Woodbine Associates

Capital Markets Consulting

Accounting Solutions:

Backbone of Investment Management

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I. Do Investment Managers Need Top-Flight Accounting Solutions?

Investment management is more than just portfolio management. Investment management executives must view their businesses holistically, not simply in the narrow terms of alpha-generation.

Euphoria from success in good times frames perception. Upward business trajectories facilitated by favorable economic climates make management seem easy. Bull markets make alpha generation seem easy. Out-sized returns enhance reputations and bring new investors. Future success seems assured. Downside risks seem negligible. But is this really the case?

The "Flash Crash" served as a lesson on how quickly and violently markets may move. Whether internal or market-based, responding and reacting to market movements necessitates deliberate, accurate and immediate action – acting on the best available real-time data.

Investment management is more than just portfolio management.

With increasingly dramatic market volatility, it becomes more crucial for firms to have the information they need to respond immediately with confidence and precision. The correct response to these market moves can only be predicated on timely and accurate analysis of risk and exposure, and a proper analysis of events. Responding to extreme and violent market moves can be both frenetic and profitable when firms and individuals have the system support and information they need. These capabilities are enhanced by an operating platform that allows them to take a 360-degree view of risk and performance.

Tightly integrated with revenue generation are core operations, which carry a host of business risks capable of inhibiting growth and crippling the enterprise. These risks must be managed through an established control framework that is put into practice largely by means of technology platforms. The accounting platform thus becomes the hub of enterprise-wide technology. Facets of accounting permeate almost every element of investment operations. Weakness in the accounting platform translates into weakness in risk control across the enterprise's investment management activity.

Business risks are ever-present but masked during robust times. During lean times, attention shifts to internal control, risk management and operational efficiency. Firms that push off risk/infrastructure issues until they become more pronounced, as they are in barren times, put business units in competition for scarce capital and resources. The implications of delay are too substantial to risk.

Failure to Implement a State-of-the-Art Accounting Platform is asking for Trouble

A state-of-the-art accounting platform is the most fundamental and far-reaching means for investment managers to mitigate business risks that can result in financial loss and challenge on-going enterprise operation. Risks tied to sub-standard investment platforms include operational gaffs, compliance breaches, regulatory transgressions, failure to detect fraud, theft and human error, failure to properly value assets under management, and failure to properly value and service client accounts. This technology plays a central role in day-to-day business operations.

Executive management must recognize that investment accounting processes and technology are integrally tied to "bottom line" firm performance. The risk to the enterprise is too substantial to delay focusing on the adequacy of enterprise accounting operations. The potential costs are just too great.

NOW is the Time to Examine Accounting Operations and Infrastructure

Accounting platform adequacy is about more than present-day business risks. Investment managers must be ready to confront evolving markets in terms of novel financial instruments, changing practices and new regulation.

Our financial markets are on the verge of unprecedented regulatory change. New rules introduced by the US Securities and Exchange Commission and the US Commodity Futures Trading Commission under the Dodd-Frank legislation will bring considerable changes in oversight and business practices. The degree to which legacy technology can flexibly and efficiently incorporate process changes and new requirements will impact an enterprise's ability to control risk and operate in the evolving environment.

Legacy accounting platforms may not be able to adapt to new requirements easily, suitably or cost-effectively. Late-date discovery that the legacy accounting platform cannot accommodate necessary changes to meet business practice or regulatory requirements will place affected investment managers in a difficult predicament. The only option at that point will be to rush through a vendor selection and implementation. These are normally drawn-out and time-consuming activities that from selection to final implementation can take upwards of a year or longer, during which time firms remain exposed to legacy system deficiencies. Firms forced to undertake such initiatives on a rushed basis will risk sub-optimal vendor selection, excessive cost and flawed implementation.

Legacy Accounting Solutions as an Impediment to Enterprise Growth

A sub-optimal accounting platform also can directly hinder business growth and development in an environment where regulation and practices are, in effect, "held constant."

Limited scalability can have a direct impact on potential business expansion in any environment if the solution cannot accommodate higher business volumes or additional activity, even if that activity is not a new industry innovation. This may directly affect overall business strategy, alpha-generation, revenue generation through distribution channels (at firms where this is relevant) and bottom-line profitability.

Current difficult industry conditions mandate that firms remain flexible and adaptable. While legacy technology in any special function can impede flexibility with respect to strategic initiatives, the central role played by the accounting platform is such that the magnitude and scope of legacy challenges will be larger and more cumbersome. Management cannot afford to be burdened by this type of situation.

