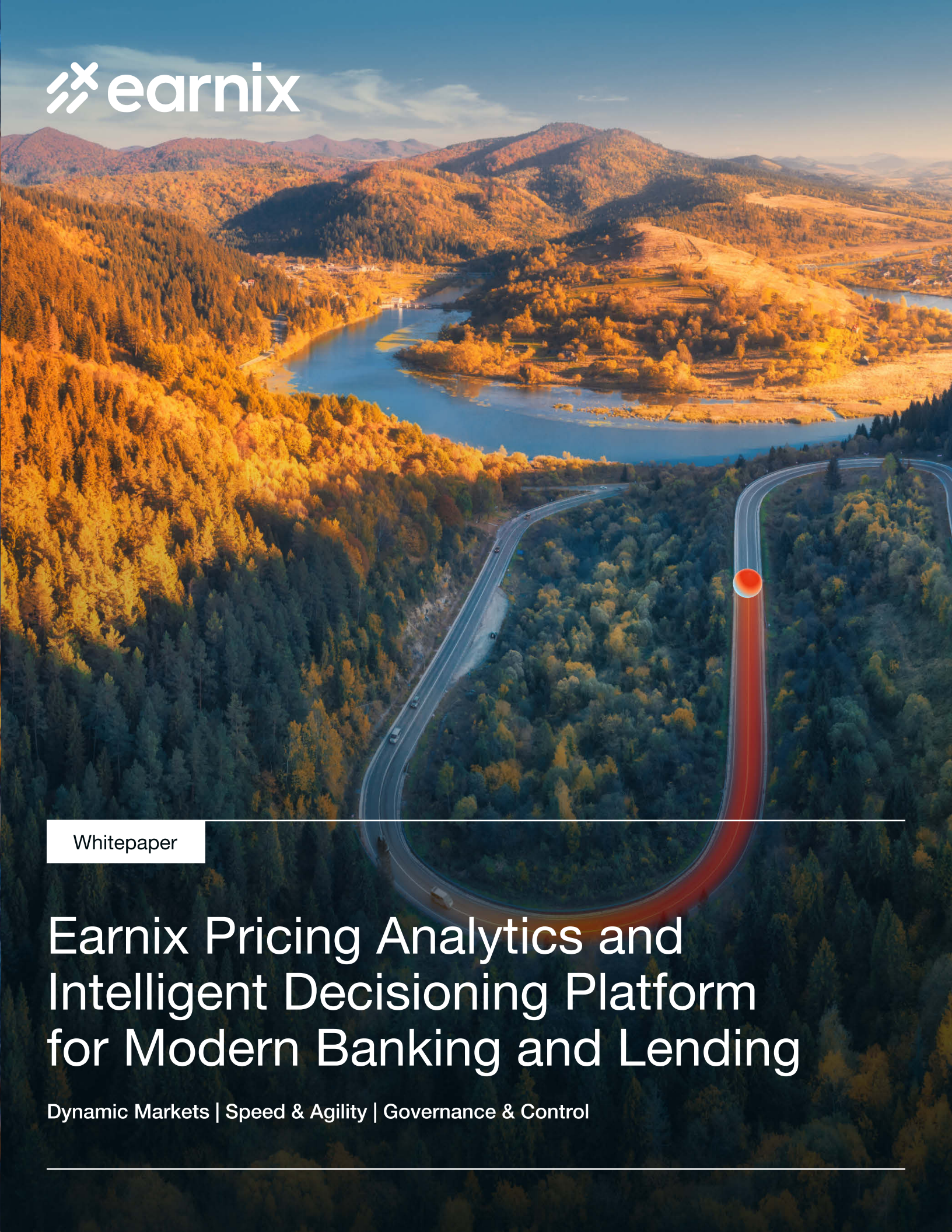


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Whitepaper

Earnix Pricing Analytics and Intelligent Decisioning Platform for Modern Banking and Lending

