
One Touch, One World: The Future of Investment Banking



Vision

"In the long history of humankind, those who learned to collaborate and improvise most effectively have prevailed"¹

Capital markets are on the precipice of yet more change. From equities to complex derivatives, research ideas to post-trade services, we are reaching an inflection point of Darwinian proportions in the maturation cycle of financial services. Modern banking is still a relatively young business in comparison to industries such as engineering; just as the production cycle of the engine became industrialised, investment banking is now following suit. As market tectonic plates shift to a new era of disruptive technological innovation, financial services will finally become industrialised, delivering transformational change in the process.

Why now? Take your pick: a lack of belief in the previous system, burgeoning regulation, crippling economics, the search for increasingly elusive alpha, technological evolution, even a desire to improve and enhance financial services for the wider community. How capital markets operate and how participants can access and engage with the investment process is being challenged. Client interaction is radically being redefined as a result.

Investment banking was historically a proprietary, secretive business, where access to the inner sanctum of intelligence and information was hard fought. Scarcity of available information created demands for economies of scale; success equated to industry mammoths that dominated through sheer size and weight. Now the ice age has hit and the mammoths are floundering. The era of the omnipotent portfolio manager predicting single stock investments – working in tandem with selective sales traders playing the role of kingmaker – is under metamorphosis.

Firms such as Google and Apple have transformed our approach to technology, empowering passive participants into active, assertive consumers who demand wide access to choice and the ability to customise requirements in real-time, 24/7. From application to design, mobile access to capital markets will become no different to the myriad other industries – be it shopping on Amazon, grocery ordering online or Apple TV – radically reshaping the market-participant equilibrium in the process.

Until now, the rise of the internet had yet to impact financial services to the same extent. This is set to change. Access to the control of product (ideas) and the ability to execute on those ideas (provision of liquidity) is being radically transformed.

Research has historically been accessed via legacy systems and reports attempting to pull information from disparate sources. The use of mobile technology enables market participants to quickly access information they need, pinpointing exact answers rather than being buried in a deluge of data. By shortening the path to insight, further ques-

¹ Charles Darwin

tions and deeper analysis can be completed, moving research from multiple sources of information (often irrelevant noise) to specific answers to individual questions.

With less de facto control over alpha and ideas by investment banks, there is less incentive for the buy side to passively engage with their broker along pre-determined lines.

As investment strategies evolve from the single asset view to complex portfolios of multiple asset classes – requiring country, industry and currency analysis, as well as insight of credit and option market trends – access to multiple products and services right across the investment bank will radically transform the traditional siloed capital markets model.

Only immediate and friction-free access to content, community and execution will deliver the ability to leverage opportunity and insight successfully. As market events change and strategies alter, the mix of product requirements may evolve to incorporate different products in various geographic regions simultaneously. From idea generation to execution, a holistic customised network will enable the buy side to leverage the full suite of products and services within an investment bank, as and when required.

The switch from passive relationships to engaged collaboration across asset classes will transform capital markets from simply selling clients a bank's product suite to delivering true client centricity. Optionality will be the key. Access to the right information, at the right time, in the right format is critical, and this will differ from client to client, desk to desk, and from one portfolio manager to another. The ability to think globally but act locally, and think individually but act communally, will require empowered individuals and firms willing to collaborate and engage.

Technology will facilitate this efficient, portable and real-time access to content and community. However, technology alone is not the answer. As technology becomes embedded in the full investment cycle, improved data analysis will ensure access to the relevant research, enable unnecessary risks to be managed more effectively in the interim and lower execution costs overall, delivering optimum returns for investors. As the traditional e-commerce model becomes an interactive service model – not only as a means to deliver enhanced efficiencies and ensure profitability, but to provide quality coverage with focus and vision – it will be the behavioural change by those who interact with the technology that will enable technical innovation to be fully realised.

Only by creating an interactive network of people and content, and harnessing technology to resurrect the most important aspect of investing – the trusted relationship – will true innovation in capital markets continue to thrive.

Table of Contents

VISION	1
TABLE OF CONTENTS	3
INTRODUCTION	5
THE IDEA.....	6
COMPLEX TRADING	7
THE CHALLENGES AHEAD	9
ECONOMIC PRESSURE	10
THE REGULATORY WEB.....	10
EQUIFICATION	12
IMPACT ON FIXED-INCOME TRADING	13
OTC VERSUS ON-EXCHANGE	14
NEXT AGE MARKETS.....	16
THE TRADING INCENTIVE	18
THE HOLISTIC INVESTMENT PROCESS	18
THE UNLIMITED POTENTIAL	20
CONCLUSION	22
ABOUT.....	24
TABB GROUP	24
THE AUTHOR.....	24

Table of Exhibits

Current Drivers for Change in Capital Markets	5
Growth of Multi-Strategy Funds	6
New Automated Workflows Across Asset Classes	7
Automation of Asset Classes / Institutional Impact on Automation of Trading	8
Evolution of Research and Information Sources	9
Reductions in Commission Flows – Europe versus the US	10
Current Proposed European Legislation	11
Latest MiFIDII/MiFIR Timeline.....	13
The 21 st Century Investment Chain	16
The Growing Requirement for Data Aggregation.....	17
The Flow from Front to Back.....	19
The Intelligence Potential	20

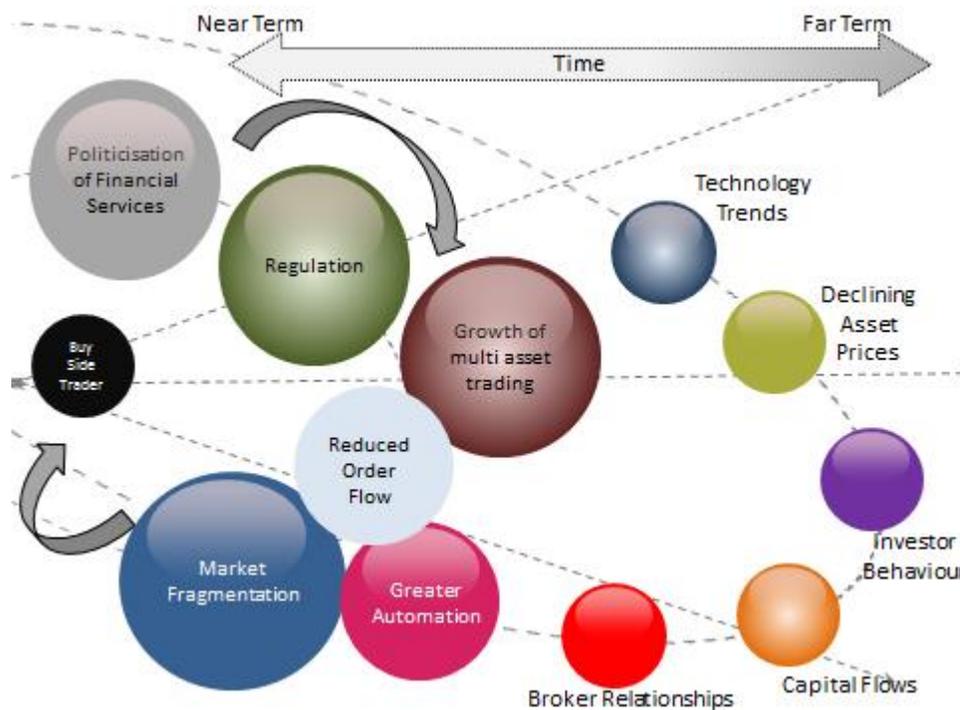
Introduction

The time is now. There is a perfect storm of market conditions, creating key drivers for seismic change in capital markets. The combination of global economic crisis and regulation has led to depleted resources triggering a shift in market participants' roles, an appetite for change and a requirement for new innovative products and services (see exhibit 1).

