

Price Optimization

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Many U.S. banks are eliminating or reducing high-risk assets that require more capital in preparation for the new Basel III recommendations that phase into effect by 2019. This shift is generating pressure on pricing policies and procedures.

According to a recent study by Economic Intelligence Unit and IBM's Institute for Business Value, 90% of the world's top banks recognize the need for transformation in pricing processes, methodologies, and use of client data.¹ Net interest margin is critical to financial services providers. They are experiencing competition for high quality loans, increased regulatory compliance expense, and recent legislation impacting fee income.



Most experts agree that lending will increase in 2011 and banks are eager to originate quality loans and lines of credit with solid interest margins. This white paper will evaluate the impact of price optimization for lending and explore potential next steps for banks seeking to upgrade their capabilities. This information may also be directly applicable to pricing for deposits.

¹ Crosman, Penny, "90% of Top-Tier Banks Say Their Pricing Models Must Change," Bank Systems and Technology. March 29, 2011.

Pricing Philosophies

Based on independent research and observation, banks typically use one or more of the following pricing philosophies. Pricing includes interest rates and fees that impact the Annual Percentage Rate (APR). Often, a hybrid or combination of the strategies below may be most effective.

- **Flat Rate Pricing.** These bankers have a one-size fits all pricing strategy which often results in a disproportionately higher number of lower credit quality loans. These lower credit quality applicants are more likely to close because the pricing is more attractive versus other banks offering risk-based pricing. Higher credit quality borrowers may apply, but are less likely to close as they can generally obtain better rates elsewhere based on their lower probability of default.
- **Loan Balance and Relationship Pricing.** Often lenders tailor the interest rate and origination fees based on loan size. Most lenders also provide pricing incentives for multiple products or relationships in an effort to promote cross-selling among various product divisions.
- **Risk Based Pricing.** All credit-trained lenders should understand higher risk equals higher pricing. Risk based pricing aligns loan pricing with expected loan risk (probability of default and severity of loss given default). The pricing is generally adjusted based on the applicant's credit profile, credit bureau score, or bank calculated custom credit score. The Fair and Accurate Credit Transactions Act of 2003 (FACT Act) requires banks to provide risk-based pricing notices as appropriate, but does not discourage the practice or limit a bank's ability to appropriately price for risk.

- **Price Optimization.** This strategy determines the individual applicant's price elasticity and calculates the optimal pricing. Banks using this strategy have been able to increase margins and loan volume. Few banks can implement this strategy internally. Most benefit from an external partner in this space.

While each of these pricing strategies are interesting, this white paper will focus on price optimization as an addition to any existing pricing strategies.

Price Optimization

Ideally, loan pricing software provides a consistent pricing process that is both rational and analytical. There must be a balance between customer demand, the market environment, and bank profitability. Since customer price sensitivity is not necessarily correlated with credit risk, a data driven decision process allows the lender to maximize the loan close rate and net interest margin simultaneously.

Individual price sensitivity determines the customers that seek the lowest possible price versus those that value other factors instead such as brand, convenience, rewards, or relationship. Price optimization can also protect the bank with a logical and scientific pricing methodology that reduces or eliminates any unnecessary bias. This may be beneficial in regard to Equal Credit Opportunity Act (ECOA) compliance.

Loan price optimization borrows from the success found in airline industry pricing: to match the best possible price with each individual customer offer. Without price optimization, higher loan pricing generally results in fewer loans. With price optimization, lenders can present custom-tailored pricing to each potential borrower. The result can be more loan volume, higher quality loans, or both.

Unfortunately, price optimization can be complicated. Imagine the task of accurately predicting consumer level price sensitivity across various loan products, channels, and credit spectrums for each individual applicant. This requires innovative behavioral scoring, predictive

insights about the price-sensitivity of the customer, and lots and lots of data.

Some larger banks have implanted internal price optimization models into their organizations. This can be effective if the firm has the time and money to continually monitor, enhance, and upgrade the systems as appropriate. Many banks instead select an industry vendor partner that specializes in price optimization.