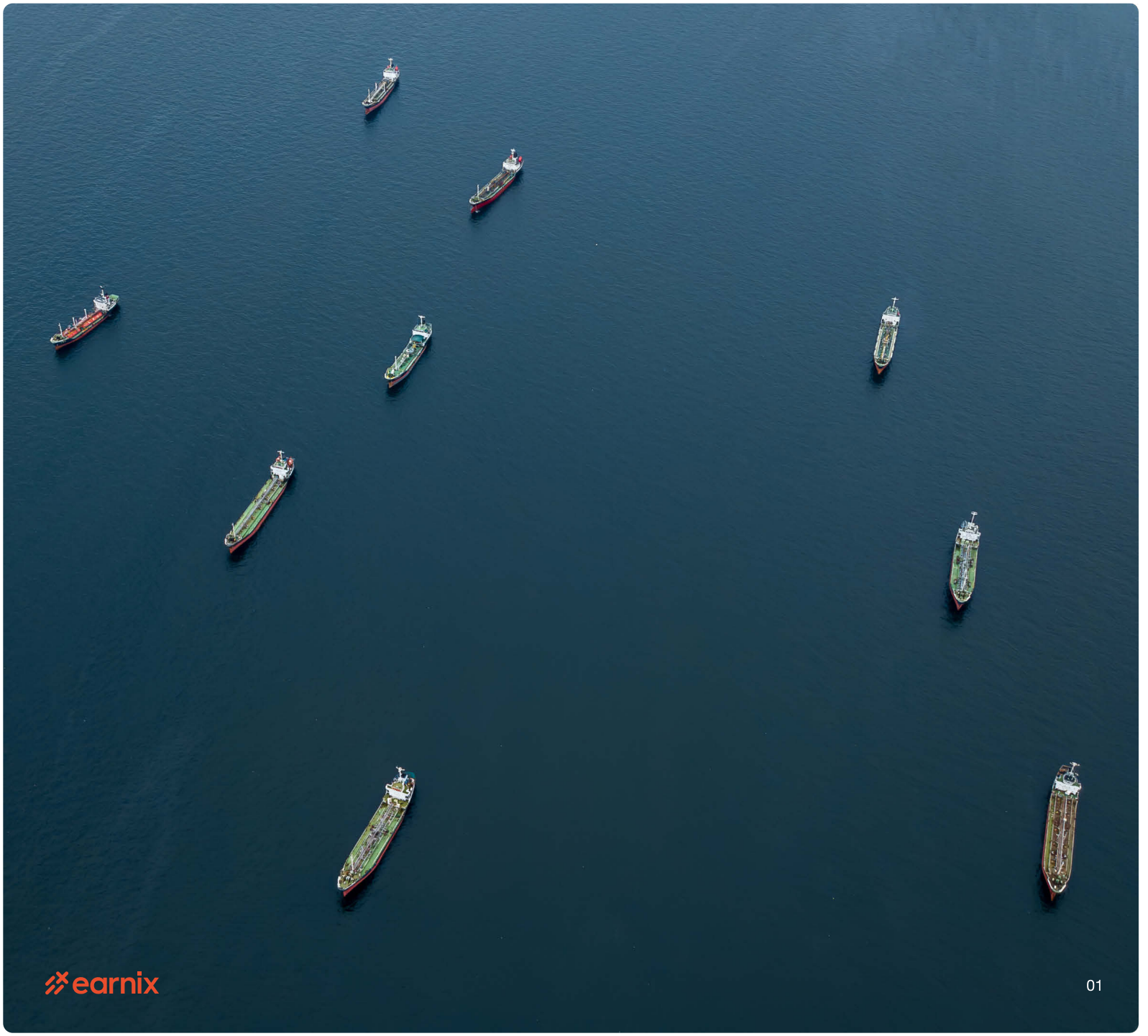
Dynamic Markets | Speed & Agility | Governance & Control

The Forces Reshaping Pricing Strategies in Consumer Banking and Lending

Consumer banking and lending is evolving faster than traditional pricing environments can handle. Volatile rates, margin pressure, regulatory scrutiny, rising borrower expectations, and the widespread use of digital comparison platforms have turned pricing into a strategic capability.

Yet many lenders still rely on fragmented tools - just as a new standard emerges, built on simulation-backed decisions, continuous optimization, real-time rate deployment, and enterprise-grade governance.

Pricing decisions now shape conversion, margin, approval rates, portfolio mix, and lifetime value. This makes pricing an enterprise-wide discipline, not a periodic task.



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Executive Summary

From Static Pricing to Continuous Pricing Optimization

Today, consumer banking and lending industry faces a fundamentally different pricing reality. Rapid interest-rate shifts, competitive digital channels, and heightened regulatory expectations have amplified the impact of pricing decisions on profitability and portfolio performance. Borrowers now expect fast, transparent, and personalized offers across every channel.

Despite this, many institutions still rely on spreadsheet-driven workflows and disconnected pricing tools. Built for slower, more predictable markets, these approaches introduce friction, delay execution, and obscure portfolio-level impact.

A new standard is emerging, continuous pricing optimization. Instead of reacting after results are realized, leading lenders simulate outcomes before deployment, optimize prices against business objectives, deploy in real time, and learn continuously from results.