Despite a number of positive results for the largest global banks in the first half of 2013, the underlying analysis of the future of capital markets has not altered. It will not be enough to focus solely on operational efficiencies and cost-cutting measures; new business models and services will need to be created to deliver sustainable profits in the longer term.

Traditional brokerage services will continue to come under increased strain, forcing asset managers to step into the breach, no longer relying on their broker relationships for traditional services as they once did. By taking far greater ownership of order flow and diversifying their portfolios, the subsequent shift in control facilitates not only their ability to successfully manage risk and improve returns, but readjusts the market-participant equilibrium.

Exhibit 1
Current Drivers for Change in Capital Markets



Source: TABB Group

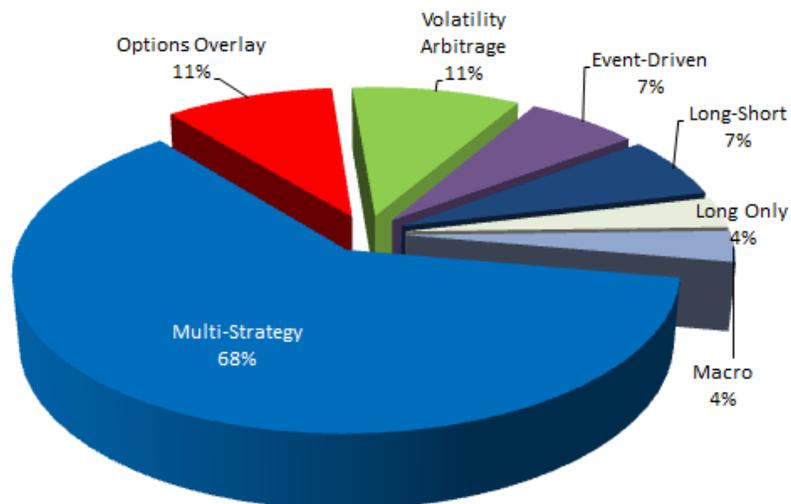
As institutional dealing extends globally with more liquidity sources and counterparty relationships to manage, the need to aggregate liquidity, create orders, and execute within

a fast-moving trading environment, while ensuring greater control over compliance and regulatory obligations, is changing the technology required, not only by the sell side but also by the buy side. The need for a holistic viewpoint across all products and departments – for all market participants – has never been more acute.

The Idea

As the appetite for risk evolves, fundamental stock picking has given way to global mandates focused on momentum valuations and earnings viability across asset classes. Coordinated central bank interventions have distorted asset values and created mirages within the investment landscape, fundamentally altering how market participants choose to engage with capital markets.

Exhibit 2
Growth of Multi-Strategy Funds



Source: TABB Group

A recent study undertaken by TABB Group in February 2013 illustrated the growth of multi-strategy funds (see exhibit 2). As a result, global multi-asset investments undertaken today require extensive modelling strategies with real-time data to conduct complex “what if” scenarios. Investment profiling can now not only predict future possible effects, but can also be updated throughout the day to incorporate the latest news or trends on Twitter, for example. Effective research must also now include real-time social media, establishing what is noise and what adds real value, requiring constant analysis and reassessment across multiple product lines and geographies.

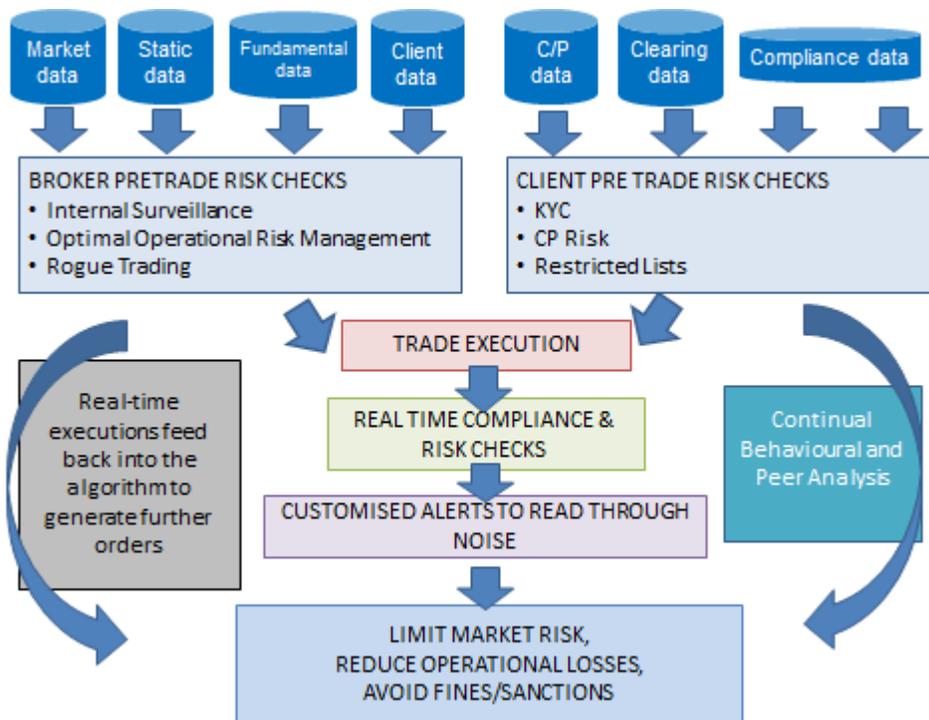
The process of the investment decision will also evolve as unforeseen risks or changes to the portfolio emerge. As investors crowd into certain stocks or sectors, managers now have to be mindful of not only their own behaviour but also that of the wider market in order to accurately manage risk.

Once an investment decision is made, real-time knowledge of the net exposure – by asset or currency, both at the fund and firm-specific level – becomes vital. Valuable time can be lost in clarifying that all the necessary checks and counter checks have been completed before the trade has been executed. Yet shortcuts cannot be taken; the cost of non-compliance can be significant and trading out of a compliance breach can be expensive if the market is heading the wrong way.

