

**Trading Myths and Realities for Non-Traders:
New Opportunities in an Electronic Age**

*A Primer for Executives, Trustees, Attorneys,
Accountants and Trade Groups in the
Externally Managed and Sub-Advised Industry*



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UAT, Inc.
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Introduction

Over the last decade, the investment industry has witnessed the steady and relentless emergence of electronic equity trading...computer networks that can, and increasingly do, execute orders in thousandths, sometimes millionths, of a second. Now, faster, cheaper trades occur at lightning speed in smaller and smaller share amounts. The net result is that electronic trading has grown dramatically from 10% of all trades in 1990 to 20% in 2000 to more than 50% of all trades today.

From a fiduciary perspective, the far-reaching impact of this shift cannot be overestimated. Old barriers have fallen, particularly in the externally managed and sub-advised investment industry, providing meaningful opportunities to strengthen transparency, supervision and cost efficiency.

With an eye toward executives, trustees, attorneys, accountants and trade groups in the externally managed and sub-advised industry, this paper examines emerging trends in this new electronic trading age that may benefit externally managed and sub-advised investment platforms.

This paper examines emerging trends in this new electronic trading age.

Just as importantly, the paper seeks to dispel widely held, but now obsolete, myths about the trading of equity securities. These myths include: the supposed benefits of buying power from aggregating orders, the presumed importance of personal relationships with traders, the apparently insurmountable technology barriers to trading and the dominance of the “bulge bracket firms”.

NOTE: Trading terms highlighted in ***bold italics*** are explained in the Glossary of Trading Terminology available under “Resources...White Papers” at www.uatinc.com.

Today's Electronic Trading

Changes in the world of equity trading have cumulatively created an environment that is unlike anything seen prior to the year 2000. In 2010, these changes continue to proceed and further amplify **five** major trends already underway.

- 1. Higher Volumes:** Trading volumes in the first half of 2009 represented all-time highs, even after posting significant consecutive increases in 2006, 2007, and 2008. AES, a division of Credit Suisse, estimated that 2009 trade volumes were 15% higher across the industry than compared to 2008, which represented an all-time high. As part of this trend, the volume of equity trading by externally managed and sub-advised platforms has grown to where medium and large programs each trade billions of shares annually.
- 2. Faster Trading:** Speed rules as orders are now electronically executed over low-latency computer networks in single-digit thousandths of a second and, in some cases, millionths of a second. "There is a race to the bottom in terms of latency," says Bill Capezzi of BNY ConvergeX's G-Trade Services. Many executing brokers now house ("co-locate") their servers at the exchanges. Such close proximity shaves infinitesimal increments of a second off execution times that can translate into huge financial advantages for active traders.

Faster, cheaper trades are transacted at lightning speed in smaller and smaller share increments.

- 3. Smaller Trades:** The average size of an order executed on the New York Stock Exchange (NYSE) and NASDAQ continues to decline, from 1,400 shares per trade in 1998 to 600 shares in 2003. By 2009, the average order size executed on the NYSE declined to 275 shares, and over 99% of orders executed are less than 2,000 shares. The average order size executed on the NASDAQ in 2009 was 270 shares. Meanwhile, some media outlets report industry average trade sizes of less than 200 shares.
- 4. Lower Commissions:** Trading commissions have dropped from 6 cents per share to around 2.8 cents per share even as ***agency-only executing brokers*** execute orders for 1 cent per share.
- 5. Tighter Spreads: *Decimalization*,** introduced by the SEC in January 2001, has narrowed the spread between the ***Best Bid and Best Offer***. In 1997, the SEC narrowed spreads from 12.5 cents per share (1/8 of a dollar) to 6.25 cents (1/16 of a dollar). With decimalization, however, spreads fell further to as low as one penny per share in highly traded (liquid) issues. For example, for S&P 500 stocks listed on the NYSE, average spreads fell from 4.5 cents per share in July 2002 to below 1.5 cents in the summer of 2007, only to briefly spike to 4.0 cents in October 2008 and fall below 1.5 cents again by April 2009.

