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Moving towards Customer-Centric Pricing: From strategy to implementation, the new opportunities for banks to compete in the current economic downturn

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Contents	
Executive Summary	2
Preamble	3
Pricing Strategies to Support Organic Growth	3
Intensified Competition as the Main Business Driver	3
Differentiated Pricing as a Strategic Response	4
From Product-Centric to Customer-Centric Pricing	6
Typical Legacy Pricing Systems are Rigid and Product-Centric	6
The Cost of Being Rigid	6
Examples of Pricing Rules	9
Price Management Process	11
Case Study: Top-10 European Retail Bank	14

Executive Summary

Pricing is a strategic weapon for acquiring new customers and, as importantly, retaining existing ones. As such, effective and innovative pricing strategies are crucial for banks to achieve organic growth. This white paper argues that in the current economic downturn, banks need more than ever technologies such as the business rule management system (BRMS) to effectively manage their pricing policies.

The first part of this document reviews the strategic importance of pricing. The most effective way for a bank to safeguard its existing base against competition is to know its customers and use this knowledge to offer appropriate products and packages at competitive rates.

In the second part, we examine the operational challenges that banks face in utilizing their customer knowledge, including using it to implement change around existing pricing policies. One of the main challenges lies with pricing policies spread across multiple product and organization silos, with business rules buried in application code. The results are high operating costs, long lead times to change and slow responsiveness to competition.

In conclusion, we review how business rules improve the flexibility of operational IT systems to the extent that pricing policies can be automatically deployed with the right governance, auditability and transparency within days instead of months.

Contents	
IT Implications	15
Collaborative Process between Business and IT	15
Architectural Alternatives and Integration within the Enterprise	17
Cost-Benefit Analysis	18
Summary of Benefits	19
Strategic Business Benefits (or Why Business Should Care)	19
Operational Benefits (or Why IT Management Should Care)	20
Conclusion	20

Preamble

IBM's mission is to help its customers make better decisions faster. IBM® WebSphere® ILOG BRMS enables them to automate complex decision points in their business processes and better manage change.

Pricing is one of the major areas in which WebSphere ILOG BRMS delivers greater operational efficiency and business value. IBM has completed many projects in this area and acquired detailed knowledge on how business rules bring flexibility to the pricing process.

Pricing Strategies to Support Organic Growth

Intensified Competition as the Main Business Driver

As a consequence of the accelerated consolidation taking place in the banking sector, the cost structure of this entire industry is increasingly driven by large, efficient multinational banks that benefit from important economies of scale.

At the same time, new players such as online banks are aggressively entering domestic markets. Since they do not have the costs that come with running a large branch network, they can pass cost savings on to their customers through accounts with attractive interest rates and payment products with little or no fees.

Highlights

For market players who adopt offensive strategies to gain market share, effective and innovative pricing is also essential to achieving maximum growth and profitability.

Differentiated Pricing as a Strategic Response

Traditional small- to medium-sized banks adopt defensive strategies to position themselves against efficiency-oriented competitors. The most effective barrier a bank can use to protect itself against competition is to know and understand its customers (for example, what they need, how they behave, and what value they have for the bank) and exploit this knowledge to retain customers and increase their customer share. Exploiting customer knowledge allows banks to differentiate themselves from their competitors by offering value-added services tailored to customers' needs and avoiding campaigns in which they have little chance of winning (for example, a pricing war on similar product offerings).

For market players who adopt offensive strategies to gain market share, effective and innovative pricing is also essential to achieving maximum growth and profitability. For instance, a highly efficient bank entering a relatively inefficient national market, whose shortcoming resulted from barriers to entry and maintaining a status quo amongst incumbents, has no reason to go into the market with the cheapest possible prices. It is able to use price arbitrage, which consists of setting prices to optimally balance market share gains with high margins.

In both situations, differentiated pricing is an essential tool for banks to preserve their current business and grow where opportunities exist:

- **From a growth perspective**, the ability to quickly launch new, revenue-generating products is essential to staying ahead of the competition or reacting quickly to competitors. In the race to acquire new customers and increase customer share, some important capabilities can work in a bank's favor: the ability to shorten time to market and time to value for new product launches, and the ability to offer each customer the appropriate product for their needs and circumstances at the right price.

