

## **Directory of Trading Terminology**

***A Primer for Executives, Trustees, Attorneys, Accountants  
and Trade Groups in the Investment Products Industry***



**Harness The Power™**

**UAT, Inc.**  
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## Directory of Trading Terminology

The rapid recent development of electronic trading has dramatically changed the landscape for equity trading. One result is that new trading terminology continuously springs into existence. The definition of these terms is provided below as a resource to assist in understanding today's electronic trading environment. Please realize that a concept may require a reader to cross-reference several definitions in order to better grasp the full explanation.

### **Add or Remove Liquidity (also referred to as Payment for Order Flow)**

Orders executed on an exchange remove liquidity by buying or selling shares already shown at "top of book." Market orders typically remove liquidity. Limit orders posted at prices outside the Best Bid and Best Offer add liquidity by increasing the number of shares shown in the "depth of market." This distinction becomes important since exchanges and ECNs charge a fee (such as 3/10 of a cent per share) to the executing broker for orders that remove liquidity while paying a rebate (such as 2/10 of a cent per share) to the executing broker for orders that add liquidity. *See: Top of Book, Depth of Market and Best Bid and Best Offer*

### **Agency-Only and Proprietary Executing Brokers**

Agency-only executing brokers, such as JonesTrading, UNX, BNY ConvergeEx and Instinet do not accumulate inventory (make markets) or place their firm's capital at risk. Thus, an agency-only firm will seek external sources of liquidity (the displayed markets and dark pools) when executing an order. As such, agency-only firms earn commission revenues from execution charges. Proprietary trading firms, such as E\*Trade Capital, ATD and Bank of America, accumulate inventories (make markets) and also place their capital at risk in their trading activity.

From a best execution perspective, it is important to realize that orders sent to proprietary trading firms are not price protected by Reg NMS once the order has cleared away the shares at the "top of book." For example, a 15,000 share buy order may acquire the 2,500 shares shown at the "top of book" at the best available price. For the remaining 12,500 shares, the proprietary trading firm is under no obligation to offer the second, third and fourth best price, in that order, until all 25,000 shares are acquired. *See: Reg NMS and Top of Book*

Thus, agency-only trading firms remove the conflicts of interest that may occur with the trading practices followed by proprietary trading firms.

### **Alternative Trading Systems**

Alternative Trading Systems (ATS) are new non-exchange execution venues that did not exist prior to 1998, when the SEC introduced Reg ATS. These include *electronic communications network (ECNs)*, which are non-exchange, low cost electronic execution centers that compete directly with the various exchanges and "*dark pools*", which are private, institutional-only crossing networks that enable firms to find a match to their trade without having to show the order to the market (and thereby protect the money managers from information leakage and loss of anonymity). *See: ECNs and Dark Pools*

### **Best Bid and Best Offer (Ask)**

The Best Bid is the highest price that a prospective buyer is willing to pay for a specific security. The Best Offer, also called the Best Ask, is the lowest price acceptable to a prospective seller of the same security. The difference between the Best Bid and Best Offer is called the “spread.” For example, if the Best Bid for an issue may be \$20.26 and the Best Offer (Ask) is \$20.25, then the spread is \$0.01.

### **Best Execution or Best Ex**

Per the SEC: In deciding how to execute orders, your broker has a duty to seek the best execution that is reasonably available for its customers’ orders. That means your broker must evaluate the orders it receives from all customers in the aggregate and periodically assess which competing markets, market makers, or electronic communications networks (ECNs) offer the most favorable terms of execution. Some of the factors a broker needs to consider when executing its customers’ orders for best execution include: the opportunity to get a better price than what is currently quoted, the speed of execution, and the likelihood trade will be executed. Execution venues (exchanges, ECNs and market makers) are required to submit monthly Rule 605 reports to the SEC as to record how these organizations execute orders relative to the publicly displayed quotes. *See: Rule 605 Reports*

### **Buy Side Trader**

A buy side trader works for money managers, known as the buy side.

### **Consolidated Quotation System (CQS)**

The Consolidated Quotation System (CQS) is an electronic service that provides quotations on issues listed on the New York and American stock exchanges, regional stock exchanges, and issues traded by FINRA member firms in the third market. NASDAQ processes this data and provides it to its subscribers as the Composite Quotation Service. The initials may be used either for the exchange system or NASDAQ service.

