Blue Fire AI (BFAI)

Emmalyn Risk Analyst

BFAI in a Nutshell: What We Do

Emmalyn – Risk Analyst

Blue Fire AI (BFAI) is transforming the Risk Industry with Emmalyn, built on a proprietary neuro-symbolic AI framework.

Trusted by leading global institutions, Emmalyn is used for:

- **Enhanced Risk Decision Support –** Providing cutting-edge company research to strengthen risk decisions.

Over the last 7 years, working with key financial institutions it was clear that the management of risk was...

- Well-invested and effective **People, Processes, and Data** enabled robust risk identification.
- Institutions demonstrated a solid understanding of **large exposures** with appropriate risk controls in place.
- When risks did arise, they were **managed with high proficiency and speed**.

Despite strong frameworks and oversight...

there was one question repeatedly being asked:

"Why did we miss it?"

- **Overwhelmed by volume**: There's too much data across too many companies — it's impossible to monitor everything effectively.
- *“Our processes are built around known risks — but we're only as good as what we already know.”*
- *“The real challenge is unrecognised risk — issues that aren't on our radar until they’ve already become a problem.”*

What Does Emmalyn Do?

She delivers seamless and explainable early warnings.

- **Emmalyn actively monitors listed companies** to detect medium-frequency, unrecognized risks through a targeted, bottom-up research process.
- **She provides a fundamental, cross-capital structure risk view** — spanning equity and credit — to detect early warning signs and surface unrecognized risks. These are often overlooked by traditional risk processes that rely on point-in-time or backward-looking analysis.
- **Her early warnings are explainable and actionable**, integrating into existing workflows to “nudge” analysts, PMs, traders, and risk teams — just like having a dedicated risk-focused analyst on the team.

Why Do Clients Employ Emmalyn?

- **Emmalyn scales risk monitoring**: Acting as an always-on risk analyst, she extends a team’s capacity to cover more companies without adding headcount.

- **Emmalyn strengthens existing processes**: She nudges internal processes by surfacing timely, explainable risk signals — turning unknowns into action.

- **Think of Emmalyn like airport security**: She scans every company like a suitcase, flags potential issues early, and hands off a clear, explainable signal so risk teams so they can act with confidence.

Emmalyn Risk Analyst (Co-Pilot)

Since launching in 2019, Blue Fire AI's Emmalyn Risk Co-Pilot has built trust, a proven track record, and deep integration into risk decision-making. Like Collision Avoidance or Lane Assist in modern cars, it enhances human judgment without replacing it.

Enterprise Adoption & Expansion

- Secured multi-year enterprise contracts with leading global institutions, including Tier 1 Investment Banks, Asset Managers, Hedge Funds and Sovereign Wealth.
- Evolving from a standalone tool to a fully embedded "intelligence inside" solution, making it seamless, indispensable, and deeply integrated into clients' workflows.

A Defining Moment in AI Adoption

- More than just a tool—Emmalyn is becoming an AI-powered intelligence layer, automating decision-making within core risk systems

Among the few AI firms achieving full enterprise integration, cementing BFAI's leadership in AI-driven risk workflows.

With "Emmalyn-as-a-Service" now available via API, this milestone sets the foundation for global institutions to partner with BFAI and unlock AI's full potential across their vast networks.

Everyone is Talking AI Why is Emmalyn Different?

Neuro-Symbolic AI vs. Generative AI: Precision Matters in Capital Markets

- Neuro-Symbolic AI – Combines symbolic reasoning (Heuristics from out-performant risk expertise) with neural networks (Localized optimization and search) to deliver accurate, explainable results.
- Generative AI – Uses deep learning to generate new content based on patterns in data but lacks precision, reasoning, and explainability.

Why Neuro-Symbolic AI is Superior for Capital Markets

- Precision & Accuracy – Embeds financial logic, capital market rules, and structured reasoning, minimizing hallucinations and false positives.
- Explainability & Auditability – Critical for risk processes.
- Beyond Pattern Recognition – Moves beyond statistical correlations which assume future reflect the past to cause-and-effect models critical for risk decisions

Why BFAI Leads in Risk Analytics

Blue Fire AI's Competitive Edge – Unlike generative AI models that rely purely on pattern detection in historical data and make a huge assumption of that repeating in the future, BFAI's neuro-symbolic AI is built in collaboration with domain experts, embedding financial logic, risk factors, and real-world constraints directly into its intelligence. This results in higher accuracy, lower error rates, and a fundamentally more reliable risk research process for capital markets.

Industry Evidence & Research

- **MIT-IBM Watson AI Lab (2022):** Neuro-symbolic AI improves **decision accuracy by 30%** over deep learning alone in financial forecasting. MIT IBM Watson AI Lab
- **DARPA's Explainable AI (XAI) Program:** Symbolic reasoning significantly enhances **model transparency and reliability** in high-stakes domains. IBM Research
- **J.P. Morgan AI Research (2023):** Generative AI struggles with **financial hallucinations,** while rule-based AI significantly **reduces risk errors.** IT Pro

Case Study – Emmalyn Head-to-Head with an Investment Bank

Silicon Valley Bank (SVB) Early Warning 20th January 2023, Two Months before the Collapse

Emmalyn (AI) Quick Note on SVB

Risk "Elevated 2" Review Name

Following on from multiple early warnings since January 2022, the Net Interest Income outlook has been under building pressure as the cost of deposits and borrowing expenses continued to accumulate. As a major lender to start-ups, SVB was adversely impacted by the reduction in venture capital investment activity, coupled with higher interest rates and high cash burn among its clients. Thus, the biggest red flag was the sudden drop in funding stability (Deposit-to-Total Funding ratio), as these factors highlighted its inability to retain deposits and led to a significant increase in wholesale funding in the second half of 2022. Over the last year, the risk outlook highlighted that the company's ability to generate core capital has severely deteriorated since the start of 2022. This trend is reflected in the spike of CSM for that year, resulting from some extraordinarily high leverage and the collapse in the value of assets (-$29.5 Bio in FY22). Currently sitting on BBB- rating, the company may find it extremely difficult to raise funds at favourable conditions and could easily dilute current shareholders by raising more capital. Leading analysts forecast more downside risk, with a potential drop of 10% in EPS by 2024.

Major Global Investment Bank Quick Note on SVB

Over-Weight - Price Target Dec 2023 $375

We recently hosted a deep dive webinar with SVB's CFO Dan Beck where we addressed several risk factors that have been at the forefront of investors attention. Since reporting 3Q22 earnings three weeks ago when the company indicated that 3Q22 likely represented a peak for NIM/NII, prompting us to reduce our 2023 EPS estimate by nearly 50%, the focus of investors rapidly shifted to the company's $16B of unrealized losses in its HTM securities to meet cash needs, thereby reducing tangible common equity. With this in mind, however, we walked away from our webinar with a view that (1) deposit outflows appear very manageable, (2) even if a worst case scenario plays out, SVB has multiple liquidity sources and (3) the inflection point for the balance sheet will likely be measured in quarters (and not years) On deposit outflows, while deposits to early stage customers (37% of total) would be considered less sticky, helping to temper pace of outflows from this cohort are substantial organic inflows from the sales of later stage start-ups.

Human-driven analysis is shaped by built-in biases — traditional processes can overlook or delay the recognition of real risks.

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