Call to Action

The accounting platform plays a central role in investment management business operations with respect to risk management, regulatory compliance, day-to-day core-operations, revenue generation, business expansion and management reporting. As the true hub of the enterprise, management cannot afford to operate with a sub-standard solution. The potential impacts are too far-reaching.

Investment management executives must take the opportunity *now* to ensure their firm's operations are supported by a state-of-the-art platform, before it becomes more difficult.

II. Accounting – The Backbone of Investment Management

Investment accounting is the hub of investment management enterprise operations. No other process, operation, or technology is so central to the regular operation of the firm, or so integral to so many business activities.

Accounting is the means by which business and financial transactions are recorded, summarized, analyzed, verified and reported to stakeholders and regulators. Stakeholders can range among boards of directors, executive management, other key business personnel and investors or shareholders. Regulators, of course, are the agencies authorized to oversee the activities of the particular firm.

The accounting platform is the software and hardware used to perform pertinent accounting functions. In addition to maintaining a range of financial and related informational data pertinent to an extensive range of enterprise-wide activity, an optimal platform performs a range of control functions including cash, asset and suspense account reconciliations. The accounting platform either holds data related to or interfaces with separate platforms involved with:

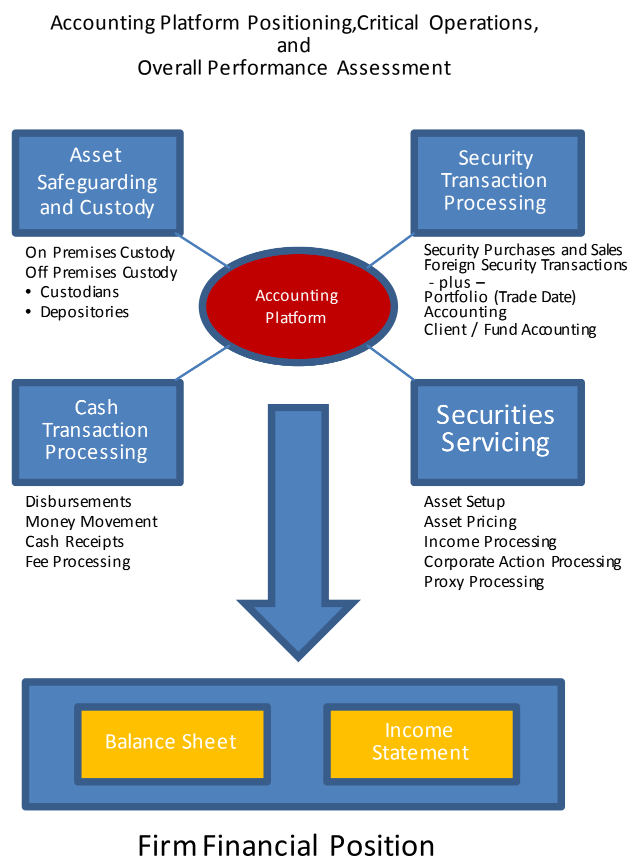
- Asset Custody and Safeguarding
- Securities Servicing
- Security Transaction Processing
- Cash Transaction Processing

Asset Custody and Safeguarding

Investment managers must be aware of the location and availability of all assets held in the firm's portfolios in order to safeguard them. Assets may be in physical or book-entry form and may be kept in-house, with a depository or with a custodian. Usually, a designated team within the firm's core operations group is responsible for accurately recording on the accounting platform each asset's location, type of registration and the specific asset positions for each portfolio and customer account[1]. The complexity of these processes is magnified considerably for investment firms that trade internationally due to different practices, regulations, taxes, settlement cycles, etc.

Securities Servicing

Securities servicing encompasses asset setup, ongoing asset pricing, income processing, corporate action processing, class action processing and shareholder servicing. Servicing relies on the use of both internal and external information, including automated data sources, to accurately reflect detailed asset-level information and asset-related events on the accounting platform.



Each security must be properly set up within the accounting platform in order for the appropriate team within the core operations group to monitor servicing by the firm's custodian[2]. A common asset record may be established for publicly-traded securities; complex and/or unusual instruments (e.g., mortgage-backed securities) may be set up on specialized systems that interface with the accounting platform for necessary information transfer. Accurate instrument coding is essential to ensure proper income processing, maturity processing and tax reporting.

