

Reinventing Your ALCO Process

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How are you going to make pricing decisions that will drive profit to your bottom line? And not just any profit, but enough profit to satisfy the ROE requirements of investors in your company? And not just any company, but in a company that is in an industry characterized by declining costs that is producing commodities?

Whoa Ho! What a mouthful. But the fact is that we can design exactly the ALCO process that you need to accomplish this objective.

Identifying Well-Priced Loans ... AT THE MARGIN

First, the focus of your retail pricing decisions should be to:

1. Maximize the revenue of growing your balance sheet AT THE MARGIN.
2. Minimize the cost of funding your balance sheet AT THE MARGIN.

That is, as my partner Tom Farin is continually preaching, the first step in the ALCO process is to identify well-priced financial products.

Basing pricing decisions on marginal costs and revenues is absolutely critical because of two factors.

First, since your customers consider most of the products that you sell commodities, you compete as a PRICE TAKER in these markets. Products such as loans (especially to the highest quality credits), checking accounts, money market accounts and your various savings accounts are all being offered to consumers by a whole host of competing depository and non-depository financial institutions. In fact, a customer can get most of what you produce from many non-financial firms who simply serve as brokers competing for the retail point of sale.

Second, the low-cost providers are setting the clearing prices in the commodity markets. If you attempt to charge a premium price for these products, your demand will quickly decrease. If you attempt to recover what you feel are your required average costs of production your customers will find the lower priced alternative sold by a competitor. You will have effectively priced yourself out of the market.

The financial services industry is experiencing declining costs as it finds an increasing array of applications for technology. This means that a pricing methodology designed to recover your average costs of production is doomed as a profit maximizing strategy! Average cost pricing is doomed not only because your own marginal costs are likely to be below your average costs, but also both the declining average and marginal costs of industry leaders are below your costs. These are the marginal costs of the firms that are setting the prices in your commodity markets.

This does not mean, however, that smaller financial institutions lose all competitive advantages to large firms. Fortunately, there are many ways to take advantage of cost advantages through outsourcing various parts of the production process. In addition, marketing tactics exist that will also allow an institution to segment markets and differentiate products in an attempt to find and exploit less price sensitive customers and to create perceived value in the minds of your customers.

Integrating Retail Pricing With Your Income Targets

The second part of the ALCO process will be to establish the volume of loan originations necessary to drive the required growth in income to the bottom line. You see, most institutions will identify their best-priced loans, such as certain commercial and consumer loans, to be those loans where they have established some ability to receive a premium to the commodity market. In such markets, therefore, they will be able to act as a price-setter and be able to have their prices impact the demand for these loans.

The trouble comes when the institution has to lower the price on these premium priced loans in order to generate the increased originations to fuel the required increase in net income. This is when the reality of marginal revenue being below average revenue (price) hits the institution squarely between the eyes. As their marginal revenue falls on these specialty loans, it may fall to where some other loan category takes over as the best-priced alternative. And, finally, much to the chagrin of the anti-fixed-rate mortgage crowd, this process may result in the necessity to portfolio well-priced FRM ϕ in order to meet the income targets.

Therefore, in an effort to identify these price-demand relationships as they relate to income targets, marginal pricing decisions will be performed with respect to the following cash flows:

1. Maturing cash flows from existing balance sheet items.
2. New originations of assets and liabilities.
3. Assets and liabilities that are shifting within the balance sheet.

Targeting Profitability

So, let ϕ start making a buck ϕ with your ALCO process.

Targeting ROE

First, target the level of profitability that you wish to achieve. You can either establish the target with respect to a desired ROE or a desired amount of earnings growth. This will give you some idea about how much balance sheet growth will be required to achieve the targeted profitability. To begin with, you can hold any assumptions about the levels of non-interest income and operating expenses constant, at least until you make some determination about balance sheet growth and composition.

And, while we are on the subject of holding things constant, we are not going to initially be concerned about the constraints that liquidity, interest rate risk and capital will place on earnings capacity. These concerns should be addressed in the context of a dynamic simulation modeling effort. In fact, I am assuming you will come to the ALCO pricing discussion with information regarding maturing cash flows and a listing of sources and uses of funds for your institution. That is, you will have some idea about the size of the funding gap that is facing your institution. But before you plan your investments or fine-tune your exposure to interest rate risk, **PRICING YOUR RETAIL PRODUCTS COMES FIRST!!!** Most financial institutions are going to win or lose their battle for profitability in the retail markets. Therefore, you need to know the volume of loan and deposit origination activity that you are going to have to fight to achieve.

