



TRANSPARENCY AND AUDIBILITY IN ACCOUNTING AND FINANCE AT HIVE

www.hiveresearch.com

Executive Summary

Hive serves underbanked consumers earning \$60,000–\$70,000 annually, prioritizes transparency and auditability through sophisticated accounting and finance processes. Leveraging **Microsoft Dynamics**, a 10-person global accounting and finance team, maintains and produces financials that are prepared in accordance with GAAP. In addition, Hive actively uses secure fraud prevention methods via **Microsoft Teams**, ensuring operational integrity and transparency. Treasury operations in Atlanta manage over **\$50 million in annual cash flows**^[^1], while full fund administration by NAV—the third largest by assets under administration—ensures further financial accuracy, transparency and reliability. Advanced forecasting models achieve **95% accuracy in cash flow predictions**^[^1], and Hive's **Global Optimizer** employs cutting-edge simulation techniques to model future scenarios. By exceeding banking and insurance standards with stress testing and scenario analysis, Hive establishes itself as a leader in responsible outsourced lending operations.

Introduction: Transparency and Auditability in Outsourced Lending Operations

Transparency and auditability are critical for fostering trust in the lending industry, particularly for fintechs like Hive, who works with lenders who service underbanked consumers with small-dollar online installment loans. Transparency ensures stakeholders have clear financial insights, while auditability guarantees independent verification of operations and financial performance. This white paper details Hive's accounting system, team structure, treasury management, fraud prevention, forecasting, auditing practices, and advanced modeling, demonstrating how Hive surpasses lending operation's industry benchmarks.

Accounting System: Microsoft Dynamics Business Central and US GAAP Reporting

Hive utilizes Microsoft Dynamics Business Central Accounting System to provide financial reporting in accordance with U.S. Generally Accepted Accounting Principles (GAAP). This approach offers:

- **Unified Financial Data:** Combined operational and financial reporting, providing both reliable and insightful measures of results and financial impact^[^1].
- **Real-Time Insights:** Combining real time operational and financial information provides stakeholders with an up-to-date view of key operational and financial KPI's.
- **Scalability:** Supports Hive's growth, handling **over 10,000 transactions monthly**^[^1].

By using Microsoft Dynamics Business Central and US GAAP Standards, Hive ensures standardized, transparent, timely and accurate financial reporting, and provides the system and framework to support annual financial audits and stakeholder reviews.

Treasury and Cash Management: Ensuring Liquidity

Based in Atlanta, Hive's treasury operations manage up to \$20 million in annual cash flows^[^1], ensuring liquidity for investor payments and loan servicing:

- **Liquidity Management:** Maintains a near 100% on-time payment rate^[^1] for obligations and ensures cash positions are aligned to securely fund operation activities and obligations.
- **Integration with Microsoft Dynamics:** Tracks cash movements in real time, reconciling over **\$187 million of transactions in 2024 alone, giving a real time 360° view of cash positions**^[^1].
- **Strategic Allocation:** Optimizes capital deployment for stability using sophisticated forecast and modeling tools.

This centralized approach enhances transparency with traceable cash records and auditability through system integration.

Fraud Prevention: Secure Communications via Microsoft Teams

Hive employs Microsoft Teams for secure payment validations, avoiding email vulnerabilities:

- **Encrypted Channels:** Protects **over 1,000 monthly payment instructions**^[^1] from breaches.
- **Dual Verification:** Requires two approvals for transactions, reducing fraud by **100% since adoption**^[^1].
- **Real-Time Monitoring:** Flags anomalies within **24 hours**^[^1].

This innovative practice strengthens security and audibility, exceeding typical industry email-based protocols. (Not clear on what this refers to is this for Loan Customers?)

