WHITE PAPER

Shifting to Customer-Centric Product Determination and Pricing Optimization

Is Traditional Segmentation Still a Competitive Advantage?

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This white paper examines a shift away from the traditional market approach of product-centric pricing toward a new and sophisticated analytics-driven model of customer-centric product determination and pricing. This shift represents the path forward for banks to move to Market of One segmentation.

The Traditional Market Approach to Pricing – Product-Centric

Product-centric pricing has been in place for decades. The gold standard for estimating price response is the randomized price test, the goal is to isolate the effect of price on the up-take by choosing to test and control populations. However, many lenders find price testing to be difficult. As a result, the data used to estimate price response in a product-centric market approach is usually derived either from A/B price tests and/or from "natural" dispersion in the pricing of historical products. This dispersion might result from so-called natural experiments (accidents), from pricing discontinuities, or from field pricing discretion.

Three levels of pricing sophistication are employed:

- **Optimal single price:** The lender charges a single price that maximizes profit; this price applies to all customers.
- **Risk-based pricing:** The lender segments the customer population into multiple risk segments and determines an optimal common margin to charge across those segments. With risk-based pricing, the rate to be charged each segment is determined by calculating the common cost of funds plus the expected loss rate for the segment plus the optimal common margin.
- **Segmentation pricing:** The lender segments the customer population into multiple risk segments and determines a rate to charge to each segment that maximizes expected profitability from that segment.

Increasing the number of pricing segments (for example by adding new pricing dimensions or by dividing existing dimensions into smaller buckets) will provide more opportunities to increase revenue and profit by enabling more targeted pricing. However, increasing the number of pricing segments also increases complexity and requires more effort from the bank to maintain, update, and communicate prices.

Following are examples that indicate the complexity and inherent operational constraints typically associated with the segmented product-centric pricing of a bank's deposit and lending rates:

- Set different pricing segments for the same product
- Typically set different pricing segments for different products
- Usually use different pricing segments for mortgages than for auto loans
- Infrequently change the pricing segmentation
- Some pricing segmentations stay in place for years

Harnessing the power of today's technology, modern banking solutions offer a better alternative: Dynamic data-driven pricing optimization that can reach the coveted "Market of One".

TERMINOLOGY

- **Price Response:** The relationship between the price of a banking product and its customer demand. The price response may differ due to many factors, such as the effectiveness of marketing campaigns, the customer's perceptions of differences in quality, product features, bank location, etc. For consumer lending, in simple terms, raising the price of a loan will result in lower demand, and lowering the price will result in higher demand.
- **Price Sensitivity:** How customer demand changes in response to product pricing changes. The sensitivity of a loan or deposit product price can be different based by channel, customer loyalty, age, geographic region, price-dependent risk factors, the customer's credit history, and more.
- **Pricing Elasticity:** Often used as a synonym for price sensitivity. Price elasticity can be expressed as a ratio of the percentage of change in customer demand to the percentage of change in price. Products with high price elasticity have prices that are very sensitive to customer demand, while the prices of products with low price elasticity are much less influenced by customer demand.
- **Optimized Pricing:** This pertains to setting prices for a Market of One, based on data that indicates the customer is likely to respond favorably to the price, and that the price is also profitable and low risk for the bank. In other words, adopting pricing optimization enables banks to improve profitability and control risk, while simultaneously attracting and retaining customers. Knowledge of optimized prices provides essential guidance that will discourage banks from issuing unsound loans or offer products at non-revenue generating prices.

An Advanced Approach to Pricing – Customer-Centric

Data-Driven Pricing Optimization: Market of One

Thanks to significant technology advancements and adoption, the consumer market is moving to a pricing model that is dynamic, data driven, and customer-centric. The banking industry is also moving in this direction, with evidence indicating that many banks are starting to make significant progress toward customer-centric pricing, and recognition that the market landscape is likely to look very different within the next three years.

