The Investment Performance Technology Landscape, 2020

SUMMARY

What are the key differences between investment performance measurement systems in the market? How are these tools evolving to better meet industry needs? These are important questions for firms considering significant investment in a new or upgraded toolset. Meradia has first-hand knowledge of many of the top systems in the market accrued from direct implementation efforts and have combined this knowledge with product strategy to provide insights on where the industry is progressing and to highlight disrupting themes. This is useful for investment performance professionals as a precursor to an RFP and/or an aid to firms considering a system change.

INTRODUCTION

There has been a renewed vigor to rationalize the investment performance architecture. This vendor assessment compares several key system factors: the ability to deliver performance book of record (PBOR), ease of implementation, product features, weaknesses, and product roadmap. This paper considers the features of these investment performance solutions:

- BNY Mellon (Eagle Performance) Data & Analytics Solutions
- FactSet B-One & PA
- Opturo (All modules)
- Ortec PEARL
- StatPro Revolution Analytics, Performance (owned by Confluence)
- SS&C Sylvan

TRENDS IN INVESTMENT PERFORMANCE MEASUREMENT SYSTEMS

Sophisticated Bespoke Analytics

Performance systems have historically struggled to keep pace with the intensive data and functional demands required for advanced portfolio analytics. The products that do keep pace meet the security master and index demands in one-way, shape or form. Vendors in the marketplace made some interesting choices in this regard:

1. **Invest considerable resources** to build comparable analytics capabilities into the core platform. Despite its origins as an investment data warehouse, Eagle Performance has invested heavily to enhance slicing and dicing capabilities more commonly found in front office analytics engines. Eagle Performance also has robust capabilities for multi-currency, multi-asset attribution and ex-post risk not commonly found in many performance solutions.

2. **Start with an analytics engine,** and then bolt-on required performance inputs. This is true for both StatPro's and FactSet's solutions. StatPro Revolution launched its new technology platform with Revolution Analytics in 2011. Revolution Analytics required basic performance inputs to be fed from an external source. This need was only satisfied within the Revolution suite with the addition of Revolution Performance in 2016. Only now, after ten years of development, can the combination of Revolution Analytics and Revolution Performance compete with the capabilities of StatPro legacy P&A engine Revolution was intended to leapfrog. Similarly, FactSet's Portfolio Analytics tool was a widely respected analytics engine that was frequently used to supplement portfolio performance calculated in other tools.

2. **(continued)** Its analytics were good satisfied forward-looking front-office needs but fell short of the full transaction-based performance inputs preferred by investment performance professionals. With the acquisition of B-One from Bi-Sam in 2017 and significant integration investment, FactSet now provides front-office analytics coupled with robust transaction-based performance capabilities. Both StatPro and FactSet products simplify analytics done in the 'performance' part of each product in favor of supplying the analytics engine with the important security level contribution to return. Complex analytics, slicing and dicing, risk and what-if are largely handled better in the analytics part of each product.

3. **Focus on user-defined methodologies.** Opturo has always been a flexible platform architected by mathematicians with an interesting approach to handle required data inputs. While it does have analytics capabilities, many of them are configured to order, as opposed to out-of-the-box. Similarly, Sylvan and PEARL have sophisticated user-defined attribution features.

