



SAS® Regular Price Optimization

Applying the right prices to the right products at the right time to drive sales, increase margin and delight customers.

What does the product do?

SAS Regular Price Optimization leverages sophisticated demand forecasts and optimization routines to determine optimal everyday prices for products down to the store/SKU level. Taking into account detailed demand history, key causal factors and business rule constraints, the solution applies advanced analytics to ensure regular prices are aligned with category strategies and business goals such as increasing margin or driving revenue growth. When combined with the power of SAS Promotion Optimization and SAS Markdown Optimization, the solution delivers optimization across the full pricing life cycle.

Why is the product important?

SAS Regular Price Optimization helps retailers improve profitability and maximize sales by applying the right prices to the right products at the right time. The solution automates the application of sophisticated analytics and optimization to the pricing process to drive sales and margin across categories and stores. The result is higher store-level margins, increased category revenue and improved overall product profitability.

For whom is the product designed?

The solution is designed for retailers that sell hardlines, grocery, fast-moving consumer goods or general merchandise across multiple store locations.



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Overview

In today's era of consumer-centric retailing, success hinges on presenting customers with tailored product offerings that both satisfy unique demand and offer overall value. One of the most critical elements of a valuable consumer-centric offering is price. From a consumer perspective, the intersection between product and price drives most consumer purchase decision behavior based on perceived value.

Now more than ever, retailers are being challenged to greet customers with a quality product at the right price. In an increasingly competitive marketplace, retailers must identify ways to deliver on the highly competitive consumer value equation to achieve sales goals and increase overall profitability. As a result, retailers today can no longer drive pricing strategies with basic approaches such as chainwide averages or cost-plus calculations.

These simplistic approaches do not address complex business conditions, resulting in lost sales and eroded margin. The marketplace demands a strategic approach to pricing that is based on the application of advanced analytics to forecasted demand, across categories and locations, enabling pricing precision at the store and SKU level.

Retailers need efficient approaches to manage the elements in their pricing structure across the organization and maximize profitability based on optimized prices for SKUs across categories and stores. This approach to price optimization must account for projected demand, known causal factors and business strategies — to generate precise pricing recommendations that can

be consistently executed in the store to delight customers with a valuable offering that is also highly profitable.

SAS Regular Price Optimization automates and optimizes the regular price determination process at the product and store level. SAS Regular Price Optimization utilizes the powerful optimization analytics and forecasting engine of SAS, in conjunction with business rules that reflect pricing strategies, sales and margin goals, and competitive data, to optimally generate regular price recommendations for products. This in turn enables retailers to meet margin and profitability targets while also exceeding consumer value expectations.

SAS Regular Price Optimization is part of the SAS Revenue Optimization Suite, which also includes SAS Promotion Optimization and SAS Markdown Optimization. In total, the suite allows retailers to set regular prices, promotions and markdown prices to better manage overall category demand at different points in the life cycle. The combined result drives increased revenue and margin, and ensures consistent and precise application of pricing across the entire organization.

Benefits and Features

Increased Revenue and Margin: The SAS Regular Price Optimization solution delivers optimal price recommendations based on the revenue, margin and volume goals for each product and for the overall product category. This is achieved via a combination of sophisticated forecasting capabilities and optimization routines, allowing retailers to simultaneously maximize store traffic and overall assortment profitability.

Consistency with business strategies and the individual category and product roles is achieved through the incorporation of business rules into the solution's price determination logic. This improved information, together with the solution's ability to automate application of the data at granular levels, leads to price change recommendations that increase category revenue and margin.

Unparalleled Price Management

Efficiency and Precision: SAS Regular Price Optimization is highly automated, freeing retail pricing teams from mundane manual price management tasks so team members can focus on maximizing business results. The intuitive user interface allows for the quick review of system-identified exceptions that have been prioritized on the basis of overall importance according to user-selected preferences and metrics.

Additional functionality makes it easier to manage the rules required to ensure that everyday prices are competitive, are consistent with overall business strategies and follow reasonable logic across the assortment. This takes into account characteristics such as brands, private label, sizes or value-added features. Powerful "what-if" functionality allows users to quickly evaluate alternative pricing scenarios. The solution is highly scalable and can optimize everyday prices at the store level for each SKU.

Alignment to Market Conditions:

SAS Regular Price Optimization is designed to optimize prices on the basis of multiple market considerations. These include projected future consumer buying behavior and sustenance of price image against competition. The result is a price optimization strategy that is based on predicted consumer response, and future demand that is aligned to market conditions.