For instance, you know that $ROE = ROA \times Leverage$. If you are already reached your desired capital-to-assets ratio of say, 6.67% that equals a leverage ratio of 15 to 1. Suppose your ROA is 1.0%. Then the resulting ROE is 15%. The balance sheet will be required to grow by a rate equaling ROE net of dividends.

$$\text{Growth Rate} = ROE * (1 - D)$$

If in this case, the dividend pay-out was 33%, the balance sheet would have to grow by 10% in order to achieve the targeted 15% ROE. If you haven't reached your desired capital ratio, you may target a growth rate that is greater than your ROE. And if for any reason you decide to target a lesser level of profitability, your need for retail growth will thereby be curtailed. I am not going to get involved preaching about the long-term required rate of return on equity being 12 to 15%, at least not now. Just start this pricing process by targeting some level of profitability.

Force All The Growth Through Loans

You could apportion the balance sheet growth required to generate targeted profitability across all of the various asset portfolios using the same common size assumption. This approach is typically used when simulating base-case forecasts. However, when performing pricing analysis, you should force all of the required balance sheet growth completely through the retail loan portfolio, thereby only using wholesale investment portfolios as a set of balancing accounts.

Remember, during our pricing process, retail loans are explicitly priced on a risk and cost adjusted basis with respect to wholesale investment alternatives. This pricing process will ensure that loans will be originated only to the point where their marginal revenue is equal to the marginal revenue of their wholesale equivalent. If you need them, investments will take up the necessary slack to generate the required growth to maximize revenue at the margin.

Targeting Net Income

Another approach to arrive at a working balance sheet growth target will result in an almost identical solution. Instead of an ROE target, you start with a desired dollar growth of net income. Since $ROE = \text{Net Income} / \text{Equity}$, we can simply focus on the numerator of the ratio. I prefer this particular approach when my ROE is below the targeted ROE, and I'd be targeting either quarterly or annual increments to income in order to get to the target.

Divide this net income number by an assumed net interest spread that could be expected on the marginal growth, and voila, you get the volume of retail loan originations required to generate this net income figure. Thereafter, the pricing process is identical to the ROE targeted approach. For instance, suppose you are looking for an increase in net income next year of \$200,000. You expect that the average yield on new loan originations net of the cost of funding will be 2.0%. Dividing \$200,000 by 2.0% gives you \$10,000,000 in average loan balances required to generate this net income for the year.

$$\text{Loans} = \text{Net Income} / \text{Spread}$$

$$\text{Loans} = \$200,000 / 2\% = \$10,000,000$$

Or, if loans are being originated equally throughout the year, you'd have to originate \$20,000,000 in loans to have an average of \$10,000,000 working for you, assuming loan growth was flat in the prior year. If there were significant growth in the prior year, you wouldn't need quite as much loan growth this year, as ending loans for the prior year exceeds average loans for that year, carrying some loan income momentum into the current year. For now, we'd assume Community Bank needs to grow loans gradually by \$20 million this year to hit their income targets.

Targeting Net Income For Community Bank

Let's use this net income approach on our case study. I actually use this approach when working with directors and investors. It's straightforward and mind-blowing.

Hey gang, I say, you made \$3.15 million pre-tax last year. Your ROE sucks; so let's start kicking this puppy in the butt. How about giving me a 15% annual increase in income until you get my ROE where it needs to be?+

So, let's see, 15% times \$3.15 million is about \$472,500, and that's what I want you to increase income by. I don't care whether you get the increase by charging fees to use the restrooms or by requiring catheters for all employees, but since I can't count on either of these, how about we just grow the bank?+

How much growth? you ask. Well, let's keep it simple. If you can get a 2% spread at the margin between what you earn on loans and what you pay for funding, you'd need to grow the bank by an average of \$23.6 million.

$$\text{Loans} = \text{Net Income} / \text{Spread} = \$472,500 / .02 = \$23.6 \text{ million}$$

Assuming equally paced growth throughout the year, a total of \$47.2 million in loan growth will be required to average \$23.6 million.