Altogether, these trends result in faster, cheaper trades transacted at lightning speed in smaller and smaller share increments. "The U.S. marketplace has evolved rapidly in the last decade. All of these advances in speed and low latency have happened since 1999 and have transformed the marketplace to the core," says Laurie Berke, principal at financial markets research and advisory firm Tabb Group.

“Speed and access are no longer peripheral components of equity trading.” Meanwhile, tighter spreads have resulted in fewer shares being available for a manager to buy or sell at any moment in time, and these shares, rather than residing on one exchange (such as the NYSE), are now spread out across dozens of market centers. Much of the latest trading technology focuses on finding ways to **source liquidity** (find the shares) in today’s **fragmented market structure** (with shares spread out across multiple execution venues), **protect anonymity** (protect the identity of the buyer or seller), and minimize **market impact** (the negative effect of a large transaction on share price) while executing orders at the best possible price, referred to as **Best Execution (Best Ex)**. Ms. Berke best summarizes these market trends: “The U.S. markets have gone down the path to multiple alternative liquidity sources linked by high-speed connectivity.”

In the meantime, a new type of trading venue known as **dark pools** is providing a means to electronically and anonymously pair together (match) institutional orders without leaking information about an order to other market participants and the public. There are now more than 40 dark pools in the U.S., including LiquidNet, Posit, Pipeline, Millennium, Vortex, Instinet and CrossFinder. Together, they lead the way in providing this private and confidential order crossing technology. Dark pools now handle 13% of total U.S. equity trading volume, although low (5% to 15%) match rates can hinder the effectiveness of these venues. In 2007, NYFIX introduced Euro Millennium in order to bring dark pools to Europe. Matching orders are often executed at **Mid Point of Bid and Offer (MBBO)**, resulting in **price improvement** for the order. Another wrinkle is that many executing brokers upon receiving an order automatically run it through several dark pools to find a match and, if unsuccessful, then route the order to the public markets, such as **exchanges and electronic communications networks (ECNs)**.

Low Touch Orders are an easily automated commodity...occurring in an all-electronic world.

The net result is that small trades are faster, easier, and cheaper to execute than ever, while large trades remain slow, difficult, and relatively expensive.

Trading Divides Into Two Worlds

What’s emerged from the development of electronic trading is a clear and critical difference between how large and small equity orders are executed. There are now two separate worlds in trading: **Low Touch Orders**, or smaller orders with little, if any, expected market impact; and **High Touch Orders**, or larger orders with significant expected market impact.

Most importantly, Low Touch Orders are an easily automated commodity. These trades occur in an all-electronic world under tight regulatory oversight, in thousandths or millionths of seconds, and at low cost. Traders in a Low Touch world have little, if any, opportunity to add value as they simply hit ENTER or “drag and drop” to execute these trades. High Touch Orders, on the other hand, are challenging,

expensive, and time-consuming. Unlike Low Touch Orders, High Touch trades require the skill of an experienced and talented trader.

Low Touch Orders

The majority of institutional order flow traded today is represented by Low Touch Orders. An order to buy 1,000 shares of Microsoft (MSFT), for example, is considered a Low Touch Order as this trade is immediately executed against thousands of shares available in MSFT at any moment in time. Trading of Low Touch Orders is marked by automation for the trader, high speed of execution, and the potential for low cost. Overall, research suggests that an order of less than 3% to 4% of Average Daily Trading Volume (ADV), that is, an order for a number of shares less than 3% to 4% of the average daily share volume traded in an issue, is a Low Touch Order best executed electronically without human involvement.

Given today's sophisticated **order management systems (OMS)**, the trading of Low Touch Orders has been mostly automated, meaning certain order sizes and types are automatically routed to designated executing brokers. **Agency-only executing brokers** such as Bloomberg Tradebook execute these orders through **electronic order books** (such as **exchanges and ECNs**), at high speed and with the most sophisticated trading technology available. Low execution costs are locked in by contract between the money manager and executing broker.