Customer-centric pricing is the path forward for banks to move to **Market of One** segmentation. This involves calculating the optimal price for each transaction (customer), with the likelihood that the price is simultaneously attractive to the customer and profitable for the bank. Market of One pricing has the potential to **generate higher profits** than any finite segmentation scheme. However, it requires a significantly different pricing and quote architecture that most banks currently don't have in place.

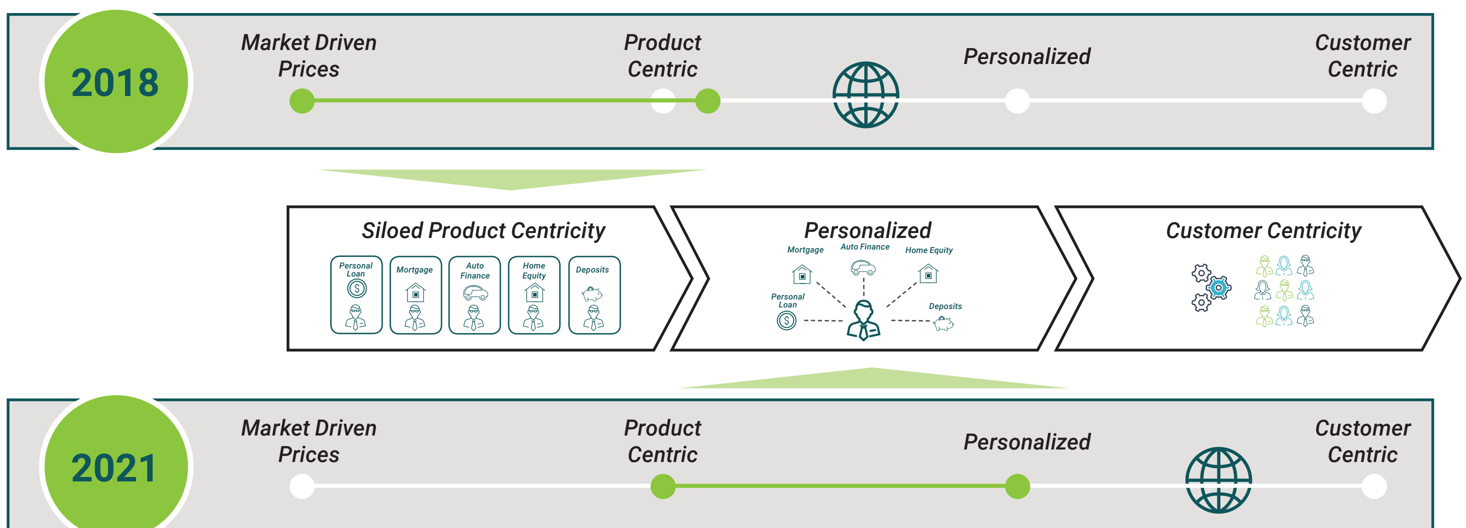
Done properly, moving from traditional segmentation for pricing strategies to a Market of One pricing segmentation can be used to **create strategic advantage in a competitive environment.** In practice, most lenders today stop well short of Market of One pricing and tend to divide each dimension into a relatively small number of segmentation buckets. In contrast, customer-centric price setting explicitly incorporates real-time market feedback and determines pricing dynamically with data-driven expectations of how the customer is likely to respond. This type of closed-loop process ensures pricing elasticity that responds appropriately to changes in the market environment.

The Market is Moving to Dynamic, Data-Driven Customer-Centric Pricing

A Market of One pricing solution uses customer, deposit, loan, and channel information to calculate the optimal price for each transaction. This requires running a pricing optimization algorithm in real-time each time an application is accepted. The resulting price is then communicated to the customer.

