

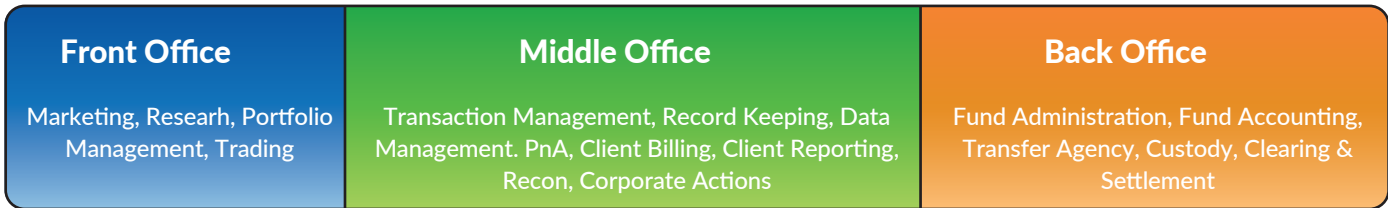
# Middle Office Outsourcing in the Investment Management World



# Table of Contents

Introduction	3
An overview of outsourcing	3
What led to the Middle Office Outsourcing?	4
Key considerations	4
Current outsourcing models	5
Decision Points for Asset Managers Considering Middle Office Outsourcing	5
Some Challenges in Client Onboarding in Middle Office Outsourcing	5
Where Hexaware Can Help in the MO Outsourcing Process	6
Conclusion	8





## 1 Introduction

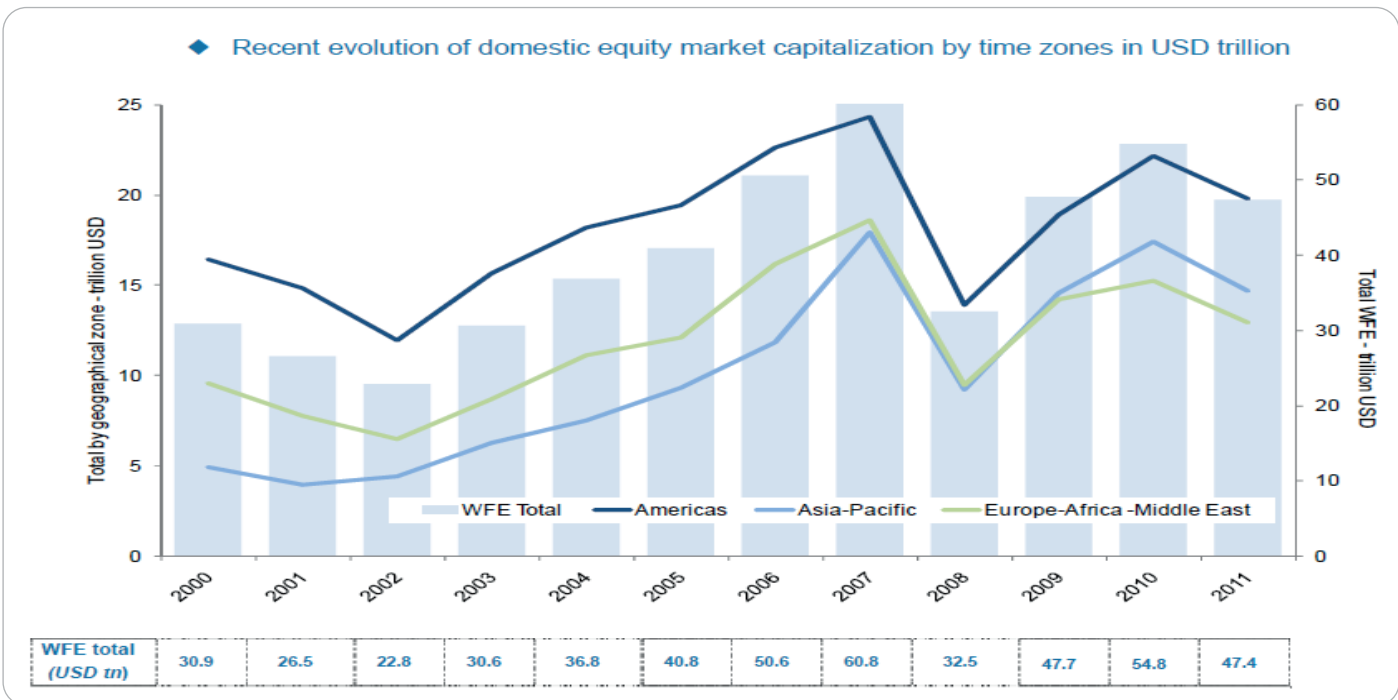
The primary role of an asset manager is to maximize returns on investments for their clients. The extremely challenging economic environment, especially post 2008, has forced Asset Managers to examine their business models and divest themselves of non-core activities so that they can cut costs and free resources to focus on their core competencies.