To optimize their value-add, executing brokers employ internal trading technology known as **smart order routers** that examine, in real-time, the liquidity (shares available) across all the trading venues in the market and, to satisfy the requirements of **Regulation National Market System or Reg NMS**, automatically route an order to those execution venues that offer the best price. This process occurs without any involvement by the firm sending the order to the executing broker.

Sometimes, executing Low Touch Orders is likened to “watching the dryer run.”

For example, a money manager routes an order for 1,000 shares to an executing broker. The executing broker's "smart order router" scans the markets in real-time and may for example, in milliseconds, buy 500 shares on the NYSE, 300 shares on the ISE (International Securities Exchange), and 200 shares on the Millennium dark pool. The 1,000 share order is filled through executions on three different markets with each piece executed at the best available price. The buyer sees three fill reports totaling 1,000 shares hit their computer screen and the order is quickly — and completely — filled. Sometimes, the high degree of automation in executing Low Touch Orders is likened to “watching the dryer run.” Importantly, under Reg NMS, execution venues are delegated responsibility, first and foremost, to ensure that each order receives **Best Execution (Best Ex)**. As a result, execution venues, including market makers, are required to file monthly **SEC Rule 605 reports** with the SEC to comply with requirements of proper supervision of their Best Ex requirements.

Executing brokers also offer **trading algorithms** to money manager trading desks. These programs quickly slice a “parent” High Touch Order into many smaller “child” Low Touch Orders for execution over a designated time period. For example, a trader may instruct an algorithm to divide a 40,000 share order into 200 orders of 200 shares each and execute these orders, using a sophisticated mathematical formula, over a five-hour time period (at 8,000 shares per hour). The expected market impact of a series of time-lapsed 200 share orders is much less than the expected market impact of a single 40,000 share order, for which only 10,000 shares may be available at **top of book**. Executing brokers compete voraciously to hire the best and brightest mathematical minds in an ever-escalating race to create increasingly more sophisticated trading algorithms.

Despite their incredible mathematical complexity, trading algorithms are actually easy to employ. Moreover, executing brokers have directly integrated their algorithms into the leading **order management systems**, essentially turning them into a simple menu-driven process. In a matter of seconds, traders utilize drop-down menus and input boxes to easily select and implement an algorithm. Algorithms are offered with names such as TWAP, VWAP, INLINE, ORBIT, ATOM, and OPTIMIZE.

Greenwich Associates, a strategic consulting and research firm, reports a strong surge in algorithmic trading in 2009, which now comprises 18% of total U.S. equity trading. At the same time, international strategy consultant Celent predicts algorithms will comprise 27% of total U.S. equity trading by 2012. Overall, 95% of the largest and most active institutional traders in the U.S. utilize trading algorithms. One reason for the large increase in 2009 is that, according to Greenwich Associates consultant John Colon, “Many executing brokers redesigned their algorithms to accommodate new patterns of volatility experienced in 2008.”

Bulge bracket firms are faced with conflicts of interest in obtaining best execution price for an entire order.

Frequently, money manager traders will tell you that Low Touch Orders clutter their desk, consume their time, and distract them from “working” the more important and challenging High Touch Orders.

These disadvantages occur when traders at money management firms are instructed to manually route Low Touch Orders to one of a rotating group of selected executing brokers, usually **bulge bracket firms**, for a variety of business (as opposed to execution cost and quality related) reasons.

Very often, these bulge bracket firms, because they make markets in many issues, are faced with conflicts of interest in obtaining best execution price for an entire order. This conflict exists because Reg NMS’s **price protection** does not extend past **top of book**. Also, it’s not uncommon for these firms to execute a Low Touch Order at 3.0 to 4.0 cents per share. In comparison, an agency-only broker can execute the same order, without a conflict of interest, for 1.0 cent per share. The agency-only executing broker, by definition, does not make markets and, therefore, does not face a conflict of interest in obtaining best price for an entire order. In fact, many agency-only firms offer Transaction Cost Analysis (TCA) software to enable their clients to monitor their execution quality.