Earnix enables this shift through a unified, modular, API-enabled pricing and intelligent decisioning platform. At its core, Price-It, Lending Plus, and Elevate Data provide simulation, optimization, and governed data foundations - while additional modules extend capabilities into AI-driven automation, customer engagement, and intelligent agent-based decisioning.

Executive Takeaways

- Pricing is now a strategic lever - not a periodic task
- Legacy tools cannot support market speed, transparency, or complexity
- Continuous optimization replaces reactive pricing updates
- Modern pricing depends on real-time APIs and connected enterprise data
- Earnix delivers simulation-backed, governed pricing and digital decisioning at scale

The Consumer Banking and Lending Market Is Changing Faster Than Pricing Can Adapt

Consumer banking and lending across auto loans, personal loans, credit cards, deposits, and mortgages is undergoing sustained disruption.

Market Forces Reshaping Consumer Banking and Lending



Interest Rate Volatility
Compresses margins and increases sensitivity to timing



Regulatory Scrutiny
Demands explainability, traceability, and consistency



Digital-First Competition
Raises expectations for instant, personalized offers



Product & Channel Complexity
Requires managing multiple pricing logics for the same product, across channels and customer segments, without sacrificing speed or control

Pricing changes, far beyond simple rate adjustments, now ripple across approval rates, portfolio composition, funding costs, and customer lifetime value.

Why Traditional Pricing Processes Are Falling Behind

Despite pricing's growing strategic importance, many lenders remain constrained by outdated processes and technology.

Key Limitations of Legacy Pricing Environments

- ✕ **Fragmented Tools & Manual Workflows:** Spreadsheet-based processes are not data-driven, do not scale, and increase error risk.
- ✕ **Disconnected Pricing & Credit Strategies:** Lack of pricing granularity to match the sophisticated credit risk capabilities leads to "average" prices within customer cohorts.
- ✕ **Governance & Compliance Gaps:** Limited auditability slows decisions and increases regulatory exposure.
- ✕ **System Complexity And Slow Time to Market:** Overly complex pricing systems facilitate IT dependency and approval bottlenecks that cause delayed rate updates, lost margin, and lower volume.

Pricing Agility in Volatile Markets With Earnix

- ✓ Faster response to market changes
- ✓ Reduced exposure to pricing lag
- ✓ Greater control across the portfolio

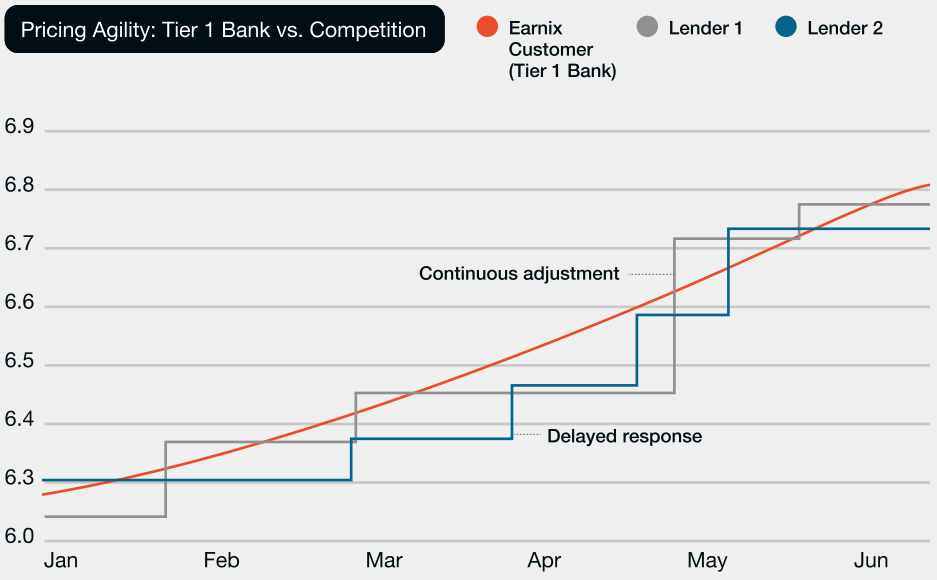


Figure 1: Pricing Agility in Volatile Markets

Traditional pricing relies on infrequent, high-impact changes that risk overcorrection. Continuous pricing enables smaller, faster adjustments with tighter feedback loops - improving control and responsiveness.

Requirements for Modern Consumer Lending and Banking Pricing Architecture

Legacy pricing architectures cannot support the data, governance, and integration demands of modern consumer banking and lending. A modern pricing operating model must balance growth, profitability, and risk at both customer and portfolio levels using data-driven, forward-looking simulation, optimization and governed execution.