Data Management is Critical to Successful Performance Measurement

Successful performance solutions have always had a strong data management backbone as the reliability of results is heavily dependent upon the quality and quantity of data fed from upstream sources. A performance analyst is a data analyst and therefore needs tools that enable rigorous input management, data validation and even governance. Data management capabilities for performance must load and transform, pre-calculate inputs, highlight exceptions and give performance managers summary indications of overall data quality with drill-down features to investigate underlying errors. Governance features include management dashboards with a top-down look at portfolio return health, the ability to selectively lock-down and publish final returns, and data lineage features to preserve and promote data provenance. Eagle Performance, FactSet B-One and StatPro Revolution Performance all include user-friendly dashboards that enable drill-through to supporting detail.
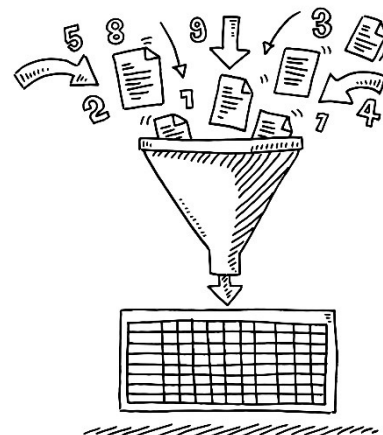
> **ETL** – Constrained IT budgets impact implementation timelines. Data hungry performance solutions include more and more features to simplify implementations: user-friendly ETL capabilities, self-service business process definitions and scheduling and prioritization features for data imports. These have done little to shorten implementation timelines as customer and data complexity has out-paced vendors' efforts to simplify and streamline. Moreover, separation of duties rules at larger institutions can limit what performance analysts can do or change impacting the usefulness of these embedded capabilities. FactSet B-One, Eagle Performance and Opturo have robust capabilities enabling users to load and manage key inputs. PEARL enables business users to schedule input jobs with some workflow notification.

> **Market Data** – Performance analytics depends on the availability and quality of market data (indexes, classifications, characteristics and other security reference attributes). Data aggregators such as RIMES and Bloomberg have improved the quality and consistency of core benchmark and security reference inputs. Most Performance tools boast out-of-the-box connectors to these well-used market data sources. FactSet B-One is both a performance engine and a powerful data aggregator. Software vendors like StatPro have migrated swiftly into the data space providing turn-key solutions that require clients to bring only portfolio holdings and transactions to the table. StatPro's recent partnership with JPMorgan could further enhance the product's ability to deliver Fixed Income indexes and analytics. Sylvan can be paired with SS&C's data aggregation platform, SVC; but SVC lacks the breadth of coverage offered by FactSet and StatPro with regards to market data. The move to data is not a surprise since simplifying integration of market data inputs can accelerate delivery of complex analytics and make features like VaR achievable.

> **Managing Exceptions** – Eagle Performance and FactSet B-One earn high marks in delivering easy-to-use, robust data harmonization functionality that transforms data inputs and dashboards to help manage, review and re-submit data exceptions. EagleML insulates new integrations from needing to understand underlying data structures with easy-to understand business term mapping. Note, both products have reputations for long implementations, though firms considering either should understand this is the result of global clients with complicated implementation needs, not product or service deficiencies. The mantra, "with great flexibility comes great complexity" applies here.

Managing Exceptions (continued) – Once a unique stand-out in business process and workflow, FactSet B-One is now average among its peers that have significantly invested in this area during the past five years. Customizable workflows with user-friendly dashboard views are now the norm. Eagle Performance's addition of Data Quality Monitor and Automation Center round-out capabilities for managing both data quality and the associated workload. Eagle can easily be configured to separate work among analysts with different responsibilities and provide transparency to inputs. StatPro Revolution Performance comes with dashboards out-of-the box. Opturo's high degree of customization makes pre-canned dashboards a challenge – the product lags in this important area.

Preserving Single Sources of Truth (SSoTs) – Opturo's sophisticated data integration capability has a unique approach. Opturo does not have a data warehouse. Instead, Opturo transforms inputs on the fly between authoritative data stores and the calculation engine eliminating duplication and the need for subsequent reconciliation between systems. Where Eagle Performance simplifies integration with EagleML, it still requires customers to move inputs to the Eagle data warehouse before they are available to the performance calculation engine. Opturo allows customers to leave authoritative data stores intact and in place.

Investment Data Warehouses come in a variety of flavors. Most attempt the difficult task of integrating market reference data with account holdings, transactions and synthesized performance and analytics. This inevitably creates data redundancy since performance systems also require mature views of market data and accounting to fully explain the investment management process. This redundancy would be exacerbated with a fully mature, data hungry PBOR. Opturo's unique approach theoretically eliminates the inherent redundancy by leaving authoritative data stores in place while providing data management, quality control and the mathematical layer required for performance and analytics. Opturo's relative 'light' footprint should be well-suited for firms that have invested heavily in SSoTs; however, the small size of Opturo's software development and implementation team make large asset managers wary. Moreover, Opturo's concept, while laudable, likely comes with scalability and other technical drawbacks inevitably associated when data is not readily available to the performance engine.

