



MAPLES
GROUP

OUTSOURCED CHIEF INVESTMENT OFFICERS

Adaptable Solutions for Outsourced
Chief Investment Officers

maples.com

OUTSOURCED CHIEF INVESTMENT OFFICERS

With investment programmes, client requirements and governance requirements becoming ever more sophisticated, outsourced chief investment officers ("OCIOs") require dynamic solutions customised to the needs of their investment professionals, operations specialists and clients.

The Maples Group offers a broad range of solutions to OCIOs. Recognising each client's unique needs and the individual nuances of their business processes, we provide bespoke solutions to OCIO clients that are scalable to evolve alongside their future requirements while meeting the challenges of their current environment.

Key Offerings

Platform Structuring and Operational Assessments: Our team can provide insight and guidance regarding investment programme structures, including managed account platforms and strategic relationship agreements based upon our experience in assisting in the establishment of such platforms, as well as assessments on operating models, process re-engineering and development of custom reporting and information system solutions.

Data Management: OCIOs typically have broad informational requirements which necessitate aggregating, processing and interpreting large amounts of data from a multitude of data formats from a wide array of data sources. We offer the robust systems (including client specific databases) and data management professionals

to manage this data, including trade, position and cash information enriched with additional data attributes aggregated from third parties and clients. We ensure that source data is correctly captured through automated reconciliations as well as a detailed review of all output by our analysts.

Portfolio Accounting: We offer a range of business process outsourcing capabilities that provide the systems, processes and professional expertise to address the varying portfolio accounting requirements of today's OCIOs and their underlying clients. Our solutions capture the idiosyncrasies of individual assets classes, client fee agreements and investment structures.

Portfolio reporting and analytics: Our systems can aggregate data from a diverse array of third parties into clear and consistent reports with accompanying analytics that provide insight into portfolio exposures, performance and risk to support investment decision-making processes, and provide contextualised and intuitive reporting to OCIOs and their underlying clients.

OUTSOURCED CHIEF INVESTMENT OFFICER OPERATIONS

Platform Structuring & Operational Assessments

OCIOs are facing challenging market conditions and have increasingly adopted alternative investment strategies to meet their clients' investment objectives. Complex structures have emerged that enable allocators to respond to opportunities within this space. However, many OCIOs require assistance in establishing the operational infrastructure needed to implement these strategies and structures.

Further, OCIOs are seeking opportunities to generate structural alpha and differentiation from their peers through the creation of investment platforms that facilitate enhanced transparency and informational resource for portfolio management while increasing control on underlying manager fees and expenses.

The Maples Group is actively involved in the launch phase of bespoke managed accounts, strategic relationship agreements, fund-of-ones, co-investment vehicles and other structures, liaising between investment managers, asset allocators, legal counsel and other service providers to ensure effective coordination and integration. Our services include:

- Upfront advice on leading market practices with respect to portfolio structures and operating models;
- Process design and reengineering; and
- Specifications of custom reporting and information systems solutions.

Our team of professionals and industry experts brings firsthand investment management experience and a commitment to providing OCIOs with the guidance, resources and insight required for efficient and effective operations.

Data Management

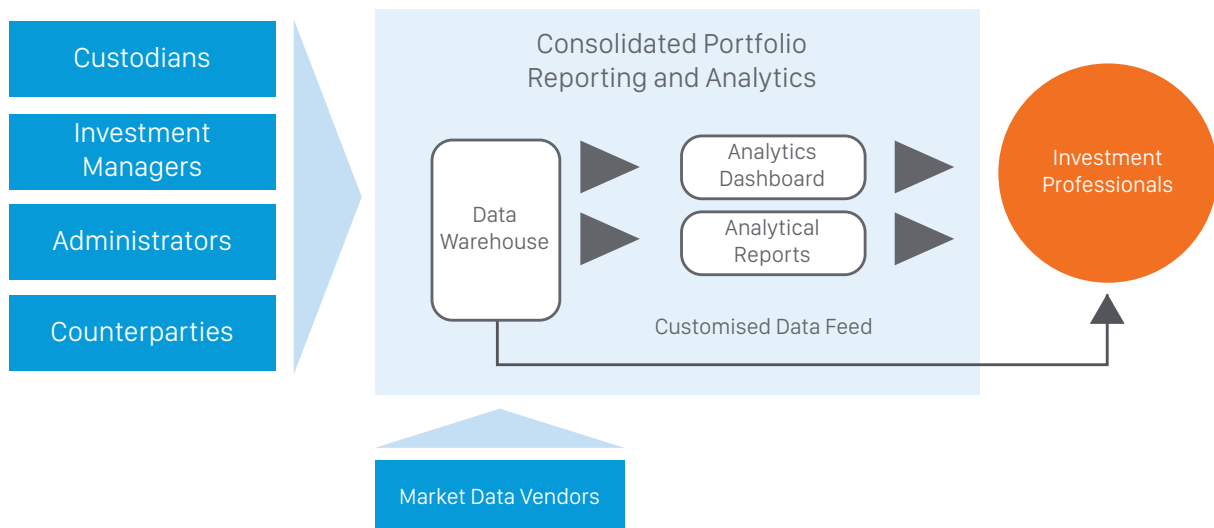
Outsourcing data management allows investment teams to focus on engaging with their clients and asset managers to drive performance and build better risk focused portfolios. Working with the Maples Group can also help supplement governance practices and enhance stakeholder reporting. Our data management services include:

