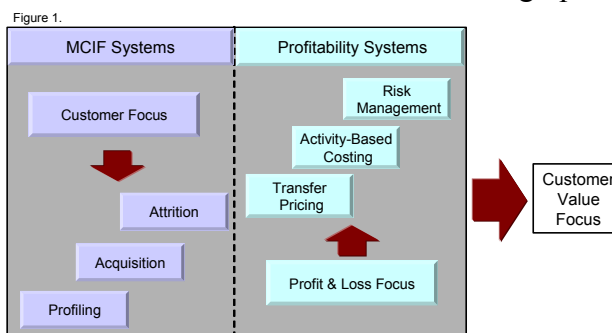


A key to creating higher value customer relationships is knowing what to look for in a profitability model.

By Bill Hasapidis

In today’s increasingly competitive financial services industry, customer profitability has become a hot topic among bank marketers. Accompanying this growing interest has been the challenge of developing and interpreting customer profitability information. For all the talk about retaining the most profitable customers and transforming the less profitable ones, few banks can actually calculate profitability at the customer level with any degree of accuracy. In fact, an industry study conducted by Mentis research of 300 North American banks reported that only 14% of banks calculate customer profitability accurately.

Customer profitability models provide a powerful means for linking marketing strategy to “bottom-line” results. The integration of financial data with MCIF information allows marketers to focus on the value of customer relationships in addition to the behavioral and demographic perspectives offered by the traditional MCIF system (Figure 1). However, navigating through the various technical issues related to profitability can be confusing and intimidating.



Traditional MCIF systems have followed various approaches to calculating customer profitability, but very few have performed this calculation with any degree of accuracy. The increased emphasis on customer profitability information has created the need for MCIF systems to improve their capabilities in this area. To help support the development of more value-focused marketing strategies, the profitability model must first accurately capture the true economics of a bank’s customer relationships.

While the full discussion of the technical methodologies required for a customer profitability model is beyond the scope of this article, it will highlight some “best practice” approaches for deriving the four key profitability components: 1) net interest margin; 2) non-interest income; 3) non-interest expense; and 4) loan loss provision.

Whether you are new to the topic of customer profitability or are looking to improve your existing model, the information contained in this article is intended to serve as a guide to make sure that your profit model will produce numbers that are accurate and informative.

Net Interest Margin

For most savings institutions and credit unions, net interest margin contributes 60-70% of total operating income, yet many institutions fail to accurately measure the profits earned from their various fundraising and deployment activities. If there is one calculation the profitability model needs to get right, it's the calculation of net interest margin. Funds transfer pricing refers to the process of assigning interest expense to loans and interest income to deposits allowing for the measurement of net interest margins of all products.

Some profit models use a simple “pool-based” approach. Under this method, the average interest rate paid on the bank's deposit products is applied to loans as their cost of funds. The average interest yield on loans is applied to deposits as the credit for funding.

While this approach is simple and straightforward, it presents several problems. First, it uses an historical average as the cost (or value) of funds and these rates may differ significantly from the actual cost of new funds being raised or deployed by the bank. This will lead to an incorrect calculation of the spread on new business.

Second, by allocating the actual net interest margin to both loan products and deposit products, this method double counts net interest margin and subsequently overstates both product and customer profitability.

Finally, since this method makes no distinction between the individual maturity and re-pricing characteristics of various products, it will cause significant fluctuations in bottom line results when rates become volatile. This will result in inconsistencies in profitability results and will generate numbers that are of little use to management.

Matched rate transfer pricing is the most accurate method for measuring the performance of a bank's lending or funding activities. Under this approach, assets and liabilities are given transfer rates that reflect their specific maturity and re-pricing characteristics. Each account is separately priced based on the exact terms of the account and interest rate environment in place at the time the account is opened. Unlike the average rates used under the pooled approach, the transfer price is tied to an external market rate based on a funding curve defined by the institution. By using a transfer rate that reflects real funding opportunities that are currently available to the bank, matched rate transfer pricing ensures that profitability measurement is consistent and credible.

For example, a 3-year term CD issued on 6/30/03 will be assigned the 3-year cost of funds defined by the bank that is in effect on the origination date and that rate will remain in place until the CD matures. A Home Equity Line of Credit that re-prices monthly will receive the 1-month cost of funds that is in effect when profit for that account is re-calculated. Products with indeterminate maturities, such as DDA and savings accounts, will be given an assigned rate based on product duration assumptions provided by management.

Implementing this approach usually requires involvement from the CFO or Treasurer or from an external consultant with experience in this area. However, the increased accuracy and confidence in the results will produce buy-in and support from financial management that is essential to the on-going use of the customer profitability information.

Non-interest income

Non-interest income can come from a variety of sources including core account fees, transaction account fees, special service fees and loan fees. Few profitability models capture all of these components with any degree of accuracy. Add into the mix the fact that fees on many products are reduced or even waived based on the *combined* customer balances rather than a single account balance and this calculation can get pretty tricky.