Asset Managers are looking to outsource non-core functions such as investment operations and one area that is gaining popularity in the post-2008 world is Middle Office Outsourcing. When used effectively, Middle Office Outsourcing can bring about additional efficiencies, savings and provide more predictable costing. Choosing the right suite of middle office outsourcing services can help Investment Managers focus on the critical front office services while leaving the running of their costly middle office functions to the service providers.

While the back office services have been outsourced to third-party Custodians for the last several years, the acceptance to third-parties managing middle office services is slowly gaining ground. With middle office outsourcing accounting for just about 20% of the current market size (back office outsourcing is about 90%), the scope for growth is tremendous and is driving major players such as BNYM, State Street, JPMC & Citi group invest in upgrading their platforms to offer a wide range of middle office services.

As these major players are already Custodians, offering middle office services would only extend their portfolio while offering a seamless experience for Asset Managers.

## 2 An overview of outsourcing



Source – 2011 WFE market highlights - <http://www.world-exchanges.org>



From the early 2000s, the global financial markets have been growing across in both the developed and emerging markets. As shown in the figure, the world market capitalization grew from US \$ 30 Trillion in 2000 to a peak of US \$ 60 Trillion in 2007 before ending 2011 at US \$ 47 Trillion. Supported by new technologies and processing capabilities, the trading volumes increased tremendously as did the number of global counterparties. In addition, with institutional investors increasing portfolio allocations to hedge funds and private equity, the use of alternative assets became mainstream.

With asset managers operating on a global scale and offering diverse range of investment products, one complication that arose was that they had to contend with an array of technology systems built for trading in specific countries with different reporting requirements, different currencies, and different asset classes in play. Moreover, integrations and mergers seen across the asset management world focused more on consolidation of brand names while leaving the processing to multiple and disparate platforms. All this led to high costs and inefficiencies in data delivery and performance.

By the beginning of 2000, it became apparent that the success of Investment Managers would be measured not just by the assets under management but also how efficiently and seamlessly they integrated the operational flow from the front to the middle and back offices.

### 3 What led to the Middle Office Outsourcing?

Middle office refers to the post-trade and pre-settlement areas - where due to the disparate systems—the straight through processing automation was difficult because of multiple interfaces from brokers, custodians and other third parties. Thus, increased manual intervention was necessary to complete the transactions.

Another factor that increased processing complexity was the increasing use of exotic, less-liquid asset classes by hedge funds and private equity. In such cases, valuations were difficult. This increased the need for a seamless middle office space, since the front office depends heavily on accurate data coming from the middle office for its investment decisions. Errors could lead to wrong decisions and/or delays in reporting which affects the perception of the investors on their asset managers.

In most cases, the back office operations were already automated and outsourced. Given that the middle office space had to seamlessly integrate to their existing back office services, Asset Managers turned to their existing back office service providers for additional services. A major advantage that these service providers had was that they understood the world of investment management.

However the road to middle office outsourcing was filled with many challenges, more than initially anticipated. This was essentially because of several decisions that had to be made with regard to consolidating systems, closing offices, reducing staff, and scoping business requirements. This resulted in significant delays of over 3 years or more in the complete outsourcing of various activities. In addition, the capital and time investment required of both the service providers and the asset managers ultimately led to the larger asset managers scaling back their middle office outsourcing goals.

However over the past decade, large players like State Street, Citigroup, JPMC and BNYM have been investing significantly in the middle office outsourcing arena and enhancing their service offerings. They have leveraged the lessons learnt in the past and the result is more robust models, which have given asset managers the confidence to initiate middle office outsourcing.

### 4 Key considerations

Asset Managers while considering outsourcing the MO operations, should look into the following criteria's:

1. Will the service provider be a true partner and not just a vendor?
2. Are low fees the only reason for outsourcing?
3. Are short-term savings the only decision factor? Have the firm's long-term gains and needs been factored in?
4. Is the data provided by the service provider accurate?
5. How fast will the service provider be, in providing the services?
6. Will the service provider be able to service all the asset classes?
7. Will the service provider be able to service globally?
8. Will the front office receive all data accurately to make investment decisions?
9. Will the service provider be able to provide customized solutions? For example, reporting?
10. What will be the impact on BAU during transitions/ conversions?
11. What will be the impact on the existing teams with the Asset Manager?



