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INVESTMENT SERVICES

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Measuring Success in Your Loan Portfolio

Measuring success is often a subjective endeavor. For credit unions, the lending process requires striking a balance between offering value to the member and making financial sense for the credit union. Gauging your value to the member will involve a host of variables, such as the rate offered compared to the competition, quality of service, convenience, etc. Ultimately determining whether you've made a *financially* sound loan is just a matter of finance.

Credit unions prefer to make loans rather than buy investments. The credit union serves its membership by lending money, and loans are more profitable than an investment alternative when priced properly. However, you don't truly know if your loan is more profitable than an investment alternative or if your car loan is more or less profitable than a mortgage loan unless you analyze the financial data.

First, you must know which numbers to look for. There are times when credit union managers proclaim financial victory after a loan promotion that will ultimately yield them as much as 100 basis points *below* the Treasury curve.

Once you've determined which portion of financial data is relevant to your analysis, you must make sure your data is accurate. This is especially true if you are offering promotional incentives to your members for loans or if you have an indirect lending relationship with a dealer.

Keep Your Eye on the Ball

Which section of your financial statements will best help you determine if your loan promotion was a success? For the marketing department, the balance sheet will yield the data that proves how many loans were added as a result of their efforts. Then again, does loan growth necessarily equate to financial success? It certainly doesn't if the loans are priced too low. Remember, you can't make up bad loan pricing in volume!

Perhaps then the answer is to look at the bottom line, Return on Assets (ROA). There are a multitude of factors that determine ROA. If, for example, you recently started funding mortgage loans, and over that period your ROA improved by 25 bps, could you conclude your venture into mortgage lending was a success? It may very well have been a wise decision, but if over the same period your non-interest expense was declining, then clearly the improvement in ROA was not singularly attributed to your loan efforts. No, ROA is not the answer.

A better way to evaluate performance is to isolate loan yield on your internal reporting. Starting with total interest income from loans, strip away the net effect of charge-offs to isolate your loan yield net of charge-offs. Observing this number over time should give you a good feel of how your loan portfolio is performing (prior to the effect of any credit impairments). If, however, you are not accurately amortizing fees or incentives associated with the loan, financial statement analysis will be quite difficult as we'll explore in just a bit.

The best way to measure the return on your loan portfolio is to evaluate a specific pool of loans over time. Static pool analysis is the process of isolating a specific type of loan issued in a specific time period (all used auto loans issued in May, for example) and evaluating the performance of those loans over time. Performance attributes include prepayment activity and charge-off information.

For loan pools that have fully matured, static pool analysis is easy because all the cash flows associated with a particular pool are known. The yield to maturity, net of charge-offs, is discovered after computing the internal rate of return (IRR) on all cash flows. Cash outflows will include the loan amount and any fees associated with funding the loan, while cash inflows will include all principal and interest payments on the loans.

For loan pools that have not yet fully matured, the yield performance can be estimated by making calculated assumptions for future cash flows. Varying the assumptions will also help the user appreciate the sensitivity of loan performance to changing assumptions.

Traditionally, monitoring credit quality over time to make sure sufficient credit spreads were maintained was the primary motive of static pool analysis. Given the prevalence of customer incentives and dealer fees (for indirect relationships), the need to monitor prepayment history has become increasingly important. As prepayments arise, amortization of the fees paid to the dealer should be accelerated, analogous to premium amortization on mortgage-backed securities. As the amortization expense is accelerated, and therefore spread out over a shorter period of time, the actual yield earned on the loan begins to decline.

In March of this year, NCUA released a supplemental guidance paper in conjunction with its Specialized Lending Activities Risk Alert that was issued in June of 2005. The purpose of that guidance paper was to provide examiners and credit union staff with a tool to perform "static pool analysis to make informed decisions about whether to increase funding, continue at current levels, or curtail acquisitions of loans based on results of actual yields or an expected yield analysis." NCUA examiners will slowly begin incorporating static pool analysis into their reviews. As diligent financial managers, credit unions should be encouraged to make use of this tool now.

Keep Your Eye on the Ball, Especially When It's Curving

You can't make up bad loan pricing in volume! Yet, some marketers of indirect lending products are presenting an analysis to credit unions that would lead them to believe otherwise. I'll divulge the premise behind the spreadsheet and show you how the analysis is misleading.The premise behind the analysis is simple enough. Calculate the expected profit (in dollars) of the current in-house loan production of, say 20 cars per month, compared to the expected profit generated by increased loan production when you begin a new indirect lending relationship. Of course with any projection, a series of important assumptions have to be made. It is assumed in this example that the credit union would normally fund 20 loans in-house, but with the new program would fund 10 loans in-house and 20 loans through the dealer; a 33 percent increase in loan volume! This is a valid assumption based on the kind of phenomenal loan growth credit unions involved in indirect have had. Another important assumption is the loans are issued for 60-month terms, but realizing that loans will prepay, they will only be on the books for an average of 36 months. That may seem like a really short amount of time, but recent prepayment history suggests the average maturity of a 60-month auto loan is less than the 36 month assumption. The last piece of the puzzle is to estimate the cost of funding the loan in its holding period. The difference between the interest income from the loan and the interest expense of funding the loan is deemed to be profit per loan.