While the calculation of loan fees is usually fairly straightforward, it is more difficult to accurately calculate fee income for deposit accounts. A quick and easy approach used by many MCIF systems is to set a minimum threshold balance and assess a monthly service charge if the deposit account balance falls below this threshold. If transaction data is available, some models may also add in a rough calculation of transaction fees based on the number of core transactions (ATM, checks) and an average fee per item.

There are a couple of problems with this approach. First, using a single threshold balance does not reflect the fact that many deposit accounts use tiered pricing and assess different service and transaction fees depending on the balance tier in which the account falls. Second, if the model cannot evaluate linked accounts, an account that falls below the minimum balance may be assessed service fees even though the total combined balance of linked accounts is above the minimum and none of the accounts should be assessed any fees. These problems will often result in non-interest income being overstated for transaction deposit accounts.

The most accurate approach is to calculate account fees based on criteria that reflect the actual fee structures of a bank's products. For deposit products, these criteria include the minimum average (or combined) balance, the number of waived items and unit transaction fees for different balance tiers. For loan accounts, they include origination fees, annual service fees and other commissions. For linked accounts, fee income should be assessed based on the *combined* customer balance for all related accounts. Up-front fees, such as origination fees and certain commissions, should be amortized over the life of the account.

For institutions with more advanced profitability goals, the proper calculation of fee income is essential for developing targeted marketing strategies and developing relationship-based pricing.

Non-interest expense

The measurement of operating costs is one of the key differentiators of profit among customers, yet poses the greatest challenge in profitability analysis. Unlike non-interest income, many of a

bank's operating expenses are not directly associated with particular products and the variation in demand for organizational resources is influenced much more by customer behavior than product type.

High cost-to-serve customers may use specialized products or access those products through a more customized delivery channel, exhibit higher transaction intensity, and require a higher level of sales support. Alternatively, lower cost-to-serve customers tend to use more standard products delivered through fewer basic channels, exhibit lower transaction intensity and require minimal sales support. For example, a customer who visits a branch twice per month and has few check, deposit and ATM transactions will generate a lower cost-to-serve than a multiple transaction customer who visits the branch weekly or a large commercial customer that requires specialized account servicing

A simple approach used by many profit models is to allocate operating expenses to customers based on total balance. A customer with 5% of the total balance is allocated 5% of Total Operating Expenses. Large customers are thus allocated large portions of operating expenses and small customers small portions of operating expenses. The erroneous assumption here is that large customers are more expensive to serve than small customers.

Rather than allocate a standard cost to every account within a particular product group, the best practice approach is to separate the fixed operating expense components – the costs required to originate, maintain or even close an account – from the variable portion which is strictly driven by customer behavior. The use of account transaction data will allow costs to be assigned to a customer based on the customer's level of activity and the unit costs associated with those activities.

Of course, one of the biggest challenges for banks wanting to use this approach is creating the proper cost factors for individual products and expense categories. This will most likely require the assistance of an external consultant with experience in activity-based costing methodologies.

Loan Loss provision

The charge for loan loss provision can have significant impact on profitability, yet this calculation is frequently overlooked by the MCIF profit models. This is primarily due to the fact that the credit-related variables needed to drive the calculation - including risk rating, loan status and default history - are typically not contained in the MCIF database. MCIF systems don't make any distinction for customer risk and will apply the same general loan loss factor to all accounts within a particular product category. This non-differentiated approach can greatly distort the customer profitability calculation.



For example, a 30-year conventional home mortgage made to a customer with an average credit score may be priced higher than one made to a customer with a high credit score to reflect the greater risk. However, the risk-adjusted margin (after loan loss provision) may be the same since the higher rate on the riskier loan is offset by the higher loan loss provision required to safeguard against potential losses.

Most profit models will incorrectly apply the same factor for *all* loans of a certain product type regardless of risk. The result will be an overstatement of net profit on the loan to the higher risk customer and an understatement of net profit for the lower risk customer.

The most accurate methodology for calculating loan loss provision is to apply factors based on the level of risk represented by the customer. The higher the estimated risk, the higher the factors. Determining accurate factors is not a simple exercise and requires expertise in this area. Statistical analysis is used to examine both the institution's credit loss history across various products as well as the risk profile in the current portfolio.

Getting from Here to There

As the competition for the “best” customers intensifies, it is no longer enough to settle for a rough idea of relative profitability. Successful marketing strategies must create opportunities to serve customer needs in ways that will be profitable to the institution. Accurate customer profitability information is essential to identifying where those opportunities exist.

With proper planning and guidance, community banks can implement packaged or hosted solutions that will help them gain a clearer understanding of the factors that drive customer profitability and develop targeted, more cost-effective marketing strategies to increase customer value. With even a modest increase in the retention of high value relationships and better information for identifying and improving the yield on the least profitable relationships, banks can realize a payback on these systems in relatively short time.

About the Author

Bill Hasapidis is founder and President of BancTRAC Solutions, Inc., a provider of advanced software tools and consulting services in the areas of customer value analysis, marketing performance measurement and credit risk management. He was previously Director of Customer Analytic Products at PCi Services in Boston and a Director in the Management Consulting Services practice of Price Waterhouse. He can be reached at 508-359-9606 or billh@banctracsolutions.com.