Complex Trading

As investors are looking further across asset classes in their hunt for yield, individual trades increasingly include multiple instruments traded in more than one geographic region, in more than one time zone, and with conflicting settlement arrangements. Firms are increasingly deploying multiple strategies where usage, costs and workflow are highly variable. To compete in this kind of trading environment, harmonised systems that enable deeper and richer cross-asset functionality – and that monitor risk more holistically and in real-time across client accounts with diverse holdings – are essential (see exhibit 3).

Exhibit 3
New Automated Workflows Across Asset Classes



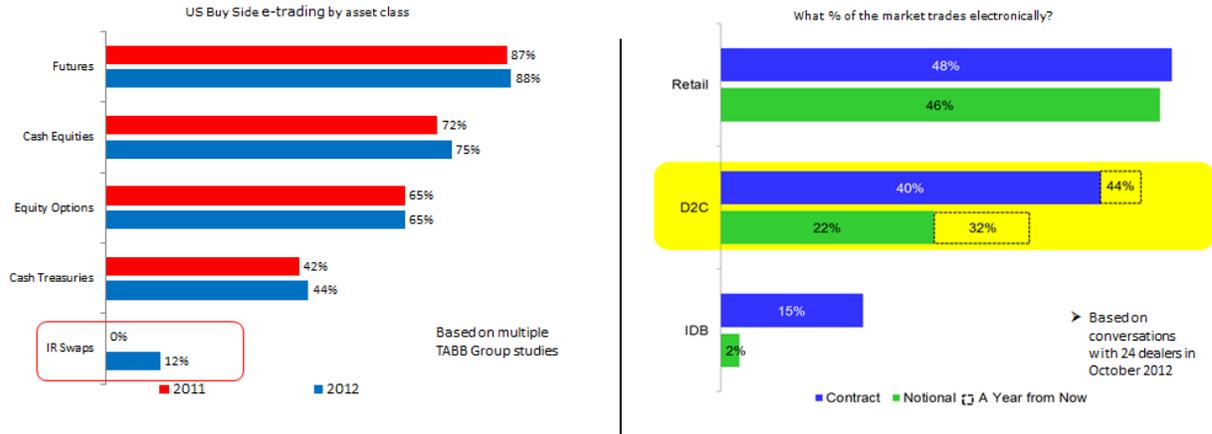
Source: TABB Group

The requirement for a single access point to multiple strands of information, across both research, execution and compliance, will fundamentally alter the dynamics of capital markets, and will lead to the requirement for additional holistic products and services.

While equity markets have matured and been electronic for several years, as a result of developing regulation there is now a rapid movement towards a more electronic workflow in other asset classes (see exhibit 4 and 5), accentuating the drive for centralised data systems to ensure delivery of best execution, effective and timely trade reporting, as well as efficient real-time risk management right across the investment spectrum.

Exhibits 4 and 5

Automation of Asset Classes / Institutional Impact on Automation of Trading



Source: TABB Group

It is not enough to focus solely on operational efficiencies and cost-cutting measures as the reasons for this behavioural change; that is only half the story. The era of transparency thrust on the investment banking industry by regulation is leading to a new age of collaboration. The *status quo* of the investment bank sell side has dissolved into the ether. Those who are courageous enough to invest and innovate will retain their client base. Now is the time for the next generation in automation: collaboration.

By sharing proprietary information and trading strategies, the buy side have the opportunity to harness the full capabilities of a global investment bank, provided the sell side matches the level of transparency and partnership. As the consultative relationship becomes electronic, the confidential partnership can reach a new level of evolution to garner the most effective results.

Vital intelligence may be buried within a client’s portfolio – if an investment bank is aware they can potentially alert their client to possible opportunities, such as offering stock to another client, a revised reweighting based on a research update or market activity, or a trading opportunity created from a separate client’s activity.

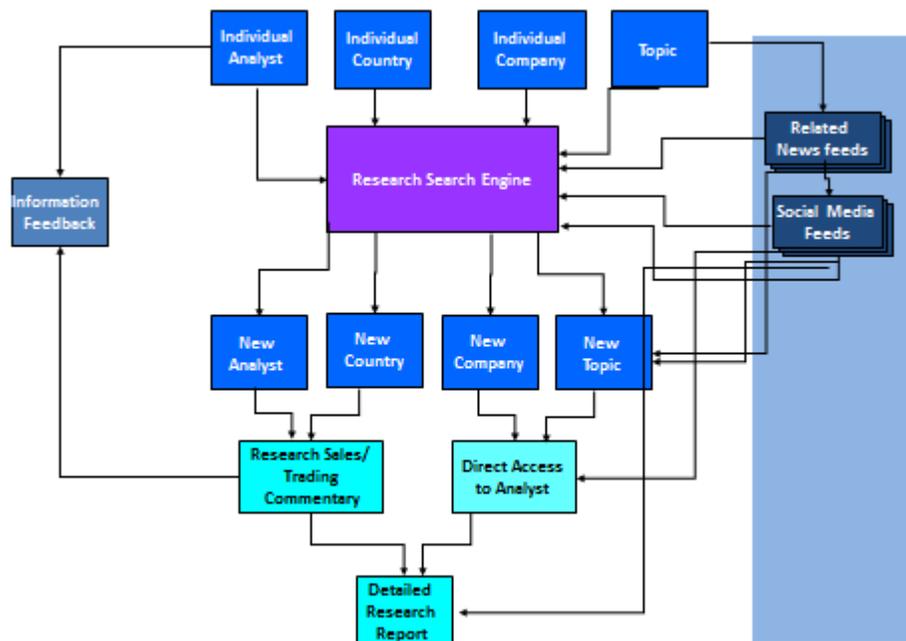
As technology enables a greater amount of data and research to be incorporated into investment decisions, the human element will remain paramount to observe market factors, and to interpret events, precedents and probabilities in order to act efficiently on real-time information. Fluid thinking and collaboration across trading, investment and risk management will be the future of capital markets, signalling the start of a mass transformation in culture, / process redesign and enhanced technological performance.

The Challenges Ahead

The plethora of possible strategies across asset classes and geographies will generate an even greater deluge of information and data overload. From sophistication to simplicity – the need for precise access to effectively solicit the right information when required will necessitate friction-free access to timely content.

The ability to drill down at a local level and scale up to a firm-wide view means market participants will require access to local, specialised knowledge within a global framework. By redesigning and simplifying research distribution, the sell side can ensure overloaded clients gain full access to what is needed, even as their requirements change on the fly (see exhibit 6).

Exhibit 6
Evolution of Research and Information Sources



Source: TABB Group

Today's trading environment is too complex and global for an insular approach. Siloed legacy systems that cannot exchange information in real-time will become redundant. If clients interact sporadically across global firms, it becomes difficult, if not impossible, for the sell side to track resources used as well as deliver truly strategic value-add opportunities. Unifying the user experience and switching from a transaction-based information set to a holistic mind-set enables more granular analysis of unified client information, which will ultimately improve the service an investment bank is able to offer, both across asset classes and globally. The once seemingly impossible is now becoming possible, but the implementation challenges to reach this goal are significant.