Figure 1

	Sales Pitch	
	Indirect	W/O Indirect
In-House Car Loans:	10	20
Indirect Car Loans:	20	--
Total Loans Funded:	$800,000	$400,000
Investments Owned	--	--
Loan Income:	$82,735	$55,156
Less Dealer Fees:	($4,800)	--
Investment Income:	--	--
Asset Yield:	--	--
Less Cost of Funds:	($32,368)	($21,579)
Net Income (over 3yrs):	$45,567	$33,577
Gross Margin:	--	--

	Revised Analysis	
	Indirect	W/O Indirect
In-House Car Loans:	10	20
Indirect Car Loans:	20	--
Total Loans Funded:	$800,000	$400,000
Investments Owned	--	$200,000
Loan Income:	$82,735	$55,156
Less Dealer Fees:	($4,800)	--
Investment Income:	--	$31,800
Asset Yield:	4.33%	4.83%
Less Cost of Funds:	($32,368)	($32,368)
Net Income (over 3yrs):	$45,567	$54,588
Gross Margin:	2.53%	3.03%

Now if you only fund 20 loans in-house compared to 10 loans in-house and 20 through a dealership (for a total of 30), which scenario do you think will yield a higher profit? Using the assumptions built into the spreadsheet, you'd be better off to begin an indirect program right away.

At least two problems exist with this analysis. The most glaring problem is that the indirect scenario employs an additional $200,000 (10 cars at $20,000 per car) in interest earning assets not included in the status-quo scenario. If the credit union did not use indirect, then they are only assumed to fund 20 loans, but they would still have another 10 loans worth of money that would presumably be earning a market rate in either an investment or some other type of loan. However, that additional interest income (net of the cost of funds associated with it) is not factored into the analysis. When it is factored in, the results may show a different conclusion.

The second problem with the analysis is that all of the output is stated in terms of dollars instead of percentage yield or spread. Stating numbers using dollars makes it harder to compare one investment opportunity to another, particularly when comparing outlays of different sizes. If one investment opportunity will involve a $500,000 outlay, and the other opportunity involves a $600,000 outlay, then you would fully expect the dollar amount of net income to be higher with the $600,000 investment. However, stating the expected profits in terms of percentage gains will allow you to more accurately assess the relative profitability of the two investment opportunities.

You Can't Hit What You Can't See

When fees or incentives are not accurately amortized, financial statements will reveal large variances in portfolio yield over time. Consider two different scenarios, one in which a credit union is using some sort of cash incentive to entice members to borrow from the credit union, and the more common example of a credit union participating in an indirect lending program.

Figure 2

Payment	Level Yield Amortization	Sum of Years Digits Method
1	$ 12.05	$ 10.20
2	$ 11.67	$ 9.99
3	$ 11.29	$ 9.78
4	$ 10.93	$ 9.57
5	$ 10.57	$ 9.35
6	$ 10.21	$ 9.14
7	$ 9.86	$ 8.93
8	$ 9.52	$ 8.72
9	$ 9.19	$ 8.50
10	$ 8.86	$ 8.29
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38	$ 1.83	$ 2.34
39	$ 1.65	$ 2.13
40	$ 1.47	$ 1.91
41	$ 1.29	$ 1.70
42	$ 1.11	$ 1.49
43	$ 0.94	$ 1.28
44	$ 0.78	$ 1.06
45	$ 0.62	$ 0.85
46	$ 0.46	$ 0.64
47	$ 0.30	$ 0.43
48	$ 0.15	$ 0.21

For those credit unions that employ some sort of financial incentive (besides a loan rate that knocks the socks off the bank across the street), odds are that the incentive is not being amortized against the interest income. Whether or not you should amortize those incentives comes down to a subjective determination of materiality. If your campaign was largely unsuccessful and you didn't issue many cash awards, or if the total amount of cash awards was comparatively small to the loan size, you can just chalk the expense up to marketing. Otherwise, those pesky auditors may ask you to somehow amortize the incentive over a period of time.

Since credit unions don't typically amortize these promotional incentives against the interest income, isolating loan yield on your financial statements will prove to be an inconclusive exercise.

Now consider the scenario of a credit union participating in an indirect lending program. Typically the fees paid to the dealer are more substantial than what might be paid directly to the member in a promotional offering. As such, the fees are certainly required to be amortized. However, many examiners advocate credit unions amortizing the dealer fees using a straight-line method over a period of 24-36 months (even though straight-line for amortization is not GAAP accounting). Using a straight-line amortization method will undoubtedly result in understating interest income for the first 5 to 10 months of the loan while subsequently overstating interest income for the remainder of the loan. If your credit union amortizes indirect fees in a straight-line fashion, it's very difficult for you to be able to determine how your loan portfolio is performing.

GAAP accounting requires the use of an amortization method such as level yield. However, because level yield is a more cumbersome method of amortization, most credit unions use straight-line amortization. As an alternative, credit unions could consider using the "sum-of-the-years' digits" depreciation method for fee amortization. Like straight-line, sum-of-the-years' digits is not considered GAAP accounting. Nevertheless, sum-of-the-years' digits method is much more reflective of the actual level of amortization over the duration of the loan. Figure 2 illustrates this point by showing a portion of a fee amortization schedule for a $20,000 auto loan, funded for 48 months at 6 percent, with a dealer fee of $250 and a prepayment rate of 15 percent CPR. Using straight-line depreciation, the amortization would simply be $10.42 per month ($250 / 24 months). Sum-of-the-years' digits depreciation, conversely, reflects only a modest degree of variance from the GAAP consistent method of level yield amortization.

Touching All the Bases

Loan yield is largely determined by the decisions you make at the point of origination. Did you make the right decision on credit quality, and did you price the loan appropriately? Nevertheless, the lending process is an ongoing operation. Decisions about the loans we make tomorrow will be influenced by the performance of the loans we made in the past. As such, we must be able to accurately assess the performance of the loans we've made. The financial manager must have accurate and meaningful financial data. Only then will the financial manager be able to maximize loan performance.

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