Integrated Outsourcing

Asset managers and asset owners continue to outsource operations, causing a shift in the competitive landscape with custodians and software vendors competing for business. Performance capabilities can be a differentiator; so much so that service providers have further blurred the lines between service and software with key technology acquisitions. BNY/Eagle and SSC/Charles River are two such examples. Some performance products include embedded services that enable their product to be more successful. Customers of FactSet's new Vault capability, which enables customers to persist book of record returns automatically, get basic data reviews and error checks free with that service. StatPro Revolution Analytics clients get security master coverage to ensure the analytics engine can function as intended. While not technically 'outsourcing,' this move of responsibility from the client to the vendor is a trend that will naturally grow as both technology and data are easily accessed by vendors in cloud-based solutions.

Technological Transformation

Successful vendors are making bold moves to improve or replace aging technology. No vendor has been as daring as StatPro with its complete cloud-centric rewrite. Focus on open architecture, APIs and web-based GUIs suggest pragmatic evolution. Sexier buzzwords abound – expect vendors to talk about Natural Language Generation (NLG), Social Impact (ESG) factors and the aspirational yet popular Artificial Intelligence (AI). Some products have evolved to meet changing business and technology trends. Others appear to have invested little.

Cloud – StatPro has made a significant bet on Cloud. A decade in the making, the StatPro performance suite is almost finished. The product suite includes Revolution Analytics (2011), Revolution Performance (2017) and Revolution Composites and is expected to be ready during the first half of 2020. While some clients could not afford to wait for the complete infrastructure build-out, others who remained on the legacy platform now claim the software has matured and they are ready to make the leap as capability gaps have been steadily closed. Eagle Performance is also undergoing its own cloud-based evolution with Eagle Access. It is not quite the as drastic as StatPro's "slash-and-burn" approach, yet it is aligned with overall software industry's move to the cloud to ease the pain of release management. B-One, Sylvan and PEARL are offered as hosted solutions, but this is a far cry from true cloud and its related benefits. Opturo's light footprint is easily adapted to cloud installations.

Data Extraction through API – Asset Managers have their own internal systems, websites and warehouses. Despite having similar desired outcomes, no two are alike. It is critically important; therefore, for the performance function to supply client warehouses (and other internal systems) with flexible mechanisms for data outputs. Flexibility in this area has been evolving across the board. Even FactSet, once a difficult system from which to extract data, has made leaps to simplify and accommodate. From a distribution perspective, the best tools offer flexible, graphical tools for quick internal views, and APIs for customizable, self-service access. Asset management firms view performance returns as data assets and use returns in different formats: self-service reporting, portfolio management systems, internal websites and mobile delivery regulatory uploads.

ON THE HORIZON

Platform Integration

The race to become the one-stop shop to meet core operational capabilities end-to-end is on. SimCorp, Blackrock, StateStreet, BNY Mellon, SS&C, FactSet and Bloomberg all seem to be in the race. Expect future customers to forego functionality for operational efficiencies gained from a single platform bet. The tools are lacking (for now) with weaknesses as different as the vendors' technological inheritance. These competitors are aggressively making moves to close the gaps that keep each from sufficiently fulfilling the end-to-end portfolio management value chain. This will be the space to watch as performance tools continue their slide towards consolidation.
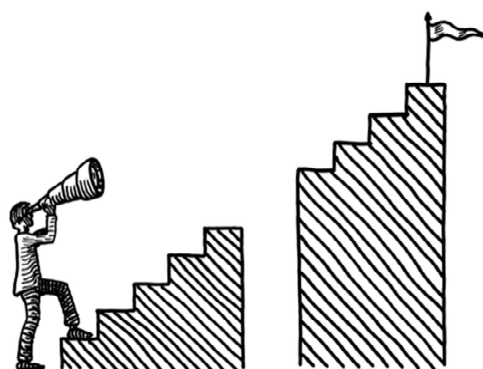
Performance Book of Record (PBOR)

