Mo.net Financial Modelling Platform
Agent-Driven Financial Modelling with Mo.net

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Revision 3

Introduction

Artificial intelligence is increasingly being applied across insurance decision processes, from underwriting to capital management. Yet the core of life insurance decision-making remains numerical, regulated, and deterministic. Financial models must be transparent, reproducible, and auditable. They cannot become probabilistic black boxes without undermining trust, governance, and regulatory acceptance.

This white paper outlines a pragmatic approach: positioning Mo.net as a high-performance deterministic calculation engine, orchestrated by AI agents that operate around the model rather than inside it. In this architecture, AI agents do not calculate cashflows, reserves, or capital. Instead, they determine when models should be run, what scenarios are relevant, how results should be interpreted in business context, and which actions should follow.

This separation preserves actuarial integrity while enabling faster, more adaptive, and more scalable decision-making.

The Limits of "AI Inside the Model"

There is growing interest in embedding AI directly into actuarial calculations. While attractive in theory, this approach raises fundamental challenges in practice. Financial reporting and capital frameworks depend on explicit assumptions, traceable logic, and deterministic outcomes. Introducing opaque statistical reasoning into the calculation layer creates difficulties for validation, audit, and regulatory review.

At the same time, many inefficiencies in actuarial workflows do not arise from the calculations themselves, but from the processes surrounding them: deciding which scenarios to run, coordinating analyses across teams, interpreting results, and translating outputs into actions.

This observation suggests a different path forward. Instead of replacing actuarial models, AI can be used to coordinate them.

Layered Architecture for Agent-Orchestrated Modelling

In an agent-orchestrated architecture, Mo.net remains the numerical core. Its role is unchanged: given a set of assumptions and scenarios, it produces deterministic, auditable results at speed.

AI agents sit above this layer. They observe business events, data signals, and management objectives. Based on those signals, agents decide whether a new model run is required, what parameter variations should be explored, and how results compare to defined thresholds or objectives. The agent does not "understand" insurance mathematics in the actuarial sense; it understands goals, constraints, and patterns.

The result is a clean division of responsibilities. Mo.net answers quantitative questions with certainty. AI agents decide which questions are worth asking.

Continuous Scenario Exploration

Traditional modelling workflows are episodic. Scenarios are defined at reporting dates or during specific exercises, often constrained by time and cost. This limits exploration and can delay insight.

With agent orchestration, scenario exploration becomes continuous. An AI agent can monitor experience data, economic indicators, or internal KPIs. When changes exceed predefined thresholds, the agent proposes a set of scenarios and triggers Mo.net runs automatically. Results are compared against historical baselines, and only material movements are surfaced to actuarial or management users.

Crucially, the model itself is unchanged. What changes is the intelligence governing when it is used.

Assumption Monitoring and Review

Assumption setting is another area where AI agents add value without encroaching on actuarial judgement. Agents can continuously assess emerging experience against existing assumptions, flagging deviations that may warrant investigation. When appropriate, candidate assumption updates can be tested by triggering Mo.net projections and measuring financial impact.

This creates a feedback loop in which assumption reviews are informed by timely quantitative evidence, while final decisions remain firmly in human hands.

Pricing and Capital Optimisation

Many pricing and capital exercises are iterative by nature. Teams explore combinations of parameters, structures, or constraints, gradually converging on acceptable outcomes. AI agents are well suited to managing this search process.

In this context, an agent can generate parameter sets or structural alternatives, submit them to Mo.net for evaluation, and refine the search space based on results. Mo.net acts as a deterministic scoring engine, while the agent handles exploration and comparison. Final outputs are reviewed and approved through established governance processes.

This approach accelerates insight without compromising control.

Why Mo.net Is Particularly Well Suited

Not all modelling platforms lend themselves to orchestration. Slow runtimes, opaque calculation logic, poor integration, limited external interfaces, or tightly coupled workflows limit the practical value of agent-driven execution.

Mo.net's design characteristics make it a natural fit. Its performance enables high-volume scenario execution. Its transparency ensures that every result remains explainable. Its separation of assumptions and calculation logic allows external systems to interact cleanly without altering core model integrity.

In an agent-orchestrated environment, these attributes are not just beneficial, but essential.

Governance, Control, and Auditability

Any use of AI in regulated financial processes must be accompanied by strong controls. In the proposed architecture, every agent-initiated model run is logged, reproducible, and attributable, using functionality already built into the foundations of Mo.net. Agents operate within defined boundaries, such as run limits, approval thresholds, and escalation rules.

Human oversight is embedded by design. AI agents may recommend actions or highlight insights, but deployment decisions remain subject to existing governance frameworks. This ensures alignment with actuarial standards, model risk management practices, and regulatory expectations.

Strategic Implications

As AI adoption accelerates, the question for insurers is not whether to use intelligent systems, but where to use them. Embedding AI directly into actuarial calculations introduces unnecessary risk. Using AI to orchestrate deterministic models unlocks value while preserving trust.

This positions Mo.net not merely as a modelling platform, but as a deterministic financial engine for an agent-driven future, capable of supporting faster decisions, deeper insight, and more adaptive workflows without sacrificing rigour.

Conclusions

AI agents and actuarial models are not competitors. They are complementary components of a modern decision architecture. By maintaining a clear boundary between reasoning and calculation, insurers can benefit from both.

Mo.net's speed, transparency, and cost efficiency make it especially well placed to serve as the calculation backbone in this emerging paradigm where intelligence surrounds the model, but the model remains authoritative.

Contact Us

For more information regarding the Mo.net platform and how it can help you with any of your existing or emerging enterprise calculation needs, please get in touch:

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