

From OMS to EMS and Beyond:

Buy-Side Platform Consolidation

Increased regulatory pressure, the drive towards operational efficiencies and the requirement to deliver “best execution” are part of a matrix of forces leading buy-side firms to reassess both their data requirements and technology infrastructure.

Technology spend is shifting from the sell side to the buy side, and technology vendors are reassessing their client base and product suite as a result. While single-asset class execution in siloed geographies can be conducted on independent order systems (OMS) and execution management systems (EMS), the increasingly complex global search for alpha across asset classes renders traditional broker offerings suboptimal. Yet businesses are allocating fewer resources to technology budgets precisely when firms’ regulatory obligations are at an all-time high. To address the new challenges they face, buy-side firms now need to adapt increasingly homogenous products from independent vendors, often beyond existing sell-side offerings and their own internal capabilities. The increased demand for timely and accurate analytics and risk management accentuates the need for a seamless integration of data throughout the investment cycle, from the front to the back office. From pre-trade idea generation to post-execution, end-of-day compliance and final settlement, only an overhaul of technology will now suffice. The requirement for flexible multi-asset low-touch solutions delivered in a cost-efficient manner is kick-starting a revolution on the buy-side desktop.

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Evolution of the Desktop

The regulatory stick is yielding results. Seeking out requisite liquidity, conducting pre- and post-trade analysis, minimising operational risks while optimising portfolios and simultaneously meeting compliance obligations require a radical rethink of buy-side technology and workflows. Integration between front, middle and back-office systems is becoming mandatory. The need to reduce complexity and costs across all internal processes is business critical in the new era of efficiency.

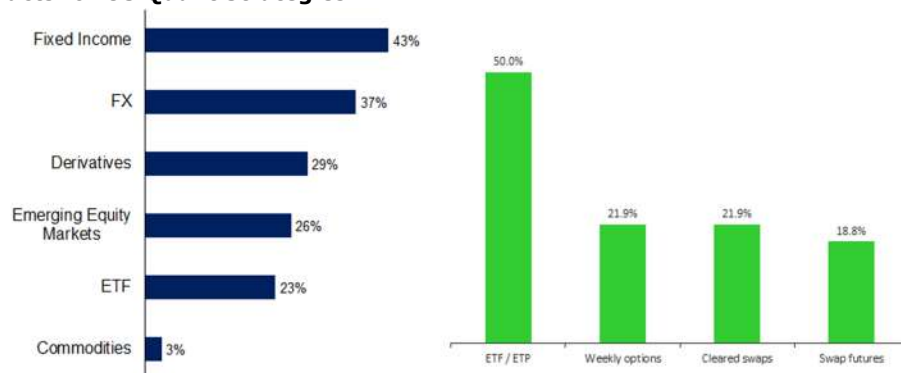
Just as we can now navigate with GPS while we drive or use our computers to order groceries, the growing demand to reduce complexity to simplicity is as relevant to asset management as it is to any other daily activity. While the debate over OMS/EMS integration is not a new one, the unique circumstances of increased multi-asset trading, burgeoning regulation and growing fiduciary responsibilities are creating a need to bring divergent yet complementary technologies together, revolutionising the buy-side trading desk in the process.

The Multi Move

To meet client demand for increased alpha opportunities, the risk/reward ratio is shifting. Asset managers are deploying more complex, interrelated strategies to exploit arbitrage opportunities across multiple products and geographies in order to achieve the desired risk/reward exposure. With electronic access now available from Brazil to India and Africa and over-the-counter (OTC) products forced onto exchanges or cleared because of regulation, the demand to electronically trade alternative asset classes is rapidly increasing (see exhibits 1 and 2).

Exhibits 1 and 2

EU Buy-Side Self-Directed Trading Intentions for 2014 / What are the Most Attractive New Products for US Quant Strategies?



