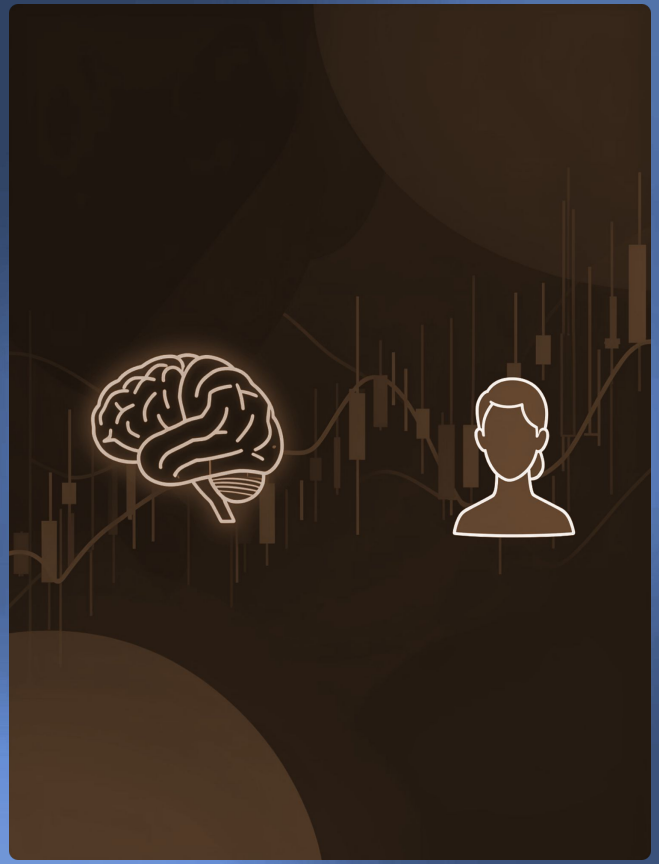


AI-Enhanced Investment Research: Thesis Engineering Framework

Structured, Robust, and Actionable Long-Horizon Investment Analysis

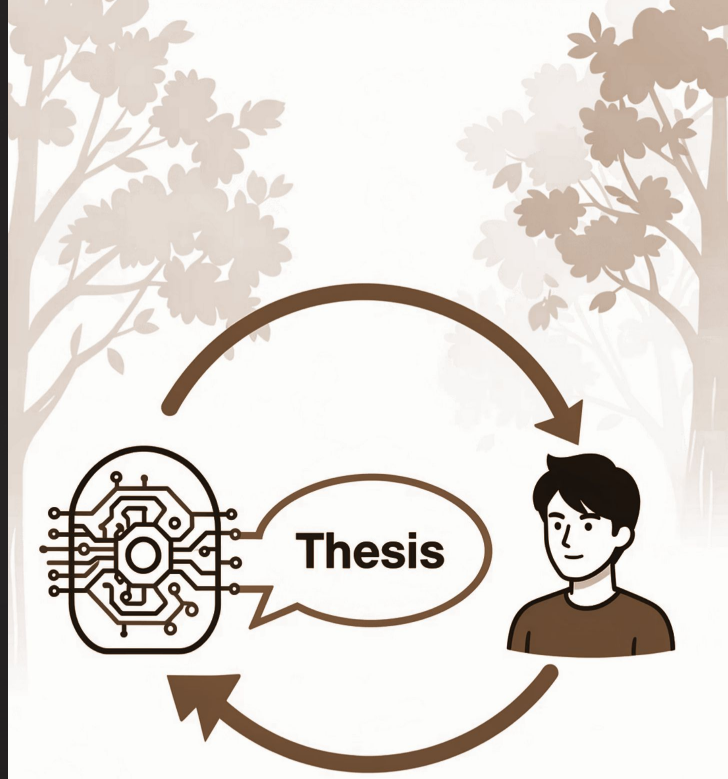
Presenter: Peter Kromkowski

The Challenge in Long-Horizon Investing

- Investment ideas often fail due to fragile assumptions and hidden dependencies.
- Analysts integrate diverse data but struggle to stress-test across multiple scenarios.
- Human judgment excels in synthesis but can miss systemic risks and tail events.