- **Trade Capture:** Automated connectivity and capture of trades in a portfolio accounting system for liquid and illiquid asset classes;
- **Security Master Maintenance:** Capture of terms and conditions of each individual investment for liquid and illiquid asset classes;
- **Valuation:** Capture of valuation for each investment for liquid and illiquid asset classes;
- **Corporate Actions:** Corporate action monitoring, capture and reporting;
- **Reconciliations:** Trade, position and cash reconciliations; and
- **Custom Data:** Operational and technological solutions to capture any available data required by our clients for portfolio accounting, portfolio analytics and reporting, or for integration with downstream systems.

1. Data Aggregation

2. Data Standardisation and Enrichment

3. Data Access



Portfolio Accounting

Backed by industry-leading systems, the Maples Group maintains accounting records for the wide range of investment strategies and instrument types typically used by OCIOs, and ensures timeliness and precision in the delivery of our portfolio accounting reports.

Our activities include:

- Cash and collateral management, including, cash reporting, cash reconciliations, liquidity projections, counterparty exposure, collateral tracking and collateral limit monitoring;
- Trade, position and valuation recordkeeping;
- Income and expense accrual tracking;
- Customisable accounting reporting solutions; and
- Fee calculation / verification.

We recognise each client's unique needs and the individual nuances of their portfolio accounting requirements. Our consultative approach to developing customised solutions for clients has enabled us to become a seamless extension of the investment and operational teams at our institutional investor clients.