Source: TABB Group

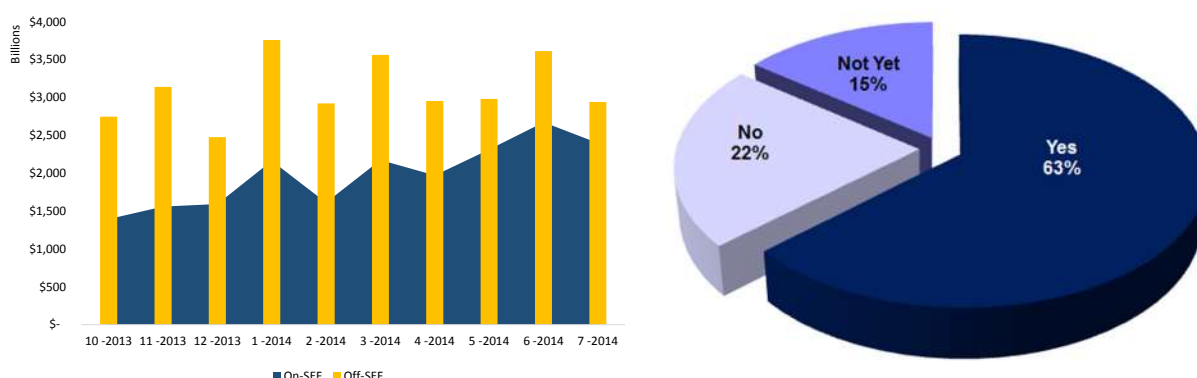
Financial markets are now global across time zones and subsequent increases in correlations requires a multi-asset holistic view in order to maximise these opportunities as they arise. Investment opportunities tend to become evident in one asset class, creating a domino effect within microseconds. Any siloed approach across internal systems will invalidate a manager's ability to respond to the opportunity instantaneously, impacting the ability to benefit.

Back-to-front Regulation

The drive to expand into new asset classes across regions also creates further complexity and challenges on the regulatory front. From EMIR to MAD, MIFID to Dodd Frank and AIFMD – seemingly minor operational details are driving home substantial shifts in technology usage and workflow processes.

Exhibits 3 and 4

Rise in Activity on SEFs – Monthly Notional Traded On/Off SEF, \$Billion / Is Regulation Driving your Decision to Invest in New Technology?



Source: TABB Group

To date, buy-side technology has concentrated its focus on front-office trading with EMS adaptation of algorithms, smart-order routers, venue and transaction cost analysis or even the recent regulatory requirement to trade swaps on swap execution facilities (SEFs) in the US (see exhibit 3).

However, there is now a growing requirement for front-to-back collaboration. Order placement, trade confirmation, fund transfers and reconciliation processes may not have been first in the IT work priority queue, but the threat of non-compliance is now focusing attentions on the need to invest in requisite back-office technology (see exhibit 4). The forthcoming switch from T+3 to T+2 settlement in Europe is just one such market structure that will focus attention on the free flow of trade data between the front and back office.

T2 D-Day

As a result of the Central Securities Depository Regulation (CSDR) and TARGET2-Securities (T2S) platform, 12 European countries are switching to a T+2 settlement cycle on October 6, 2014. Germany, Slovenia and Bulgaria already trade T+2, so it can be argued that Europe already successfully trades T+2. However, as with all things European, nothing is as straightforward as it would first appear.

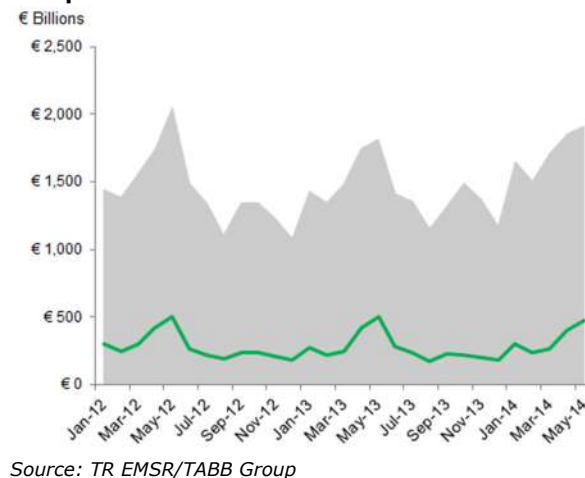
The benefits of a shorter cycle are self-evident. Reduced counterparty risk for individual firms will translate into lower systemic risk by optimising the capital "float" required and reducing potential risk in unsettled transactions. There could also be improved post-trade operational and process efficiencies as firms focus tech spend on back-office functionality

rather than trading; costly potential errors can now be rectified before they have a larger, more damaging effect.

Yet German trades currently account for 20% of monthly European turnover on average (see exhibit 5) and manual interventions are routinely required for successful settlement. One European firm TABB spoke to claimed that almost 10% of their trades in Germany required manual intervention. If you were to extend this across all major European countries, the manual settlements workload firms face is likely to increase significantly, and it is not just the back office that will be affected.