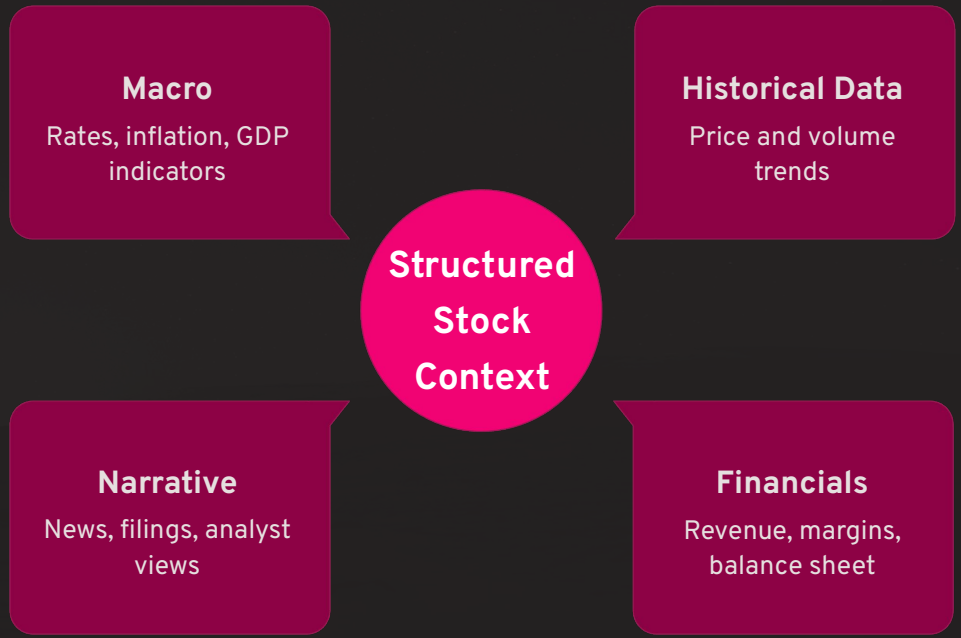
Framework Objective: Augmenting Human Insight

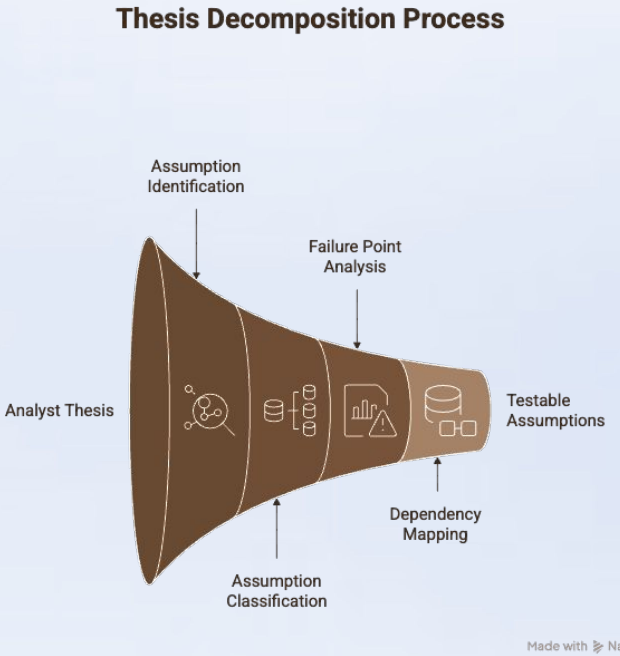
- Leverage AI to complement human research, not replace it.
- Systematically test assumptions and stress-test narratives.
- Maintain persistent memory of prior ideas and outcomes.
- Produce more robust, transparent, and actionable investment theses.



Starting Point: Thesis Exploration

- Situates stock within historical, operational, narrative, and macro context.
- Extracts relationships and causal connections from unstructured text.
- Tracks performance trends over time to constrain plausible scenarios.
- Does not produce automated buy/sell recommendations; informs analysts.