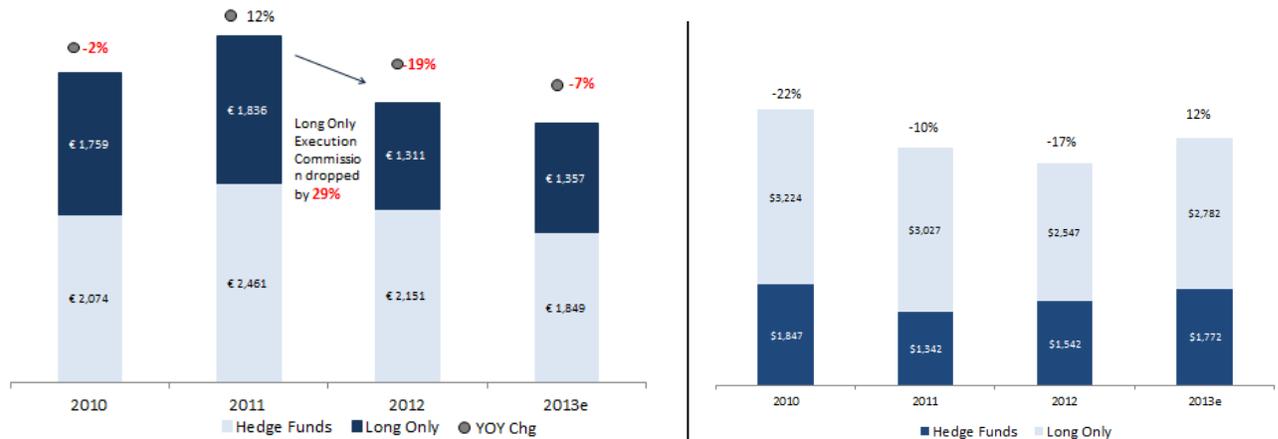
Economic Pressure

As alpha opportunities continue to shrink and turnover in funds slows, the desire to develop streamlined businesses that reduce costs, control risk and deliver performance to underlying investors will increase the level of automation required throughout the investment cycle and across all asset classes.

In Europe, this process is being accentuated as a result of the economic crisis that has pervaded European markets, the consequential decline in trading volumes and the impact on broker commissions (see exhibits 7 and 8).

The ensuing reduction of brokerage services and personnel, and increasing autonomy of the buy side, is leading to new challenges. Brokers reducing head count are merging high- and low-touch trading, forcing the buy side to automate flow. Dependent on the available liquidity in the name an asset manager is looking to trade, they may now also choose to trade the convertible bond one day, a credit default swap another or a single-stock future on the next. As a result of changes in fiduciary requirements, the Swiss fund manager trading a Swedish second-tier name may now need to trade FX directly on the back of the position rather than automatically take the 4pm fix from a broker. The ability to flip between products will require sufficient buy-side knowledge and competence in trading multiple asset classes, but also succinct access to effective research. Only selection strategies based on real-time information will deliver performance. Researching which is the best match or even an alternative match requires instantaneous answers to a whole host of perhaps as yet unthought-of questions.

Exhibits 7 and 8
Reductions in Commission Flows – Europe versus the US



Source: TABB Group

The Regulatory Web

While the volume and complexity of regulation is creating significant administrative challenges for market participants across the globe, European regulation is impacting not only sell side but also buy side behaviour to a far greater degree.

Under the regulations concerning “best execution”, the US adopted a strict “best-price” approach, which prohibited trade-throughs, while in Europe, MiFID adopted a principles-based approach, which included multiple dimensions such as price, speed, size and the probability of execution. Rather than delegate the decision to their broker, European asset managers are required to ensure they have sufficient information and autonomy with which to deliver best execution.

Investors – particularly institutional investors – care about a range of factors apart from just price. For example, an investor seeking to buy a large parcel of stock may be happy to trade off price against executing a large block quickly. As fiduciary responsibilities take centre stage, the principles-based approach of European regulation will require greater subjective analysis, thereby seriously disrupting the traditional modus operandi for the buy side, creating a need to redefine technology and service requirements.

**Exhibit 9
Current Proposed European Legislation**

European Legislation	Impact	Opportunity	Handicap	Outcome
MiFID Review	-2	1	33%	Will force brokers to turn dark pools into MTFs, making them more equal to exchanges. This will reduce barriers to entry increasing competition for trading volumes. Also significant impact on HFT and automated trading volumes.
Basel III	0	0	100%	Basel III increased capital charges will force/encourage the move from OTC to listed derivatives.
Brown Vitter	1		10%	Fixed Capital ratios at 15%
HFT Taxes	-3	0		Will reduce intermediation and transaction volume. Will also reduce need for direct feeds, and exchange tech/infrastructure.
Transaction Taxes (French)	-1	0	100%	Impact on French trading activity is neutral to negative. Considering additional taxes, it a) depends upon the tax regime, and b) depends upon the markets' ability to get around it. Looking at French TTs, it doesn't look like there has been a dramatic impact <u>yet</u> because there are exemptions and alternatives. Swaps / CFDs - trading volume not significantly impacted. But not enough time has passed to show the true impact. Potential regulation of Swaps / CFDs going forward.
Transaction Taxes (Italian - and closer to proposed European TT)	-3	0	70%	Impact on Italian trading activity is negative. Few ways to get around TT and even if Italian stocks are listed in foreign markets, they are still taxed. Here trading volume in only 2 months has dropped between 9% and 31% compared to other markets that can trade these same products

Source: TABB Group

The recent introduction of multiple regulations (see exhibit 9) will make it essential to have not only full and immediate access to trading data once the investment decision has been made, but also seamless interaction with back-office systems – from risk management right through to collateral management systems – as well as a full understanding of the relevant regulation for that particular asset class. Automated processes will therefore become the essential backbone in the investment and execution process.

However, as the level and range of European regulation remains in flux, it is vital to have technological solutions that are flexible enough to adapt to whatever lies ahead. The European financial transaction tax (FTT) is just one example. Currently still under negotiation within the 11 European Union member states supportive of the measure, the French and Italian FTTs are already in force, illustrating the level of regulatory complexity market participants now have to operate in. One tax includes derivatives, one does not; one excludes market making, the other does not have its own definition of market making, but relies on European regulations around short selling to define what market-making activities would fall outside the scope of the tax. There is also significant ambiguity in the language of the Italian decree leading to confusion as to how the tax is calculated. For example, it remains unclear whether trades would fall within the exemption for market making if you are making markets on exchange but hedging that liability over-the-counter (OTC).

As regulators increasingly require firms to illustrate their ability to factor risks that are taken in investment, those that cannot accurately describe, monitor and assess their risk profile will find their firm under scrutiny and their ability to interact limited. Global regulation is here to stay; as a result, automated systems and processes, together with a centralised pool of data, will become vital to survival and to ensure sufficient compliance.

The need for ever-more sophisticated trading systems to collate, analyse, monitor and report on risk will necessitate investment in improved connectivity, SORs and venue analysis. Only instantly feeding the trading data back into both the portfolio management and back-office systems will deliver a seamless investment flow with minimum breaks and settlement fails.