Full Lifecycle Pricing Determination

and Execution: While available as a standalone application, SAS Regular Price Optimization is part of the SAS Retail Intelligence Platform and provides the cornerstone for a complete product lifecycle pricing strategy. Using historical data, advanced analytics and optimization, the complete SAS solution helps retailers manage the price of an item from introduction to closeout in order to maximize realized revenue and profits.

Solution Details

Automated Pricing Models and

Recommendations: SAS Regular Price Optimization systematically recommends an optimal set of prices based on category objectives, pricing strategy, business rules, competitive data and forecasted demand. It is highly automated and scalable and is capable of making price recommendations at a SKU level by store. The automated nature of the optimal price recommendations allows retailers to manage by exception and focus on the value-added activities that drive business results.

Best-of-Breed Analytics: Built for speed, efficiency and accuracy, the proprietary demand models bring proven scalability, automation and analytical sophistication to the forecasting process. The solution can generate millions of forecasts at various levels of product and location hierarchy down to SKU-store level. In addition, it estimates marketing mix effects (such as price elasticity, halo and cannibalization effects, circular lifts, etc.) along with trend and seasonality estimates to forecast demand for both products and categories.

The solution provides retailers a user-friendly interface to control and manage updates to demand models and monitor forecast accuracy. Alternately, SAS provides professional services to manage the forecasting process as well.

Advanced Optimization Capability:

Price recommendations are generated using state-of-the-art optimization techniques that can account for nonlinearities in the underlying mathematical formulation. Pricing rules capture the business knowledge in terms of strategic decisions on competitive positioning and margin setting. Optimization satisfies the pricing rules while adjusting the prices to maximize the selected performance measures.

Alternative what-if scenarios provide a range of price recommendations allowing trade-offs between competing rules, different performance measures and uncertain business assumptions. Optimization takes into account both the invoice cost and landed cost of the product (varying by store) to provide a true picture of margin.

Integration with Price Execution and

Other Planning Systems: The solution can integrate to retailers' upstream (assortment planning/category management) and downstream (price execution) systems. As a result, no manual entry of price information is required. The solution can be integrated through a standard set of APIs to incorporate the powerful product capabilities into an existing systems architecture.

Intuitive User Interface: SAS Regular Price Optimization adds tremendous flexibility and sophistication to the process of determining price strategy by incorporating an intuitive user interface. The menus and settings allow users to apply their own business experience to the activities. The UI can be seeded

with preferred settings to help improve the automated price optimization process and allow analysts to explore alternative scenarios and exception management.

In addition, the solution presents all relevant data — business rules, cost, competitive data, price elasticity, optimal price recommendations, forecasted demand and KPIs — in a manner that allows users to efficiently make better price change decisions. The amount of time savings due to availability of all data in one place lets users review prices of all products at store level rather than just focusing on key items.

Scenario-Based Price Optimization at SKU and Store Level:

The solution also has the capability of performing multiple what-if scenarios by altering category objectives, such as revenue targets, desired margins, or number of units to be sold. For each scenario, the system provides revenue forecast, margin and unit movement for products and category based on recommended price changes. The category manager can compare scenarios on the above-mentioned metrics to implement the best set of prices. In addition, a multistep approval process enables merchants to work with pricing analysts to achieve the best blend of price changes that are aligned with the pricing strategy.

Management of Business Rules and Pricing Strategy:

The SAS Regular Price Optimization solution allows users to manage business rules and pricing strategy along product and location hierarchies as well as on individual products or defined groups of products. Users can independently determine a variety of rules, including: ending digits, price points, margin, competitive and price change rules. Furthermore, the users can create product relationship rules that link multiple products.

Key features

- Intuitive user interface provides an easy-to-use and flexible user environment.
- Optimal price recommendations for products that maximize revenue and profitability across categories and stores:
 - Advanced analytics that forecast demand for categories and products at store level.
 - Business rules that ensure compliance to pricing strategy.
 - Category financial targets.
- Ability to use what-if scenarios on financial targets and business rules to help establish the best blend of prices.
- Management of business rules and pricing strategy.
 - User interface to manage business rules such as price endings, size relationships (price-per-unit ratio) and relative price gaps between various brands (such as between private label and national brands), and competitive rules.
 - Exception-oriented workflow helps users understand compliance to business rules.
 - Ability to use what-if scenarios on values of business rules to understand impact on price changes and financial metrics such as revenue, margin and units sold.
- Allows retailer to manage price image with respect to competition.
- Alerts users of changing market conditions and recommends how to proactively respond to them.
- Visibility to competitors' pricing, category performance and other exception reporting.
- Configurable approval process.
- Integration with price execution and other planning systems across the merchandising life cycle.
- Flexibility in implementation: behind the firewall or ASP.
- Built-in forecast accuracy measurement and monitoring.
- Part of comprehensive SAS Revenue Optimization Suite that includes SAS Promotion Optimization and SAS Markdown Optimization. It allows retailers to set regular prices, promotions and markdown prices to better manage overall category demand at different points in the life cycle.