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[1] Substantial differences in customer accounting exist across institutions. The particular practices are dependent on firm type and its business. For example, customer accounting at a mutual fund will differ substantially from that of an investment advisor handling separately managed accounts (SMAs).

[2] For discussion purposes we assume all securities are held by the firm's custodian.

The people tasked with pricing must have detailed policies and procedures to ensure appropriate sources, methods and pricing frequency dependent on the particular asset. To the extent instruments are priced within the accounting platform, businesses must ensure that appropriate external feeds and sources are linked to the platform.

Those tasked with income processing must ensure that the firm's custodian properly posts dividends, interest and any other types of payments or distributions to the cash "sleeve" associated with a portfolio. Any subsequent distributions to the investment manager's clients must also be tracked. This is all done by convention within the accounting platform, which is then reconciled with the custodial system and other systems that may be resident at the investment manager. Processes may be highly automated or conversely manually intensive, depending upon the types of instrument and the nature and frequency of payments.

Those charged with monitoring corporate actions must also tie out with the firm's custodian. This group must ensure that any events initiated by the company are properly captured within the accounting platform for subsequent reconciliation with the custodian. This is essential as such actions may impact a range of elements associated with securities including name, listing exchange, tender offers, mergers/acquisitions, rights, warrants, options offerings, splits, etc.

Security Transaction Processing

Transaction processing involves tracking the acquisition and disposition of securities. Those tasked with tracking security purchases and sales must ensure that trades are "known," that sufficient cash exists with the firm's custodian to take possession of securities on settlement date, or that the appropriate securities are available for delivery in the case of a sale. Again, all of this is tracked through the firm's accounting platform and reconciled with the firm's custodian and other internal systems. Through direct interfaces with other systems, much of this work can be automated. Exception processing – reconciling and researching those few items that do not match – can be investigated and handled.

Cash Transaction Processing

Cash transaction processing includes cash disbursements, receipts and fee processing. The firm's accounting platform facilitates record keeping by mirroring balances and transactions that should occur within the firm's cash accounts at financial institutions and custodians. Those tasked with monitoring cash transactions must ensure that all transactions are accurately performed in a timely manner and that the firm's records mirror those at financial institutions and custodians.

A considerable portion of cash transactions are generally client-related and may involve new capital submitted for investment, periodic income payments, directed disbursements, discretionary distributions, retirement benefit payments, etc. The particular work flows, requirements and payments depend on the nature of the investment manager's business and clients. Different types of clients have markedly different requirements, so types of cash transactions may vary considerably across firms[3].

The accounting platform allows the firm's core operations personnel to be cognizant of the investment manager's security and cash positions. The solution may also be used to maintain a range of client-account related information and support day-to-day activity, client reporting, management reporting, compliance reporting and regulatory reporting. Accounting platforms are able to perform an extensive range of regularly scheduled complex reconciliations with third-party systems and records. This is essential for purposes of internal control and risk mitigation.

III. Features of a Best-in-Class Accounting Solution

Investment accounting systems come in a variety of shapes, sizes and flavors. Some are configured to be implemented as modular solutions and integrated with existing operating, trading or risk management platforms; this typifies some of the legacy systems still being used that exacerbate many of the risks and inefficiencies we have highlighted. Others are embedded with an operating platform that can serve as the core processing system for the organization, and on which trading, risk management, collateral and other functional systems can be added; these have key features that can form the basis of a firm's operational infrastructure.

Single Enterprise-wide Operating Platform

It is essential that these systems run on a single operating platform that can be deployed for firm-wide processing. The storage and retrieval of securities and holdings data to each functional area needs to be seamlessly integrated and managed. This ensures that gaps will not exist in the organizational work flow that could lead to errors or inconsistencies as transactions are initiated, processed and reported.

Automated Straight-Through Processing

Automated straight-through processing is essential for nearly all front, middle, and back office operations. By automating the operational workflow, a firm reduces the amount of manual input required to process transactions. It simplifies many tasks to management of approvals and exemptions. This reduces the risk of errors and their associated costs, in addition to the cost of personnel needed to

[3] The intention here is to be illustrative as opposed to comprehensive.

process trades. Firms are able to consolidate the workflow on a single platform and avoid redundancies and potential conflicts between other front, middle and back office systems. Control is enhanced by allowing users to generate configurable requirements for approvals and permissioning (approval criteria including “4 eyes” reviews) delegated to users and sub-users.