Equification

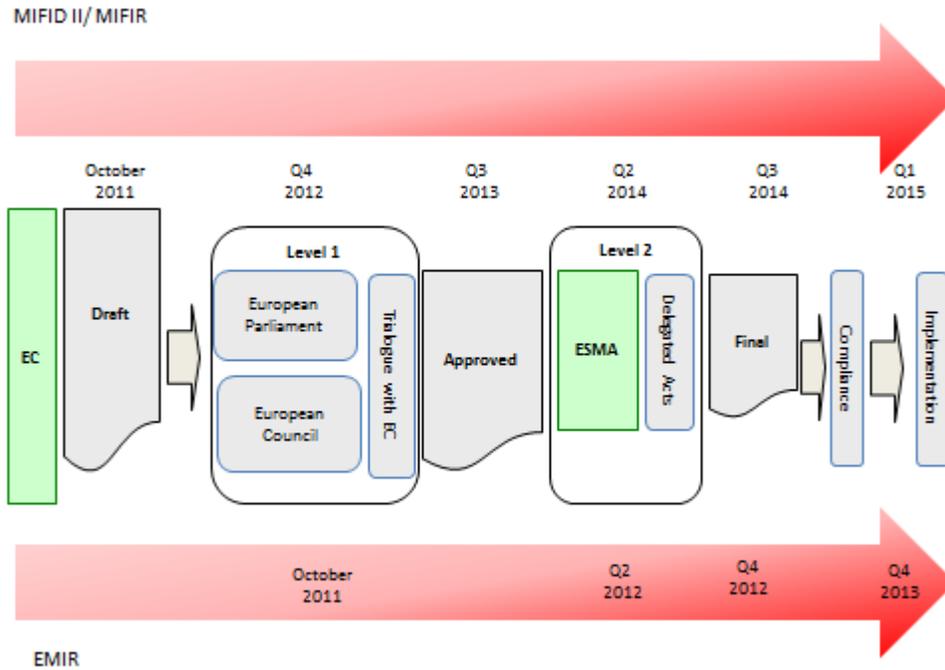
While the automation of the equities investment decision is nothing new, the speed at which other asset classes will succumb to automated trading will happen at a far greater rate than most of the market suspects.

The Markets in Financial Instruments Regulation (MiFIR) covers all asset classes bar FX and is reaching the final stages of the compromise agreement (see exhibit 10). It is clear that European politicians intend to use the equity model as the base model for all instrument types. New requirements for basic regulation, such as improved trade reporting, will spearhead widespread uptake of automated workflows, transforming traditional bilateral markets in the process. Increased automation will open up new opportunities to hedge risk, calculate margin and source liquidity, as the heightened use of data and technology will ensure a smooth transition.

As asset managers streamline trading operations to maximise efficiency, the ability to aggregate position data in order to gain a complete view of cash and securities balances will maximise investment decisions and trading strategies. Obtaining a complete view of positions across multiple systems – and seamlessly switching from asset class to product, and from research through to back-office reporting – will enable firms to efficiently manage investment portfolios, provide greater visibility and reduce expenditure.

New regulation and a need to further drive down costs mean buy-side firms need greater investment decision support, robust client and regulatory reporting systems, and efficient risk and compliance functions. The evolution towards more data-centric systems architecture will provide a more efficient and cost-effective solution to improving their decision-making and reporting capabilities than can be achieved by addressing these challenges independently.

Exhibit 10
Latest MiFIDII/MiFIR Timeline



Source: TABB Group

Breaking down silos and resolving inefficient usage of collateral will now become a priority for firms obligated to hold more collateral for OTC transactions. Without an automated workflow process, efficient management of collateral will be impossible to manage. Without an optimal way to analyse the availability of collateral, there will be no way to ensure the ability to trade. The introduction of the straight-through process (STP) will become the catalyst for the explosion of automated trading in other asset classes.

Impact on Fixed-Income Trading

New global regulation will fundamentally alter the way fixed-income products are traded. Basel III, which will be implemented in Europe through the Capital Requirements Directive IV at the start of next year, will require banks to hold more capital against the bonds on their balance sheet based on their level of risk, severely challenging the traditional bilateral OTC execution model.

The added cost that will be imposed by Basel III is already constraining banks' balance sheets and they are unable to commit as much capital to all clients or support broad bond inventory as they did previously. This is creating two significant challenges for both the sell side and the buy side.

First, banks need to be able to establish where their reduced capability to offer capital and inventory reaps most reward. Second, the buy side can no longer turn to their broker to locate the requisite liquidity. As regulation forces greater pre- and post-trade transparency into the opaque fixed-income market, inventories will continue to decline, forcing market participants to engage in an increasingly elusive hunt for the other side of their trade on an ad hoc basis. As secondary market liquidity decreases and volatility increases, any delay in location will significantly impact execution costs and potentially increase risk exposure.

In a similar manner to the automation of equities trading, buy-side traders are looking for a range of different but complementary execution options to trade bonds, as opposed to liquidity that is split across different dealers. However, many bonds are tightly held and trade very infrequently so the chances of finding a match in an individual bond will be significantly diminished compared to matching an equity trade. In addition, during volatile periods, bond markets can be "one-way", further decreasing the chances of a match. Fixed-income markets are also heavily subject to the "winner's curse", therefore the requirement for both types of participant to find matches for their orders without revealing their intentions to the market is essential, particularly for institutional asset managers who trade wholesale rather than retail-sized order flow.²

Banks can also be left holding small, illiquid positions in bonds from facilitating client trades. Under the new regulations, these illiquid positions would incur a high capital charge. The ability to off-load small but potentially expensive positions quickly and efficiently once more requires the ability to locate the right party. A centralised information pool that provides brokers maximum access to relevant client intel, not only frees up sell-side balance sheets but delivers vital inventory when and where it is required.

OTC versus On-Exchange

EMIR's definition of "on-exchange" contracts will mean that anything traded anywhere other than a regulated market (RM) will be considered OTC regardless of whether they are traded on an MTF or are economically equivalent to the on-exchange contract and therefore subject to collateral requirements.

Breaking down silos and resolving inefficient usage of collateral will now become a priority for firms obligated to hold more collateral for OTC transactions. Without the access to the appropriate data, participants will be unable to manage existing collateral effectively and therefore mitigate any unnecessary credit risk. The mechanics of margin calculation and posting, as well as asset inventory data, can play a vital role in effective trade pricing.

² MiFID II and Fixed-Income Price Transparency: Panacea or Problem? TABB Group, July 2012

ing. Asymmetrical credit support annexes (CSAs), where only one party needs to post collateral or CSAs limited to certain legal entities or products, may in fact be too expensive or unprofitable to trade without accurately being able to ascertain the true underlying cost.

Without an automated workflow process, efficient management of collateral will be impossible to manage. Without an optimal way to analyse the availability of collateral, there will be no way to ensure the ability to trade. The introduction of the STP process will become the catalyst for the explosion of automated trading in other asset classes.