These **agency-only executing brokers** utilize the execution services of the most sophisticated **electronic order books**, including exchanges and ECNs such as NASDAQ MC, NYSE ArcaEx, BATS Trading, and Direct Edge. “The agency brokerage model, with its straightforward system of commission payment for trades executed, has been a beneficiary of the turbulence from the credit crunch,” reports Ruth Hughes Liley of *FTSE Global Markets*. Celent reports that these technologically advanced market centers, based on their providing consistently greater **price improvement** (implicit savings generated by orders executed between the Best Bid and Best Offer prices) on orders, continue to take market share away from the less adaptive players. Electronic market centers now execute 53% of total U.S. share volume with Celent predicting a 65% market share for these services by 2012. Similarly, the trend of slow slippage into obscurity continues for the traditional floor broker specialist firms as their collective market share of total U.S. share volume dropped to 27% in 2008, with Celent predicting a further drop to 10% by 2012.

Greenwich Associates reports that all electronic or Low Touch Orders constituted 36% of total U.S. equity trading in 2008-2009, up from 32% in 2007-2008. Given their low cost, ease of execution, and high reliability, it’s easy to understand why the percentage of all-electronic or Low Touch trading is expected to continue to grow as a trader hits the ENTER button and sophisticated computers perform the rest of the work in executing an order.

In total, there is little value added by traders when executing Low Touch Orders. There can only be higher cost or lower cost for the very same service and results. The simplicity, reliability, and low cost of executing Low Touch Orders raise important fiduciary questions: Why should a Fund, Trust or Plan pay 3.0 cents per share or more for its money managers to execute Low Touch Orders? For Portfolio Managers, the question becomes even more acute: Don’t lower trading costs result in adding alpha and improving performance, especially since low execution costs can be locked in through contractual agreements with executing brokers?

The simplicity, reliability and low cost of executing Low Touch Orders raise important fiduciary questions.

High Touch Orders

High Touch Orders are those orders with significant expected market impact e.g., an order to buy one million shares of an issue that usually trades four million shares per day. Overall, research suggests that an order of more than 4% of Average Daily Trading Volume (ADV), that is, an order for a number of shares greater than 4% of the average daily share volume traded in an issue, is a High Touch Order requiring a customized trading strategy for that order.

Not only do traders have to locate the desired number of shares and complete the transaction at the best possible price, they must also strive to minimize adverse market impact of the order on the price of the issue. And they have to do all of this while protecting anonymity (hiding their identity and trading strategy) from other trading firms and money managers. Why? There are two reasons: First, **High**

Frequency Trading (HTF) firms, according to a study by Quantitative Services Group (QSG), use powerful supercomputers and virtually instantaneous communications networks to seek out and exploit trading patterns established by High Touch Orders. High Frequency Trading firms trade ahead of High Touch orders to lock in trading profits that result in less favorable share prices to money managers. For example, as their computers begin to recognize a High Touch Order's market impact, High Frequency Traders buy this issue and immediately sell the same shares at higher prices to this large buying program (thereby generating an immediate profit for the High Frequency Trading firm). As you can see, there is an element of gaming present between High Frequency Traders and the money managers' High Touch Orders. Second, competing money managers often utilize leaks in trade information to discern their competitors' investment strategies.

The trading of High Touch Orders, in other words, remains both complex and individually customized, especially in comparison to the simple, easy, and fast process for executing Low Touch Orders. And therein lies the fundamental difference between High Touch Orders and Low Touch Orders: The execution of High Touch trades cannot be automated.

"Working" an Order

With High Touch Orders, a trader conducts a custom analysis for each order, including the desired number of shares in the order; the current liquidity available and **depth of book** in the issue on the **displayed markets** and **dark pools**; a technical analysis of the historical volume and price trends for the issue; an analysis of how market impact may vary with different trading strategies; the overall tempo, direction and volatility of the market; any recent news in the issue, industry and market; the strengths and weaknesses of their executing broker relationships; the estimated depth of inventory of the market makers in the issue; and the available algorithms and block trading options.

The execution of High Touch trades cannot be automated.