Improved Workflow Management

Systems using a single operating platform with straight through processing enable better workflow management that can help identify and resolve issues and errors at their inception. When combined with real time information and reporting, management can better perform inquiries and activate decision support tools. With STP capabilities, an accurate audit trail can better answer ‘where is the money?’ when discrepancies exist.

Audit Trail

Proper internal control requires a system to deliver a complete audit trail over the life cycle of a transaction: from trade origination through profit and loss generation to maturity or disposition. Managers need a clean and easily accessible lineage of transactions and a corresponding history of user entries into the system. This must be available enterprise-wide for holdings at any historical point in time.

Single Centralized Database

Best-in-class accounting systems consolidate data storage to and retrieval from a single centralized database. This database is the repository for recording the organization’s financial holdings and positions; it serves as the “golden record” for the firm. It connects to the general ledger and is the single point of record for all financial positions and holdings. As such, it is a common element or denominator used by each functional area and system in the firm’s front, middle and back office.

The importance of a single centralized database to the accounting process is straightforward, but the holistic benefits this architecture offers to other operational areas cannot be understated. It provides a central location for firms to record, source and reconcile data with the different systems, databases, and sub-ledgers used by each functional area and system within the firm. As the sole central repository, it provides a means to achieve transparency and data consistency across the enterprise, which is essential to management’s ability to control and manage risk, evaluate performance and produce accurate reports. It is the foundation for all business activity across the organization.

Transparency

The transparency availed from a central database is essential for effective risk management, internal control and a firm’s ability to mitigate both financial and operational risk. By reconciling positions to a single repository, firms can quickly and comprehensively identify errors and inconsistencies. Errors or omissions caused by user inputs or redundant systems, once identified and flagged, can be immediately addressed, limiting their impact and reducing their cost.

Financial market and credit risk require a clear view of aggregate exposure at the enterprise level, across multiple operating units, desks and portfolios. Managers need the ability to quickly and accurately evaluate positions and calculate potential exposures to ensure they remain within targeted limits and thresholds. Data centralization puts firms in a position to evaluate exposure broadly and accurately within their organization, with little chance for errors or omissions. Combining this consolidated view of the firm's assets with consistent firm-wide calculation methodologies and normalized market data tells management exactly "what we have, what it is worth and what exposure it creates."

Internal Control & Risk Management

Throughout time we have been presented with real-life examples of instances when things go very wrong. Long Term Capital, Lehman Brothers and MF Global are a few recent examples. These are catastrophic occurrences with devastating results. Today's investment accounting systems weren't available when Long Term Capital imploded, but perhaps a more fully integrated accounting system could have helped prevent the others. With better internal control from straight-through processing, increased transparency and more accurate reporting, risks are likely to have been more visible and readily identified. Proper risk and control channels might have been alerted to exposure breaches sooner or may have monitored unauthorized movement of money across protected accounts. Furthermore, external counterparties and customers might have identified their own exposure to these organizations in time to take action, adjust their positions and reduce their losses.

Data Consistency

A central database ensures data consistency across the organization, which is a pre-requisite for accurate internal reporting and external reporting for clients, auditors and regulators. Consistent data enables accurate calculations for key processes such as striking NAVs and performance measurement. It reduces the potential for errors arising from multiple incongruous sets of books and/or sub-ledgers. A firm needs consistent internal data management to ensure accurate external reporting for GAAP, IFRS, statutory and tax purposes.

The potential consequences from inaccurate reporting are costly: loss of business and reputation, inaccurate investment decisions, loss of client confidence and inefficiencies with other operational processes. Alternatively, well-integrated data pays dividends. Integrating accounting books and risk books streamlines reporting, enables better delivery of information to investors, facilitates faster NAV calculations and enhances risk assessment.

Functional Integration

The importance of a centralized database spans beyond pure accounting tasks. It impacts the organization as a whole, particularly adjacent functional areas with overlapping processes, such as trading, risk and collateral management. Until recently, these areas have been managed separately and largely independent of one another. Navigating the market under Dodd-Frank, EMIR and other new regulatory requirements will require firms to more fully integrate many previously siloed functions and in many instances tie them in

Improved Integration

Following Lehman's collapse, funding costs and counterparty collateral terms (specified in ISDA CSA documents) for OTC derivatives became relevant pricing parameters affecting transaction values. Later this year, central clearing will become mandatory for OTC derivatives, which will force firms to more closely manage collateral, liquidity and risk and analyze their impact on new transactions. Complete integration of these functions with front office trading is entirely dependent on its operating systems' capabilities.

to the trading desk.