## 5 Current outsourcing models:

### Lift outs:

1. The Asset Managers operations teams and all other related functions are carved out, ring fenced and taken over by the service provider.
2. This way the service provider gets the experienced staff and the asset manager immediately gets the benefit of the costs reduction, both fixed and variable.
3. Care should be taken by the service provider to ensure a seamless transition experience for the transferred employees including change in work description, location, corporation culture as also the associated uncertainties.
4. When application system and technology movement is involved then service provider have to make significant investments to ensure integration with their existing platforms.
5. In terms of execution, this model is complex.

### Conversions:

1. There is no movement of staff or systems to the service provider; only all services and business are moved to the provider's platforms.
2. This model has gained popularity due to the reduced time to execute with conversions (in some cases) completed in a year's time, though the service provider has to invest significant time and material in the areas of due diligence well ahead of the executions.

### Component based:

1. Reduction in costs associated with technology, staff and locations
2. Don't have to build or renew licensing on systems, thereby reducing large investments in technology
3. Expand quickly geographically in business and not having to invest heavily upfront on technology to enter new markets
4. Leverage capabilities of large service providers who continuously upgrade and invest in technology to give the latest and faster service offerings
5. Don't have to invest regularly in the changing regulatory requirements, as large service providers will anyways invest in them, given their global scale
6. Can add new asset classes, without having to bother about enabling or building new technology to accommodate these new asset classes

Though the middle office outsourcing opportunities certainly add to the existing revenues of these service providers, it does come with a number of challenges. The service providers seek to address these challenges by teaming up with their IT vendor partners to execute at lesser costs by outsourcing to the partner's offshore locations in India.

## 7 Some Challenges in Client Onboarding in Middle Office Outsourcing:

1. Extended Requirement Phase (Scope Creep)
2. Prolonged impact analysis of core systems and process
3. Mismatches in systems cause increased manual intervention and lowered STP
4. Prolonged migration timeframe
5. Indefinite testing timeframe
6. Negligible standardization of reporting
7. More time needed to define requirements to appropriate level of granularity
8. Difficult for operations and technology stakeholders to understand feature/functions being described and requiring sign-off
9. Requirements and system design need to have more detail and be written in conjunction with technology and operations
10. Operating model needs to be better understood at the time requirements are written
11. A heavy reliance on module/component testing, "stubbed" data and manual testing
12. Full end-to-end integrated testing only undertaken in UAT
13. Lack of business domain knowledge results in a heavy reliance on Requirements and Business SME's
14. Lack of quality test data and minimal use of automations
15. Need for a better understanding of data lineage/ flows through architecture
16. Need for more comprehensive test data in the technology testing phases



- 17. Need for more domain knowledge within technology and more staff with end-to-end knowledge of architecture and business
- 18. Disparate locations of technology, operating and product teams hamper communication, learning and knowledge sharing
- 19. Too many handoffs between AD teams and a need for better ownership of key interfaces