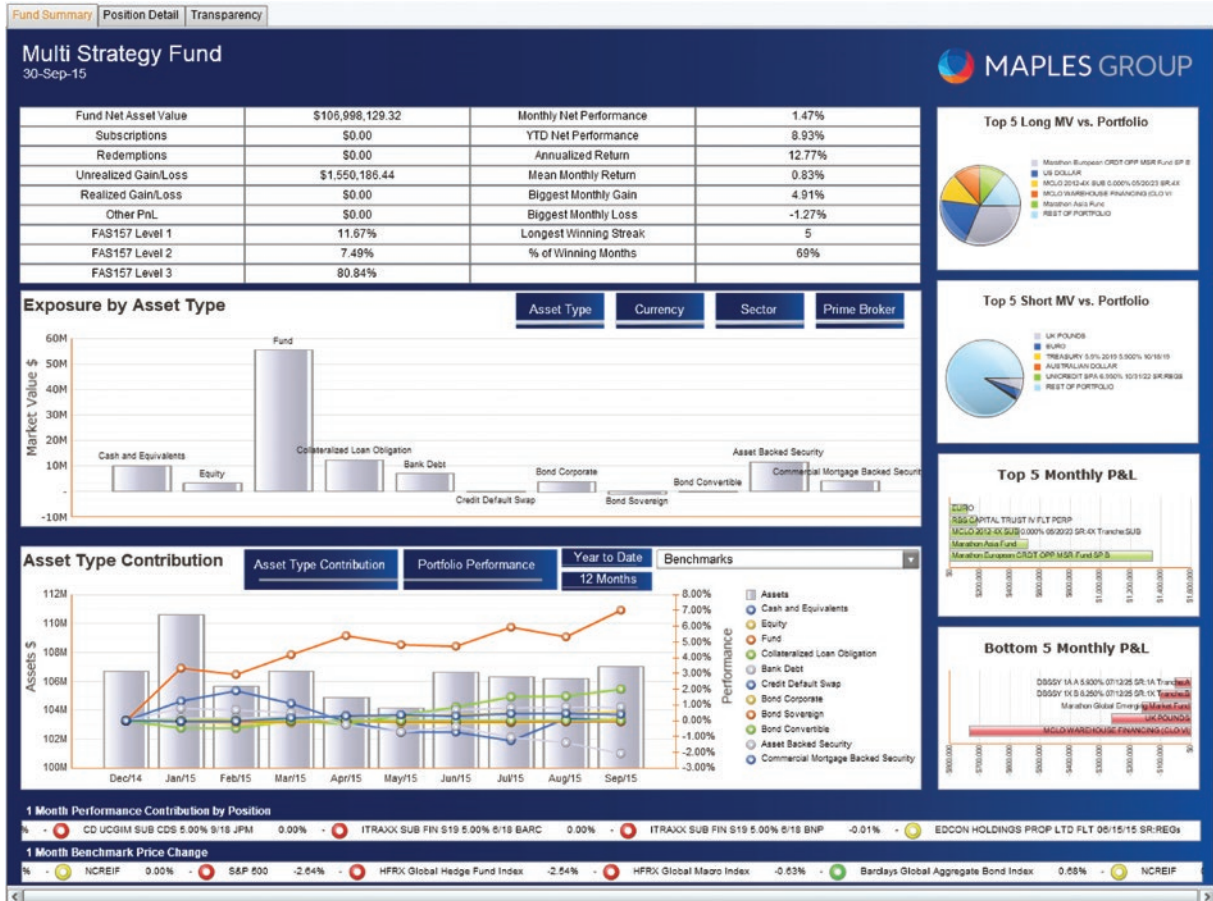
Portfolio Analytics & Reporting

The Maples Group offers an end-to-end consolidated reporting solution for OCIOs that transforms data into portfolio insights. Our systems can aggregate information from both our internally maintained accounting systems and third parties, including custodians, administrators and managers. This information is distilled into intuitive analytical reports that provide insight into portfolio positions, exposure, risk and performance to support investment decision-making and reporting processes.

Our services include:

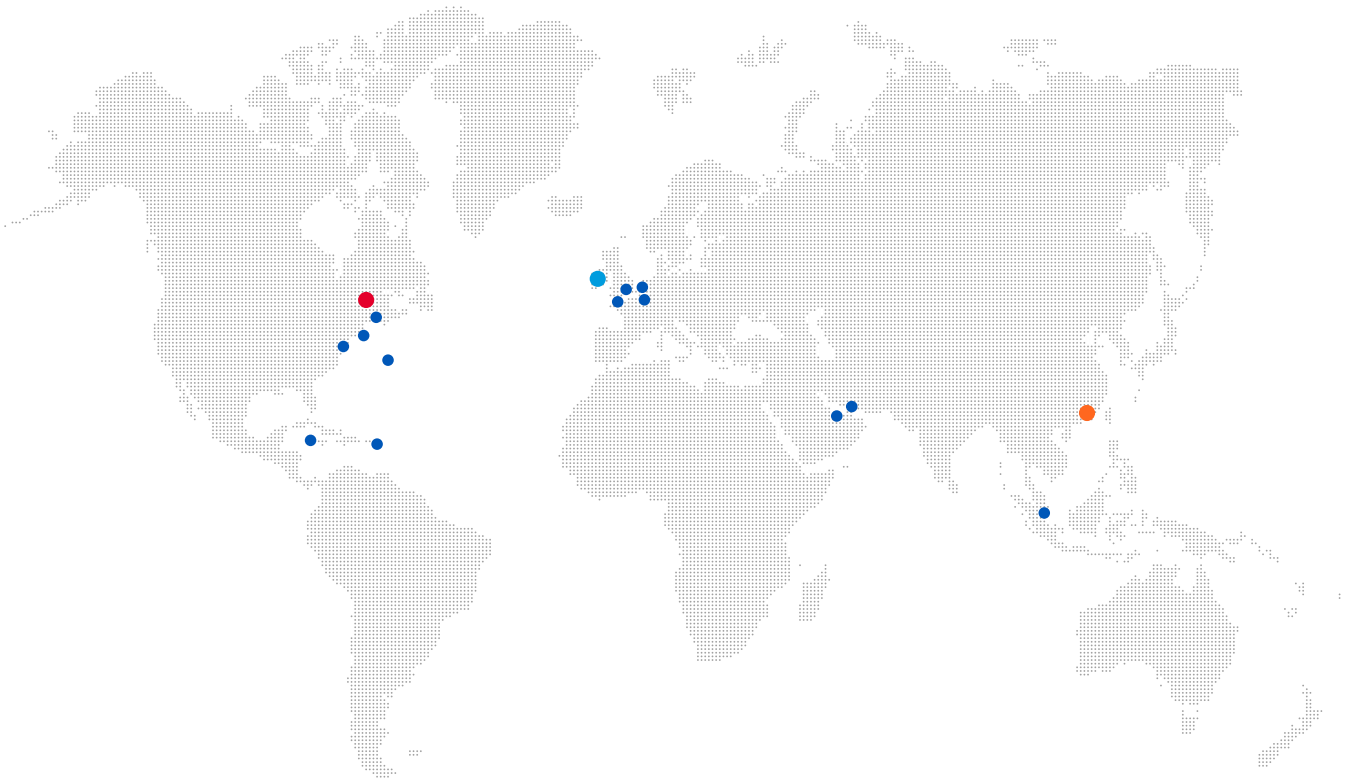
- Flexible reporting for monitoring exposures by different categories, including asset class, geography, industry, manager and strategy;
- Position-level detail and a granular breakdown of the funds' underlying assets;
- Cash management reporting;
- Performance calculations, including contribution, attribution analysis and comparisons against benchmarks;
- Risk measurements, including value at risk, what-if scenarios, factor analysis and correlation analysis; and
- Fee and expense monitoring and recalculations.