1. Simulation-Backed Decision Making

- ✓ Evaluate approval rates, profitability, and portfolio composition using forward-looking scenario simulation before deployment
- ✓ Reduce uncertainty by testing pricing strategies across multiple markets and behavioral assumptions

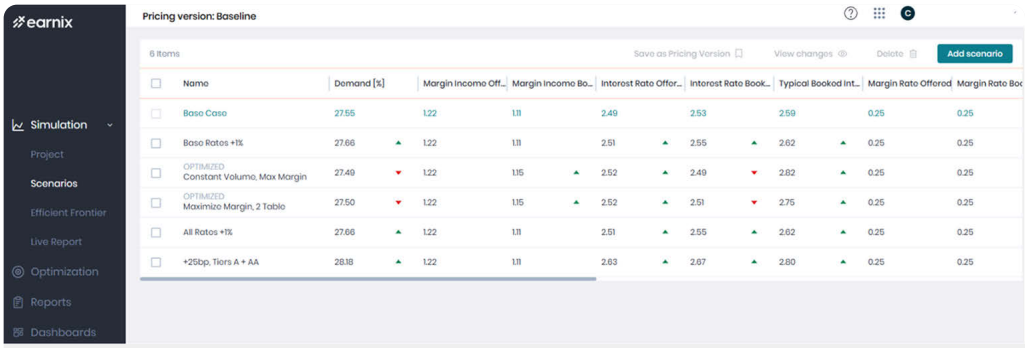


Figure 2: Side-by-side scenario simulation in Earnix Price-It.

Business users can simulate and compare pricing strategies based on key performance indicators such as demand, volume, interest income, rate booked, and margin income helping teams assess trade-offs and select the optimal strategy before deployment.

2. Real-Time Analytics, Price Optimization & Learning

- ✓ Optimize pricing decisions against defined objectives (e.g., margin, volume, portfolio mix) using constrained optimization techniques
- ✓ Validate optimized strategies through scenario analysis, A/B testing, and champion–challenger experimentation
- ✓ Re-optimize pricing continuously using observed outcomes and performance feedback loops
- ✓ Apply efficient-frontier analysis to understand trade-offs between growth and profitability

Requirements for Modern Consumer Lending and Banking Pricing Architecture

3. Scalable, Multi-Product Pricing

- ✓ Apply consistent pricing logic across loans, cards, deposits, and mortgages while supporting product-specific constraints
- ✓ Evaluate cross-product and cross-channel trade-offs at the portfolio level to avoid siloed, product-level optimization

4. Embedded Governance

- ✓ Built-in version control, approval workflows, audit trails, and model explainability
- ✓ Generate defensible decisions to support regulatory review without slowing execution

5. Portfolio-Level Visibility & Control

- ✓ Systematically move between growth-led, balanced, and profit-led strategies by adjusting optimization objectives, constraints, and decision weights
- ✓ Re-align pricing strategies as business objectives and market conditions evolve

Price Optimization: Efficient Frontier to Manage Pricing Decisions

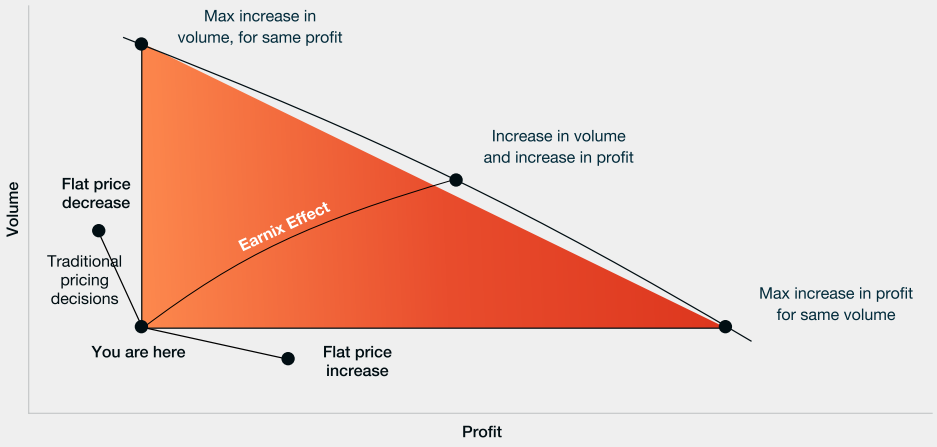
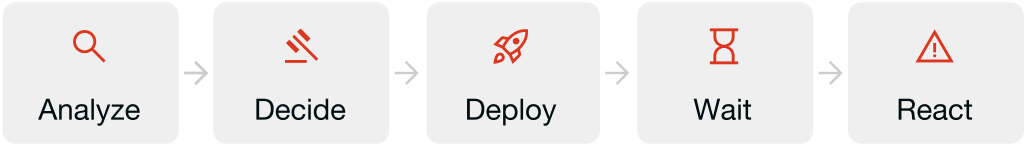


Figure 3: Price Optimization and the Efficient Frontier

Optimized pricing moves lenders from a current baseline along the efficient frontier, balancing volume and profit through constrained optimization instead of flat price changes.

