Mortgage Product and Pricing Management

Robust product and pricing management model can empower businesses to change direction quickly with minimal IT intervention, thus enabling lenders to launch new products and administer product and pricing changes quickly, and gain an edge in the marketplace.

Executive Summary

The product and pricing management function implements sales and marketing strategies and risk-based pricing, and is thus critical for mortgage banks. Programs and program changes delivered through product and pricing management have a direct impact across the enterprise functions — risk, treasury, loan marketing (brokers, correspondents, sales executives, branch officers and loan consultants/officers), processors, underwriters, closers, funders and other support staff. Thus, the speed and efficiency in managing product and pricing is a key differentiator for mortgage originators.

Every originator seeks to roll out new and innovative products and product variants ahead of its competition to meet market demands, provide best-in-class offerings and, ultimately, convert a larger portion of leads to loans. This is a daunting task in the absence of a clearly defined and robust approach to managing product and pricing in a dynamic mortgage market. Further, product and pricing management for a lender originating several billion dollars in mortgages every quarter with a wide geographical and product spread is very different from that for a community lender that offers standard products in fewer geographies.

This paper outlines some of the key challenges a typical lender faces in managing product and pricing and outlines an optimal approach that aligns with the originator’s broader business strategies.

Background

Product and Pricing Overview

Most mortgage banks manage product and pricing across the enterprise through a rules engine. This rules engine may come out of the box along with a standard loan origination system (LOS), may be a third-party tool or may be an in-house custom developed engine.

- **Out-of-the-box with LOS:** Most enterprise LOS platforms provide product and pricing engines out of the box. These engines provide sufficient capabilities to configure and manage basic products and their corresponding pricing. While the benefits of using an out-of-the-box product and pricing engine include better integration, reduced setup/development time and low development and maintenance costs, these engines’ capabilities are limited because the engines themselves are elementary in nature. Thus, these engines may not be suitable for large mortgage banks with several complex products in their portfolios. All major LOS
platforms — such as Empower, Dorado, Unifi, etc. — provide product and pricing rules engines out of the box.

- **Third-party rules engines:** There are many standard rules engines available in the industry, such as iLog, Blaze Advisor, etc. These rules engines are highly configurable and flexible. They have an edge over LOS out-of-the-box engines in terms of features/functions, but require significantly higher design, development, integration and maintenance effort. They are typically deployed by enterprise segment mortgage banks and/or banks, which use them across several lines of business. Most LOS platforms do support integration with industry-standard rules engines. However, customizing/implementing these requires significant effort and time. Additionally, these rules engines do not have basic product and pricing rules and infrastructure setup out of the box. Thus, setting up the infrastructure alone requires significant effort and time.

- **Custom development:** Some lenders may choose to develop their own rules engine based on their specific requirements and overall IT vision. While organizations have greater control over such engines, they entail significantly higher development and maintenance costs and take more time to develop. In many cases, the organization may have chosen to develop a custom engine in the early 2000s given the limitations of LOS out-of-the-box engines and the lack of standard rules engines in the market then, and may have continued to use these legacy engines.

While mortgage product and pricing rules, rule sets and flows may be designed differently, the typical rules architecture for mortgage product and pricing comprises three components: product guidelines, pricing parameters and underwriting guidelines (see Figure 1).

- **Product guidelines:** This rule set defines the master set of products available for consideration and the corresponding eligibility criteria.
  A subset of eligible products can be determined based on loan parameters such as LTV, FICO, DTI, property type, etc.

- **Pricing parameters:** This rule set enables risk-based rating of products to determine rates/points and the corresponding insurance premiums on the loan. While some engines may process the entire list of eligible products (from the product guidelines) to give a matrix of product-pricing offers to the user, others may require the user to select the product(s) before pricing is invoked. Typically, LOS out-of-the-box product and pricing engines require a user to select a product before executing pricing.

- **Underwriting guidelines:** This rule set provides broad guidelines to help underwriters perform various underwriting activities on a loan. These underwriting guidelines can potentially affect the workflow for a loan. Therefore, the ability to configure underwriting guidelines varies greatly from one rules engine to another.
Typically, LOS out-of-the-box engines do not provide very strong configuration capabilities for underwriting guidelines.

**Challenges**

Every mortgage bank has its own approach to managing product and pricing. Some consider it a business function, while others have the core team report into IT but work closely with business. However, most mortgage banks face the same set of challenges – long lead times, expensive maintenance and a lack of trained resources. Several factors contribute to these challenges, some of the most important being the following (see Figure 2):

- **Lack of a well-defined process:** Most originators do not have well-defined processes for product and pricing management. The processes are usually reactive to market needs and often tend to create a large backlog of incomplete product and pricing changes. The lack of process combined with ad hoc change requests leads to a situation where critical product and pricing changes take precedence over any planned changes. As a result, more often than not planned changes usually lose their market viability before they even get into production, leading to lost business opportunities. The lack of a well-defined implementation process also reduces the quality of delivery, as the quality of past deliveries is not repeatable for future releases. Delivery pressures also cause quality to be ignored, resulting in costly errors and rework.

