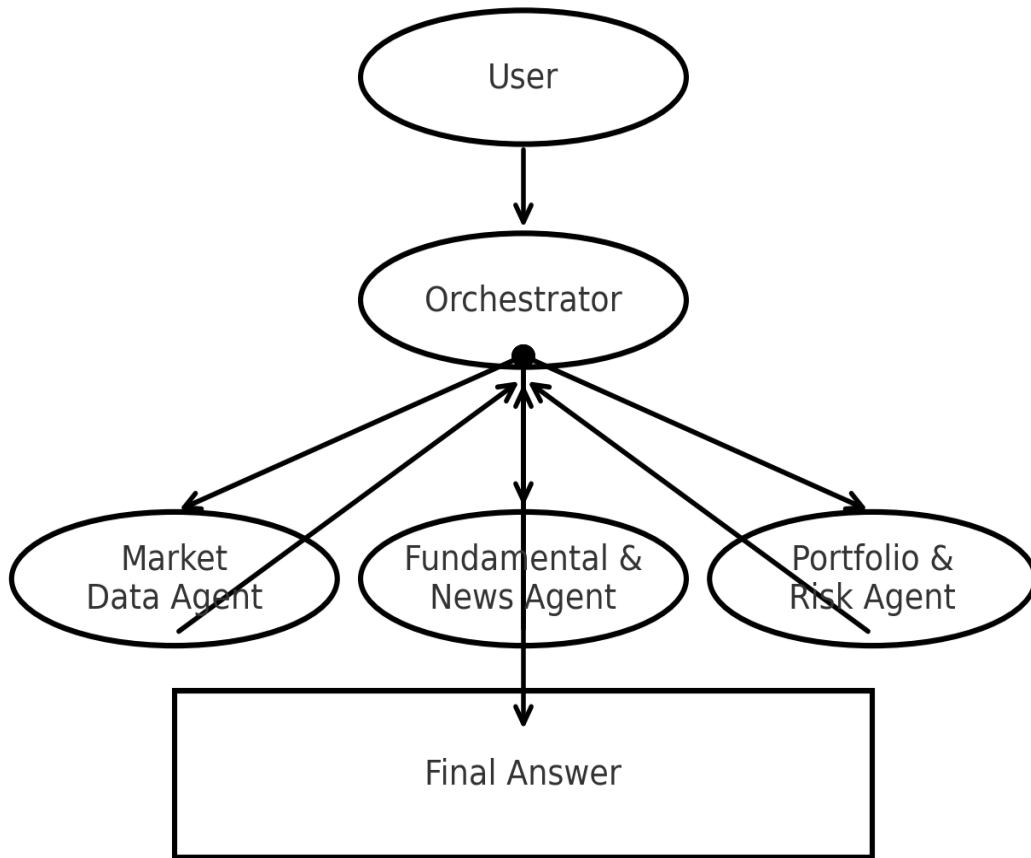# Financial Analysis Multi-Agent Architecture – Final Submission

Clean Reconstructed Diagram

1. System Overview

This multi-agent system processes financial questions through modular reasoning. The User sends a query, the Orchestrator decomposes it, and three agents handle specific subtasks: Market Data, Fundamental & News, and Portfolio & Risk. Their outputs flow back into the Orchestrator, which produces the final structured answer.

2. Agent Responsibilities

Market Data Agent
• Retrieves prices, volume, returns, benchmarks, and FX data.
• Normalizes frequency, fills missing data, aligns time ranges.

Fundamental & News Agent
• Retrieves company statements and computes financial ratios.
• Analyzes news sentiment and produces a fundamental snapshot.

Portfolio & Risk Agent
• Uses user risk profile and constraints.
• Computes volatility, beta, drawdown scenarios, and position recommendations.

3. ReAct (Reason Before Act)

Market Data Agent: Determines symbols, benchmarks, horizon, and data quality before fetching.
Fundamental Agent: Identifies key ratios and reporting periods before analysis.
Portfolio Agent: Reviews constraints and risk tolerance before generating recommendations.

4. Evaluation Criteria

Market Agent: Accuracy, completeness, stability.
Fundamental Agent: Ratio correctness, fact recall, summary faithfulness.
Portfolio Agent: Constraint satisfaction, scenario robustness, backtesting logic.

Final Output:
A coherent investment recommendation that merges quantitative, qualitative, and risk-based insights.