That's net, I say, that's net growth, folks. That's growth of \$47.2 million on top of the loan originations you'll need to replace maturing cash flows. +

Here, let me provide the focus for your strategic planning process. You have roughly \$237 million in loans, right? Now \$152 million of these loans are in 1-4 family residential, and I'd bet at least 20% of these balances, or \$30 million, will mature, amortize and prepay this year. And I'm not even considering any extra prepayments from all the mortgages that are currently refinancing. So, since residential mortgage loans represent 64% of your loan portfolio, we'd assign 64% of the \$47 million total increase in net loans, or another \$30 million in originations for the residential portfolio. That's \$60 million in residential originations this year, gang. That should focus your mortgage people. +

Applying the same reasoning to the entire \$43 million in consumer loans, assuming that 40% of these shorter duration balances will mature and the consumer portfolio gets assigned its pro-rata share (18%) of new loans, we'd need \$25.5 million in consumer originations this year.

And, again, applying the same reasoning to the entire commercial portfolio, assuming about 30% of these balances will mature and the commercial portfolio gets assigned its pro-rata share (18%) of new loans, we'd need \$21.5 million in commercial originations.

That's a total of \$106.6 million in loan originations to get \$47.2 million in net growth. It's the \$106 million figure that's important because this represents the loan production, which is subjected to being priced in the markets over the forthcoming year.

So, my irreverent presentation to the board of directors aside, let's review the process.

THE PRICING PROCESS—LOANS

First, look at a listing of your loans by category. Prioritize your listing of loans by the volume of maturing cash flows. Loan categories with the largest volume of maturing cash flows bear the burden of replacing their evaporating income streams. By maturing cash flows, I'm including amortization and prepayments on your loan balances. These loans deserve your immediate attention because you have to get these balances back on your balance sheet before you can begin the process of growing! If by market circumstance, you are reviewing a particular loan category that is no longer attractive to consumers (adjustable rate mortgages in an environment of relatively low interest rates), you'd better be paying close attention to which loan product will be replacing the adjustable rate mortgage.

Second, to these maturing cash flows you will add the expected growth of this loan category. That is, the loan growth that is the result of assigning the requisite profitability target to that loan category. For instance, suppose that you've determined you need \$1 million in new loan originations this month to meet your profitability target, and one-quarter of your loan portfolio is in consumer loans, then assume that \$250,000 of the new originations will come from consumer loans. Add this amount of growth to the volume of maturing consumer loans and you get the total of required consumer loan originations for the month.

But, wait. We're getting ahead of ourselves. When looking at a specific loan category, you need to determine whether the loan category is well priced relative to its risk and cost adjusted investment alternative. Given the duration of newly originated loan product, what is the yield of similar asset-backed securities? What are the origination and servicing costs of the loans that we are considering at the margin? What are the additional credit risks associated with the specific loans that you are considering originating?

Actually, all of this information could appear in a table in a format suitable to facilitate decision-making.

A	B	C	D	E	F
Retail					
Maturing Cash Flows Per Period	Projected Originations Per Period	Rate on Projected Originations	Equivalent Adjusted (Risk & Cost Bogy)	Wholesale Alternative Investment	Spread to Retail Equivalent
\$1,420,000	\$1,920,000	8.056%	6.88%	6.38%	1.18%

In the situation depicted in this table, Community Bank is projecting to originate \$1,920,000 of consumer loans next month to A credit borrowers at a rate of 8.056%. The bank is pricing the consumer loans assuming that they have a duration of approximately two years. The retail pricing screen in I-Price lays out the risk and cost adjustments required in the pricing process. The wholesale equivalent security yield is 6.38%.

Retail Equivalent Rate		Comparison	
Wholesale Equivalent Rate	6.377	Orig Rate:	8.056
Credit Risk Adjustment	<u>0.200</u>	Retail Equiv:	<u>6.877</u>
CR Adjusted Rate	6.577	Variance:	1.179
Service Cost Adjustment	<u>0.300</u>		
Retail Equivalent Rate	6.877		

After adjusting for incremental credit risks of targeted customers and incremental costs associated with this approximate volume of origination, the retail equivalent yield required on loans is 6.88%. So at least I know that the consumer loans projected for origination are well-priced—that is, priced at a positive spread (118 bp) to the retail equivalent yield. If this spread wasn't positive, I'd have to ask, why would you be planning to originate loans at a yield that wouldn't cover their risks and costs?