With this analysis (which can take up to 10 minutes for a single order) and a degree of "gut instinct", a trader will select the combination of tools and resources best suited to that order. "Now that trader really sits in the hot seat," says Ms. Berke, principal at the Tabb Group, in summarizing the challenges in executing High Touch Orders. "These days there is a heightened responsibility for choosing the correct methodology for executing, for preserving every last ounce of alpha and rebuilding performance."

The execution strategy for a High Touch Order could include, individually or in combination, any of the following: a single or series of trading algorithms, a dark pool or multiple dark pools, one or more block trading desks, smart order routers, discussion with market makers, requests for commitments of capital, and sending or monitoring **indications of interest (IOIs)**. As these factors change over the course of the trading day or days required to complete the order, traders will monitor the progress of their execution strategy and modify that strategy, in real-time, as important developments occur. As one can see, given the sophistication required in executing High Touch Orders, traders and their customized trading strategies clearly add value when executing large blocks of shares.

Once the execution of an order is complete, a trader gathers statistics on the overall performance of the strategy. These statistics regarding the execution of High Touch Orders are critical toward grading the trader's performance and, ultimately, in determining bonus compensation.

Industry-Wide Emphasis on Lower Trading Costs

Broad pressure to lower costs is resulting in a new and profound emphasis away from High Touch trading towards increased use of Low Touch trading. The trend is best summarized in a July 15, 2009 article by Joan Weber of *RiskCenter.com*, where she states: "The most effective strategy used by institutions to reduce trading costs is to shift trading volume from traditional "high touch" trades... to relatively low-cost electronic execution." Overall, U.S. institutional equity

trading volume executed by High Touch trades slipped to 56% in 2008-2009 from 60% in 2007-2008. Ms. Weber went on to report, "The switch to electronic trading generates significant cost savings in the average commission cost incurred by institutions." This article further addresses industry-wide trading costs by stipulating that the average trading cost for High Touch trades has remained unchanged from 2008 to 2009 at 4.0 cents per share while Low Touch all-electronic trades declined in average cost from 1.7 cents per share in 2008 to 1.6 cents per share in 2009.

The industry "all-in" average commission costs is 2.9 cents per share.

As a result of the movement from High Touch trading to all-electronic trading and the lower cost of all-electronic trading, the industry-wide "all-in" blended average commission rate declined from 3.2 cents per share in 2008 to 2.9 cents per share in 2009. Similarly, Kendall Kim, in his book entitled "*Electronic and Algorithmic Trading Technology*" places the average industry-wide "blended" commission rate at 3.3 cents per share, with the average industry-wide cost for High Touch Orders at 4.0 cents per share and all-electronic orders at 1.7 cents per share.

Obsolete Trading Myths

Even as electronic trading becomes a dominant market activity, there remains a considerable gap in knowledge with respect to how electronic trading impacts investment platforms that are large consumers of trading services. Indeed, there are a number of myths about trading that persist around the industry. The basis of each myth is grounded in practices that were once true, but the rapid developments in electronic trading since 2000 have rendered them all obsolete...relics of an era when trading was characterized by a cigar-chomping, alpha male who simultaneously spewed profanity and tawdry remarks while juggling four phones and a ham and cheese sandwich.

The vast majority of the cigar-chomping traders are long gone now, replaced by an ultra-high speed network of computer servers that communicate with each other at the speed of light. A clear sign of this change is evident when one walks past the NYSE during lunchtime. The army of people wearing colored vests that used to flood Wall and Broad Streets has disappeared. Electronic trading represents a

quantum change that, in essence, democratizes access to what was formally the province of an exclusive and privileged club of individual **sell side traders**. In today's electronic trading environment, market information is widely available to all market participants, be they traders, institutions, or retail investors, and can be acted upon in the time it takes to hit an ENTER key.

It's a new world of trading, to be sure, and what was true 10 years ago may not be applicable today. But, human nature such as it is, certain fallacies persist. Here are **four** notions that still linger, an explanation of how they impact externally managed and sub-advised investment platforms, and why they're no longer true.