Increasingly reliable software and architecture have largely eliminated concerns about the use of real-time algorithms in pricing. Several major industries, notably the airlines and online retailers such as Amazon, have adopted increasing levels of dynamic optimization in their pricing; Lending will surely move increasingly toward Market of One pricing as well. The proven success of dynamic pricing has eliminated the belief that every price offered to a customer needs to be reviewed and vetted by a human being. Tools are available that enable pricing to be based not only on customer and transaction characteristics, but also on the current state of the market and the current competitive environment.

Figure 1. The Changing Landscape



Many banks have enterprise-wide intiatives underway, and 4 out of 5 banks highlight Customer-Centric Pricing as a Top 3 priority in 2018-19

Advances in the Consumer Lending Market

We can cite several examples showing that the consumer lending market is moving toward Market of One pricing. At least one unsecured lender in the UK uses a real-time algorithm to set prices for approved applications. Dynamic pricing optimization is used by several banks in Canada, Australia and New Zealand to calculate recommended ranges for mortgage prices on a quote by quote basis. Given the potential benefits and patterns exhibited in other industries, it is likely that lenders will increasingly move toward Market of One pricing over the next few years (see image above). It is fair to conclude that **improving pricing sophistication will always lead to increased profitability for a lender.** Furthermore, **lenders who are slow to adopt more sophisticated approaches are vulnerable** because adoption of more sophisticated pricing by competitors may lure customers elsewhere and lead to reduced profits.

Valuable Insights and Strategic Advantages

Following are key examples of the value that dynamic customer-centric pricing offers to financial institutions:

- Better understanding of the underlying drivers of depositors' behavior in a rising interest rate environment.
- Mitigation of customer flight risk without increasing expenses, along with potential net interest income gains of as much as 10 to 20 bps.
- Create a competitive advantage in a commoditized deposit and lending landscape with differentiated pricing and rapid response.
- Streamline processes and improve agility, with the capability to identify and respond quickly to changing customer and market dynamics.
- Create a strategic lever for managing liquidity levels and product mixes.
- Achieve complete transparency to mitigate conduct and compliance risk, with audit trails and workflows.
- Innovate while minimizing risk – no changes to the bank's core banking system required.

Figure 2. End-to-End Retail Banking Pricing Platform

Pricing Analytics and Optimization

- How price-sensitive are my customers?
- How will they respond to offers?
- How do I rapidly learn when conditions change?
- How can I segment customers and deliver tailored and compliant products and pricing?
- How do I dynamically set rates to achieve growth, profitability, and liquidity goals, even as markets move?
- How will my forecasts be impacted by competitor or interest rate changes?

Pricing Governance and Execution

- Now that I know my optimized rate strategy, how do I execute it efficiently on individual accounts?
- How can I adjust fees to incentivize behavior and deepen the customer relationship?
- How can I automate and govern the entire process with mininal changes to my core platform?
- How can I ensure compliance and mitigate conduct risk?

Pricing Analytics & Optimization + Pricing Governance & Execution

A Customer-Centric Pricing Optimization Platform provides an adaptive price-setting process that incorporates market feedback and sets prices based on explicit expectations of how the customer is likely to respond (leveraging price sensitivity and elasticity insight). This approach can create a true strategic advantage in banking's competitive environment of fluctuating interest rates. With a customer-centric pricing platform, banks can improve and extend current pricing capabilities by utilizing a data driven, real-time pricing optimization engine that maximizes adoption and bank revenue. Importantly, the bank's pricing and offers are triggered based on key life events and the unique needs of the individual customer – providing the right product, at the right price, at the right time – bolstering the bank's role as Trusted Advisor and delivering optimized pricing to the ever-important Market of One segment.

Utilizing an Enterprise Pricing Optimization component, based on a customer-centric analytics platform, provides real-time critical pricing optimization capability. Pricing simulations and predictive bank revenues are based on real-time data attributes of volume achieved, industry changing rates, competitor rates, pricing sensitivity of the customer, etc. There is clear value and empowerment with moving toward true Market of One pricing and moving away from fixed micro-segmentation tiered pricing and legacy static models that try to mimic real-time optimized pricing (but fall short).

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