The move to T+2 will affect cash positions, currency fluctuations, rebalancing of portfolios, stock loan and corporate actions, all of which will need to occur within a faster time frame. This highlights the requirement to automate processes in order to understand where the risk lies – in real time. Another challenge will be the global implications of T+2. Managing cross-border transactions, along with time zone challenges, puts extra scrutiny on the ability to settle these trades two days after the date of trade. If you trade with a counterpart in another time zone, affirmation may not even happen until T+2 without same day allocations.

Exhibit 5
German Equity Trading as a Proportion of European Turnover



As the industry focuses on the implicit rather than explicit costs of trading, the focus on buy-ins and CCP fines can substantially increase the cost of investment. The buy side will need to take action now to ensure they have accurate post-trade reconciliation processes, and rigorous and timely responses to corporate actions in place. What happens when a client fails? How many brokers have fail-safe backup plans? What impact will one client have on others? Stock loan bottlenecks will require changes to agent coverage for many – if everyone is chasing the same stock, the risks becoming exponential.

The greatest opportunity to reduce risk and unnecessary expenditure will be through the elimination of manual workarounds. Efficient know your customer, customer relationship management and pre-trade allocation processes to eliminate trade breaks between an OMS and EMS, as well as internal versus external trade matching are now essential. The boring but necessary security identification data may not be top of the priority list but this is the area in which the majority of mismatches lie. Money invested in developing efficient processes here will pay dividends. Manual rectifications and resubmissions are both timely and expensive.

Fund managers no longer have the luxury of waiting until the end of trade date to allocate and confirm a trade – allocation details must now be confirmed ideally pre-trade but, at the very latest, same day in order to reduce the overall number of exception reports that must

be addressed. In turn, broker-dealers can no longer wait until T+1 for the resolution of queries. The correct assets and values must be delivered to the right location in the proper allocation of funds. Getting any of this wrong is now an expensive hobby no participant can afford.

Not Just European Equities

Those sitting in the US and Asia should take heed; T+2 is fast becoming the norm. In Asia, Japan's Financial Services Agency implemented a move to T+2 settlement for the domestic government bond market in April 2012; China already implements a T+1 trade settlement cycle and Australia is also reviewing T+2. While currently, the US has a lower same-day affirmation rate than either Europe or Asia, automated central matching processes will be required sooner than expected. A recent white paper published by the Depository Trust & Clearing Corporation illustrated that a shortened settlement cycle will substantially reduce risk across the industry by more quickly freeing up funds for reinvestment and reducing credit and counterparty exposure. The mutual fund trade group, the Investment Company Institute, has also recently thrown its weight behind the move to T+2 settlement.

In addition, there are still conflicting views as to what is potentially in scope, with dual-listed securities, fixed-income cash bonds, and even OTC client transactions on the back of the cash equity leg. The International Capital Markets Association is also adjusting its rules to cover transactions that fall out of the scope of CSDR; CSD trades are often negotiated bilaterally and may not be executed or reported to a trading venue. A fragmented sell-side versus buy-side settlement cycle is not one that lends itself to globally harmonised markets. As already witnessed in Germany, it is not unusual to get a significant number of mismatches between a sell-side T+2 trade and a buy-side T+3 trade.

The more immediate problem will be the potential operational risk of so many European countries going live on the same trade date, October 6, 2014 and, more significantly, the concern around October 8 as the last T+3 settlement date and the first T+2 settlement date. Operational risk in the form of liquidity scarcity, failures and operational resource bottlenecks across participants are all very real and legitimate concerns. If the trade is booked correctly on trade date, with the appropriate data attributes in the right format, and then allocated, affirmed, matched and/or confirmed on trade date, the challenge of meeting and adhering to T+2 becomes significantly easier. In essence, the quality of the workflow processes and the provision of accurate and timely data will be essential. Without streamlined efficiency front to back, successful settlement will be impossible to either manage or deliver.