As the evolution of OTC trading will transform from a predominantly voice brokered industry to an electronic STP model, all asset classes will become increasingly dependent on a combination of low-latency trading, global fund flows, data, trade analysis and ultimately, economies of scale to succeed.

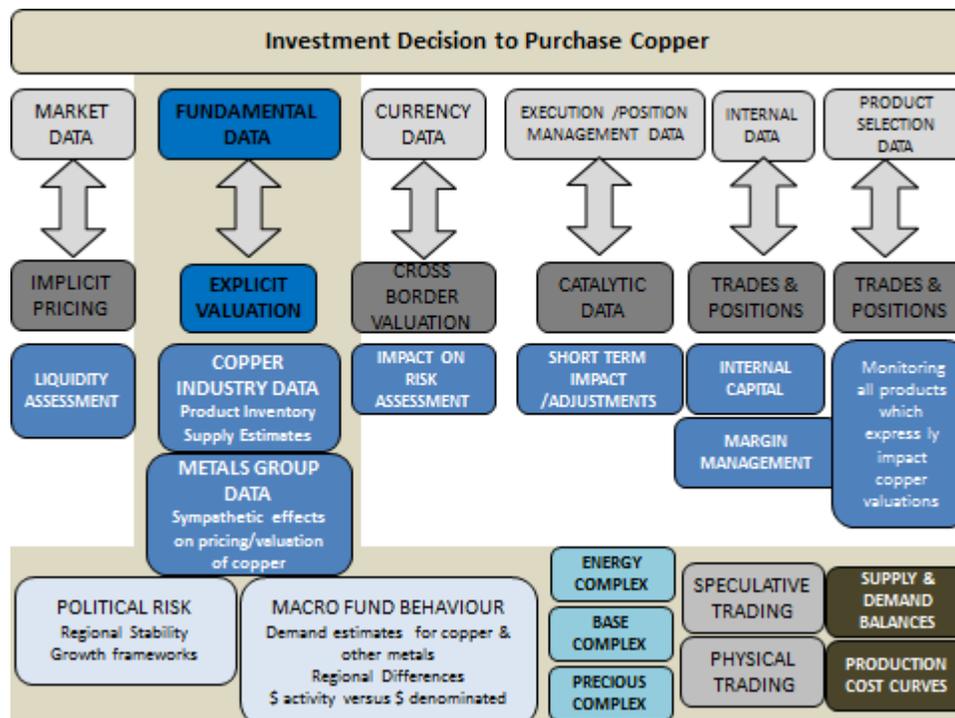
However technical challenges remain as enthusiasm for unified trading approaches; all of which requires investment in technology, precisely at the time when few in the industry have the resources to support this. Yet the ability to harness any available liquidity across the widest spectrum of instruments will only be resolved by an increased use of technology and data.

Next Age Markets

The institutional investment industry needs to do more with less. It is no longer enough for the sell side to just offer good service. The ability to distinguish individual products and services requires a proactive approach, such as the ability to track holdings relative to real-time market changes and analyse potential impact before it happens. Buy-side desks are becoming as constrained and depleted as those on the sell side. Assisting buy-side client to maximise the products, services and people available to them, will in turn ensure the sell side's survival.

The appropriate level of consultancy – whether this is advice on ideas or trading strategies, the volume or reach of the advice and expertise, when and in the format the client requires this – needs to be defined by the client in order to achieve the right level of service. The requirement to simplify and integrate dynamically, to cut through the noise to get to the information that matters most whenever and wherever it is required, will lead to a new way of working – buy or sell side, in the office or mobile – which will dramatically reshape capital markets for years to come.

Exhibit 11
The 21st Century Investment Chain



Source: TABB Group

As returns become increasingly challenged, the need to monitor risk effectively shifts from assessing traditional risks, such as growth, leverage or yield, to more complex arrangements based on volatility, credit exposure and options expiries, and even social media feeds. With global changes in technology, trading patterns and legislation, no in-

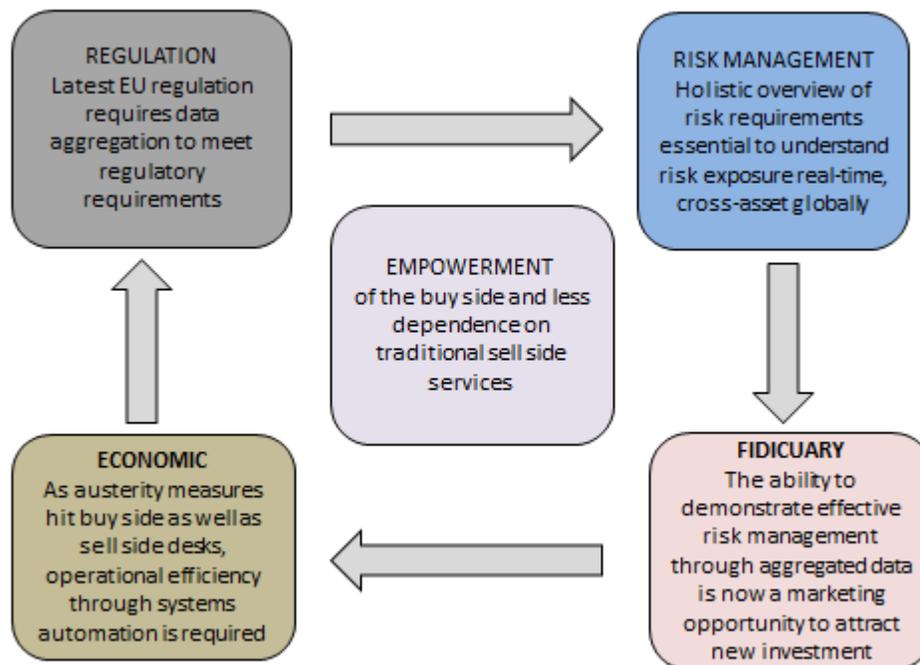
vestment strategy can be conducted in isolation, and the complex labyrinth of data and information looks set to continue to evolve (see exhibit 11).

Investment construction and design as a service will be the new remit for capital markets in the 21st century. The emphasis on holistic enterprise risk management is creating new and innovative opportunities for the design of novel investment structures and products. Cross-asset trading, much of it previously OTC, can involve any number of instruments, from equities and fixed-income products with FX components, to interest rates and futures involving foreign exchange, as well as options for hedging. Literally any combination is possible.

Whereas legacy siloed systems can work in the short term, the growing volume and potential within cross-asset execution will require a standardised approach to pricing, routing and execution to optimise this new activity. Risk management and best execution mandates are also placing demands on sell-side firms to provide more execution transparency across siloed systems, by tagging and tracking individual orders through the investment cycle to full settlement.

This demand will only continue to grow in the future. All firms will be required to standardise their approach to market data aggregation, internalisation and smart routing, while also consolidating and harmonising their approach to risk management across different instrument types (see exhibit 12).