## 8 Where Hexaware can help in the MO outsourcing process

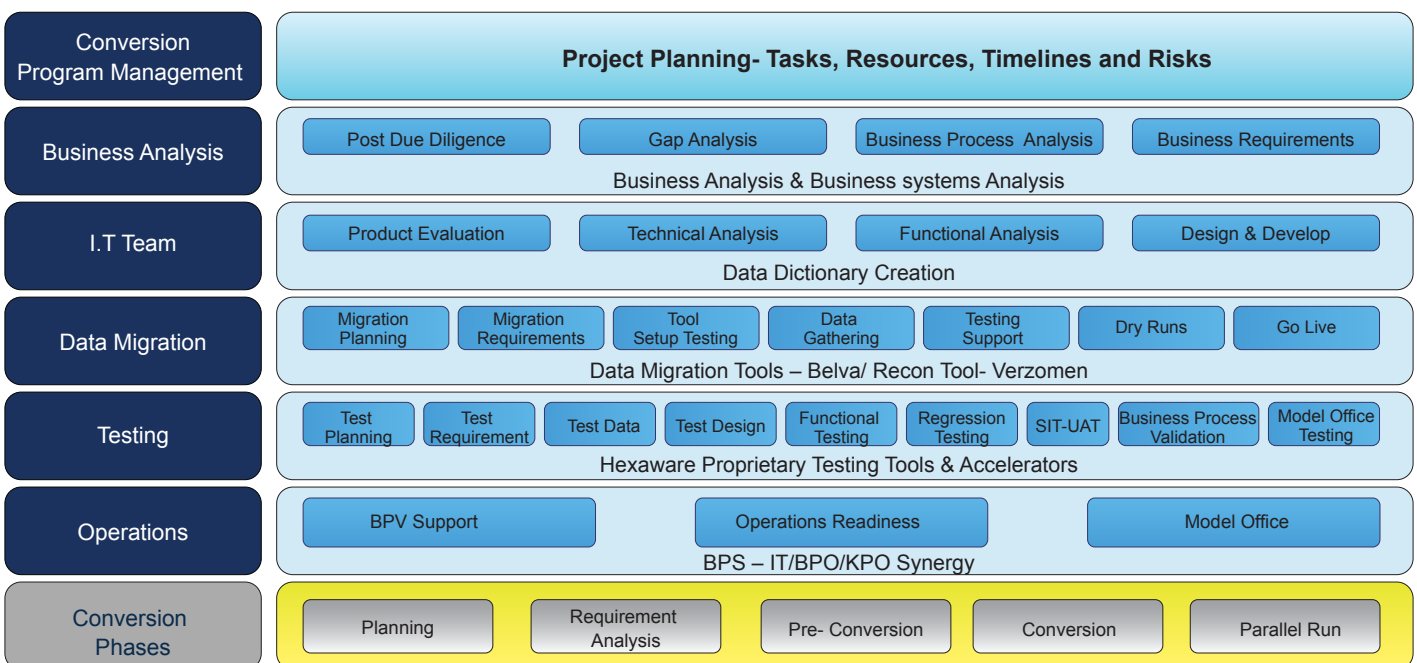
### Due Diligence and Analysis:

1. Deploy domain consultants with deep end-to-end middle and back office asset management experience for accelerated/ rapid business understanding of the customer operations with detailed business flows
2. Use Hexaware developed application portfolio mapping tool for quick mapping of customer landscape
3. Compare client requirements with standard service catalogue and identify gaps
4. Deploy process mapping experts for detailed process mapping in reduced timeframes
5. Use Hexaware developed process mapping tools / techniques / templates like Belva and Verzonen
6. Document application and gap analysis using templates based on industry best practices
7. Create online knowledge management for future reference

### Transitions and Steady State:

1. Use Hexaware developed tools like DART, BIMA, and BELVA for quick and efficient data migration
2. Leverage best-in-class SDLC incorporating tenets from Hexaware
3. Deploy domain consultants with deep end-to-end asset management experience for more business-focused support during BUAT and CUAT testing.
4. Tap into alliances with our partners such as HP and IBM for test automation tools
5. Use of Hexaware in-house Testing COE
6. Leverage optimized onsite-offshore model for extended coverage
7. Off-the-shelf service management process packs like Rapid SM (service desk, incident, problem, change management)
8. Periodic analysis based on Lean & Six Sigma principles

## E2E Conversion - Where Hexaware can help Service providers



## Scope for improvements in the future

### Requirement Analysis: Interface Mapping 1

- Format & layout Mapping of data structure and formats
- Data requirements: Data enrichment / transformation and data field omission
- Delivery channel: Mapping of delivery channel for each data source

#### Transaction Data

- Trades
- Positions
- Cash Balances
- Fund Flows (Subscriptions / Redemptions)
- Collaterals & Margin
- Expenses
- Corporate Actions ( Dividends, Income, Maturities, Splits. M&A etc)

#### Static & Reference Data

- Securities, Currencies, Exchange, issuers, Issues, Country, Region, State, Cities etc.
- Counterparties / Brokers / Custodians / Banks / Portfolios / Funds / Managers
- Pricing Information (MTM, FX Rates, OTC Valuations)

#### Internal Data Interfaces

- Downstream Feed Requirements
- Reporting / EDW Requirements

### Conversion Data Migration (Base-lined & Forward Period data) 3

- Data Dictionary mapping
- Data set sequences & dependencies
- Data enrichment / transformation, data validation and reconciliation exception resolution
- Post Migration Data building (Rolled up Summary information)

#### Historical Data

- Trades / Cash Transactions/Corporate Actions
- Positions
- Taxiots
- Investor Register
- Accounting Data ( Journal Entries, GL/ SL Data, Trial balances, balance Sheets)
- Static & Reference Data

#### Dynamic Data

- Unsettled trades
- Open Cash / FX Transactions
- Open Corporate Actions
- Corporate Action entitlements (post Ex-data)
- OTC transactions

### Pre-Conversion: Configuration & Data Set-up 2

- Application Customization & Enhancements
- Application & System Settings
- Static & Reference Data
- Fund Set-up