Everything and Everyone

Similarly, the obligation to register with the US Securities and Exchange Commission (SEC) under Dodd-Frank will impact a number of smaller funds that have previously managed to "make do and mend". Any funds that manage in excess of \$100 million need to register with the SEC (even in cases where there is a single client). Funds that need to register will have to maintain and file records with information that includes assets under management, trading and investment positions, valuations policies, leverage and counterparty credit

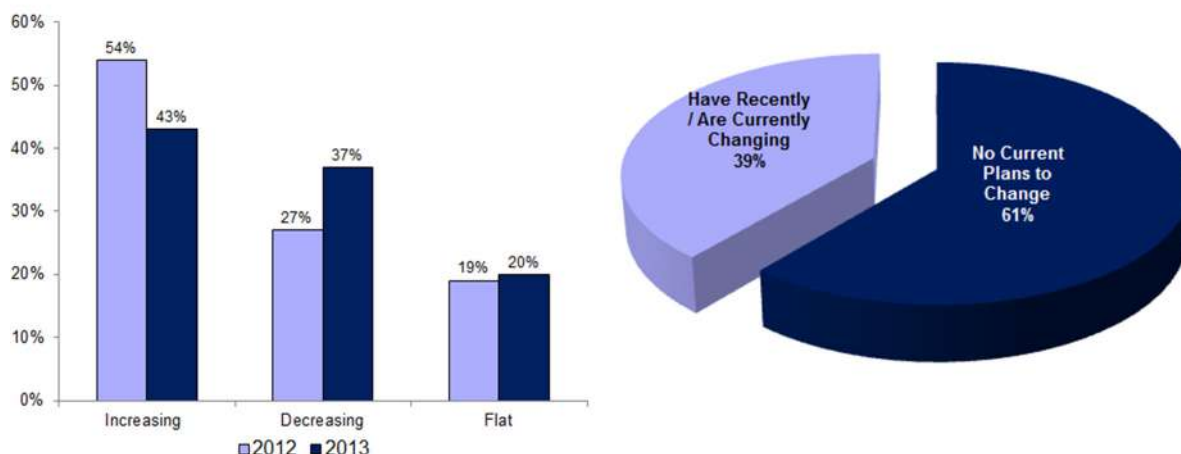
exposure, which, for many, will instigate a significant investment in infrastructure. In Europe, the requirements for MiFID II, MAD and MAR will mean that all firms, regardless of size, will need to record and maintain a vast swath of data and records to remain compliant. Irrespective of a firm's size, the days of manual workarounds and Excel spreadsheets have been relegated to history.

As well as changes to back-office procedures, the automation of additional asset classes will require a significant investment in technology. Calculations around trading fixed-income products, the impact on collateral, margin risk and analysis will also require an overhaul of both current OMS and EMS, intensifying the shift from end-execution alone to active portfolio management.

The current dependency on market makers in the fixed-income space will drive even further innovation to help buy-side trading navigate between exchange and OTC products more efficiently. The challenge for market participants will be creating this within a variable cost framework. In this environment, no firm – buy or sell side – can afford to be lumbered with high fixed costs.

Exhibits 6 and 7

EU Buy-Side IT Spend Indicators for 2014 / Changes to Current OMS/EMS Providers



Source: TABB Group

The current economic reality means that only 43% of European buy-side participants anticipate that their IT spends will increase in 2014 (see exhibit 6). It is now a question of retooling IT budgets to meet the new requirements. With fewer resources and depleted budgets, streamlined data and seamless trade flow processes become essential.

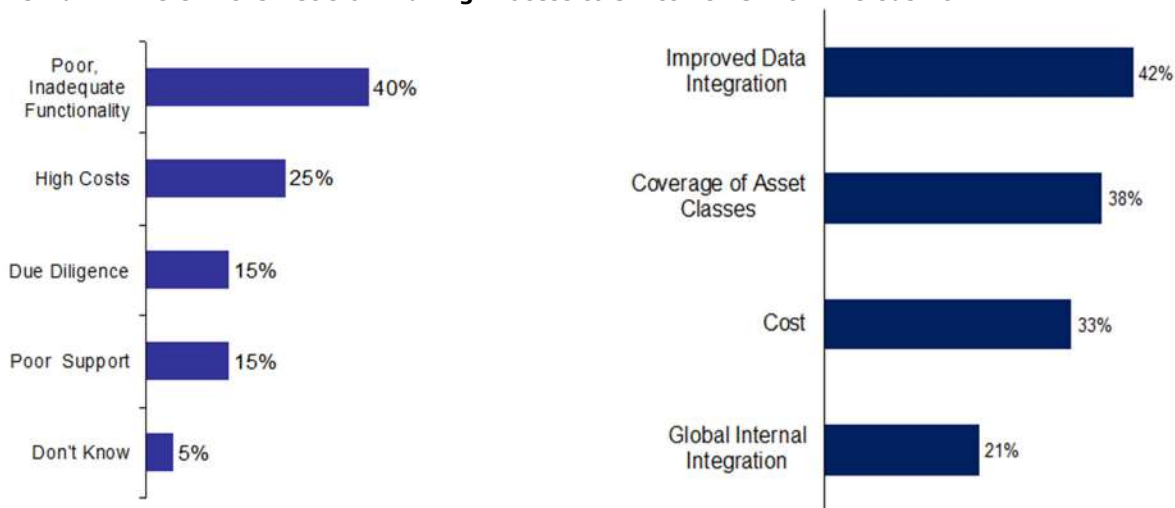
Thirty-nine per cent of respondents said they were, or were considering, changing OMS or EMS systems (see exhibit 7).