Exhibit 12
The Growing Requirement for Data Aggregation



Source: TABB Group

The Trading Incentive

The most striking aspect of today's trading environment is the range of aggressive, high-speed and sophisticated trading strategies. For both the buy and sell side, the relentless pursuit of alpha across a proliferating array of global markets and asset classes in order to exploit arbitrage opportunities and develop more innovative products will continue unabated.

Technology enables these strategies, products and algorithms to exist and it is the development of electronic trading that has allowed traders' ambitions to be as complex and as global as they are today. Traders now require the means to quantify when, where, in what size and what asset class they should trade, in real-time. Artificial intelligence offers the ability to optimise strategies based on a combination of past, present and future, leveraging past trading activity to incorporate predictive analytics, timing and volume adjustments in order to optimise alpha opportunities.

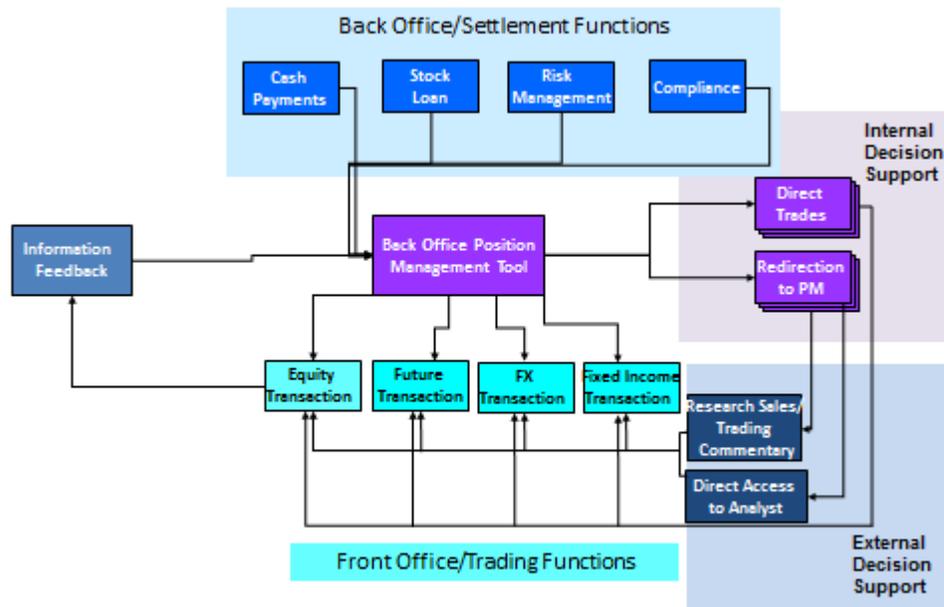
As the number of buy-side participants continues to grow, along with the range of instruments, the actual number of trading venues (across asset classes) has begun to decrease. One effect of this consolidation has brought traditional equity markets together with newer derivatives exchanges, meaning that the newly consolidated trading venues are now able to offer multi-asset class trading opportunities. As traditional OTC derivatives products become more commoditised, they have the potential to graduate to an exchange environment, so any cross-asset trading system must be able to facilitate this change.

The Holistic Investment Process

But this applies not only to trading. As regulation increases, there is a need for sophisticated trading systems to collate, analyse, monitor and report on risk. This in turn has delivered optimal operational efficiencies, creating new commercial opportunities for differentiation, improved client service and improved management of credit and balance sheet risk, including the development of true cost accounting.

A consistent and flexible pricing framework that can cater for today's heterogeneous, cross-asset trading environment and the constant innovation in financial products will again require a bespoke, centralised resource of data flows and information. Financial contracts are composed of multiple cash flows, perhaps synthetic or cash, each with a contingency that could be a call, a default or a corporate action. The necessity of linking pricing frameworks to these contingencies, rather than introducing a new formula for each instrument type, will be essential to avoid rendering a system unworkable in terms of maintenance and extensibility (see exhibit 13).

Exhibit 13
The Flow from Front to Back



Source: TABB Group

The age of static, siloed investment banking is over. Innovation is essential for companies to grow, and is transformative for any industry. Investment banks that fail to engage in this process will not survive to the next generation of capital markets.

Often true transformation can only be seen after the fact. In the field of biotechnology, the sequencing of the genome was hailed as a great innovation. Yet for industry participants, it was only an incremental step. The sequencing of the genome did not save lives. However, it enabled companies to create new medicines, one of which was the third-biggest drug launch in biotech history and was transformative for the company in question.

True innovation is already underway in capital markets – in fact, there is an oversupply of innovation, whether that be relating to trading, research or crowdfunding. However, it will be the execution of these innovative ideas that will make the difference. Firms of the future will be those who channel natural, innovative entrepreneurs into places where they can execute and create.

Investment banks have turned into operational-efficiency conglomerates, crushing innovation out of employees in the drive to reduce costs. The importance of failure is often disregarded in times of economic stress. However, focusing on not making mistakes rather than working to advance innovation, will ensure those firms will inevitably be passed by those that do foster innovative thinking and practice.

This tendency has been especially brutal in capital markets. Since 2009, TABB Group estimates US financial markets firms have reduced their IT spending by approximately 19%, and since its peak in 2007, spend has fallen more than 30%. Firms have consolidated, reduced head count, slashed bonuses, outsourced core systems, embraced cloud and hosted environments, and fought pricing increases like the plague.

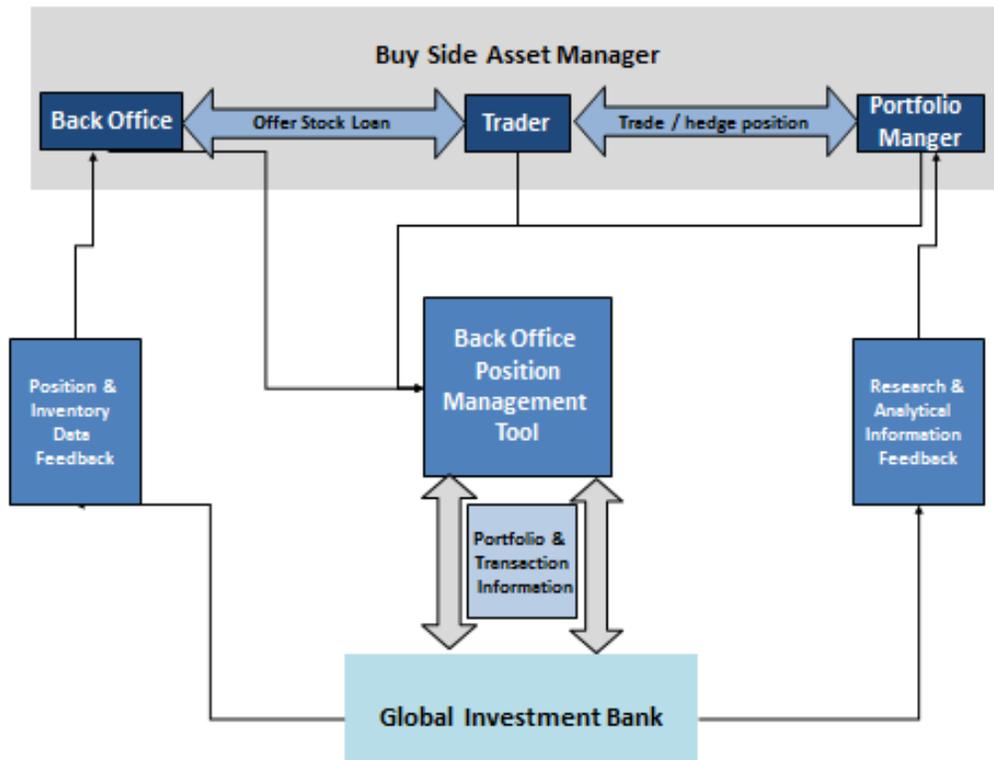
Shifting regulation, massive fines and tremendous confusion have forced investment banks to stay risk averse. In the current economic environment, innovation has become almost impossible. To innovate, firms need to be confident about opportunities; but when rules are in flux, opportunities become harder to spot, harder to fund, and can even change as the regulatory wind shifts direction.