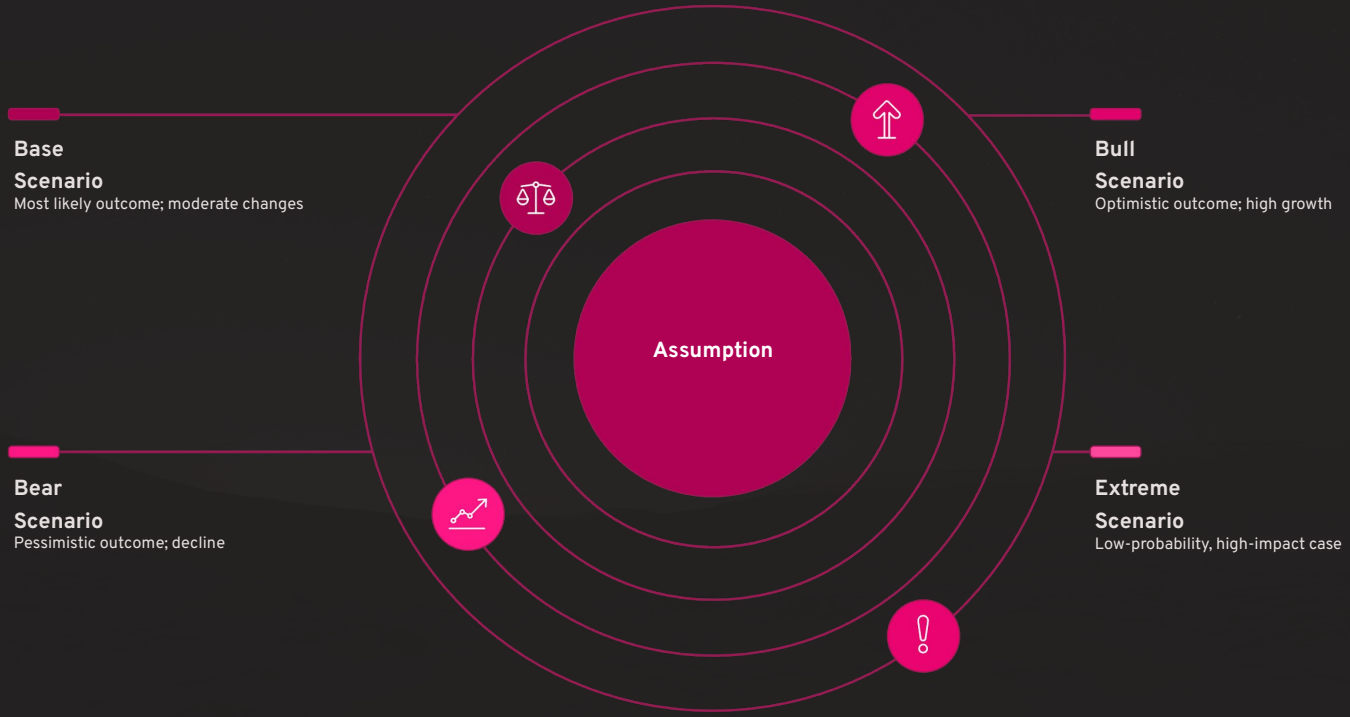




Thesis Decomposition: Unpacking Assumptions

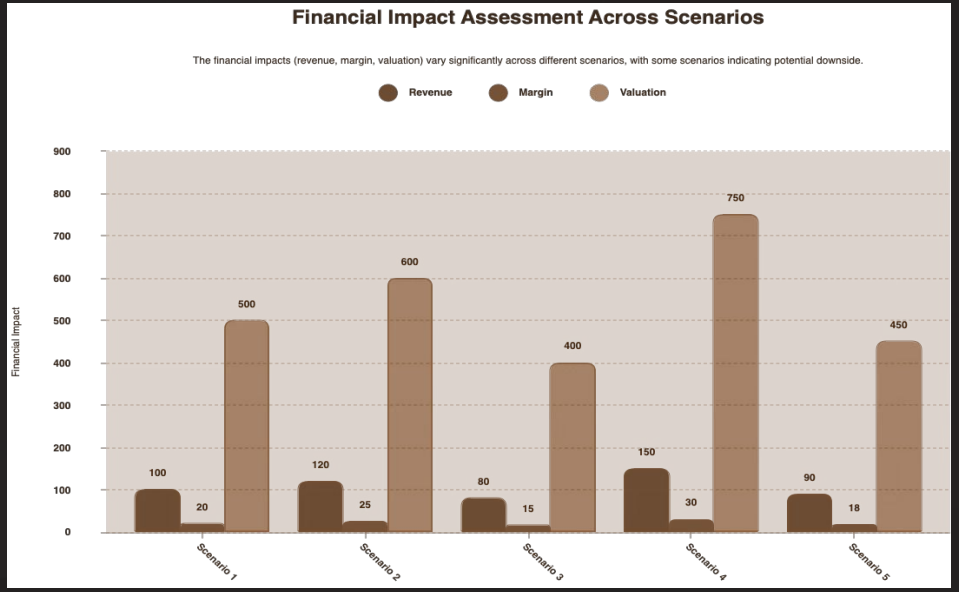
- Breaks analyst-written thesis into explicit, testable assumptions.
- Classifies assumptions by operational, macro, competitive, and behavioral dimensions.
- Identifies single points of failure and high-leverage dependencies.

Grounded Scenario Generation

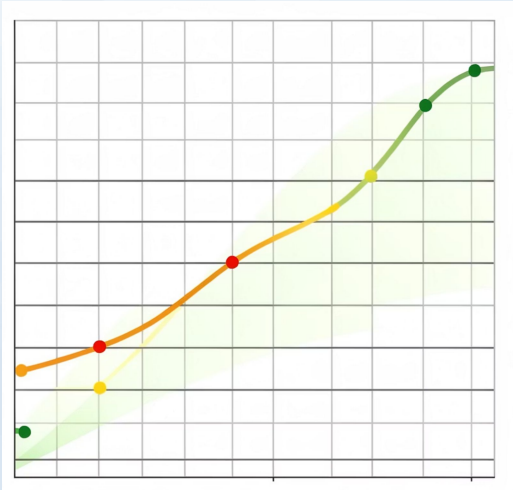


We generate realistic counterfactual scenarios for each assumption, leveraging historical analogs and peer performance to ensure their plausibility. This process highlights extreme but credible cases, providing a robust view of potential outcomes without creating implausible projections.

Scenario-to-Financial Translation



- Converts scenarios into revenue, margin, and valuation impacts.
- Identifies significant downside events (“tail loss”).
- Aggregates outcomes into a comprehensive assessment for analysts.



Evidence Integration & Temporal Updating

The system continuously aligns incoming data with existing assumptions, providing a dynamic view of investment theses.

Real-time Data Alignment

Continuously integrates earnings, key performance indicators (KPIs), and news flow with established assumptions.

Evidence Classification

Intelligently classifies new evidence as either supporting, contradicting, or ambiguous against the current thesis.

Dynamic Risk Adjustment

Updates survival curves and fragility scores in real-time, reflecting the evolving landscape of evidence.

Conviction Calibration: Aligning Confidence with Reality

This step ensures that analysts' confidence is rigorously measured against the objective resilience of their investment theses, guiding optimal position sizing.

Bridging the Gap

- Measures the precise alignment between analyst confidence levels and the intrinsic resilience of the investment thesis.
- Provides data-driven recommendations for position sizing adjustments based on real-time evidence and dynamic survival metrics.