The Cold Logic of Consolidation

Streamlined dataflows and the rewards of OMS/EMS integration were previously considered a luxury. The return on investment was too low to justify either the expense or the inconvenience; why rip out existing functionality if it more or less covered what was required? But as greater demands in OMS functionality require accurate and consistent data – intraday and historic, internal and external – back-office functionality is moving to the forefront. The ability to establish pre-trade risk ahead of execution requires integration of internal systems now deemed essential to confirm the ability to trade. In 2012, the biggest driver to change OMS was poor functionality; in 2014, it is the improved data integration between internal systems (see exhibits 8 and 9).

Exhibits 8 and 9

The Main Drivers in the Decision-Making Process to Switch OMS: 2012 versus 2014



Source: TABB Group

Similarly, as the regulators zero in on investor protection and the fiduciary responsibility of the buy side, a free single-dealer EMS platform becomes less than ideal when you are looking to demonstrate a “best execution” strategy. As such, an increasing number of buy-side firms are rejecting the cost/benefit ratio of supposedly “free” single-dealer offerings for broker-neutral solutions that have richer functionality and deal in multiple asset classes across the globe.

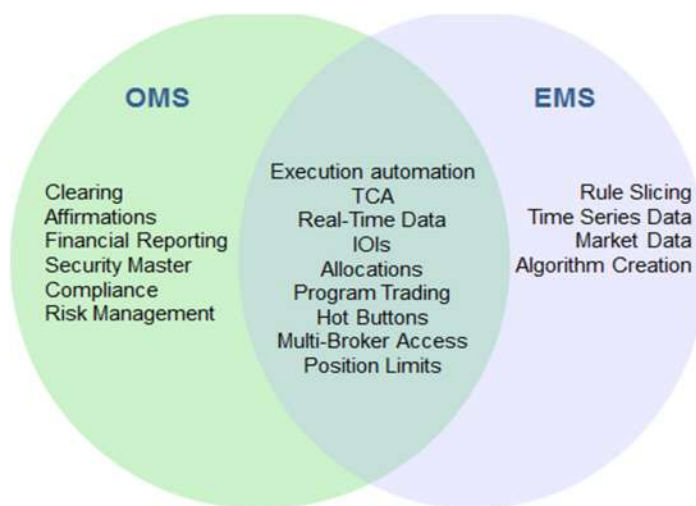
Banks also have fewer incentives to offer clients proprietary platforms. Increasing capital constraints under Basel III restrict banks to holding large portfolios of assets indefinitely. Capital is becoming an increasingly rare commodity and prime brokers (PBs) have factored it into their relationship management so that those firms deemed unprofitable are now under pressure to either provide more business or lower their costs. Similarly, whereas smaller firms were once able to rely on their PBs to act as their unofficial outsourcing for the back office, PBs are becoming more selective as to which client risk they are able or willing to take.

One and The Same

OMS and EMS may historically have had very different technology, but now both systems have increasingly overlapping functionality. OMS is complex and often deeply imbedded in the buy-side infrastructure – designed for portfolio construction, attribution, benchmarks, reference data, compliance, reporting, risk management, trade allocation and order processing. Meanwhile, EMS evolved from an increased need for speed and trade execution efficiencies in fragmented markets across multiple order types and a wide range of destinations (see exhibit 10).

Exhibit 10

Functionality Comparisons between OMS and EMS



Source: TABB Group

As firms look to consolidate platforms, it is not a straightforward decision based on dominant factors such as feature sets or price. It is a matrix of factors, including charging model (per seat, consulting services, and connectivity fees), underlying technology, relationships, market data integration, access to multi-asset classes, quality of service, reputation and, of course, total cost of ownership.

