is plentiful and loans are scarce. Very few institutions currently find themselves in a position where this is the most relevant measure today because of the capital scarcity issue.

Incorporating Credit Risk and Capital Requirements



Let me make an additional point relating to the ROE issue. In addition to the likelihood we will see higher capital standards; we are also in the midst of a transition from Basel I to Basel II capital requirements. Basel II assigns differential capital requirements to loans based on the category of the loan, the credit worthiness of the borrower, and credit risk mitigation techniques like collateral coverage and guarantees. When the next set of capital regulations appear, I expect them to be interagency standards. That means I feel credit unions, banks, and thrifts will be under the same standards.

As these regulations evolve the differential between rates based on credit risk associated with the borrower is likely to open up. For example, the differentiation in rates between your consumer A, B & C borrowers will need to consider:

1. The additional loss experience as we move between borrower credit classes.
2. The additional servicing cost (legal and collection) associated with servicing weaker credit customers.
3. The additional capital you are required to post to support your weaker customers.

Adjusting for Interest Rate Risk

There is currently a fair amount of slope in the yield curve. I'm sure you are all aware that it costs more to match fund a long-term loan like a 30 year fixed rate mortgage than a 48 month used car loan or a variable rate commercial line of credit. But how do you determine what the differential should be? And how should it change as the yield curve flattens? Models should take care of this for you automatically. The major wild card in this part of your analysis will be the source and use of prepayment speeds, which affect cash flows, pricing, and amortization of up-front fees and costs.

Adjusting for Option Risk

Most commercial pricing models fail to consider option risk. Yet when you make a loan you often give the customer the option to prepay any time they wish at par, even if the market value of the loan is above par. That is one very valuable option. When you sell a mortgage to Freddie or Fannie, part of the discount rate used in valuing your loan is the cost Freddie or Fannie will incur in hedging the option risk once the loan is placed in their portfolio. On fixed-rate mortgages, this can run from 75 to 125 basis points. If you keep the loan, we believe the loan should be priced in such a way that you can afford to hedge the option risk if you need to.

Adjusting for Servicing Costs

This can be a tough issue as most financial institutions we deal with are not aware of what it costs to originate or service their loans. Even if the studies have been performed, there is the issue of whether to consider the just marginal cost of producing and servicing the next loan or to add in adjustments for direct overhead like collections and general overhead like top

executive salaries, etc. Many institutions begin by using industry averages from a variety of sources. But which sources are the best and most accurate/appropriate?

Issues in Implementing Loan Pricing

It would be nice if you could just buy a loan pricing model, install the model, train your users, and begin using the model effectively. I've already raised a number of issues that need to be addressed in effective implementation. Here are some additional issues that need to be considered.

- Changes to the loan pricing process – in many institutions loan pricing is driven by the lending function. But if pricing decisions are to be made effectively, the financial functions in the organization need to be effectively incorporated into the process. You may want to review some of the points made earlier in the document and ask yourself who is best suited to work on plugging the information gaps. In addition, any time there is a change in process, someone is likely to feel threatened. For example, some might ask, “Will implementing a loan pricing model make my pricing decisions in the past look bad?” “Am I going to lose control?” In order to address the data and implementation issues, you will need buy-in from a variety of groups – financial folks, senior management, senior loan officers, and the loan officers on the front line.
- Gathering loss experience – I can't tell you how many times I have found that institutions with complex risk based pricing frameworks that are unable to produce loss experience at the same level of detail at which rates are being set. In addition we have the issue raised earlier of what loss experience time period to use in establishing credit risk adjustments.
- Capital allocation to loan categories – If we are to calculate ROE, we need to assign capital requirements to different categories of loans. Regulatory guidance in this area is fairly non-specific. Pricing models need specific capital requirements at the loan or product category level. How will they be established?
- Conceptual pricing models – We introduced four different conceptual models earlier in this X-Speak blog entry. Which one makes the most sense for you to use? Should you use a combination of the four? Which combination? What goal should you set for a measure like ROE?

Relationship Pricing

Up to this point our discussion has focused on pricing loans. But there are at least two situations in which it makes sense to look at the entire relationship.

1. You are pricing a large commercial loan deal that involves multiple loans and/or deposits.
2. You are considering a relationship pricing framework where consumers receive lower rates on loans based on the value of the rest of their relationship.



Large commercial deals warrant the time needed to analyze them individually. And it is truly amazing what a moderately sized non-interest checking account can do for the profitability of a much larger commercial loan. Any institution pricing a commercial deal based on the profitability of the loan alone will be at a competitive disadvantage in relationship to another financial institution capable of pricing the loan based on the entire relationship.

On the consumer side, relationship pricing schemes that discount a loan rate for a deposit relationship are common. Yours might say, “Give them a 25 bp discount on new car rates if they have a checking account with direct deposit.” So the customer opens a checking account and sets up a \$50 per month ACH transfer to obtain the 25 bp discount. Now your institution has a less profitable loan and an unprofitable checking account. Relationship pricing models can be extremely useful in assessing what the average collected balance needs to be to justify the 25 bp

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