We recognise that a "one-size-fits-all" approach to analytics may not work for all OCIO's and their underlying clients. As such, we take a flexible approach to customising reporting formats to the needs of our clients.



GLOBAL OPERATING MODEL

Maximising responsiveness and optimising efficiency



The Maples Group staffs operations from multiple time zones enabling around-the-clock processing and support.

1. Hong Kong

Our team in Hong Kong commences work on T+0 allowing deliverable completion on T+1. Hong Kong staff specialise in data processing, document review and data consolidation received from a variety of sources.

2. Dublin

Our Dublin team continues the process with data review, data reconciliation and technology preparation.

3. Montreal

Final review and quality assurance occurs in Montreal, where our team ensures that all client deliverables are validated prior to release. Montreal also handles ad hoc queries, investigates differences and manages client service.

THE MAPLES GROUP CASE STUDIES

Streamlining Operations & Technology

Our client manages portfolios on an OCIO basis for investors with a total AUM of more than US\$5 billion. The client was seeking to streamline operational processes that were becoming increasingly complex due to an increase in the number of underlying clients, volume of transactions, complexity of assets managed and broad reporting needs of their investment team.

Our Brief

The client sought to address certain gaps in its operational infrastructure. Actionable information was reliant upon multiple, disparate and frequently manually-maintained systems and spreadsheets. There was a significant time lag between the availability of data and its readiness. Moreover, extracting comprehensive information about the investment portfolio was challenging.

Our Solution

Following an initial engagement to obtain a detailed understanding of the operational processes through which information is calculated and utilised, a strategy was developed for a complete outsourcing of the client's operations function, leveraging our global operating model, and the creation of an improved technology platform.

The full solution includes:

- Daily data management including aggregation of data from the client, custodians, investment managers and an array of third party data providers;
- Daily maintenance of the full general ledger for all underlying clients;
- A customised version of our online reporting portal that provides the client with an overview of their assets with drilldown capability, specific views by asset class, a variety of performance calculations and a wide range of risk information; and
- Access to a team of data, accounting and reporting experts 24 hours a day.

THE MAPLES GROUP CASE STUDIES

Optimising Data Processing & Reporting

Our client manages portfolios on an OCIO basis for over 50 investors. The client was seeking to consolidate data management, portfolio accounting and portfolio analytics into a single scalable, robust and customisable platform.

Our Brief

The client believed that their existing platform was not meeting their overall objective to aggregate mass amounts of data, cleanse and validate the data and provide timely and accurate information in a contextualised and intuitive manner for provision to multiple stakeholders. Subsequently, the client sought a single operations and technology platform to consolidate investment information across over 300 managers and funds across a broad range of liquid and illiquid asset classes. This platform would need to maintain full accounting records and leverage all available data to provide daily reporting early on T+1 at multiple levels of abstraction.

Our Solution

We began by customising our data aggregation, portfolio accounting and portfolio reporting platform to the client's requirements for two of their portfolios. Using the prototype as a basis, we worked collaboratively with the client to optimise existing processes and create a scalable infrastructure. Subsequently, we onboarded all portfolios onto the platform.

The full solution includes:

- Daily data management, including aggregation of data in a wide variety of data formats from the client, custodians, brokers, investment managers, underlying clients and an array of third party data providers;
- Daily maintenance of the full general ledger for all underlying clients; and
- Customised portfolio accounting and performance and risk reports that provide the investment team with daily portfolio views for investment decision-making and rebalancing purposes, and underlying clients with bespoke exposure, performance and risk information.

CONTACTS

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The Maples Group is a leading independent global fund services provider operating in key financial centres across the Americas, Asia, Europe and the Middle East. Working within these jurisdictions, the Maples Group offers a wide range of services and operational support to alternative investment funds and institutional investors. The Maples Group's expert teams and innovative technology provide clients with high-quality service and adaptable solutions that create value and enhance effective management.



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