From Static Pricing to Continuous Pricing Optimization

Traditional pricing follows a linear cycle:



This periodic approach creates delays between market change and pricing response. In volatile, competitive markets, those delays lead to missed opportunities, overcorrections, and limited portfolio control.

Continuous pricing optimization replaces this model with an always-on, closed-loop approach. Pricing strategies are simulated before deployment, executed in real time, monitored continuously, and refined based on observed outcomes, allowing lenders to adapt proactively rather than react after performance declines.

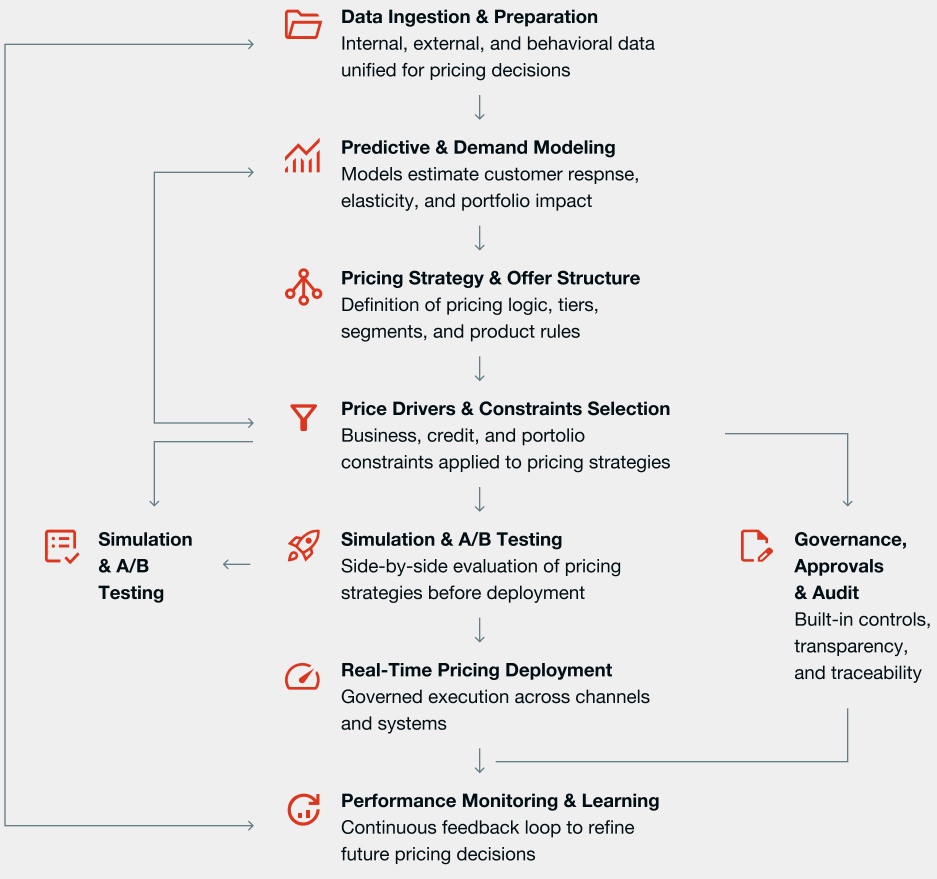


Figure 4: Continuous Pricing Optimization Lifecycle

Through this lifecycle, pricing becomes a continuous, evidence-based capability - integrating analytics, execution, and learning into a single operational system.

Earnix Price-It: Enabling Continuous Pricing Optimization at Scale

Continuous pricing optimization is delivered through the Earnix Price-It platform, moving advanced pricing from experimentation to governed, real-time production without introducing operational or compliance risk.

Earnix combines AI-driven analytics, simulation, optimization, execution, and governance in a single cloud-native platform designed for enterprise scale.



Core Capabilities of the Earnix Price-It Platform

Earnix Price-It includes embedded AI-driven pricing intelligence designed specifically for lending use cases.