Let's assume we've determined that of the \$47,250,000 net increase in total loans, we'll assign 18% of this required increase to the consumer loan portfolio. Well, that's 18% times \$47,250,000, which is \$8,505,000 for the year, or \$708,750 for the month. Adding \$708,750 required growth to \$1,420,000 in maturing cash flows gives us a required total originations of \$2,128,750. The projected origination volume of \$1,920,000 at a rate of 8.056% falls \$208,750 short of this target. This projected volume of loan originations was arrived at by conferring with your loan officers and getting some idea of the volume of originations that they really expect to book at that rate of 8.056%.

At this point, we proceed to the Margin Analysis screen in I-Price to do a little what-if analysis. Just how much of a price drop can I afford to give up on the projected \$1,920,000 in loan originations and still break even with the retail equivalent rate of 6.88%? Not much, as it turns out. Dropping the rate by a mere 14 basis points to 7.92, also drops the marginal yield to 6.88%, which is just break-even to the retail equivalent. So, what do you do?

Marginal Effect				
Marginal Effect				
Index: 3 Year US Treasury				
Rate: 4.676				
<input type="button" value="Reset"/>				
	Balance	Spread	Rate	Inc/Exp
Base Strategy	1,920,000	3.380	8.056	154,675.200
Alternative Strategy	2,178,750	3.240	7.916	172,469.850
Difference	258,750			17,794.650

Comparison	
Marg. Effect:	6.877
Retail Equiv:	6.877
Difference:	0.000

Well if a drop in rates of roughly 1/8 percent will elicit the required volume, do it. But maybe we should be thinking of ways to segment the market in such a way as to not disturb general pricing across all consumer loans. Or perhaps we just accept the retail volume that we can achieve, and fill in the required growth target with purchases of comparable loans or securities.

Actually at this point a whole host of market-driven issues come into play:

(A) How rate sensitive is the market for this type of loan? Are there comparably priced substitutes? Are there ways to differentiate the pricing of loans using points, documentation requirements, pre-qualification, etc.?

(B) What about the street reality issues? Often it's not easy to enter or exit certain loan markets. Real Estate brokers, agents, indirect consumer originators or whatever your sales delivery system happens to be all have their own idiosyncrasies.

(C) What kind of options exist for your institution to portfolio the risks and rewards of customizing loan products to meet specific customer demands? What is it that they say? Consumer necessity is the mother of retail product innovation.

Prioritizing The Order of Loan Analysis

Earlier I suggested that you look at the largest loan portfolios first, because these represent the cash flows that just must be replaced if you are to hit your earnings and derived growth targets.

But you could also order your loans based on the spread of the projected origination rate over the retail bogey. The bigger this spread, assuming that you are originating a relevant volume of loans at this spread, then the better-priced is the loan. You must be capturing some premium for features unique to the loan product or of your loan service. Then you could price your loans until the marginal revenue of the best-priced loan category just equaled the marginal revenue of the next best-priced loan alternative.

In fact, it would be great if you started inventing characteristics (retail options) that loan customers desired or could be persuaded to desire, priced these options into your loan, and created your own premiums to benefit from.

Eventually you price your loans until their marginal revenue equals their retail equivalent yield, and that's when you start to consider buying investment securities associated with the appropriate loan portfolios.

When you get done you've grown. Whether by loans or investments, you've grown. And now that you know how much loan growth that you need to fund, you can calculate the marginal cost of your various retail and wholesale funding strategies.

What About Interest Rate and Liquidity Risk?

Once you get your basic funding on the balance sheet, we'll be able to do the income and market value simulation necessary to determine the risk characteristics of the WHOLE PORTFOLIO. Until then, why bother? After all, you've already priced the risks of the individual cash flows used to build the balance sheet into both the wholesale and retail equivalent yields calculated through our pricing process.

Calculate the returns of your business strategy. Then see if that strategy puts you up against any risk constraints. Calculate the income foregone as a result of adhering to these risk constraints.

Then you'll know which risks are the most important to hedge and how much income to be sacrificed in hedging them.

Why spend any more than you need to hedge the risks you're being paid to take? Remember the Mission Statement: Make a Buckō and the Vision Statement: Make a Buck Quickly.