Forecasting Models: Managing Investor Payments and Costs

Hive's forecasting models predict cash flows for investor payments, acquisition costs, and operating expenses:

- **Data-Driven Projections:** Uses historical trends and future impact analysis to achieve 95% accuracy^[^1] in monthly forecasts.
- **Machine Learning Enhancements:** Improves precision, reducing variance to 5% **whereas variance would be closer to 15% using non-machine learning models.**^[^1]
- **Validation Process:** Aligns forecasts with actuals weekly, monthly and quarterly, ensuring reliability and constant refinement of inputs.

These models support transparency by sharing projections and auditability through consistent validation and refinement, allowing clear and extremely accurate cash flow predictions

Third-Party Auditing and Fund Administration

Hive engages Berkower – AICPA and PCAOB certified Audit firm [³]- for audits and NAV—the **third largest fund administrator by assets under administration**, managing over **\$350 billion globally** [²—for independent administration and oversight:

- **Financial Verification:** Annual AICPA Audits cover **all annual investor transactions within the fund** [¹].
- **Independent NAV Calculations:** Ensures accurate investor reporting for **all fund activities and reporting that is in compliance with all fund regulations and standards** [¹].
- **Enhanced Credibility:** Dual oversight exceeds typical fund standards another layer of oversight.

These practices reinforce Hive’s commitment to transparent and auditable financial operations and reporting.

Accounting Reconciliations: Precision and Audibility

Hive’s reconciliations provide granular accuracy:

- **Loan-Level Detail:** Reconciles **50,000+** individual loans annually [¹].
- **Processor and Vendor Tracking:** Matches **\$5 million** in vendor payments monthly [¹].
- **Audit Trails:** Supports external reviews with **99.8% accuracy** [¹].

This precision, enabled by Microsoft Dynamics, surpasses industry norms, ensuring trust and compliance.

Exceeding Industry Standards: Stress Testing and Scenario Analysis

To outpace banks and insurers, Hive integrates:

- **Stress Testing:** Simulates a **50% default rate increase**, ensuring portfolio resilience.
- **Scenario Analysis:** Models **10 economic downturn** scenarios, covering recessions, inflation, and rate spikes.
- **Sensitivity Analysis:** Assesses a **2% interest rate** change, impacting up to **\$1 million** in annual costs [¹].

These techniques, exceeding Basel III and Solvency II standards, prepare Hive for adverse conditions with robust risk management.

The Global Optimizer: Advanced Modeling for Future Resilience

Hive's **Global Optimizer**, powered by **Gurobi**, employs advanced simulation techniques—stock and flow, agent-based modeling, and causation modeling—to forecast over a 10+ year horizon:

- **Stock and Flow:** Tracks capital inflows/outflows, modeling over **\$100 million** in portfolio cash flows per year^[^1].
- **Agent-Based Modeling:** Simulates **100,000 borrower interactions**^[^1] for loan performance insights.
- **Causation Modeling:** Analyzes how drivers (e.g., repeat customer rate, performance, COGS, OpEx, volume, seasonality), impact the future replacing historical forecasting.

It optimizes deployment volume and capacity, capital requirements, and investor payments while adhering to operational constraints and forecasted inputs, enhancing transparency with forward-looking insights and audibility through reconciled data validation.

Conclusion: A Leader in Financial Management

Hive's adherence to GAAP accounting, secure operations, and advanced modeling—bolstered by Microsoft Dynamics, NAV 3rd Party Administration oversight, annual certified audits, and the Global Optimizer—set a high bar for transparency and auditability. With over **\$100 million in managed cash transactions**^[^1] and practices exceeding banking standards, Hive fosters trust and resilience, cementing its leadership in fintech lending.

Footnotes and References

[^1]: Hive. (2025). *Internal Performance Metrics*.

[^2]: NAV Fund Administration Group. (2025). *Annual Report on Assets Under Administration*.
[Link to NAV report]

[^3]: Berkower website: <https://berkower.io/about-us/>

Bibliography

- Hastie, T., et al. (2009). *The Elements of Statistical Learning*. Springer.
- Goodfellow, I., et al. (2016). *Deep Learning*. MIT Press.
- Sutton, R. S., & Barto, A. G. (2018). *Reinforcement Learning*. MIT Press.
- Jurafsky, D., & Martin, J. H. (2023). *Speech and Language Processing*. Pearson.



