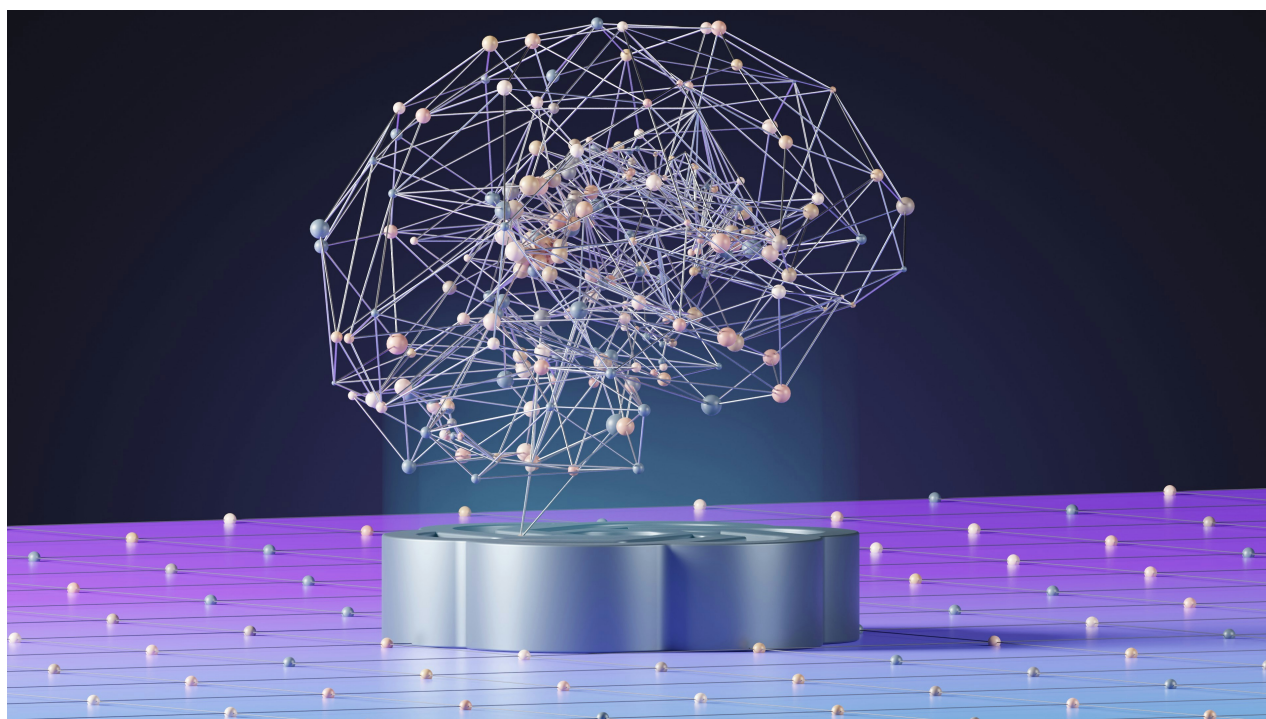


# How AI Enhances Recommendation Engines by Combining Models and Judgment

AI | Jul 24, 2025



Every day, banks face thousands of exception requests. A commercial client needs a rate concession to match a competitor's offer. A mortgage customer requests payment flexibility during a rough patch. A long-standing business relationship wants modified loan terms. Each decision carries weight and affects profitability, relationships and portfolio risk.

For 20 years, we've helped banks navigate these complex decisions through sophisticated price optimization. Now we're bringing that same discipline to AI-powered recommendations. But here's what sets our approach apart – We don't just tell you what to do. We show you the full picture.

## Beyond Binary Recommendations

Most recommendation engines work like traffic lights — red or green, approve or deny. They analyze the data, apply the rules and spit out an answer. But banking decisions aren't that simple.

competitive pressure in the market, etc. Then it builds the counter-case: the precedent it sets, the margin impact, the rate-sensitive depositors who might demand matching terms and so on.

But this is only the beginning. Our AI business analyst also suggests creative alternatives that consider the whole relationship. Maybe you offer a smaller exception than requested but make it contingent on early renewal of their term loan. Or perhaps you grant the full rate if they consolidate their operating accounts. These aren't pre-programmed options; they are relationship strategies synthesized from the full context of the situation.