Highlights

The current financial crisis and subsequent economic slowdown are having a significant impact on banks' pricing strategies.

- **From a customer loyalty perspective**, it is crucial for a bank to be seen as fair and providing value to its customers. Therefore, it is important for banks to try to eliminate any possibility of a charging error, and propose targeted offers tailored to how they see their customers or customer demographics. This view reflects how the banks see customers' needs, product usage, price sensitivity, risk profile and future value to the bank. Since payments constitute the core of the day-to-day customer experience and relationship with banks, correctly pricing transaction fees is essential.

Banks must also align their pricing structures with their internal cost structures. This is very important because cross-subsidies make banks vulnerable to competitors. Cross-subsidies give customers the wrong incentives and expose banks to the risk of losing market share for highly profitable lines of business and being left with the less profitable ones.

Finally, the current financial crisis and subsequent economic slowdown are having a significant impact on banks' pricing strategies:

- As a consequence of the "credit crunch," every functional area of banking is under pressure to increase revenues while simultaneously reducing costs. While customer-centric pricing can preserve revenue growth, there is also an opportunity for saving costs by managing pricing policies from a centralized "pricing engine" that allows the consolidation of product silos.
- An additional consequence of the credit crunch is that banks are struggling to cover their short- and mid-term funding needs. As a result, the ability to capture retail customer deposits becomes a key competitive advantage because it is much cheaper than financing on the wholesale credit market, where rates are still abnormally high. A bank's ability to capture retail deposits depends on its ability to market new and attractive deposit offers quickly—and price them correctly—as credit conditions change.
- In an economic downturn, the price sensitivity of customers typically increases. This means there is an increased risk that they will move their business to a competitor and concentrate their banking relationships in order to reduce the amount of fees they are obliged to pay.

Highlights

Implementing customer-centric pricing may not be trivial for a bank whose existing IT systems are too rigid to support the new strategy.

From Product-Centric to Customer-Centric Pricing

Typical Legacy Pricing Systems are Rigid and Product-Centric

Implementing customer-centric pricing may not be trivial for a bank whose existing IT systems are too rigid to support the new strategy. To understand the reasons for such rigidity, let us examine how pricing logic was implemented in the legacy systems of one of our European customers (case study on Page 11):

- **Pricing logic was implemented in a fragmented and opaque manner**—the pricing function was duplicated in many legacy silos, where it was implemented using low-level programming languages (for example, COBOL) that could only be understood by IT staff.
- **Existing systems were siloed by product**—this organization made it impossible to manage prices holistically, thereby precluding the possibility of developing a holistic view of the customer. The pricing logic was spread across more than 20 different applications.

The Cost of Being Rigid

For this customer, the cost of being rigid became unacceptable when they realized that this rigidity was the root of serious business issues. Rigid legacy IT systems constitute:

- **An impediment to executing pricing policies once they have been defined**—not being able to enforce pricing policies can damage a customer's perception of a bank and spoil existing retention efforts. In a product-centric environment, a bank can try to improve the loyalty of a high net-worth customer for a given product, but be perceived as unfair or inconsistent by the same customer for charging fees that are higher (or worse still, incorrect) on another product. The bank might not even realize the existence of the issue until the customer complains or actually moves to a competitor.
- **An inhibitor to product innovation**—if time to market for a new product is too long, a bank can only market and test a limited number of new products per year.