While the OMS strength lies in breadth of functionality and support, the potential for EMS differentiation lies in value-added analytics, data and content. Although there are distinct market leaders in both OMS and EMS offerings, it will be the optimisation of combined OMS and EMS functionality – OEMS – that will enable buy-side dealing desks to leverage real value. Nor is it as simple as plugging the OMS into the EMS – most firms have multiple systems across different asset classes. While neither an OMS nor an EMS can offer a full solution independently, it will be the ability to integrate that will differentiate. This means mapping security master codes and reference data fields from one system to another across multiple time zones and settlement structures. Successful integration and management of accurate, consistent and timely data will be instrumental.

The Future OEMS

The heterogeneous buy-side community has provided challenges and opportunities to software providers offering both OMS and EMS capabilities. Buy-side requirements vary greatly depending on what and where they trade, the velocity of trading, the number of asset classes and their overall strategies. No longer can vendors roll out an undifferentiated product line to attempt to serve the buy side en masse. Nor can they offer a truncated version of EMS capability, which previously might have been satisfactory in the world of long-only equity funds, but few others. Long-only hedge funds have been eclipsed by multi-strategy funds in the search for alpha and the requirements of regulators, including the obligation to trade all asset classes under MiFID II. The benefits of consolidated OMS and EMS systems are several. For the buy side looking to trade multi-asset and manage portfolio risk in real time, the ability to customise algorithms, manage execution destinations and the increased use of data analytics within the trading process will require extensive and complex event processing modelling. Yet few systems have yet successfully managed this transformation.

More likely, success will be delivered via integration of best of breed in OMS and EMS in the hunt for cost-effective solutions. As the buy side is forced to do more with less, third-party vendors who can offer compelling opportunities to facilitate technological advances, as well as lower the total cost of ownership will have a significant competitive advantage, particularly those who already own space on the desktop.

The Future Buy-Side Community

As in 2012/13, when outsourcing became mainstream, the appetite for sharing technology and leveraging resources to ensure easy and flexible deployment to generate alpha will dominate in 2014 and beyond. As more of the buy side looks to integrate and consolidate, a single-software solution already positioned on the desktop will be the cost-effective method for many to centralise and access data. From indications of interest (IOIs) to aggregators to visibility of fills, those providers able to deliver an extensive reach across multiple data sources and asset classes within a single audit trail will retain the competitive advantage.

As more firms employ multi-strategy approaches, platform consolidation becomes ever more critical, instigating behavioural change, which feeds into a cycle of increased self-sufficiency and greater technological requirements. The recent FX scandals are a case in point. Buy-side firms that automatically traded the 4pm fix from their custodian now have to consider alternatives to address end-investor concerns and demonstrate best execution. Increased ownership over order and execution capabilities delivers better results and the seemingly straightforward task of completing the FX leg of an equity transaction has changed from a back-office function to a front-office self-directed trade.

The anticipated evolution of the fixed-income and derivatives markets to include near-real-time bids and offers and volume/trade data has raised expectations among many market participants that the levels of liquidity, transparency and efficiency within equity markets will be available for all asset classes – eventually. This has become a significant driver in the OEMS decision-making process for many buy-side firms as well as driving innovation for financial software providers. Those trading venues with larger amounts of liquidity and transparency will have a distinct advantage in attracting new clients.

Sell Side to Buy Side

Key market structure changes are also redefining traditional broker relationships. Although buy-side firms will continue to rely on a combination of high- and low-touch sell-side services to source liquidity, the delivery of these services will be transformed. Asset managers must increasingly rely on their own resources to shape their execution strategies, foster a greater understanding of how algorithms work and be able to manage their own risk independently. As a result, the buy-side evolution of OEMS is leaping beyond sell-side applications to provide platform integration, the addition of decision-support tools from pre-trade analytics, real-time accurate execution across multiple-asset classes through to efficient post-trade settlement. Artificial intelligence now needs to be incorporated to deliver shorter-term alpha capture and enhance trade execution strategies through visualisation tools that facilitate better intelligence and informed decisions in near real time.