Yet the longer the majority of industry participants stay routed to the spot in the glare of the regulatory spotlight, the greater the potential upside there will be for those that invest in technology now.

The Unlimited Potential

This is just the start. The possible permutations of this opportunity are limitless.

Exhibit 14
The Intelligence Potential



Source: TABB Group

As the economic situation has escalated, the requirement for real-time, multi-asset solutions available globally 24/7 offers a new era of capital markets. Participants require lean models that enable waste to be crushed, offering scale and efficiency in any stage of the investment cycle, be it research, execution, collateral management, stock borrow and trade reporting.

The true value of people and ideas requires an open platform to integrate and innovate; the only way to consistently outperform is through better or advantaged information. Sharing ideas and being open has not traditionally been the mind-set of investment banking, but if the industry is to survive, it will be through collaboration and transparency. Creating a friction-free, personalised and integrated network of real-time market intelligence to enable full-execution capability will shape the future of investment banking (see exhibit 14).

By making technology work harder, information becomes contextual and can deliver added business opportunities, whether that be to offer stock back to a broker to lend to another client in order to research intel on a holding within the portfolio. By automating the information process, global investment banks have the opportunity to nimbly access their wealth of intel and deliver this to clients in a palatable format.

The potential for this new deep analytical source of intelligence, with the ability to extract data in different forms across a new range of products, will lead to huge opportunities for those with the right balance of technology and human connection. The constant evolution of products will offer significant competitive advantage, from the investment decision through to the conclusion of the execution.

After a decade of underperformance, institutions will continue to look for ways to bypass investment banks for execution, research and even IPOs unless they can prove they deliver value. Therefore, investment banks must find ways to remain relevant. The concepts that led to cross-asset trading strategies and a consolidated approach to IT have only been in the spotlight for a relatively short period of time. But the demand is clearly there and with the derivatives market showing no sign of slowing down, it is a demand that will not fade away.

And, although technology will certainly be a differentiator, culture shifts, human capital management and process re-engineering will be critical, in combination with much more well-designed technology, in order to achieve a winning and sustainable model. The world of capital markets is set for radical change.

Conclusion

The age of static, siloed capital markets is over. Lean and efficient, nimble and responsive to individual client needs, the next generation of investment banking is waiting in the wings, a balancing act of human capital and technological innovation, ready to take centre stage.

Declining returns compounded with record low interest rates and the global economic crisis have fundamentally shaken traditional investment banking to its core. Slowing fund flows, reduced commissions, and a persistent shift away from developed markets and vanilla equity products, have required market participants to dramatically change the rules of engagement in order to survive.

Higher capital standards under Basel III will continue to force banks to shrink their balance sheets further and many business models will need to be "rightsized" to reflect the new market reality. The lines between different market participant roles and how their redefinition occurs will continue to shift, for example, what is owned versus what is shared from an infrastructure perspective. The raft of oncoming regulation will continue to reshape capital markets, as investment banks become less able to use cheap retail deposits to fund trading in order to take risks.

The march of progress will continue to dictate that banks must offer more for less. Algorithmic trading has industrialised execution of capital equity markets and this is set to be replicated across asset classes. The subsequent increased transparency has ripped away opacity. Commissions and spreads have already been relentlessly compressed and the squeeze on margins is now spreading to more complex businesses.

The industrialisation of the execution process will spread throughout the investment process. From idea generation through to portfolio management, the changing focus on customer centricity will break the mould. Whereas legacy siloed systems worked in isolation, cross-asset execution will require a standardised approach to pricing, routing and execution. Capital markets silos are finally being broken down, enabling a greater holistic view, and providing more efficient risk management and regulatory compliance through better data analysis of current positions.

A tremendous opportunity now exists within financial services. Disruptive new business models, products and services – enabled by exponential improvements in technology – will fundamentally challenge incumbent firms and market structures. These new approaches are driving a reconfiguration of the financial industry.

However, it is not only about operational efficiencies. The only way to consistently outperform is through better or advantaged information. Sharing ideas and being open has not traditionally been the mind-set of investment banking, but if the industry is to survive, it will be through greater collaboration and transparency.

By making technology work harder, information becomes contextual and can deliver added business opportunities from idea generation through to efficient execution. By automating the information process, global investment banks have the ability to extract data in different forms across a new range of products and services. This constant evolution will offer significant competitive advantage from the investment decision through to the conclusion of the execution.

Although technology will be a differentiator, culture shifts, human capital management and process re-engineering will be critical in creating winning and sustainable business models for the future. Investment construction and design as a service will be the new remit for capital markets in the 21st century. We are finally entering the new industrialised era of investment banking.

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, investment manager, broker, exchange and custodian. Our goal is to help senior business leaders gain a truer understanding of financial market issues and trends so they can grow their business. TABB Group members are regularly cited in the press and speak at industry conferences. For more information about TABB Group, visit www.tabbgroup.com.

The Author

Rebecca Healey

Rebecca joined TABB Group in March 2011, bringing more than 15 years' experience in e-trading and financial services. Rebecca has held various sales and trading positions with Bankers Trust, Goldman Sachs, and most recently 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 today, 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 *OTC Equity Trading 2013: Harnessing the Liquidity*; *European Equity Trends 2012/13*; *European Equity Trading 2012/13: Changing the Rules of Engagement*; *FX in Transition: Taking The Quantum Leap*; *MiFID II and Fixed-Income Price Transparency: Panacea or Problem?*; *Market Surveillance in Europe: Under Starter's Orders*; *European Equity Trading 2011/12: Looking for Allies in the Face of Adversity*; *European Algorithms: The Evolution*; and *Trading in the Middle East: the Road to Mecca*.



www.tabbgroup.com

Westborough, MA
+1.508.836.2031

New York
+1.646.722.7800

London
+44.(0)203.207.9027