

PROPERTY AND CASUALTY INSURANCE

Always-On Portfolio Management: How Agentic AI Can Give a Lasting Edge to Commercial P&C Insurers

By [Erdem Altay](#), [Semih Durmus](#), [Nadine Moore](#), [Michael Schachtner](#), and [Victor Zhou](#)

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As property and casualty (P&C) insurers continue to invest in generative AI in areas such as underwriting and claims, an even bigger, unexplored opportunity sits at the top of the organization, in portfolio management. A new, agentic AI approach can unlock sustained competitive advantage for those who invest the time to build it.

P&C executives are under pressure to improve risk-adjusted return on equity while managing complex, multiline businesses in an increasingly uncertain global environment. They face a confluence of growing volatility, correlated risks, and data fragmentation. In this context, the gap between challenges and capabilities is widening as catastrophe exposure, claims severity, and competitive dynamics shift faster than teams can respond.

Many P&C commercial carriers face these challenges with outdated and fragmented systems, siloed data, and inconsistent definitions. While today's external environment necessitates agile, analytical steering of in-force portfolios, insurers struggle to unify data, assess potential steering actions, and make decisions in a timely manner. Where new demands must be met with rapid decision making, organizations are bound by inertia.

This capability gap offers a clear opportunity for early movers to gain a strong competitive advantage by embracing agentic AI for policy portfolio management. BCG estimates that those who do stand to improve gross premium written (GPW) growth by 1%-3%, combined ratios by 1%-2.5%, and return on equity by 1%-2%, based on a survey of more than 50 P&C commercial insurance executives. While companies are exploring these capabilities, the full potential has not yet been realized.

Current Portfolio Management Challenges

A variety of challenges are holding P&C carriers back from conducting smoother portfolio operations. Four in particular stand out.

Visibility is fragmented and shallow. Underwriting, claims, risk engineering, and reinsurance data sits in separate systems, obstructing visibility into concentration risk. Reporting provides aggregated views by line and region, but lacks the granularity needed to detect early shifts in margin or exposure.

“ Without a clearer visibility into the trends and concentrations of the policy portfolio, insurers lack a systematic way to maximize risk-adjusted growth and returns.

Portfolio rebalancing looks backward. Portfolio management is typically retrospective and reactive, making it difficult to proactively steer the book of business toward desired segments (for example, geography, broker, or client type). CFOs and CROs can test major capital and reinsurance scenarios, but not the full set of tradeoffs across growth, exposure, and capital allocation. Without a clearer visibility into the trends and concentrations of the policy portfolio, insurers lack a systematic way to maximize risk-adjusted growth and returns.

Adjustments come too late to impact underwriting, if they come at all. Portfolio adjustments, set centrally by CROs and CUOs, lose speed and clarity as they move toward the frontline. As a result, underwriter tools, queues, and referral thresholds continue to reflect outdated risk appetites and guidelines. The result is inconsistent execution of portfolio strategy across regions, products, and lines of business.

Risk-quality issues are detected only when large losses occur. Audits catch process-related mistakes but rarely identify risk-related oversights (such as mispriced coverage, missed exclusions, or deteriorating exposure profiles). Without continuous monitoring, errors in risk selection, terms, or pricing compound unnoticed across the portfolio until they surface as losses.

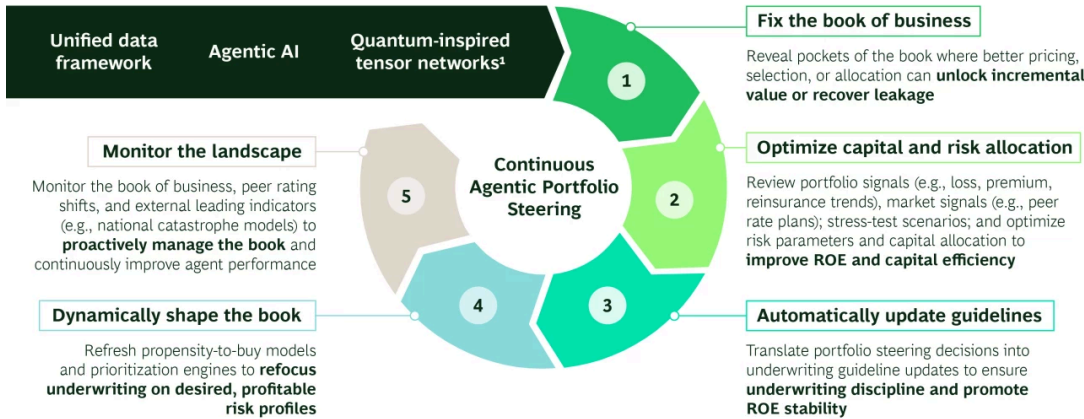
An Agentic AI Flywheel for Portfolio Management