The term 'PBOR' was coined by Richard Mailhos in his white paper "Characteristics of a Performance Book of Record" published by Eagle Investment Systems in 2015. The concept is gaining traction as firms continue to look for a single system that provides greater transparency into investment decisions and locks down performance data for audit needs. The capability to deliver against robust PBOR requirements is a tall order. PBOR combines ABOR and IBOR inputs with constituent level benchmarks for bottom-up and top-down performance analysis that FULLY explain the entirety of the investment management process. Eagle's robust source-centric data model may be the industry's best bet to deliver on this promise.

Eagle, FactSet B-One and Sylvan have most of the ingredients necessary to fully support a PBOR, but Eagle Performance can seamlessly combine ABOR and IBOR data within the same portfolio code giving it top marks. Simply combining ABOR and IBOR data in the same portfolio construct; however, is not quite enough since it falls short of all the features necessary to explain differences. No product we evaluated achieves this out-of-the box. New functionality that isolates differences between ABOR and IBOR – including timing, valuation, accruals or FX – would deliver on results promised with PBOR claims. FactSet and B-One product teams continue work on integrating these two disparate and complementary products. A successful merger of these two capabilities could deliver the elusive real-time Performance Book of Record complete with sophisticated slicing and dicing, state-of-the-art attribution and what-if analysis capabilities.

Multi-Asset Attribution

There is an increasing trend in the number of multi-asset portfolios managed globally. Diverse asset types and unique portfolio management strategies pose a new challenge to performance platforms in the attribution space. Two specific challenges are worth mentioning.
1.	The ability to measure and evaluate multi-level decision points requires flexible processing frameworks to walk up and down the portfolio.
2.	There is a need to assign several benchmarks (i.e. benchmarks attached to different levels within a portfolio) in addition to a top-level benchmark. This would necessitate eliminating certain modelling constraints. FactSet provides an out-of-the-box macro attribution framework that can be applied to many types of multi-asset class portfolios. Ortec's Investment Decision Process model (IDP) provides the flexibility to model a decision hierarchy. Eagle Performance can create custom configurations that cover some use cases.

No single product can sufficiently cater to all the complex and divergent needs of the marketplace. Multi-asset attribution is evolving, much like Fixed Income attribution was evolving a decade ago. We expect significant enhancements to products in this area soon.

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CONCLUSION

Choosing one performance system, or group of systems, over another is a decision best made by anticipating future challenges and considering a firms' operational and technology strengths. Some will value the sophistication of attribution capabilities; others will prioritize flexibility or favor cloud technology. Still others will prioritize operating model considerations (e.g., how the product does the work) over standard features.

Given the variety of choices and possibilities, many firms turn to experienced, well-versed, and vendor-agnostic partners to navigate an extensive RFP process that maximizes investment value.

HOW MERADIA CAN HELP

Meradia's experts in investment performance, operations and technology have in-depth knowledge of many of the top-selling systems. Our well-earned reputation for delivering clear, unbiased and objective analysis guides investment firms through the vendor selection process to choose a product that best fits the business needs based on an organization's strengths and technology capabilities. Further, we have the expertise to help prepare firms for their conversion from one platform to another, and to perform system implementations.

Laurie J. Hesketh, CIPM, PMP, is a Managing Director leading strategic engagements for Meradia clients. She has 20 years of experience in the investment services industry and provides senior-level expertise in the areas of data infrastructure and process development.

Laurie focuses on strategy and target operating model projects, most of which include deep dives in investment data warehouses, investment performance and client reporting transformation. She routinely advises on complex transformation projects from a variety of perspectives since she has held roles in asset management, outsourcing, and wealth management. Her technology background and subject matter expertise have proven extremely valuable in supporting clients' change initiatives.

Her strong foundation in investment operations and investment performance measurement, manufacturing operations, business analytics, human resources and information technology offers clients a unique blend of skills and cross-industry perspective.