- **Lack of well-trained resources:** Product and pricing management demands a specialized skill set with overlapping competencies across domain, LOS platform, product and pricing engine and IT. These skills include in-depth knowledge of the business processes on the LOS platform, marketing strategies, rules engine application and architecture and IT processes. Lenders struggle to find the right mix of resources with the necessary skill sets.

- **Primarily on-site model:** The product and pricing teams are usually located on-site as lenders do not want to cede control of their engine, which is core to their business. This is not only expensive, but also breeds other inefficiencies such as “key man risk,” inadequate knowledge management, etc. Product and pricing can be better managed by leaving its administration to sound process, right sourcing and handoffs, while retaining the core product and pricing strategy decisions in-house.

- **Poor knowledge management:** Product and pricing management requires associates with a very specific skill set and the ability to work in a high-pressure environment. These factors create a barrier to adequate documentation of collective team experiences. The absence of formal knowledge management techniques leads to a longer learning curve for a new resource joining the team. Since the team knowledge is concentrated in individuals rather than documented and preserved, it increases the “key man risk” for the organization.

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**Challenges in Product and Pricing Management**

![Figure 2](image-url)
Product and Pricing Management Solution

Managing product and pricing effectively and efficiently involves balancing processes, scale, ownership model, cost and release timelines to suit the originator’s business needs as well as market strategies. This section suggests an approach that lenders can adopt to select the best-fit strategies for effective product and pricing management. A comprehensive product and pricing management solution should include/take into account:

- **Agility and predictability:** Product and pricing changes are usually time-sensitive and, therefore, the solution needs to support rapid delivery. However, the quick turnaround should not be at the cost of the quality of the deliverable. Thus, a repeatable process that delivers changes quickly and has a predictable outcome (in terms of quality and deliverables) is required. Further, the process should be able to cater to planned as well as emergency changes that can come in at any time during the change release lifecycle.

- **Scalability:** Market dynamics can place unique demands on the product and pricing management team. Thus, the solution must be agile and scalable to respond effectively to market dynamics. The solution should be able to handle the entire range of change requests – from regular configuration changes to urgent, high volume, time-sensitive changes.

- **Governance and communication:** When an activity is process-driven, strong governance through metrics/SLAs and communication play a key role in its success. Thus, lenders need to define the following aspects of governance and communication:
  - **Communication:** The communication within the team and with stakeholders needs to be well-defined, efficient and transparent.
  - **Measurable performance:** Well-defined SLAs and KPIs to measure performance are required.
  - **Defined roles and responsibilities:** Well-defined ownership, roles and responsibilities to avoid conflicts are needed.
  - **Cost of ownership:** Typical maintenance and enhancement costs for product and pricing management vary significantly and could range anywhere between $250,000 up to 2-3 million dollars per annum. Hence, lenders should evaluate the solution in terms of total cost of ownership based on how it aligns with their business needs and their IT operating model and vision.

- **Knowledge management:** This is the most neglected aspect of product and pricing management. Lenders should consciously devise processes to document the knowledge within the product and pricing team. While project/release-related artifacts are usually stored/managed due to core IT processes, lenders must specifically focus on maintaining knowledge assets on configuration processes, configuration framework, product-level setup, domain collaterals and environment inventory management-related documentation.

- **Team composition:** Product and pricing management demands a specialized skill set with overlapping competencies across domain and IT. Thus, a combination of domain business analysts with technical analysts with specialized training distributed across locations would be the right sourcing mix for this situation.

Conclusion

A sound product and pricing architecture and robust product and pricing management model can empower businesses to change direction quickly with minimal IT intervention. Lenders can launch new products and administer product and pricing changes quickly, thus gaining an edge in the marketplace.

In spite of the advancements in information technology, the challenges for mortgage lenders in managing product and pricing include lack of well-defined processes, lack of well-trained resources and the right team structure, lack of training, onsite concentration and poor knowledge management. These result in longer turnaround times, poor release quality, rework, delays in change management and a team that is expensive to maintain.

Lenders can overcome these challenges through sound processes that enable predictable delivery within timelines demanded by the business, building a model that supports peaks and troughs in a dynamic market, a strong communication mechanism, an SLA-based delivery approach and staffing the team with the right skill set with com-
petencies across domain, LOS platform and IT. These steps should be adequately supported by knowledge acquisition, knowledge management and knowledge enhancement processes. With the right product and pricing management model, we estimate that lenders can reduce turnaround time by up to 30% and cost by up to 50%, while improving productivity, throughput and delivery quality.

About the Authors

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Cognizant Mortgage Practice

Cognizant Mortgage Practice employs over 70 business consultants and 5,000-plus associates and has successfully delivered over 500 large and complex engagements across originations, secondary markets, servicing and loss mitigation in the U.S., UK and Europe. We offer consulting, IT, BPO and IT infrastructure services across all functional areas. Product and Pricing Management is a proprietary offering designed and developed by Cognizant to assist lenders in effectively maintaining and managing the product and pricing function.