Highlights

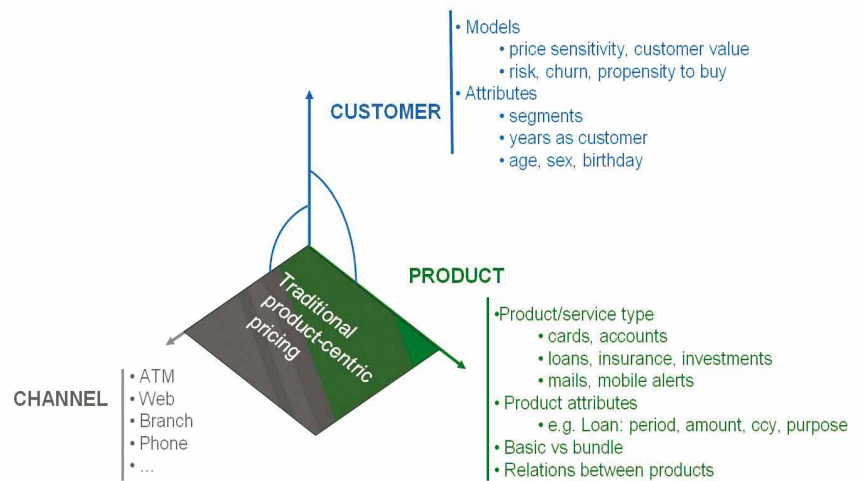
When new policies are derived from human expertise and intuition, there is likely to be a significant gap between defining business requirements by marketing and business managers, and implementing them by IT.

- **A roadblock to pricing optimization**—when sophisticated, data-driven analytical capabilities exist within the company to analyze and develop new pricing policies, the return on investment (ROI) for these investments may be compromised if it is difficult to effectively implement these policies in the operational systems. Also, when new policies are derived from human expertise and intuition, there is likely to be a significant gap between defining business requirements by marketing and business managers, and implementing them by IT.

Customer-Centric Pricing

In this section, we outline some of the main functional requirements for moving from product-centric to customer-centric pricing. As shown in the following diagram, traditional product-centric pricing focuses only on two dimensions in pricing bank products and services (for example, product and channel). This is “one size fits all” pricing.

Figure 1: Main Dimensions of Bank Pricing



Highlights

By contrast, bringing the customer dimension (in blue) into the equation means that pricing becomes:

- **Differentiated**—based on customer attributes (needs, product usage, price sensitivity, risk profile and value to the bank).
- **Holistic customer view**—shows what a customer is charged for using banking products and services.

Different pricing strategies can be used to price either retail or corporate customers:

- Retail pricing tends to be segmented, and typical pricing criteria include risk profile, lifetime customer value, potential value of total customer wallet, propensity to buy, price sensitivity, churn probability and transactional behavior.
- Corporate pricing usually relies on service level agreements (SLAs) that are proposed and negotiated depending on customer needs (which bundle best fits these needs) and characteristics (payments volumes, domestic versus international, industry). Bundles can include volume discounts on payment fees.

A specific pricing policy may be applicable only for a limited period of time and only in specific geographical areas or branches.

Additionally, other pricing criteria may often need to be taken into account (for example, pricing conditions relative to a marketing campaign). This means that a specific pricing policy may be applicable only for a limited period of time and only in specific geographical areas or branches.

Highlights

Pricing can be very rule-intensive because the agreements that define pricing conditions can be complex and based on multiple criteria.

As we have just seen, pricing can be very rule-intensive because the agreements that define pricing conditions can be complex and based on multiple criteria. From a product development perspective, business rules can then be used for different purposes:

- **Eligibility rules**—determine who is eligible for a given offer based on risk.
- **Pricing rules**—determine the price to be applied (interest rates on a loan or an investment product, fees on transactional operations according to the risk weighting and/or propensity to pay higher charges).

Examples of Pricing Rules

In short, a business rule can be defined as a statement in which a decision has to be taken under a given set of conditions.

The example in Figure 2 shows a textual rule in which the “decision” to be taken is whether a 30 percent discount should be applied. The rule states that the discount only applies to retail customers initiating credit transfers through the Web.

Figure 2: Discount Rule Based on Channel, Product and Customer Segment

IF
the event type is 'credit transfer'
and the customer type is 'retail'
and the channel used is 'the web'
THEN
apply a 30% discount to the standard fee

Figure 3 shows a promotional rule that provides a 10-base-point premium on one-year deposits to high net-worth customers applying through a branch in North London.