Using a single data source for inter-related functions ensures an accurate and comprehensive picture of exposure at the trade, portfolio and enterprise levels through consistent pricing, valuation and risk measurement. These results provide front office personnel with the information they need to make informed investment decisions and do what they do best: create alpha.

Real Time Capability

It is necessary for virtually all operational systems to function in real time. Increasingly volatile markets and advances in marketplace technology have heightened the speed with which asset managers must react to changing market conditions. The ability to react and make informed decisions is predicated upon the accurate and timely analysis of risk and exposure at multiple levels within the organization. Centralized, consistent and comprehensive position data needs to be accessible in real time to function effectively in today's markets.

Improved Risk Management

A seamlessly integrated front-to-back system enables business leaders to better implement effective risk management, particularly at the enterprise level. It provides an aggregated view across holdings valued by disparate internal and external sources. Systems that support the full transaction life cycle allow firms to broadly normalize the market data and valuation methodologies and calculate exposure consistently across supporting pricing and risk management systems. This provides an accurate real time enterprise view, which is critical for firms to assess and manage their exposure in today's fast moving markets.

Complete Instrument Coverage

Accounting platforms must provide complete coverage for all securities, contracts and agreements and products traded and held. Instrument coverage begins with the inventory listed in the security master and includes a system's ability to create and store newly traded and unique positions. Positions outside the realm of the security master, such as OTC derivatives (interest rate swaps, credit default swaps, total return swaps, etc.), structured products, private equity positions and bank loans are increasingly common for asset management firms and need to be fully supported by its accounting system.

System acceptability should consist of more than just a line item trade entry and include the ability to process the transaction over its entire life cycle from origination to maturity or disposition. This enables firms to rely exclusively on the data stored in their "golden record" database and eliminates the need for spreadsheet-based "workarounds" or exemptions that lie outside the core system.

New securities created through private and preferred issuance, new products and asset classes and other customized transactions are being utilized with increasing frequency. Managers need to know their system can accept and process these transactions quickly to inspire full confidence in the information they receive.

Granularity

The depth or granularity of instrument coverage is equally important. A system's database needs to be able to record transactions at their most granular and fundamental level. As the golden record for position and holdings data used by other functional areas including trading, risk management, reporting, compliance, settlements among others, it must be sufficiently granular to provide fungible data between the different external systems used by these areas. This ensures seamless connectivity and reconciliation with external (non-accounting) systems.

The database must be capable of supporting all of the characteristics and terms embedded in the securities, derivatives and other transactions and holdings, down to individual cash flows, currencies and all other relevant details. This allows complex positions to be separated into their individual components and recorded at the most elemental level. This granularity provides for more detailed internal risk and reporting and increases the likelihood of seamless integration and reconciliation with external parties and systems.

Multi-Currency

Today's global environment requires abilities to record and process trades and holdings in multiple currencies. This functionality allows users to record transactions in their original base currency and seamlessly translates holdings across other currencies for reporting, risk calculation, settlement and cash management purposes.

Flexibility

System flexibility is in many ways a by-product of the aforementioned characteristics. Increased integration among different functional areas, central storage of all holdings and consistent valuation methodologies provide the infrastructure for more flexible assimilation and use of information by managers. Asset managers require increasingly customized reporting capabilities for internal management as well as external reporting to both clients and regulatory agencies. More complex investment objectives, involving multiple currencies, products and asset classes, require equivalent sophistication and customization for client reporting.

Configurable Reporting

Reporting needs go beyond present holdings and often requires firms to view historical positions, risks and holdings. This includes transaction and position-based reporting with a full history of trades from their inception to the present time. Reports must be capable of displaying offsetting internal transfers that don't show on global aggregated reports. Data management and reporting must be flexible enough to display holdings according to internal account, group, book or other identifiers.

Current and prospective regulatory reporting requirements including Dodd-Frank, UCITS IV, MiFID II, FATCA and Solvency II will increase demands on reporting capabilities and require firms to extract and present holdings and risk-related data in new and more detailed formats. Meeting current and prospective regulatory requirements requires a system to offer a high degree of flexibility and user customizability.