AI-Driven Pricing Intelligence

- ✓ Operationalize predictive, optimization, and machine learning models aligned to lender-specific KPIs such as margin, volume, risk, and portfolio mix
- ✓ Support both native and externally developed models through Model Accelerator, enabling reuse of existing analytics investments
- ✓ Apply explainable and responsible AI to ensure pricing decisions are transparent, defensible, and suitable for regulatory review

Unified Data Foundation

- ✓ Earnix Price-It integrates internal, external, and behavioral data through native connectivity to enterprise platforms such as Snowflake, Databricks, Amazon S3, and other cloud or on-premises data sources
- ✓ Provides a centralized, governed data layer purpose-built for pricing, simulation, optimization, and real-time decisioning workloads, ensuring consistent and decision-ready data across teams
- ✓ Maintains full data lineage, version control, and auditability, enabling end-to-end traceability, regulatory transparency, and compliance throughout the pricing lifecycle

Execution, Integration & Automation

- ✓ Deploy pricing strategies in real time through vendor-agnostic APIs to LOS, CRM, dealer, pricing, and decisioning systems
- ✓ Automate data preparation, simulations, testing, approvals, and production deployments using built-in Python-enabled workflows and orchestration capabilities
- ✓ Enable business-led execution with role-based access controls, governed approval workflows, and full audit trails across models, rules, and pricing strategies
- ✓ Coexist seamlessly with existing core banking platforms and decisioning infrastructure, eliminating the need for system replacement

Core Capabilities of the Earnix Price-It Platform

Cloud-Native SaaS Architecture

- ✓ Earnix Price-It is delivered as a secure, cloud-native SaaS platform engineered for high availability, resilience, and scale
- ✓ Configuration-driven implementation enables rapid deployment without custom code, heavy customization, or infrastructure management
- ✓ Automatically scale processing capacity and execution resources to support increasing pricing volumes, model complexity, and real-time quote demand
- ✓ Enterprise-grade security, compliance controls, and controlled release management ensure pricing operations remain protected, auditable, and continuously available

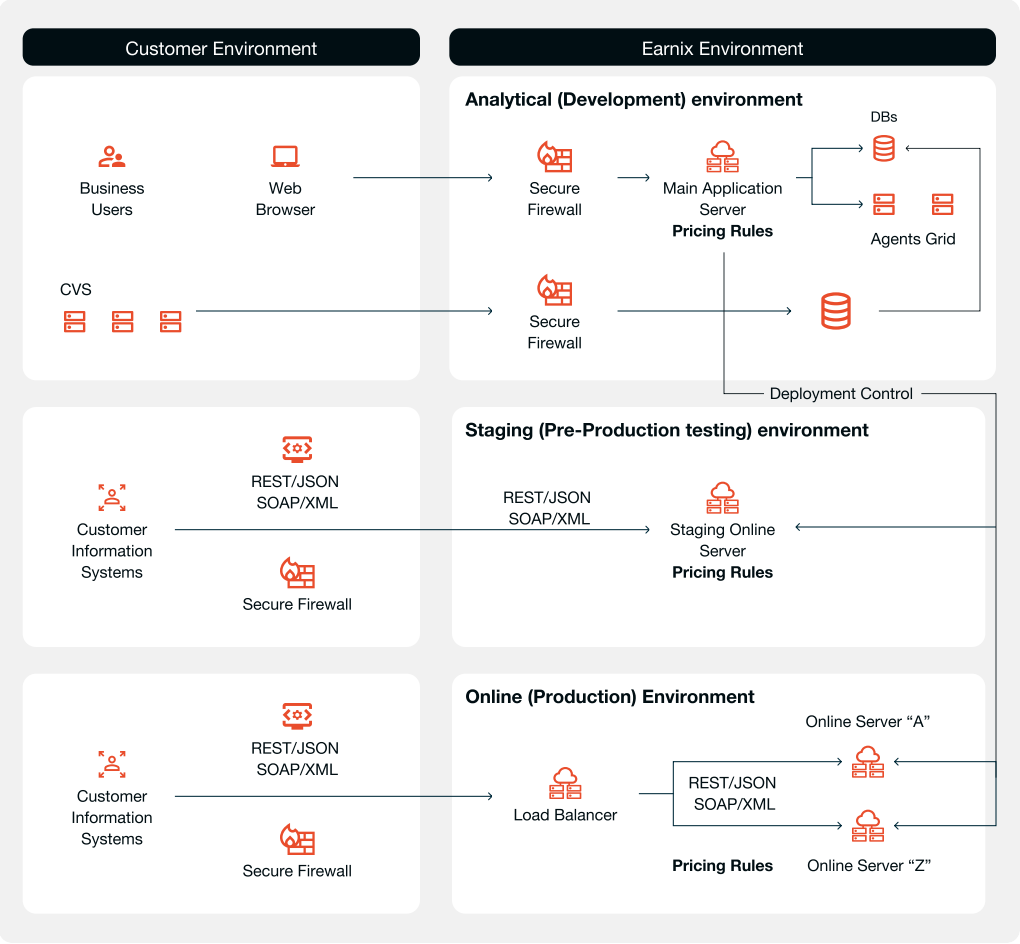


Figure 5: Earnix Deployment Architecture Across Development, Staging, and Production

The Earnix Price-It deployment architecture separates analytical, staging, and production environments, allowing pricing models and rules to be developed, tested, and deployed through governed, API-based execution.