Agentic AI presents the possibility of a granular, comprehensive, real-time, and continuously reinforcing portfolio management capability. These capabilities drive five steps of a continuous, AI-powered flywheel. (See Exhibits 1 and 2).

EXHIBIT 1

The Future of Portfolio Steering Is Continuous and Agentic

Core enabling technologies power the portfolio management flywheel



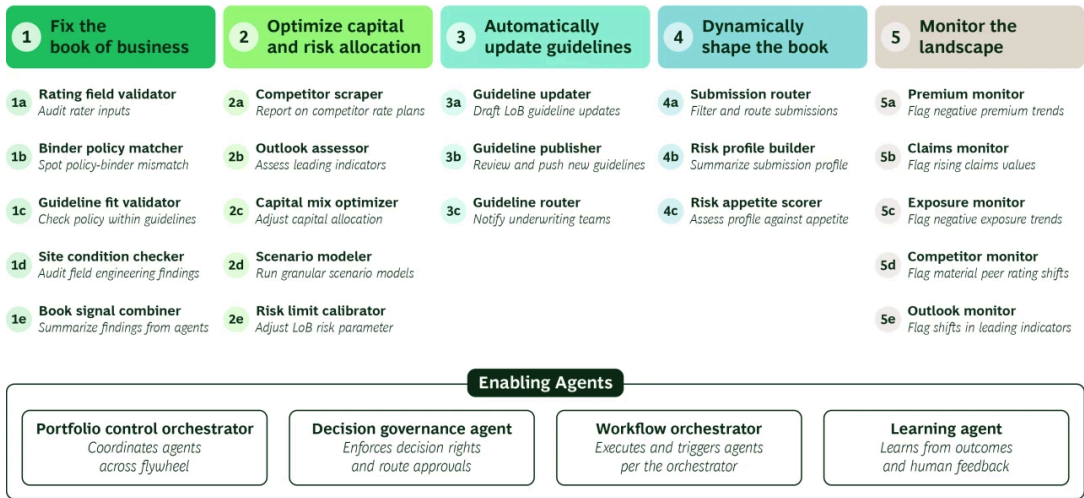
Source: BCG analysis.

¹Quantum-inspired tensor networks are classical mathematical frameworks that use concepts from quantum mechanics—specifically quantum entanglement and state compression—to model, store, and process massive multidimensional data arrays on standard classical hardware like GPUs.

EXHIBIT 2

Multiple AI Agents Power the Portfolio Management Flywheel

Examples are illustrative and not exhaustive



Source: BCG analysis.

1. Fix the book of business.

The process begins with agentic AI creating opportunities to drive new profitability by revealing pockets where better risk selection, assessment, pricing, and coverage can unlock value or recover premium leakage. AI agents achieve this by assessing policy data, in large volumes and in detail, across submissions, loss history, risk engineering, rater inputs, quotes, policies, and claims. In addition, agents can review declined business to identify missed opportunities that fit the organization’s risk appetite.




- In property, that means a detailed review of the schedule of values, limits, deductibles, occupancy, roof condition, and binder-to-policy consistency.
- In casualty, it's an assessment of claims, legal, and reserve patterns that point to a renewal action, tighter terms, or a different attachment point.
- In workers' compensation, it compares declared payroll, class mix, field safety information, and true labor exposure.