Adaptability

Adaptability to evolving business needs and new products is instrumental to promoting growth and reducing risk. Spreadsheet-based workarounds often become necessary short-term solutions to gaps in product or instrument coverage, presenting control and risk management challenges. Systems can reduce this risk through a short implementation life cycle for new or unique positions and give users the capability to add customized transactions "on the fly," with implementation periods measured in days or weeks rather than months. This reduces risk and speeds the time to market for new products and initiatives. Operational systems and investment accounting should never constrain growth and top-line initiatives.

Scalability

An investment accounting system needs to be scalable to an organization's future operational and functional business needs. It must be capable of growing with an asset manager's business and supporting new initiatives and product offerings. Scalability along product lines, instrument types, currencies, regions and regulatory jurisdictions is critical as firms expand their businesses globally. Systems need to play a facilitating role and supply the capabilities needed for continued business growth.

Other Ancillary Features

While not intrinsically critical, features such as ease of integration with third-party systems, organic reconciliation functionality and frequent vendor updates can significantly enhance an investment accounting system's effectiveness. These features help a system remain up to date and better integrate with the "outside world," and reduce the likelihood and cost of compatibility problems. The degree and availability of support and the financial stability of the provider are also key considerations in selecting a long-term partnership and require due diligence by the prospective user.

IV. Benefits of a Best-in-Class Investment Accounting Platform

The benefits of a best-in-class investment accounting platform are many, and if looked at properly, are also a necessity as technology has advanced at a rapid rate and markets have gone global. Violent market movements, market structure changes and a host of impending regulation around the globe have become pervasive. Sitting on old, disparate legacy systems – with all the added costs and operational and informational inadequacies – brings risks that can be easily eliminated through an upgrade to a best-in-class system.

Improved Efficiency

A top-of-the-line investment accounting platform can bring much-needed efficiency to a corporation's investment accounting operation. Legacy and disparate systems that exist in many firms today result in unnecessary expenditures, including the need for multiple licensing, data feeds and system updates and upkeep. Firms with antiquated systems are prone to non-reconciled data, reconciliations burdens, lack of aggregation, integration failures, reporting difficulties, compliance problems, data inaccuracy and manually intensive processes (which can lead to errors that lead to poor data quality and, in turn, sub-optimal investment decisions).

Investment firms running on legacy systems should give grave thought to: why? As technology and the markets have advanced astoundingly in the past decade, top systems should provide multiple updates annually. Using legacy systems, which are as much as a decade old, is akin to typing on an IBM Selectric.

In addition to putting data integrity at risk in the communication between disparate systems, there are increased costs and manpower required to operate multiple legacy systems. There is a vastly increased probability of human error and greater reliance on the personnel required. Costs can be reduced through factors that include reducing the number of licenses carried, the scope of internal support and external maintenance, costs of data for each system, costs of hardware, and integration and implementation of new releases and updates.

A seamless, front-to-back, enterprise-wide investment accounting system that has the ability to harbor the complete scope of business in today's investment firms would assure granularity of data from the simplest level and produce clean and concise end-result reports. They would produce accurate analysis of the firm's positions and risk drawing from one common database with clearly defined workflows, controls, and checks and balances.

Reduced Cost

Having eliminated the need to run multiple systems, there are many elements that can be eliminated from a firm's structure that would immediately reduce cost to the firm. Costs inherent with additional workforce greatly weigh on a firm's bottom line. With fewer overlapping systems, a firm can reduce the personnel dedicated to upkeep of these systems, including day-to-day maintenance, constant massaging of systems to "talk" to one-another, manipulating each system to accept new products, changes in compliance and regulatory requirements, and geographical expansion, as well as system-specific upgrades. The ideal enterprise-wide system assures the quality of work at minimal costs while mitigating risks.

Enhanced Capabilities

Today's investment firms are faced with more than just investment challenges. Investment managers and the systems they use must be able to move to new frontiers. "One trick ponies" are a thing of yesteryear, as are the systems that cater to siphoned investing. Today's global, multi-asset and multi-currency investment landscape requires dynamic skills in today's investment managers. The supporting systems must be just as nimble and efficient in their adaptability to these changes.

Forging into new markets requires systems that are able to seamlessly integrate all new products and currencies. There are compliance issues locally and abroad, as well as trading facilities that carry their own specific requirements.