**NAVIGATING THE SHIFTING
GLOBAL ECONOMIC LANDSCAPE:
TARIFF DISRUPTIONS AND BEYOND**

www.hiveresearch.com

The global economy is undergoing a profound transformation. Tariff disputes, notably between the United States and China, are challenging decades of trade norms. For investors, this isn't just noise—it's a signal of deeper shifts. At Hive Financial, we leverage advanced analytics, complexity science, and artificial intelligence to decode these changes. This article starts with the basics—why tariffs matter—and scales up to sophisticated models and strategies, offering insights for everyone from high school students to Ph.D. researchers, with a focus on empowering investors.

Tariff Disruptions: The Ripple Effect

Picture this: you're selling lemonade across borders, and suddenly, a new tax makes your drink pricier than the local stuff. Customers drift away. That's the reality for businesses caught in the U.S.-China tariff crossfire. These taxes on imports and exports are pushing companies to rethink supply chains and markets. In 2022, U.S. tariffs on Chinese goods averaged 19.3%, while China's retaliatory tariffs hit 20.7% on U.S. products, per the Peterson Institute for International Economics. The result? Trade volumes are shifting—U.S. imports from China dropped 7.9% in 2023, while exports to Southeast Asia climbed.

This isn't a blip. Even if negotiations ease tensions, trust has eroded. Businesses are diversifying—think Vietnam or Mexico as new hubs. Investors take note: portfolios tied to U.S.-China trade face risks, but opportunities emerge in these pivot regions.

The U.S. Economic Model: A House of Cards?

Why is this happening? The U.S. has long been the world's consumer kingpin, importing far more than it exports. In 2023, the U.S. trade deficit hit \$773 billion, according to the U.S. Census Bureau. To fund this, it sells Treasury bonds—essentially borrowing from the world. But this model has limits. Foreign holdings of U.S. debt topped \$8 trillion in 2023, with China and Japan as key creditors. If confidence wanes, so does the dollar's dominance.

Here's a simple analogy: imagine maxing out credit cards to shop, relying on friends to cover the bill. Eventually, they'll hesitate. That's the U.S. predicament. Devaluation or inflation could follow, nudging global players to seek alternatives—like Europe or emerging markets.

A World Moving On

The global trade map is redrawing itself. The EU-China Comprehensive Agreement on Investment (2020) and Asia's Regional Comprehensive Economic Partnership (2022) signal a shift. These blocs are forging paths less reliant on the U.S. Data backs this: U.S. share of global trade fell from 14.5% in 2000 to 11.8% in 2022 (World Bank). Investors should watch these alliances—capital flows will follow.

Agent-based modeling (ABM) is a powerful tool for simulating complex systems, where individual "agents"—such as firms or nations—interact based on predefined rules that mirror real-world behaviors and incentives. Imagine applying ABM to global trade dynamics. We could model how a 15% tariff hike might ripple through international markets over a decade. In this simulation, virtual agents representing countries or companies would adjust their trade strategies in response to the tariff. The model might reveal, for instance, that U.S.-centric trade networks could shrink by 20%, while intra-Asian trade could grow by 12%, signaling a shift toward a more multipolar trade landscape. While this is a hypothetical scenario, it illustrates how ABM could uncover hidden patterns and help investors anticipate long-term shifts in global trade.

Complexity Science: Beyond Straight Lines

The economy isn't a clock—it's a jungle. Small moves, like a tariff tweak, can trigger outsized effects. Complexity science helps us see this. Unlike traditional models assuming equilibrium, it embraces chaos. Consider a supply chain: one firm's pivot to a new supplier can cascade, disrupting entire sectors.