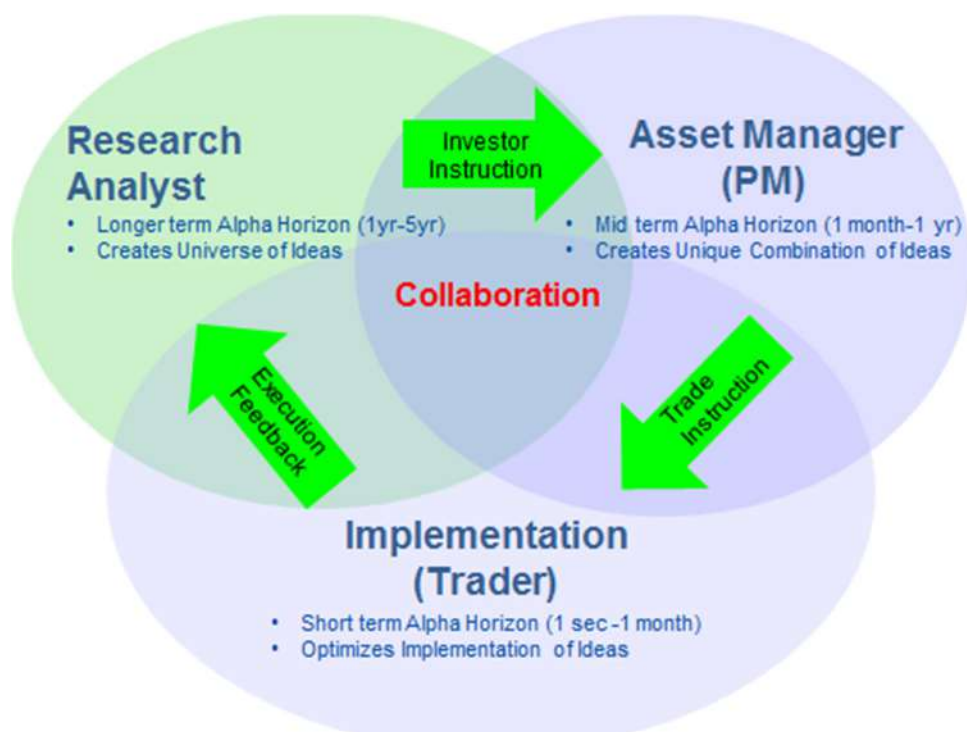
Whereas EMS played the key role of an independent mechanism to aggregate, deploy and monitor trading algorithms from a host of providers, the switch to trading FX and fixed-income products electronically will lead to new requirements such as interoperability and

collateral management, which will have a knock-on effect for equity execution and the next stage of its evolution.

New alert functionality can highlight the most statistically relevant intraday changes to better interact with the execution process in real time with a given set of parameters. As the need to monitor risk effectively shifts from assessing traditional risk, such as growth, leverage or yield to more complex arrangements based on volatility, credit exposure and options expiries and even social media feeds, the complex labyrinth of data and analytics will continue to grow. The evolution towards more data-centric systems architecture will provide a more efficient and cost-effective solution to improving decision-making and reporting capabilities than can be achieved by addressing these challenges independently.

OEMS solutions will now need to focus on portfolio management, trade support, trade processing, risk and compliance as well as the provision of multiple sources of liquidity for execution. Smarter central event processing (CEP) around decision-making processes will require historic as well as real-time data sources, and accurate and responsive P&L analysis.

Exhibit 11
Future Workflows for Multi-Asset Dealing Desk



Source: TABB Group

Data, Data and More Data

The ability to analyse data – both historic and real-time – will transform that data from a utility to an advantage. This will be achieved across brokers and venues, in order to establish which product to trade on which venues relative to the underlying fund. The

requirement to ensure the data is accurate and consistent will also drive further standardisation and consolidation.

Just as venue analysis is essential for the cash equities trader, broker and product analysis will be the backbone of the future buy-side trader. Intelligent analysis offers the ability to optimise current strategies based on a combination of past, present and future data analyses. This includes leveraging trading activity with predictive analytics, timing and volume adjustments to optimise alpha.

The potential for this new deep analytical source – with its ability to extract data in different forms across a new range of products – leads to huge opportunities for those with the right technology. From incorporating actionable IOIs to tracking interest in illiquid names, collateral optimisation and cross margining to stock lending, the efficient management of data via desktop technology is the new *modus operandi*.

From the investment decision to compliance and risk management, only the integration of OMS and EMS will minimise challenges to data consistency and accuracy throughout the life cycle of the trade. The need to integrate both internal and external data, intraday and historic, static versus derived (see exhibit 12) will require seamless integration in a single centralised source.

The potential impact of toxic data, at even one single point in the life cycle of a trade, will potentially magnify implicit costs and regulatory fines exponentially. As such, consistently maintaining accurate and timely data will turn data management into an advantage rather than merely a utility.