#### Transaction Data

- Brokers, Custodians & Counterparties
- SMF Data
- Cash Accounts Setup
- Capital Account, income Account, Margin Account
- Fund and Cash Account Linkages
- Country and Currency Setup, Tax Tables, Holiday Schedules
- Base rates and foreign exchange rates
- Custodian Deadlines, etc

#### Fund Setup

- Base Currency, Transaction Currency
- Accounting periods & Reporting Cycle
- Accounting parameters and rules
- Chart of Accounts
- Price source for various instrument types
- Taxiots selections of the fund ( Average LIFO, FIFO, Maximize/ Minimize Gain/ Loss, Specific lot)
- Fund groups and blotters based on requirements
- Fund-Custodian linkages

### Testing 4

- Data Comparison / validation
- Data Quality Testing
- Interface / Integration
- Functional Testing
- Business Process Testing

### Parallel Run 5

- Setting of baseline conversion data until prior period
- Posting of transactions
- Running batch cycle for accounting
- Validation and reconciliation with existing client system



## 10 Conclusion:

As mentioned earlier in this document, over 90% of back office operations have been outsourced to the Custody world, while middle office outsourcing is still at about 20%. This suggests business opportunities increasingly shifting to the Custody world over the next decade. This fact, in turn, suggests reduced technology spend by Asset Managers in the areas of middle- and back-office in the coming years, with the Custody world taking the larger role and opportunities. Given this trend, does it make a compelling case for IT providers like Hexaware to focus and partner in the areas of IT and operations with the Custodians than with the Asset Managers on business and revenue growth? The answer is a resounding Yes!

## About Hexaware

Hexaware is the fastest growing next-generation provider of IT, BPO and consulting services. Our focus lies on taking a leadership position in helping our clients attain customer intimacy as their competitive advantage. Our digital offerings have helped our clients achieve operational excellence and customer delight by 'Powering Man Machine Collaboration.' We are now on a journey of metamorphosing the experiences of our customer's customers by leveraging our industry-leading delivery and execution model, built around the strategy— 'Automate Everything, Cloudify Everything, Transform Customer Experiences.'

We serve customers in Banking, Financial Services, Capital Markets, Healthcare, Insurance, Manufacturing, Retail, Education, Telecom, Professional Services (Tax, Audit, Accounting and Legal), Travel, Transportation and Logistics. We deliver highly evolved services in Rapid Application prototyping, development and deployment; Build, Migrate and Run cloud solutions; Automation-based Application support; Enterprise Solutions for digitizing the back-office; Customer Experience Transformation; Business Intelligence & Analytics; Digital Assurance (Testing); Infrastructure Management Services; and Business Process Services.

Hexaware services customers in over two dozen languages, from every major time zone and every major regulatory zone. Our goal is to be the first IT services company in the world to have a 50% digital workforce.

---

### NA Headquarters

Metro 101, Suite 600, 101 Wood Avenue South, Iselin, New Jersey - 08830  
Tel: +001-609-409-6950  
Fax: +001-609-409-6910

### India Headquarters

152, Sector - 3 Millennium Business Park 'A' Block, TTC Industrial Area Mahape, Navi Mumbai - 400 710  
Tel : +91-22-67919595  
Fax : +91-22-67919500

### EU Headquarters

Level 19, 40 Bank Street, Canary Wharf, London - E14 5NR  
Tel: +44-020-77154100  
Fax: +44-020-77154101

### APAC Headquarters

180 Cecil Street, #11-02, Bangkok Bank Building, Singapore 069546  
Tel : +65-63253020  
Fax : +65-6222728

### Safe Harbor Statement

Certain statements in this press release concerning our future growth prospects are forward-looking statements, which involve a number of risks, and uncertainties that could cause actual results to differ materially from those in such forward-looking statements. The risks and uncertainties relating to these statements include, but are not limited to, risks and uncertainties regarding fluctuations in earnings, our ability to manage growth, intense competition in IT services including those factors which may affect our cost advantage, wage increases in India, our ability to attract and retain highly skilled professionals, time and cost overruns on fixed-price, fixed-time frame contracts, client concentration, restrictions on immigration, our ability to manage our international operations, reduced demand for technology in our key focus areas, disruptions in telecommunication networks, our ability to successfully complete and integrate potential acquisitions, liability for damages on our service contracts, the success of the companies in which Hexaware has made strategic investments, withdrawal of governmental fiscal incentives, political instability, legal restrictions on raising capital or acquiring companies outside India, and unauthorized use of our intellectual property and general economic conditions affecting our industry.