- **Fallacy #1: Aggregating Orders Creates Buying Power**

The notion that investors benefit from the buying power of money managers aggregating orders across dozens of accounts into a single "block" may be the most common, most outdated, and probably most damaging misperception about trading. ("Block" orders constitute orders of 10,000 shares or more.) Bloomberg reported in November 2008 that "...block trading has all but disappeared as the credit crisis and near-record volatility dissuade investors from selling shares in chunks." Bloomberg further reported that, while blocks represented 42.9% of the NYSE's total trading volume in 2000, block trading comprised less than 10% of the NYSE's volume in 2008. On the NASDAQ, blocks comprise less than 0.1% of all transactions.

Today's reality: A money manager who automatically aggregates orders from dozens of accounts into a large block is no longer providing a value-added service.

In an electronic trading world, with a **fragmented market structure**, that is, where small numbers of shares are spread out across numerous trading venues, a large block order represents a liability, not an advantage. The process of moving large-block High Touch Orders in today's environment is a difficult, expensive, and time-consuming task, whereby a **buy side trader** must carefully construct a customized strategy for each block order to find the shares, protect the identity of the buyer and minimize the impact of the transaction on the price of the security.

Today's reality: A money manager who automatically aggregates trade orders from dozens of accounts into a large block is no longer providing a value-added service. In today's electronic trading environment, these block High Touch Orders are executed at higher expense, across numerous trading venues, over an extended period of time (often several days). Furthermore, High Touch Orders may fall victim to less favorable share prices resulting from **High Frequency Trading (HFT)** firms' ability to profit by trading ahead of the money manager's High Touch Orders. For an externally managed or sub-advised platform, the result is that the optimal approach to trading their accounts has dramatically changed: Smaller orders generated by the individual externally managed or sub-advised accounts are most often better served without aggregation into a single order representing dozens of a money manager's accounts. In fact, these smaller orders for individual externally managed or sub-advised accounts are, in terms of execution quality and cost, best served by immediate execution, without aggregation or delay, in the market as individual Low Touch orders.

- **Fallacy #2: It's Important to Have Personal Relationships With Sell Side Traders**

In an electronic trading world, the combination of automated trading technology, ubiquitous real-time information, and pro-consumer regulatory developments has greatly restricted the ability of individual traders to provide preferential treatment to parties with whom they conduct securities transactions. Buying or selling for most orders is really no more complicated than “drag and drop” on a computer screen. And no trader can, with a few exceptions, provide an “inside deal” to a client without triggering serious regulatory and compliance concerns.

Today's reality: In the electronic trading world, low-cost, agency-only brokers lead the way past bulge bracket firms with faster technology and lower cost execution. At the same time, new SEC rules protect the “little guy” by mandating best execution (best ex) on every order, regardless of its source. In fact, the SEC charges the trading venue or market maker with primary responsibility for best execution on each order it executes. In the end, a comprehensive electronic network replaces personal relationships with individual traders in a regulatory environment where Reg NMS delegates the executing exchange, ECN or market maker the primary responsibility for ensuring each order receives Best Execution (Best Ex).

SEC Reg NMS delegates the executing exchange; ECN or market maker the primary responsibility for ensuring each order receives Best Execution (Best Ex).

- **Fallacy #3: The Dominance of “Bulge Bracket Firms”**

It wasn't long ago that advanced technology, strong capital resources, and large trading floors positioned the “bulge bracket firms” at the center of the trading world. The natural inclination of traders at money management firms was to send the bulk of their order flow to these Wall Street wirehouses to execute through proprietary trading (prop trading) activity at high cost. Six cents per share in brokerage commissions was the norm as order flow was used to pay for external research, marketing arrangements for “shelf space”, and preferential treatment in executing large blocks of shares.

Today's reality: “That trend for ever more proprietary trading hit a brick wall at 90 miles per hour,” says Richard Balarkas, CEO of Instinet. “The credit crunch was a result of the fact that the bulge bracket was, at heart, prop-trading firms taking ever more excessive risks. In the new daylight, people are seeing that this model is not primarily geared to the interests of their clients.”