Critically, humans are still in the loop. The diagnostic runs on demand with role-based controls that determine who can trigger reviews and at what level. For example, the CUO can initiate a review for the full portfolio, and underwriting leads review their respective lines. (See Exhibit 3.)

EXHIBIT 3

Scalable, Granular Policy Review

AI agents provide P&C carriers with a scalable assessment of policy-level detail to uncover opportunities for improved underwriting, risk engineering, and policy administration

Use Case	Select examples across lines of business (<i>not exhaustive</i>)		
	 Property	 Casualty	 Workers' Comp
Confirm the limits and deductibles used for rating are accurate	Renewed without updating wind and hail exposure	Loss history used in pricing excludes recent claims	Reported FTE count understates true exposure
Audit issued policies for cases of manual error in rating	Mis-entered TIV, deductibles, roof age, occupancy class	Mis-entered sales, payroll, ISO code	Mis-entered FTE count, job classification
Identify mispricing in cases where field engineer input was inaccurate	Priced as flood risk despite protection (e.g., levees)	N/A	N/A
Catch policies where final policy form does not match initial binder	Policy issued without updated endorsement agreed by both parties	Bound for narrow exclusions but umbrella terms are broad	Policy issued with broader employer liability than priced
Spot issued policies that fail to meet underwriting guidelines	Property in high-wind county and TIV exceeding zone limit	Manufacturer with high-hazard products	Account with high safety risk written without loss control review
Check declined business that falls within guidelines and risk appetite	Newly built warehouse was declined despite strong construction	Contractor declined for job class but work is low-risk	Business declined for job mix but high-risk job is small share

Source: BCG analysis.

Note: FTE = full time equivalent; TIV = total insurable value.

2. Optimize capital and risk allocation.

In the next step, agents fine-tune capital allocation and risk-appetite setting. They look at signals from three sources: the live portfolio, competitor data from external sources, such as System for Electronic Rates & Forms filings, and leading indicators from third-party and internal risk data. The in-force book can be sliced across line of business, geography, broker, customer, and more with near real-time visibility into core metrics across top line (for example, GPW, net premiums written, sub-to-bind), bottom line (loss, expense, combined ratio), and return on equity. Leaders can test capital allocation, risk parameters, and reinsurance support through simulated impacts to portfolio KPIs. Agents enable robust, scenario-based simulations to forecast portfolio performance. CFOs, CROs, and CUOs review and rerun models to assess impact and tradeoffs of

various portfolio steers, for example, line growth capital consumption. Informed by comprehensive signals and finely-tuned scenario models, leaders are empowered to make informed portfolio steers.

3. Automatically update guidelines.

Once portfolio steers and appetite adjustments are finalized, agents update underwriting guidelines with line-specific adjustments, including referral thresholds, deductible floors, attachment points, and documentation requirements. After the CUO and line underwriting leaders approve the changes, agents publish updates to the guideline repository, policy administration system, and other downstream systems of record and notify frontline underwriters via email, collaboration tools, and core underwriting applications. The result is more consistent, disciplined underwriting aligned with portfolio strategy.

4. Dynamically shape the book.

The flywheel continues with agents dynamically reshaping the book of business by refreshing prioritization and propensity-to-buy models, submission routing logic, renewal triage rules, referral matrices, and other business logic. Those insights are then used to adjust everyday rules (such as how submissions are routed, which new business gets attention, what qualifies as eligible, and how renewals are triaged) so decisions across the workflow consistently steer the portfolio toward better outcomes.

“ New business submissions that fit the desired profile rise in underwriter queues, while risks that no longer match the target mix move into referral paths.

In practice, new business submissions that fit the desired profile rise in underwriter queues, while risks that no longer match the target mix move into referral paths. Renewal submissions are reevaluated against updated eligibility criteria and flagged for manual review where needed.