Additionally, and perhaps most feared, regulatory requirements are most likely only in the beginning phase of a generational change across the globe. Responding to both the massive advances in technology as well as recent swoons in the marketplace over the past decade, regulators are only playing catch-up to the markets and are scampering to impose regulation to grab a hold of today's and tomorrow's markets. Investment managers must be well-informed to adapt to these requirements, and the systems they use must have the instant capacity to seamlessly integrate any new rules, regulations and requirements into their day-to-day activity. Failure to do so would both handcuff the investment advisor and put the entire firm at risk for failure to comply.

More Effective Risk Management and Faster Reaction to Today's Markets

The failures of Lehman, Bear Stearns and MF Global caught many on Wall Street on their heels. These were catastrophic occurrences with devastating results. Could these failures have been prevented? Perhaps. The exposures at all three firms should have been more apparent and readily available to multiple sets of eyes. A system with a full investment view would have done this. Illegal transfers of funds would likewise have been flagged.

But what about everyone else? Could investment firms have been in better position to assess their own risks and exposures to these firms? Almost certainly, "yes." Herein lays the necessity to recognize exposure to companies with direct investment or where counterparty exposure exists and be able to adjust positions accordingly, accurately and expediently.

A front-to-back best-in-class investment accounting system provides an integrated and transparent enterprise view of all assets held under a firm's umbrella. With a clear view of counterparty risk, these failed firms – as well as firms in bed with them (either through direct investment or as a matter of business) – could properly assess their internal and external risks. Disparate systems and slow, inaccurate information lead to greater investment detriment. Precise, accurate and timely data leads to better and more confident decision making.

Lehman, Bear or MF, or the "Flash Crash" of 2008 – how quickly were investment firms able to respond to these market catastrophes? Few firms were able to calculate their exposure within minutes. Most firms took hours, days or longer. Investment managers know this would be an unacceptable manner for a trader to conduct himself on a trading desk. Such failures and market disruptions are apt to happen more frequently and with greater ferocity than ever, and data delays and discrepancies can lead to impaired investment decision making. Investment managers should rely on the uniformity and expedience of information that a best-in-class system can furnish.

Enhanced Growth Capacity

As discussed in the many scenarios above, old disparate legacy systems are not only costly to maintain but are more often than not the bottleneck to progress and growth. Adaptability is essential. Investment managers and the systems they rely upon require the openness for adaptability and growth. From the globally invested portfolios managers now maintain, to the reporting requirements of regulators, to the widening customer base requiring flexible and configurable reporting, today's systems must be fully integrated and have the ability to draw from one data pool to produce real-time, customizable reports at a moment's notice. Today's markets demand it.

Overall Advantages

A best-in-class, front-to-back investment accounting system is certain to provide enough cost savings to justify itself from the get-go. The risks to data that are inherent in maintaining disparate systems, added costs and the bottlenecks they do and will inevitably cause should have investment managers clamoring for better solutions. The need to be global, to incorporate new asset classes, to serve an expanding base of clients and to keep up with regulatory requirements are paramount in today's markets.

If that's not enough, no one wants to be the next Lehman, Bear or MF Global – but if traders have exposure to a firm like that, they most assuredly will want to know what their risks are, and right away. Top systems can do that.

V. Conclusion

A best-in-class accounting solution is a strategic investment that reduces risk, facilitates new business initiatives, and enhances revenue-generating activities.

A best-in-class accounting solution is a strategic investment that reduces risk, facilitates new business initiatives, and enhances revenue-generating activities.

Maximizing profitability at asset management firms today encompasses much more than alpha generation, asset growth and distribution. Business leaders need to adopt a holistic approach to managing the entire organization – one that includes strengthening key operational systems and processes that reduce enterprise risk, increase efficiency and enhance their potential for growth. Sub-standard and outdated systems erode a firm's profitability, diminish its capabilities and open the door to untenable operational risk.

The most critical area of a firm's operations, and one that directly affects most other areas in the firm, is the investment accounting system. It is the backbone of an asset management firm and a common denominator across all other functional areas. A sub-par investment accounting system not only creates potential risk and increases costs, but also impairs the effectiveness of other areas in the firm. Alternatively, a best-in-class system that centralizes data on a single operating platform with other key features not only mitigates risk and reduces operational costs, but also enhances the capabilities of other areas in the firm.