Poor quality data could result in miscalculating a client mandate. Accurate validated data is vital for a firm's profitability and reputation. Similarly, data sent too late may negatively impact the ability to holistically manage risk. Taking three weeks to retrieve one section of data analysis will skew any accurate fund assessment.

The value of superior data is rapidly becoming a new marketing tool to reduce costs and unnecessary risk, and improve efficiency. Trusted data enables investment teams to make better, faster, more accurate decisions, thus maximising portfolio growth.

The Cycle Begins Again

Increasing regulatory complexity and the move to trading across asset classes and geographies will require disparate, siloed systems to communicate as one, both front-to-back and across the globe. From options traders in Chicago, to calculating real-time exposure risk in Russia, to the latest post-trade reporting requirements of EMIR, buy-side needs have grown far beyond single-asset siloed systems.

There will always be single asset/single strategy funds that can function using a broker's system. However, all evidence points to more optionality becoming available to buy-side firms, requiring a dynamic free flow of data throughout the life cycle of a trade. This will facilitate change in data consistency, accuracy and seamless integration between combined OMS-EMS systems.

New asset classes or complex trading algorithms have only been available through bespoke EMS platforms that needed to run alongside combined OMS-EMS systems. As institutions look to reduce complexity and costs, consolidation of platforms across asset classes and geographies is the obvious solution. While this is a worthy goal, some management reporting and accounting aspects of OMS systems still remain outside the scope of OMS-EMS hybrids. The evolution of platform consolidation will continue as firms look to reduce complexity and costs, and endeavour to use a single OMS-EMS system across asset classes and geographies.

This time, innovation will not only occur because of industry consolidation, but also due to changes outside the platform. Regulatory developments in cash markets, especially fixed income, will need to be reflected in the next iterations of OMS-EMS systems. It will be the need for rapid improvements in the middle and back office that will drive greater demands for integration between disparate systems.

The harmonisation of the settlement period to T+2 and the imposition of penalties that will fall on market participants if they fail to deliver securities within the two-day limit will require a significant technology change for non-automated firms. For those still dependent on manual processes, the risk of fines and buy-in charges will lead to greater STP in post-trade processes via automation of pre-settlement matching. To date, technological advancements have focused on execution. The ability to create algorithmic processes across a whole range of business areas (such as position management, hedging strategies, capital allocation, collateral management and even basic account management) will continue to redefine OEMS requirements and drive further innovation.

Future fund performance will become ever more reliant on alpha retention, cost controls and data flows. As alpha opportunities continue to shrink and turnover in funds slows, the desire to develop streamlined businesses front-to-back, reducing costs, controlling risk and delivering performance to underlying investors will increase the level of automation required throughout the investment cycle and across all asset classes. The buy-side platform evolution is set to continue.

About

TABB Group

TABB Group is a financial markets research and strategic advisory firm focused exclusively on capital markets. Founded in 2003 and based on the methodology of first-person knowledge, TABB Group analyses and quantifies the investing value chain, from the fiduciary and investment manager to the broker, exchange and custodian. Our goal is to help senior business leaders gain a clearer understanding of issues and trends within financial markets so they can better grow their businesses. TABB Group members are regularly cited in the press and speak at industry conferences. For more information about TABB Group, visit www.tabbgroup.com.

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A respected thought leader in market structure reform and financial technology, Rebecca Healey joined TABB in March 2011, bringing over 15 years of direct industry experience in e-trading and financial services. Rebecca is widely quoted in the media and has appeared on both television and radio discussing the ongoing changes in capital markets. In 2012, Rebecca was invited to provide evidence for the UK House of Lords review of electronic trading. Rebecca has held various sales and trading positions with Bankers Trust, Goldman Sachs, and Credit Suisse, where, as Vice President, she was instrumental in launching the successful AES (Advanced Execution Services) product to hedge funds from its inception in 2002 until 2008. Prior to this, she was the first electronic trader at Credit Suisse to be registered for all electronic European cash equity markets and covered sales trading into Asia and then Europe between 1997 and 2000. More recently, Rebecca was based in the Middle East from 2008 to 2010. There she was employed by the British Embassy in Bahrain, where she successfully launched the UK Government's financial services strategy and set up the Bahrain Financial Services Roundtable, which remains a key source of information for the UK Government, especially in relation to Islamic finance. Rebecca holds a Bachelor of Arts degree in Spanish & Latin American History & Politics from the University of London. At TABB Group, Rebecca has authored a number of research papers covering European equities, FX, fixed income, dark pools, TCA, market surveillance and regulation.



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