Examples of such rules include size relationships, such as price-per-unit ratio, and relative price gaps between various brands, including private label and national brands. Users can track product and location attributes to manage pricing rules, making it easy for them to view and modify pricing rules. The SAS solution summarizes rule violations to provide users insights into how current prices are complying with established business rules.

Advanced Analytics That Provide Demand Insights: SAS Regular Price Optimization comes packaged with powerful analytics that help retailers understand demand and price sensitivity at both SKU and store level. Furthermore, it helps users understand how product prices affect both individual product and category level sales and

the impact of individual product price changes on the demand of other associated products. The automated demand insights powered by the analytics allow users to truly manage by exception.

Proactive Response to Changing Market Conditions: Regular price optimization alerts users of changing costs and competitive prices so that merchants can take timely action. It informs users of business rule violations and price change recommendations caused by market conditions. The solution also alerts the user when new products are introduced into the category since such additions have the potential to alter category dynamics. Further, the solution supports establishment of a price point for new items to maximize the impact of introductions on category growth.

Visibility to Competitor's Pricing, Category's Performance and Other Exception Reporting: The SAS Regular Price Optimization solution enables retailers to understand category and product performance over time. Mapping the history of both their own and competitors' price changes provides valuable information to help understand market dynamics such as which firms are price leaders and which are more reactionary.

The solution comes bundled with exception reports that deliver insight into opportunities for price changes and vendor cost negotiations. It also allows retailers to create their own custom reports to meet their unique reporting needs.

SAS® Regular Price Optimization Technical Requirements

SAS Regular Price Optimization leverages the SAS Merchandise Intelligence 3.2 architecture. The server tier is implemented in SAS as part of SAS Foundation 9.1.

Middle Tier

The SAS Merchandise Intelligence Midtier Server is a Java-based, middle-tier component. The middle-tier component enables automatic optimizing of data. The SAS Merchandise Intelligence Midtier Server can be installed in the following operating environments:

- Windows Server 2003
- AIX 5.3

Client

The SAS Merchandise Intelligence client is a Java-based client application. The SAS Merchandise Intelligence client can be installed in the Windows XP Professional operating environment, with Service Pack 2.

SAS Merchandise Intelligence supports the following transactional databases:

- DB2 8.2
- Oracle Database 10g

SAS® Retail

Comprehensive Retail Intelligence

SAS® Size Optimization is just one part of SAS' vision for complete retail intelligence. Retailers can employ a wide range of powerful SAS solutions, all built atop a common retail business intelligence platform to allow for rapid integration and lower total cost of ownership. These solutions include nearly three decades of SAS retail analytics experience and merchandising best practices. No other vendor offers such a comprehensive, integrated set of solutions for retailers.

- **SAS® Customer Intelligence:** Identify, acquire, activate, serve and retain profitable customers.
- **SAS® Merchandise Intelligence:** Drive revenue, protect margins and earn customer loyalty with optimized merchandise plans, assortments, demand forecasts, pricing, promotions, space plans and allocations.

- **SAS® Operational Intelligence:** Leverage organizational assets to serve customers and trade with vendors efficiently and profitably.
- **SAS® Performance Management:** Analyze, forecast and maximize profits across the entire value chain and monitor performance toward common goals.

SAS – a World Leader in Business Intelligence

Founded in 1976, SAS is the world's largest privately held software company and the industry leader in business intelligence. Today, SAS serves more than four million users at nearly 43,000 sites in 111 countries, including more than 80 percent of FORTUNE Global 500® general merchandisers and specialty retailers. SAS is also an associate member of the National Retail Federation.

For nearly three decades, SAS has been giving retail organizations THE POWER TO KNOW®. SAS leverages the investments you've already made in operational and transactional systems, adding a layer of intelligence you can't get anywhere else.



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