Core Capabilities of the Earnix Price-It Platform

Earnix Platform Benefits

- ✓ Real-time pricing responsiveness to market and competitive changes, reducing pricing lag and improving ROI
- ✓ Portfolio-level KPI simulation and monitoring, including origination, margin, and approval trade-offs
- ✓ Reduced operational risk and errors through systemized workflows, governed execution, and a highly resilient platform with 24/7 technical support and enterprise grade availability
- ✓ Cross-functional collaboration across pricing, analytics, compliance, and IT using a shared platform
- ✓ Seamless deployment across channels and lines of business via real-time APIs
- ✓ Elastic scalability and performance that minimizes IT overhead and supports growth
- ✓ End-to-end governance and auditability for internal controls and regulatory oversight
- ✓ Continuous UI innovation informed by real-world requirements from 100+ financial institutions worldwide, ensuring the platform evolves with emerging market needs and proven best practices
- ✓ Advanced optimization capabilities built on 20+ years of experience developing pricing optimization algorithms for financial products, enabling more precise, scalable, and resilient pricing decisions than traditional rule-based systems



Figure 6: Operational Benefits of a Unified, API-First Pricing and Digital Decisioning Platform

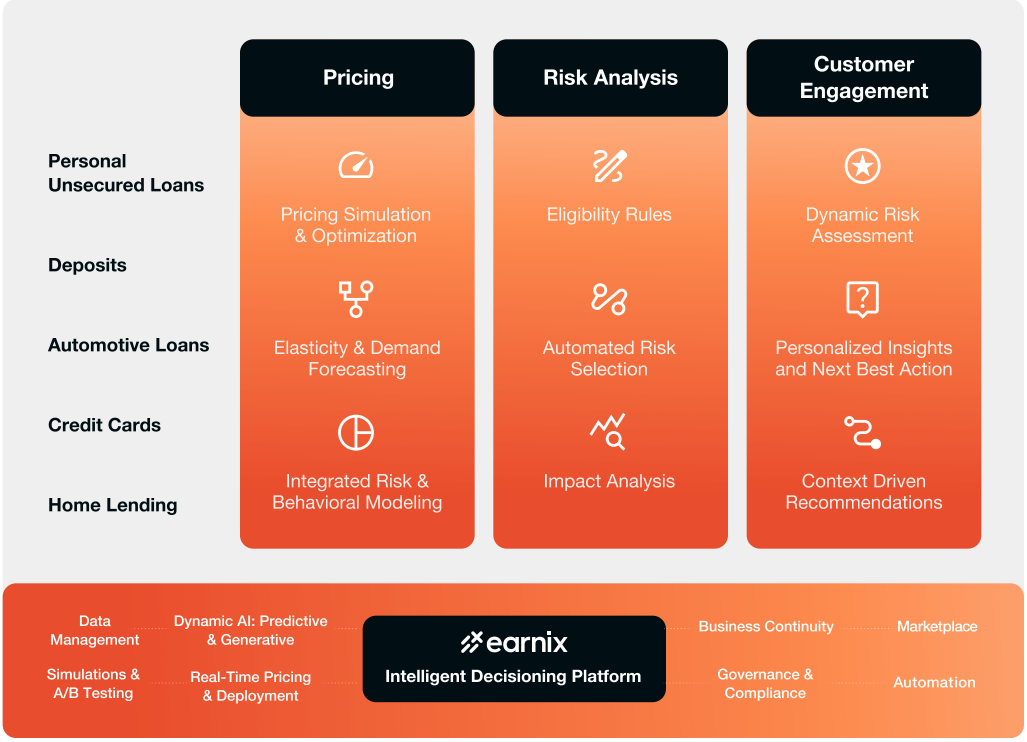
A cloud-native, composable architecture enables faster time to market, secure and governed execution, seamless ecosystem integration, and scalable pricing operations.

Earnix Platform Architecture

A Unified Pricing Analytics and Simulation Platform for Intelligent Lending Decisions

Delivering continuous pricing optimization requires more than isolated tools. It demands a unified platform that connects strategy, analytics, execution, and learning - while remaining flexible enough to integrate with existing lending ecosystems.