Today, the bulge bracket firms often do not offer the fastest and/or cheapest execution and, in the current tight credit markets, their ability to commit capital to assist in executing large block orders (the practice of buying a large block from a seller to later sell at a higher price) is severely limited. Moreover, the SEC has implemented highly publicized crackdowns, with billions of dollars in fines, penalties, and restitution on questionable practices associated with mutual fund timing, shelf space agreements, and the 28(e)-1 safe harbor. The combination of tight credit markets, record high market volatility, tight regulatory oversight, and more conservative fiscal management is restricting the size of the inventory of shares these firms are able or willing to

hold and, thereby, the capability of large Wall Street firms to provide value-added capital commitments and block trading services. Finally, the demise of Lehman and Bear Stearns further amplifies these trends.

High-speed, low cost, **agency-only executing brokers** are filling the void created by the decline of major Wall Street firms. Agency-only brokers neither make markets nor commit capital to assist money managers in moving large blocks of shares. Thus, these firms do not risk their own money while trading and, as a result, have weathered the financial crisis far better than their bulge bracket counterparts. "There is the sobering consideration that I really do have to consider counterparty risk now," says John Palazzo, managing director, North America, CA Cheuvreux, "I do want to know if they are agency or not and what exposure they may have." Bloomberg notes that agency-only executing brokers are seeing double-digit gains in their share of the market's total trading volume, and for good reason; executing through a bulge bracket firm can cost 3.0 to 4.0 cents per share or more while agency-only executing brokers, using cutting-edge technology, are executing orders for 1.0 cent per share.

Executing through a bulge bracket firm can cost 3.0 to 4.0 cents per share while agency only executing broker execute orders for 1.0 cent per share.

- **Fallacy #4: Insurmountable Technology Barriers to Trading**

Now that trading is no longer an obscure and arcane function, and along with the development of electronic trading technology, a variety of extremely capable and highly automated **order management systems (OMS)** have emerged, and they're available at low cost. These easy-to-operate systems, which typically include seats licensed for a few thousand dollars per month, provide benefits such as sophisticated trading capability, real-time holdings and activity data, rules-based pre- and post-trade compliance review for each order, portfolio, and groups of portfolios, real-time reporting, and automated connectivity to hundreds of executing brokers across the globe.

Today's reality: OMS technology has grown hand-in-hand with the sophistication, automation, and prevalence of electronic trading. These changes have resulted in inexpensive and easily operated real-time trading technology systems. A good illustration of this progress is illustrated by the sophisticated, easy-to-use trading systems that firms such as E*Trade, TD Ameritrade, and Fidelity place in the hands of millions of individual investors to operate on desktop PCs.

New Opportunities

With the externally managed and sub-advised investment industry in the United States representing some \$4.0 trillion, this asset base generates billions and billions of shares of equity order flow annually. Since half to two-thirds of all order flow is Low Touch, the substantial difference between the automated ease in executing Low Touch Orders and the customized working of High Touch Orders creates a particularly attractive opportunity for externally managed and sub-advised Plans, Trusts and Funds.

Forward-thinking decision makers who manage externally managed and sub-advised investment platforms are recognizing the longstanding deficiencies inherent in currently existing operating paradigms. This opportunity is particularly timely as externally managed and sub-advised trusts continue to grow in assets, and yet face increasing pressure to improve transparency, cost savings and business efficiency. “After the recent turbulence, we are seeing our client’s priorities shift”, says Andrew Gelb, head of securities and fund services in EMEA for Citi’s Global Transaction Services (GTS), “as they focus more and more on cost, transparency and risk management.”

This world of electronic trading holds impressive benefits for financial organizations, not the least of which are improved cost efficiencies. Nowhere is the possibility of these opportunities more apparent than for those firms that operate externally managed and sub-advised investment platforms.

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About UAT, Inc.

UAT, Inc. is a Denver-based technology organization that focuses on lowering commission costs and increasing transparency to benefit organizations that utilize sub-advised or externally managed investment management to manage their investment portfolios. www.uatinc.com