Figure 3: Promotion Rule

IF
the event type is 'application for one year deposit'
and the customer belongs to segment 'high value'
and the branch is located in 'North London'
THEN
add 10 b.p. to yield rate of one year deposit

Figure 4 shows a decision table, a way to combine many textual rules into a compact spreadsheet-like representation. In this table, the first five columns are condition columns and the last column (Price) contains the decisions for applying a transaction fee.

Figure 4: Decision Table Calculating Transaction Fees

Period	Bundle	Product	Operation	Segment	Price	
					Fee	Message
2008	Green Account	Savings Account	Credit Transfer	YOUNG	0	No Fee...
2008	Green Account	Deposit Account	Credit Transfer	YOUNG	0.15	-
2007	Green Account	Credit Card	ATM Withdrawal	YOUNG	0.1	Only...
2007	Blue Account	Credit Card	ATM Withdrawal	SENIOR	0	No Fee

Highlights

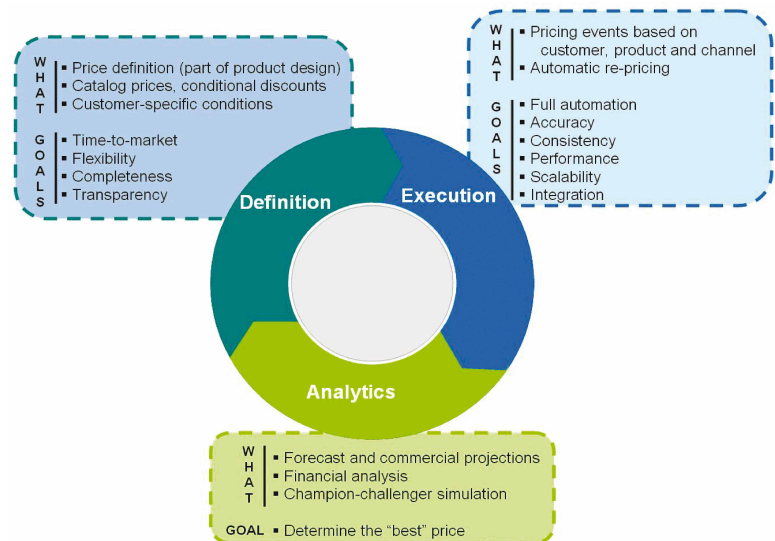
Important requirements for price definition include short time to market, completeness, flexibility and transparency.

Price Management Process

Let us now take a look at the price management process that governs the creation and evolution of pricing policies. Figure 5 shows this process divided into three major steps:

- **Price definition** - part of the product design, it includes the definition of standard conditions and the description of the process for negotiating particular conditions. Important requirements for price definition include short time to market, completeness (the capacity to formally describe all pricing policies so that they can be enforced), flexibility and transparency.
- **Price execution** - applying the pricing policies defined in the previous step, price execution is triggered by events: the need to propose a customer quote, calculate a fee to be charged for a transaction or re-price a service. Key requirements include full automation, accuracy, consistency (for example, across channels), high performance and scalability.
- **Price analytics** - here recommendations about the “best” price are made: the price that maximizes profit by taking into account demand-side variables (price sensitivity of customers, volume forecast), internal bank constraints (internal costs, product catalogue, risk policies) and market variables (competitive offers, promotions).

Figure 5: Price Management Process



Highlights

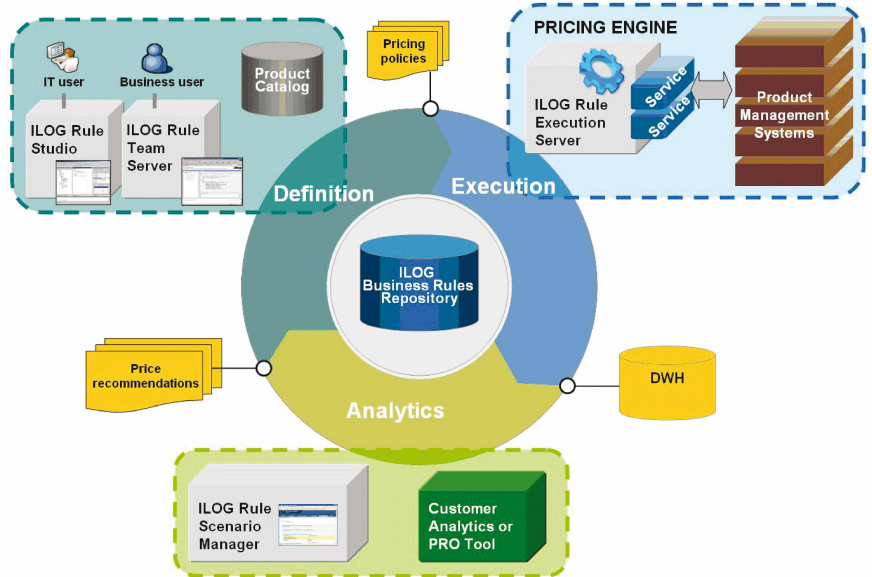
IBM WebSphere ILOG BRMS provides tools to support the different steps in the price management process.