A basic example is the **trade balance equation**:

$$\text{Trade Balance} = X - M$$

Where (X) is exports and (M) is imports. For the U.S., ($M > X$), yielding a deficit. But add feedback: a weaker dollar from deficits hikes (M) costs, potentially spurring (X). Complexity models amplify this with network effects—say, a 10% tariff shifts (M) by 5%, but secondary impacts (e.g., supplier bankruptcies) double the hit. Simulations can reveal these hidden risks.

AI: The Investor's Edge

Artificial intelligence supercharges our analysis. Take **multi-agent reinforcement learning (MARL)**: AI agents mimic economic players, learning optimal moves in a tariff-laden world. Artificial intelligence (AI) provides a unique way to explore complex economic challenges. Consider a theoretical scenario where AI agents are tasked with minimizing supply chain costs under a 25% tariff. In this model, AI could simulate how companies might adapt—potentially by shifting toward regional suppliers or optimizing logistics to offset tariff impacts. While specific outcomes would depend on the simulation's design, such an approach could reveal strategies for reducing costs and highlight sectors resilient to trade disruptions, like logistics in regions such as ASEAN that may benefit from increased regional trade.

This conceptual framework demonstrates how AI-driven analysis could uncover opportunities and risks. For investors, it offers a window into which industries might adapt more effectively to policy shifts, informing smarter, data-driven decisions without relying on unverified predictions.

AI also crunches real-time data—trade flows, currency shifts—spotting patterns humans miss. It's not magic; it's math plus scale.

Strategic Investing in a Complex World

How can investors thrive in today's unpredictable markets? The key lies in a mix of smart diversification, steady adjustments, and a sharp eye for untapped opportunities. Let's dive in.

Spread Your Bets Wisely

With tensions between the U.S. and China stirring up economic uncertainty, putting all your money in one place is a gamble. Diversifying—spreading investments across different countries and industries—can soften the blow from trade disputes or geopolitical curveballs. Think of it as building a safety net: if one region stumbles, others can hold you up.

Small Steps, Big Stability

The book "How Countries Go Broke" by Ray Dalio floats an idea called the "3-Part, 3-Percent Solution" for fixing U.S. finances. It's about making gradual tweaks—say, nudging taxes up by 3%, trimming spending by 3%, and boosting growth by 3%—to keep things steady without rattling markets. Investors can take a page from this: skip the big, impulsive moves and focus on small, calculated shifts that add up over time.

Look to Emerging Stars

Emerging markets are worth a closer look. Vietnam's exports shot up 14% in 2023, and India's tech scene is growing at an 8% clip each year. These places aren't just riding out the storm—they're powering through it. For investors, they offer a shot at strong returns in areas less tangled up in U.S.-China friction.

Let Data Light the Way

Advanced tools like agent-based modeling and artificial intelligence can sharpen your strategy. These aren't just buzzwords—they're ways to dig into market trends and spot opportunities that others might miss. Imagine simulating how a trade policy shakes out globally or predicting which sectors are poised to surge. That's the edge data can give you.

In a chaotic world, the smartest investors don't panic—they plan. Diversify to dodge the risks, adjust with purpose, and use data to find the gems. That's how you turn uncertainty into opportunity.

Conclusion: Thrive, Don't Just Survive

Tariff disruptions are a symptom, not the disease. The global economy is rebalancing—less U.S.-centric, more networked. At Hive Financial, we turn complexity into clarity, blending economics, AI, and data for actionable steps. For investors, this is no time for panic—it's time for precision. Diversify, analyze, and collaborate. The future favors the prepared.

Explore more at HiveResearch.com.

If you're interested in learning more about Hive Financial Assets, a private credit fund, with a track record providing consistent debt yield returns since 2017, please reach out to us at IR@HiveFinancialAssets.com or check out Hive Financial Assets.

This article is for informational purposes only and does not constitute investment advice. Hive Financial is not a registered investment advisor or broker and does not offer investment advice. Readers should consult with a registered financial professional before making any investment decisions.