The Earnix Platform is built on a modular, API-first architecture that allows lenders to adopt capabilities incrementally, integrate seamlessly with core systems, and scale pricing maturity at their own pace. Each module operates independently yet shares a common data, model, and governance foundation.



Earnix Platform Architecture

Core Pricing and Decisioning Engine

Price-It (Core Pricing Engine)

Price-It sits at the core of the Earnix platform, providing an optimization driven pricing engine that models elasticity, tests scenarios, and executes pricing decisions in real time across channels. It delivers a governed path from analytical experimentation to production deployment - enabling pricing strategies to be tested, approved, executed, and continuously monitored within a single environment. Its low code/no code interface empowers business users while preserving full modeling flexibility for advanced teams.

Risk & Strategy

Lending Plus (Pricing & Risk Alignment)

Lending Plus allows pricing and risk teams to model credit strategies and pricing changes side by side, revealing tradeoffs before deployment. This ensures pricing decisions align with risk appetite, profitability goals, and portfolio performance expectations.

Data & Unified Intelligence Foundation

Elevate Data (Unified Data Foundation)

Elevate Data provides a governed, scalable data foundation that unifies internal and external data sources, ensuring pricing, simulation, and optimization are powered by consistent, high-quality, decision-ready data. It ensures data quality, lineage, and access control across teams, supporting enterprise-scale analytics while meeting regulatory and compliance requirements.

Earnix Platform Architecture

Decision Enablement, Modeling & Acceleration

Pricing Accelerator (Business Decision Enablement)

Pricing Accelerator gives business leaders intuitive dashboards, portfolio insights, and dynamic simulations without relying on IT. It shortens decision cycles and empowers teams to quickly assess performance and act on market opportunities. This allows non-technical users to explore scenarios, assess financial and portfolio impact, and align pricing actions with strategic and regulatory objectives.

Model Accelerator (Advanced Analytics & AI Operationalization)

Model Accelerator streamlines the development, deployment, and monitoring of advanced machine learning and AI models. It automates key steps to ensure models are accurate, explainable, compliant, and operational at scale.

AI Assistance & Execution at Scale

Earnix Copilot (AI Assisted Productivity)

Earnix Copilot uses generative AI to accelerate analysis, documentation, and configuration across pricing and modeling workflows. It helps teams interpret model outputs, automate routine tasks, and reduce friction in implementation.

Customer Engagement (Decisioning at the Point of Interaction)

Customer Engagement uses AI driven questioning, recommendations, automation, and contextual guidance to help frontline banking teams deliver personalized and compliant customer experiences while accelerating agent productivity and speed to value.

Accelerating Value with Earnix Managed Services

For lenders seeking to accelerate impact or extend internal capacity, Earnix Managed Services provides hands-on pricing and analytics expertise.

Managed Services support:

- Pricing strategy design and optimization
- A/B and champion–challenger testing
- Scenario modeling and simulation
- Ongoing performance monitoring and refinement

Lenders retain full transparency, governance, and ownership of strategic decisions.

By combining a unified pricing platform with optional expert support, lenders can scale modern pricing capabilities at their own pace - whether accelerating early adoption or extending established teams during periods of change.



Real-World Impact: Earnix in Action

Proven Impact. Measurable Results.

$47B+	1B+	20X	7%	+16%
Optimized annually across loans and deposits	Loan quotes delivered annually	ROI	Increase in origination volumes	Margin increase

> "It's an all-in-one solution. Earnix had everything we needed in terms of rate optimization, pricing agility, modeling, client segmentation, scenario testing and data import. The results were very good!"
>
> - Pricing Leader, Top Global Lender

Lenders that adopt continuous pricing optimization:

- ✓ Respond to volatility in days - not months
- ✓ Balance growth and margin dynamically
- ✓ Eliminate pricing blind spots across segments and channels
- ✓ Operate with full regulatory confidence

Pricing becomes a repeatable competitive advantage, not a periodic fire drill.

These outcomes reflect a consistent pattern: lenders using Earnix move faster, price more intelligently, and maintain control, turning pricing into a repeatable, enterprise-wide advantage.

By continuously feeding real-world outcomes back into pricing models and simulations, Earnix customers establish a learning loop that drives ongoing optimization and sustained performance over time.

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Next Steps

Ready to transform your pricing capability?

Pricing volatility is not temporary - it is the new normal. Lenders that continue to rely on fragmented tools will remain reactive. Those that invest in unified platforms, continuous optimization, and governed execution will lead with speed, precision, and confidence.

Discover how Earnix helps leading lenders move from reactive pricing to continuous optimization - delivering faster decisions, stronger governance, and measurable results at scale.

Contact Earnix today