This process is not necessarily explicit or formalized by banks, and we are not being prescriptive in suggesting that banks adopt this process. Nevertheless, it is an important concept, and it shows how an adaptive learning loop can be created and used to drive a bank towards a better competitive position. As shown in Figure 6, WebSphere ILOG BRMS provides tools to support the different steps in the price management process:

- The IBM ILOG Business Rule Repository provides a central place to store and manage business rules.
- For price definition, WebSphere ILOG BRMS provides rule management tools for both business and IT users. IBM ILOG Rule Team Server (RTS) provides intuitive rule authoring tools that enable product marketing managers to define pricing and eligibility policies. Pricing rules can be described in an intuitive rule language that maps the business domain. RTS allows business rules to be viewed by the customer through a single, centralized and customer-centric view of all the pricing policies.
- For price execution, IBM ILOG Rule Execution Server (RES) provides a managed and scalable execution environment for deploying pricing services. By exposing rules as well-defined services, RES facilitates integration with existing operational systems, thus enforcing pricing policies across all channels and products.
- For price analytics, IBM complements existing customer analytics and pricing optimization solutions. IBM ILOG Rule Scenario Manager (RSM) provides a simulation and testing environment to perform champion-challenger simulations. By using RSM, business analysts can perform more accurate simulations by incorporating complex conditions in the pricing policy description.

Highlights

Figure 6: How IBM WebSphere ILOG BRMS Supports the Price Management Process



Customer management and customer analytics investments help build great assets in terms of better customer knowledge.

WebSphere ILOG BRMS supports end-to-end management of pricing policies, thus unlocking ROI from analytics investments. Customer management and customer analytics investments help build great assets in terms of better customer knowledge. However, exploiting this customer knowledge in operational systems is typically very challenging if there is a software development cycle. Business rule technology provides an efficient and agile way to inject customer knowledge into operational systems without recoding.

Highlights

New system fully supports the bank's strategy in terms of cost competitiveness and customer satisfaction.

Case Study: Top-10 European Retail Bank

The following table describes a WebSphere ILOG BRMS project for a top-10 European retail bank:

Challenges	Goals	Solution	Benefits
<ul style="list-style-type: none"> Lack of transparency in siloed pricing applications leads to incorrect and inconsistent fees Adapting pricing policies to quickly respond to competition and align them with bank's internal cost structures 	<ul style="list-style-type: none"> Reduce time to market for new offers, products and pricing policies Improve transparency of the pricing policies Enable what-if analysis to evaluate impact of changing pricing rules 	<ul style="list-style-type: none"> Reengineered legacy systems and centralized rule-based pricing engine based on IBM ILOG JRules Business rule automation for applying decisions on product- and agreement-level pricing, customer segmentation and VAT invoicing 	<p>New system fully supports the bank's strategy in terms of cost competitiveness and customer satisfaction:</p> <ul style="list-style-type: none"> From months to 10 days to change a pricing policy Two million operations processed in 15 minutes Centralized pricing engine reduces maintenance costs

Highlights

Challenges	Goals	Solution	Benefits
<ul style="list-style-type: none"> Ensuring compliance with new regulations Technology obsolescence and loss of key people with application maintenance expertise 	<ul style="list-style-type: none"> Eliminate manual processing and reduce application maintenance costs Increase performance and scalability to support high volumes of batch processing and enable online processing 	<ul style="list-style-type: none"> New business analyst role to improve alignment between business and IT 	<ul style="list-style-type: none"> Four weeks to implement pricing policies for new SEPA products Transparent pricing rules that can be maintained by business users

IT Implications

Aligning IT and business to flexibly manage frequent changes in pricing policies.