The demands placed on investment operations and support systems have never been greater. Increased volatility requires immediate decisions and rapid implementation. Global investment strategies using innovative new products and securities are being introduced with greater frequency and must be managed more closely and in real time. The increased scope, breadth and complexity inherent with today's investment strategies makes it more challenging for asset managers to know "exactly what we have, what it is worth and what exposure it creates." Accurate, consistent and comprehensive data is the solution – and has never been more critical.

Concurrent to this is an onslaught of new regulation occurring globally that will further change the way we trade, comply and report. We are still early into this global regulatory cycle. Current and forthcoming regulation will increase the need for firms to better manage risk and report their holdings in increasingly granular and detailed formats to multiple regulatory agencies.

The time to act is now. Legacy systems present too great of a risk to a firm and its profitability to be ignored. Asset managers need to outfit their organization to succeed in today's markets and position themselves to capitalize on tomorrow's growth opportunities. This can be done by making a single strategic investment in a system that will have widespread impact across the organization – a best-in-class investment accounting system. A top system can holistically reduce costs, mitigate risk and increase capabilities, putting asset managers on the path to maximum profitability.

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Mr. Samelson has interacted extensively with the media. He has appeared on CNBC and been quoted in a range of major publications including the *Wall Street Journal, New York Times, Financial Times, Forbes, Business Week* and *CNBC Market Watch*. He has also been quoted in various trade publications, including *Institutional Investor, Trader Magazine, Advanced Trading, Wall Street & Technology, Wall Street Letter, Trading Technology Week, and Securities Industry News*.

Prior to founding Woodbine Associates, Mr. Samelson was a senior analyst at Aite Group focusing on equity-related topics. He has also served as Director of Product Management at Liquidnet, Inc. where he contributed to enhancements of Liquidnet "Classic" and performed the initial planning for the company's trading desk. Prior to that, Mr. Samelson served as Vice President of Global Portfolio Sales and Trading with Investment Technology Group (ITG), where he developed portfolio and single-stock trading business and managed trading relationships with investment management, mutual fund and hedge fund clients. He also worked in portfolio trading at Lehman Brothers and as a as a financial risk management consultant at Price Waterhouse. Mr. Samelson began his career as a banking officer in the Europe Division of Irving Trust Company.

Mr. Samelson received an M.B.A. in Finance and Business Policy from the University of Chicago and a B.A. in Economics from Columbia College of Columbia University. He has held FINRA Series 7, 63, 55 and 24 licenses.

MICHAEL KURZROK
DIRECTOR, EQUITIES

Michael Kurzrok is Director of Equities at Woodbine Associates, Inc. His expertise lies in analysis of strategic, business, regulatory, market structure, trading and trading technology issues and how these influences impact firms in the global equity markets. He is an advisor to investment firms, stock exchanges, brokerages, and technology firms. His professional career spans two decades with eleven years in the financial industry.

He spent nearly a decade on a buy side trading desk where in addition to trading, he focused on strategic and tactical aspects of trading desk organization and evaluated industry factors such as regulation and market structure, and regularly assessed trading methods and comparative venue performance with an eye toward enhancing desk profitability. He has been closely tied to the financial industry throughout the past twenty years.

Mr. Kurzrok has been widely quoted in the press, has served on industry panels and roundtables, and is a frequent speaker at industry events. Mr. Kurzrok has a BS in Finance from Lehigh University. He has held FINRA Series 7 license.

SEAN OWENS
DIRECTOR, FIXED INCOME

Sean Owens is Director, Fixed Income at Woodbine Associates, Inc. focusing on strategic, regulatory, trading, risk, and technology issues that impact firms active in the fixed income and OTC derivative markets. He brings to the firm a wealth of experience in U.S. and international fixed income markets, quantitative analysis, consulting, and research.

Mr. Owens has published research in financial journals and has been widely quoted in the media and various trade publications. He has served on industry panels and roundtables and is a frequent speaker at industry events.

Mr. Owens brings more than ten years experience in the fixed income and currency markets as an interest rate derivatives trader, formerly with General Re Financial Products Corporation. During that period, he traded, structured and managed the risk for trading books within the major currencies. He also played a central role unwinding the firm's derivative portfolio during the unit's liquidation.

Mr. Owens also has experience advising a range of small businesses on strategic and tactical issues central to performance in their market segments. Mr. Owens has an M.B.A. in Finance from Columbia Business School and a B.S. in Economics from the United States Military Academy. He has held FINRA Series 7 and 63 licenses.