Industry vendors providing price optimization solutions show impressive results for their clients. Nomis Solutions shared that “since 2004, its pricing technology and process customers have run over 100,000 pricing scenarios, priced over \$400billion in consumer accounts, and generated over \$400MM in incremental profits.”²

Some of the advantages of a price optimization tool are the ability to provide real-time pricing, dashboard reports on production and profitability, and compliance adherence. Two best practices are the ability for a lender to provide clients with alternative pricing scenarios and management reports that allow a drill down into detail data.

Ideal pricing is beyond a simple risk-based credit decision, loan balance, or relationship focus. Price optimization is the culmination of all these factors and more into a rules based decision engine that provides “the right price for the right customer at the right time.”

Clients may also use price optimization software for credit capital allocation. The calculation of the

² Nomis Solutions Company Overview, www.nomissolutions.com

full credit profile of each borrower includes factors that drive the capital allocation and product profitability.

Improving the Pricing Process

Price optimization solutions may also be able to reduce management time in administering the pricing process. Instead of a pricing committee meeting to review pricing on a daily, weekly, or monthly basis – this committee can instead establish rules, alerts, and triggers that manage and monitor pricing automatically. This frees the group to focus on more strategic decisions and rule modifications versus day-to-day pricing decisions.

Many offerings have the ability to generate consumer deposit and loan rates sheets by bank, region, or state. This allows banks to recognize key market differences while also calculating the profitability for each scenario.



Reasons for considering price optimization were carefully outlined by Kelly Mankin, Vice President, Marketing for Chrysler Financial at the Global Pricing Optimization Forum in 2008.

- ☑ All prices are optimized to achieve specific performance objectives at a granular territory level
- ☑ Potentially increases profits and return on assets while keeping volume constant
- ☑ Gives a more cohesive view of Key Performance Indicators (KPIs) at a national and individual market level

- ☑ Brings a more structured, repeatable efficient pricing process to the entire organization³

Key Functionality

Most price optimization solutions, whether in-house or provided by a third party, provide multiple benefits. These solutions are based on advanced analytics, historical data, and price sensitivity. The key functionality of these systems may be prepackaged or available ala cart. Below are the most commonly requested features:

- **Rate Sheets.** Preparing rate sheets and fee schedules including necessary credit capital allocation criteria.
- **Existing Portfolio Pricing.** Analysis and re-pricing of existing customer portfolio to reduce attrition and manage credit risk.
- **Point of Sale Tools.** Frontline employees can leverage real-time transaction-level price optimization to sell more products at a higher profit margin. These tools may include relationship components and scenario capabilities for guidance on various options that achieve desired margin.
- **Pricing Process Improvement.** By providing a highly structured application process, pricing recommendations are seamless and overrides are minimized. Multiple industry studies have proven that loans booked as credit overrides perform significantly worse, so an improved pricing process can help minimize this risk. Some solutions can also provide alerts when ROE (return on equity) thresholds are not met.
- **Reporting and Tracking.** Dashboard reporting provides insights into pricing compliance, price sensitivity, competitor pricing, attrition risk, and opportunities for improvement. Ideally the reporting will provide drill-down functionality by division, region, branch, and employee.

³ Mankin, Kelly, Chrysler Financial, “Optimizing Profitability in a Challenging Environment.” Global Pricing Optimization Forum 2008.

- **Implementation and Training.** The proper installation and setup of the price optimization solution is critical. Depending on the level of integration, ongoing support may also be required from various internal and external resources. It is important to consider this a dynamic solution with continuous process improvement versus a “once and done” mentality.
- **Professional Services.** Consulting and professional services can often be helpful in optimizing the solution. A vendor partner’s industry pricing expertise can help banking executives properly benchmark industry standards, conduct price sensitivity analysis, and define negotiation guidelines for front-line employees. An external partner can also assist with ongoing strategies, improving pricing processes and systems, and continually monitoring pricing operations.

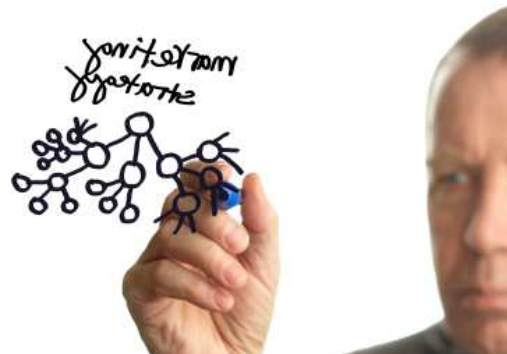
Significant Positive Results

There are several key learnings from price optimization that appear to be consistent across lenders.