5. Monitor the landscape.

Agents continuously track salient external signals and compare portfolio performance against simulated outcomes from prior scenario modeling for early signs of trouble or drift. When agents spot negative trends or unusual patterns, they flag them and prompt a timely review by portfolio managers and leadership, depending on magnitude of variance. Instead of waiting for quarterly reports, decision makers get near-real-time visibility and context, allowing them to decide whether to stay the course, make a rapid adjustment, or rerun a fuller diagnostic from step one in the flywheel. The benefit is earlier intervention and less return-on-equity variability.

The Path to Building an Agentic Portfolio Management Capability

To operationalize a differentiating agentic-portfolio management capability, P&C commercial insurers must undertake focused efforts to connect currently siloed systems, standardize data definitions, and codify business logic and rules for agents to replicate. Moreover, insurers will need to reassess how their portfolio management teams operate for an agentic AI paradigm.

We recommend a three-step approach to building the agentic portfolio management flywheel.

Start now: fix the book to fund the journey. The process begins with the foundational steps of connecting existing data across systems and establishing standard data definitions. This unified data layer merges data across submission flow, quotes, binders, policies, claims, reinsurance, risk engineering, underwriting guidelines, and exposure into a coherent view of the entire policy portfolio. This initial phase is not a multiyear data transformation; it is a focused effort to connect what already exists across systems.

“ AI agents run a diagnostic across the portfolio, identifying mispriced coverage, terms leakage, concentration risk, and renewal optimization opportunities. This step already captures significant value by improving rate adequacy, correcting exposures, and tightening terms, generating measurable P&L impact that funds the next phase.

Once this begins, the organization adds layers of internal and external data (for example, broker submissions, market pricing signals, and third-party risk scores), building toward a knowledge graph that deepens with every cycle. With this foundation, AI agents run a diagnostic across the portfolio, identifying mispriced coverage, terms leakage, concentration risk, and renewal optimization opportunities. This step already captures significant value by improving rate adequacy, correcting exposures, and tightening terms, generating measurable P&L impact that funds the next phase.

Win in the near term: connect strategy to execution in real time. The next step builds on the data foundation by establishing a process pipeline that translates portfolio strategy into underwriting outcomes. Leaders build in protocols that determine, for example, how a change in risk appetite or capital allocation cascades into updated guidelines, referral thresholds, submission routing, and renewal triage. Agents draft the guideline changes, CUOs and line

leaders review and approve, and the updates are published directly to underwriting systems and workflows. This enables leaders to close the gap between a portfolio steer and its execution and do it in near-real-time rather than in weeks or months.

Win in the long term: monitor, model, and adapt continuously. The full flywheel effect is achieved by AI agents continuously tracking an insurer's portfolio data, while simultaneously monitoring external signals like economic trends, natural catastrophe risk, and competitor rate plans. Leaders can run scenario models on demand to test tradeoffs, exploring how certain capital allocation, risk appetite, and reinsurance moves might play out before committing to specific course corrections. AI agents can compare outcomes against predictions, learning from gaps and refining future recommendations. Over time, this creates a self-improving management capability that evolves from reactive reporting to predictive insight and ultimately to adaptive, forward-looking decision making.

Agentic AI translates portfolio objectives into actionable guidance, enabling CFOs, CUOs, and CROs to consistently fix the book of business, optimize portfolio actions, and steer underwriting. The result is a shift from reactive portfolio management to proactive, data-driven, and continuous portfolio optimization. P&C commercial insurers that embrace this capability stand to reap gains through lower combined ratios and higher, more stable return on equity. As advancements in AI continue, it is imperative that P&C carriers experiment and invest in agentic portfolio management capabilities to capture the competitive advantage for first movers.

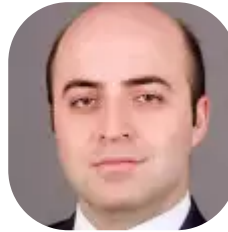
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Authors



Erdem Altay

Managing Director & Partner
New York



Semih Durmus

Managing Director & Partner
Minneapolis



Nadine Moore

Managing Director & Senior
Partner
Chicago



Michael Schachtner

Managing Director & Senior
Partner
New York



Victor Zhou

Project Leader
New York



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