Collaborative Process between Business and IT

We have mentioned the importance of aligning IT and business to flexibly manage frequent changes in pricing policies. We now consider how to make it happen.

From the outset of any business rule project, IT is in charge of putting in place the business rule management infrastructure to be used by all the users involved in managing the rules.

Highlights

IBM WebSphere ILOG BRMS provides tools to empower business users.

For the rule management part, WebSphere ILOG BRMS provides tools to empower business users (for example, they can define their own rules in an intuitive rule language) while providing IT with all the necessary control points to ensure that the newly introduced or modified rules do not break operational systems.

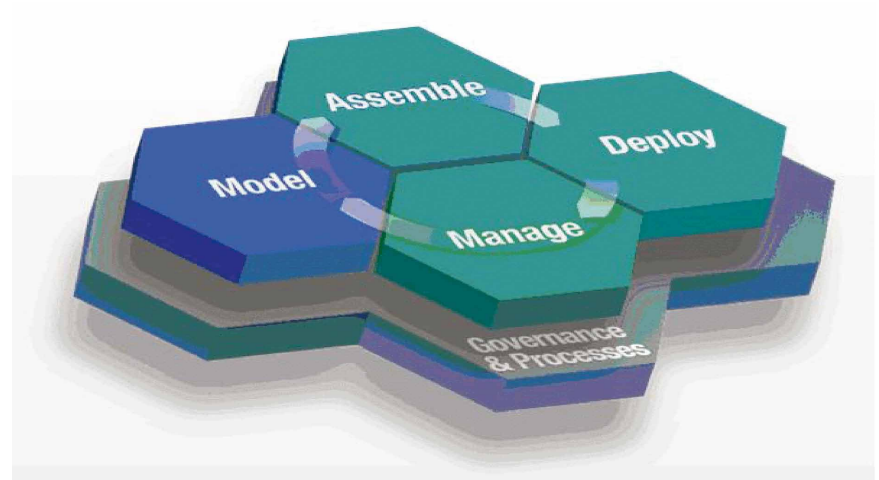
While in traditional development, business requirements are passed to IT for implementation, rule development is typically much shorter (closer to continuous improvement) and does not necessarily require IT involvement for implementation.

Figure 7 shows the life cycle of rule-based decision services in a SOA infrastructure, and the roles and responsibilities most commonly assigned to business and IT:

- **Model** - model business policies (business and/or IT), impact simulation (business), testing and validation (IT)
- **Assemble** - create rule services (IT)
- **Deploy** - register RES and deploy rule services (IT)
- **Manage** - monitor and control rule services (IT)

Highlights

Figure 7: SOA Life Cycle of a Rule Service



The same business rules and rule services can be deployed on different platforms in terms of architectural options.

Architectural Alternatives and Integration within the Enterprise

In terms of architectural options, the same business rules and rule services can be deployed on different platforms:

- Java-distributed environment
- Java on mainframe
- COBOL on mainframe (IBM ILOG Rules for COBOL)

WebSphere ILOG BRMS also provides standard adapters for the main SOA application servers and business process management (BPM) and enterprise service bus (ESB) platforms such as IBM WAS, WPS and WMB.

Highlights

Migration Path

Beyond technology and tools, following a rule approach means also applying a methodology for gradually transforming a legacy system. For instance, a possible migration path can be:

- Define a tailored business object model for pricing
- Extract pricing rules from existing applications
- Define rule services and how to integrate them with other systems
- Deploy the rules in a COBOL/mainframe environment (optional) or an SOA infrastructure

WebSphere ILOG BRMS can help a company build its own reusable SOA assets. For instance, if we consider the pricing of payment transactions, IBM has experience in building rule vocabularies that map ISO20022, a standard format in payments. This means that a bank standardizing its payment operations on ISO20022 can immediately start defining business rules able to manipulate payment transactions.