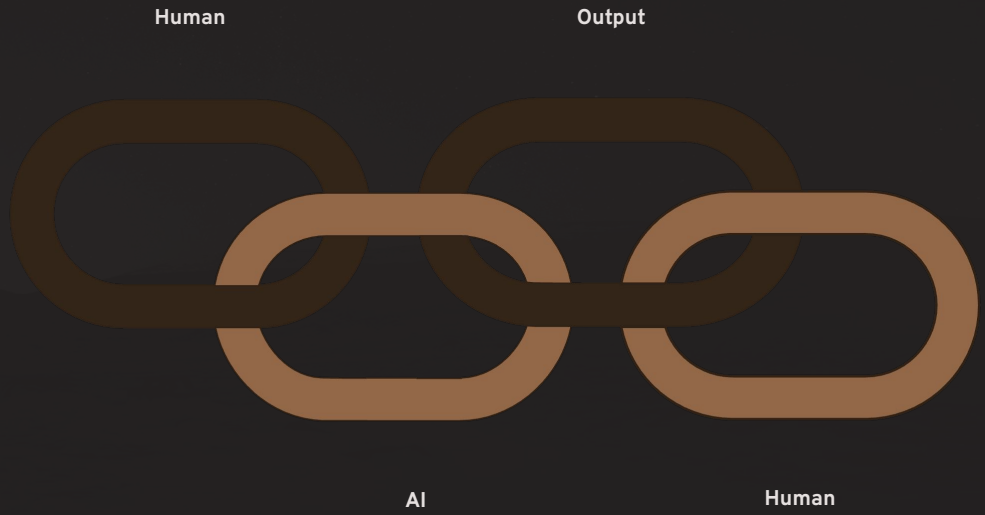
Continuous Improvement

- Generates rolling calibration metrics, offering continuous learning feedback loops for analysts.

Human + Machine Feedback Loop

The systems approach fosters a powerful collaboration between human intuition and AI's analytical prowess, driving continuous improvement and mitigating risk.

- Human interprets context and makes decisions; AI tests assumptions and maintains memory.
- Persistent memory allows self-improvement across multiple theses.
- Iterative loop reduces tail risk and exposes hidden dependencies.



Future Enhancements: Evolving Intelligence

1. **Outcome Tracking**
   Implement robust outcome tracking to accurately calibrate survival and fragility estimates against real-world results.

2. **Learning Loop Optimization**
   Develop an adaptive learning loop to adjust thresholds, refine scenario generation, and optimize relative risk weighting.

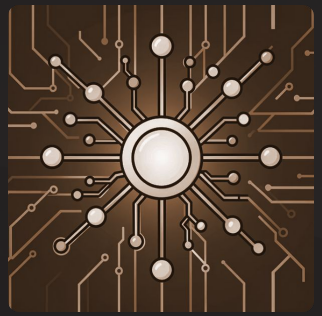
3. **Empirical Calibration**
   Introduce empirical parameter calibration based on realized outcomes, ensuring our models remain precise and relevant.

4. **Sector-Specific Guidance**
   Provide sector-specific half-life and monitoring guidance, offering tailored insights for diverse market segments.

Evaluation Metrics: Quantifying Performance

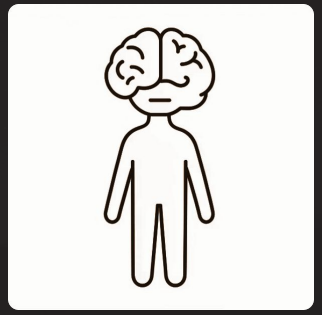
- Persistence of assumptions under stress.
- Severity of downside events and tail risk.
- Responsiveness of analysts to contradictory evidence.
- Improvements in confidence calibration and repeat-mistake reduc

Summary: Human + Machine Impact



AI's Role

- Enforces rigor in analysis and simulates various stress scenarios.
- Continuously tracks evidence and maintains a persistent institutional memory for all theses.



Human's Edge

- Provides invaluable contextual understanding and strategic judgment.
- Makes critical capital allocation decisions based on nuanced insights.

Together, the framework significantly lifts hit rates while proactively managing tail risk, resulting in durable, auditable, and well-understood long-horizon investment ideas.

Next Steps

Roadmap outlines key initiatives to further enhance the platform and solidify its position as a leading analytical tool.

V2 Implementation

Implement outcome tracking and historical calibration (V2).

Expanded Libraries

Expand scenario libraries and monitoring templates.

Tailored Guidance

Introduce sector-specific guidance and continuous learning.

Core Maintenance

Maintain structured, auditable, and explainable investment thesis evaluation.