

Validation and Technical Interpretation of A-PCFF: Foundational Forecasting Engine of AFMF under DFAS Doctrine

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May 22, 2025

Official Metadata and Governance Statement

- **Date of Publication:** May 22, 2025
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- **Framework:** Alaali Financial Models Framework (AFMF)
- **Governance Architecture:** Dynamic Financial Applied Science (DFAS)
- **Governance Protocol:** DFAS-FEP – Foundational Engine Protocol
- **Model Classification:** Class II – Validated (Phase I Completed; Eligible for Class I Upgrade)

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1 Executive Summary

This validation certifies A-PCFF as a **DFAS-FEP Class II Forecasting Engine** and the foundational forecasting layer of the Alaali Financial Models Framework (AFMF). A-PCFF introduces a **first-mover innovation** by merging GARCH-based volatility forecasting with stochastic simulation to redefine liquidity as a probability distribution. The engine enables forward-looking metrics such as $P(FC_t \geq 0)$, liquidity Value-at-Risk, and 5th percentile thresholds.