Cost-Benefit Analysis

Providing customer-centric pricing and empowering business users are important benefits, but let us now consider the cost side of things. After all, highly customizable capabilities usually come with a price tag.

This consolidation of many systems into a centralized rule-based pricing engine contributes to reducing the total cost of ownership (TCO) of pricing systems.

As with many SOA projects, using business rules represents an opportunity to consolidate many systems into a centralized rule-based pricing engine that is then exposed as a service. This consolidation contributes to reducing the total cost of ownership (TCO) of pricing systems.

Highlights

Rule externalization, streamlined approvals, gated deployment, and monitoring and control of rule services contribute to the cost efficiency of the rule maintenance process.

Beyond consolidation, the cost efficiency of the rule maintenance process relies on the following factors:

- **Rule externalization** - capacity to change rules once from a centralized location. The “change once, run everywhere” philosophy followed by WebSphere ILOG BRMS aims at drastically reducing the cost of maintaining pricing rules.
- **Streamlined approvals** - to support collaborative work on business rules among various stakeholders, WebSphere ILOG BRMS automates the policy change request workflow. This enables maximizing the productivity of business rule management activities, including creation, review, approval, testing, simulation and deployment.
- **Gated deployment** - generation and deployment of configurations to multiple locations.
- **Monitoring and control of rule services** - central management of rule services reduces deployment risk and ensures consistent creation and implementation of rules.

These same factors also contribute to drastically reducing the time to market of new pricing policies.

Summary of Benefits

Strategic Business Benefits (or Why Business Should Care)

- Improve customer retention to preserve existing business
- Grow by introducing new revenue-generating commercial offers quickly (for example, bundles)
- Manage alignment of pricing structure with internal cost structure

Highlights

Operational Benefits (or Why IT Management Should Care)

- Flexibility
- Time to market shortened from months to a few days to change or implement new pricing policies
- Better alignment and collaboration between business analysts and IT, moving from long software development cycles towards continuous improvement
- Performance and scalability
- Centralized pricing engine reduces maintenance costs and TCO
- Transparent pricing rules that can be maintained by business analysts
- Enforcement of pricing policies across multiple channels and operational systems

Conclusion

Beyond budget cuts, the current economic downturn represents an opportunity for smart IT investment. A recent article by McKinsey identifies pricing as one of these areas. Such investment can provide key advantages over competitors at a time when the pace of the strategy war game is accelerating and some players are struggling to match the pace.

We have argued that moving towards customer-centric pricing can deliver a strong ROI and that a key first step consists of developing the capability to enforce pricing policies in operational systems.

A recent article by McKinsey identifies pricing as an opportunity for smart IT investment.

Highlights

Business rule technology is the cornerstone for bringing customer centricity and reactivity to price management, as well as the effective use of customer knowledge in order to better compete.

We would add that the opportunity cost of investing in rule-based pricing technology is low. By this, we mean that doing nothing could actually cost much more:

- For the present, it would mean living with inefficiencies (long time to market and high maintenance costs), inhibited product innovation, inability to exploit knowledge about the customer and optimize prices (locked ROI from analytics investments/business intelligence).
- For the longer term, it would mean running the risk of losing ground to competitors in a market with intensifying competition and accelerated consolidation.

Business rule technology is the cornerstone for bringing customer centricity and reactivity to price management, as well as the effective use of customer knowledge in order to better compete.

IBM can deliver:

- A best-of-breed BRMS to support the price management process.
- Open standards and pre-integration with principal technology platform vendors (AS, SOA, BPM and ESB) for a natural fit and integration into the enterprise technology stack.
- Proven methodology, best practices and project accelerators from IBM Professional Services to guide users along a step-by-step migration path.



For Further Information

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- Visit IBM WebSphere ILOG BRMS Resource Center at <http://www.ibm.com/software/websphere/products/business-rule-management/>
- Contact IBM at <http://www.ibm.com/developerworks/websphere/services/contacts.html>

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