1. Price Sensitivity is Unique. Some customers are highly sensitive to changes in loan pricing; others show minimal impact from pricing increases or decreases.
2. Price Sensitivity is Stable. Individual customers have a repeatable level of price sensitivity across various channels and lending products. This allows past client behavior to be used to model for future price offerings.
3. Price Sensitivity can be Estimated. Historical pricing, predictive credit file data, and demographic information can be combined to increase profitability.⁴

⁴ Phillips, Dr. Robert, “Understanding Price Elasticity to Drive Portfolio Profit.” Executive White Paper.

The dollars and benefits are real for price optimization. Some success stories are listed below.



Top Five U.S. Bank

The home equity lending group of a top five U.S. bank now uses price optimization for more than \$6 billion in home equity originations annually. The team deployed the new solution to maintain volume and increase margins. This division was able to increase volume by 15.5% and increase profits by 4.9% as a direct result of implementing a price optimization solution.⁵

RBC

Royal Bank of Canada implemented a price optimization solution for unsecured personal lines of credit, installment loans, and indirect auto loans. The bank realized a 7.5 – 8.0% lift in net interest income as part of the roll-out. Additional benefits included a system savings of \$1 million per year and a better understanding of price elasticity across its client base. According to Zeenat Sidi, Vice President, Personal Lending, RBC, “Some inelastic segments respond to a 100 bps rate increase with a projected 14% loss of volume, and highly elastic segments would have 35% loss of volume.”⁶

⁵ “Enhancing Performance in Home Equity Lending: A Pricing Optimization Case Study.” www.nomissolutions.com

⁶ Sidi, Zeenat, RBC, “Implementing Pricing Optimization across Multiple Products.” Global Pricing Optimization Forum 2008.

Americredit

AmeriCredit's Auto Finance division implemented a full-spectrum pricing and profitability solution which enabled its pricing team to significantly increase profits. According to Tom Schwartz, Vice President of Profitability Analytics for AmeriCredit "in the first quarter of full deployment, the return generated by the profit-based pricing initiative was over \$4 million."⁷

Conclusion

Price optimization determines the price-elasticity for a specific client in a particular transaction. The customer's willingness to pay is essential to pricing. Financial services institutions leveraging this data will outperform their competition. As you consider price optimization there are several natural applications.

Direct marketing campaigns can leverage price optimization data to enhance response rates. By promoting the "right product to the right customer at the right time" banks can increase both application and close rates across multiple channels.

⁷ "Finding a pricing optimization solution," FST Magazine, www.usfst.com

Price optimization can also be used for origination decisions in both a centralized or decentralized environment. By using a rules based engine, front-line personnel or distribution channel partners can be provided with recommended pricing and also have defined pricing discretion levels.

Finally, price optimization can be used for managing existing portfolios and particularly lines of credit. Pricing decisions can include changes that increase yield, decrease attrition, or improve utilization.

As you consider the merits of price optimization for lending within your organization, recognize that any improvements you are able to achieve will result in a direct negative impact to your competitors. Clients who implement price optimization software are able to selectively secure high margin, profitable loans and push low margin, unprofitable loans to the competition.

Leverage pricing as a competitive advantage and consider the benefits of early adoption as well as the consequences of delaying implementation.

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Wisemar is a management consulting firm providing dynamic solutions for the alignment of people, processes, products, and technology. The firm specializes in helping financial services clients through business process improvement, change management, and corporate strategy engagements. Wisemar was founded based on one simple principle – "client satisfaction."

Wisemar leverages experienced senior consultants with a structured engagement process to deliver consistent positive results for clients. Wisemar executives and consultants have worked with the majority of the top 50 US banks; regional, community, and direct banks; and many of the top vendors and partners in the financial services space. This diverse experience helps provide the framework necessary to deliver innovative best practices to clients to help them improve performance. Wisemar is headquartered in Charlotte, NC.

For more information, please visit www.wisemar.com or contact us at 704-503-6008.