RECOMMENDATION	"DEVIL'S ADVOCATE"
Given the customer's substantial relationship, zero prior exceptions and strong account balances, the 15 bp rate exception should be approved to maintain goodwill and preserve the valuable banking.	Maintaining strict pricing discipline requires rejecting rate exceptions even for high-value customers to prevent setting precedents that could erode overall pricing strategy.
ALTERNATIVES	
<ul style="list-style-type: none"> <li>Propose a comprehensive relationship review that ties the Term Deposit rate exception to an expanded loan package with more favorable terms for the upcoming \$5mm loan renewal.</li> <li>Offer the rate exception contingent on the customer increasing their average collected balance by an additional \$2-3 million over the next 12 months, creating a mutually beneficial arrangement.</li> </ul>	

By forcing our AI business analyst to explore multiple perspectives and creative solutions, we ensure decision-makers see angles they might have missed. This isn't indecision — it's intelligence. The relationship manager advocating for their client gets ammunition. The product manager protecting margins gets support. And the final decision can be more nuanced than simple approval or denial.

## Built on Price Science, Not Scripts

Organizational hierarchies are designed to foster a natural progression of growth. People typically start as individual contributors, then get promoted to manage small teams, make mistakes, receive feedback and gradually expand their scope. Along the way, many discover they prefer solo work and choose to remain individual contributors.

The sophistication of banking decisions demands far more than simple rule engines. When evaluating a mortgage concession request, checking boxes against policy rules isn't enough. Real decisions require a clear vision of the whole picture. For example:

- The customer's modeled price sensitivity and likelihood to refinance elsewhere
- Portfolio-level impacts of granting similar exceptions
- Confidence levels in our predictions (and transparently communicating when confidence is low)
- Strategic objectives like growth targets or margin protection

rather than chat interfaces, our AI business analyst synthesizes these complex dynamics into actionable insights. "Chat with data" is everywhere, but tools informed with appropriate and relevant insights are much less common. This divide is where we've focused on delivering unique and substantial value.

## Layered Intelligence in Action

This is where generic AI tools and their evangelists get it wrong. They promise that AI will magically surface insights, automate decisions and transform your business. "Ask your data anything!" they proclaim, as if the problem was ever about asking questions rather than knowing which questions matter.

Our AI business analyst combines multiple layers of intelligence: foundational analytics that detect patterns across all use cases, your specific portfolio data and customer behaviors, your institution's unique context (from terminology to fee structures) and real-time dynamics like recent promotions or market shifts.

When these layers work together, a rate exception request isn't evaluated in isolation. It's considered within your institutional context, current market conditions and the specific behavioral patterns modeled for that customer segment. The result? Recommendations that reflect the full complexity of your business.

## Learning from Every Decision

The best banks don't just make decisions — they learn from them. That's why we've built controlled experimentation into our recommendation framework. By introducing small amounts of randomized variation in recommendations, institutions can build evidence about what actually works. Did granting those mortgage concessions retain more customers than our models predicted? Did saying no to certain rate exceptions have less impact than feared? This isn't guesswork. It's a rigorous test-and-learn methodology applied to everyday decisions.

Our AI business analyst doesn't just help you make today's decision better. It helps you build the data to make tomorrow's decisions smarter.

## Empowering Human Judgment

We're sometimes asked why we don't just provide a single, confident recommendation. The answer goes back to our core philosophy: AI should enhance human decision-making, not replace it.

Banking relationships are complex. That commercial client requesting a rate exception might be considering moving their operating accounts. The mortgage customer might be your branch

By providing comprehensive analysis from multiple angles, we ensure decision-makers can blend analytical insights with relationship knowledge and strategic priorities with tactical realities. The result? Better decisions that consider both the quantitative and qualitative dimensions of banking.

## The Path Forward

Exception management is just one application of AI-enhanced recommendations. The same principles — sophisticated modeling, multi-perspective analysis and transparent confidence levels — apply across banking decisions. From product recommendations to risk assessments, the combination of deep analytics and AI synthesis opens countless new and incredibly exciting possibilities.

But technology alone isn't enough. Success requires starting with genuine expertise, building on proven methodologies and maintaining absolute clarity that the goal is accelerating human judgment, not replacing it.

Ready to see how AI-powered recommendations can transform your exception management and decision-making? Contact us at [sales@nomissolutions.com](mailto:sales@nomissolutions.com) to explore how our approach can work for your institution.

*Written by: Wes West, Chief Analytics Officer at Nomis Solutions*

This is Part 3 of our series on AI at Nomis. Coming next: How AI Accelerates Model Monitoring and Documentation.

Part 1: [How We're Actually Using AI at Nomis: A Pragmatic Approach to an Overhyped Technology](#)

Part 2: [How AI Accelerates Data Analytics without Replacing Analysts](#)

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