### **Consolidated Tape**

The Consolidated Tape is a high-speed, real-time electronic system that constantly reports the latest price and volume data on sales of exchange-listed stocks. The data reflected on the consolidated tape derives from various market centers, including all securities exchanges, electronic communications networks (ECNs), and broker-dealers.

### **Dark Pools and Crossing Networks**

Dark pools are institutional-only trading systems that provide private venues for executing shares through a matching (crossing) system. Thus, information about the number of shares and the identity of the prospective buyer or seller is not available to the general public. Buy and sell orders are matched (often at the mid-point of Best Bid and Best Offer) against one another without being seen by the general public or other trading firms. Therefore, “dark pools” protect anonymity of the order, reduce market impact and provide, when possible, price improvement on the order. Some dark pools are for trading firms (sell side) only, some are for buy side firms (money managers) only and some work with both buy and sell-side firms. A drawback to using dark pools is that the overall match rate for orders is rather low, often in 10% to 15% range, with the result that an order could sit in a dark pool for several days with little, if any, progress in its execution. *See: Market Impact.*

### **Decimalization**

Decimalization is the pricing of stocks in dollars and cents instead of fractions of a dollar and was adopted by the U.S. stock markets in January 2001. Prior to decimalization, spreads were set in increments of 12.5 cents (1/8 of a dollar) and then reduced in 1997 to 6.25 cents (1/16 of a dollar). Following decimalization, spreads for highly traded (liquid) issues are as low (tight) as 1.0 cent.

### **Depth of Book**

Depth of book represents the total number of shares at all prices posted on exchanges and ECNs. For example, there may be 2,500 shares available for purchase at the best price of \$20.25 (“*top of book*”) and another 1,500 shares available \$20.26 per share and 1,000 shares available at \$20.27. In this example, the “depth of book”, that is, all shares shown on the Consolidated Tape, at all prices, is 5,000 shares. *See: Top of Book.*

### **Directed Brokerage**

Directed brokerage is the practice of sending trades to a specific broker-dealer for execution (“directing” the trade), often in exchange for some benefit to the advisor, such as a revenue rebate or shelf space for financial products. Directed brokerage programs, due to the role of the executing broker providing the directed brokerage service, tend to increase an organization’s brokerage costs in excess of the revenue benefit to the participating organization. New technology provides the means to generate revenue while simultaneously lowering brokerage costs.

### **Displayed and Non-Displayed Markets**

Displayed markets are those exchanges (for example, NYSE and NASDAQ) and electronic execution networks (ECNs) that comprise the public markets for executing a trade. For example, the number of shares and price quotation for all issues traded on all of these venues are shown on the Consolidated Quotation System (CQS). The result is that the combined number of shares from these exchanges and ECNs are available or “displayed” to all retail and institutional parties interested in buying or selling an equity issue. *See: Protected Markets and Consolidated Quotation System (CQS).*

Non-displayed markets are those execution venues that do not show up on the Consolidated Quotation System (CQS). These venues are also referred to as “dark pools”, in that institutions match orders through these systems, such as Millennium and CrossFinder, without showing these orders to the general public or to other trading firms. *See: Dark Pools and Crossing Networks*

### **Electronic Order Books**

Electronic order books refer to all computerized trading venues where order execution occurs, without a physical trading floor, through computerized networks. Electronic order books include several types of electronic trading venues such as exchanges and alternative trading systems (ATS) such as electronic communications networks (ECNs) and dark pools.

### **Exchanges and Electronic Communications Network (ECNs)**

Exchanges and ECNs are electronic order books that match buy and sell orders and retain the spread. Exchanges, as self-regulatory organizations (SROs), face more onerous regulatory requirements and may have a physical trading floor. ECNs, as broker-dealers, are entirely electronic and face lighter regulatory requirements. A key differentiating factor is that exchanges, as SROs, earn significant revenue from exchange fees generated from the sale of their quote and trade data

through the Consolidated Quote System. Once an ECN reaches a certain volume of trading, such as BATS Trading or Direct Edge, they may consider applying to the SEC to become an exchange in order to generate revenue from the sale of their quote and trade data.

### **Flash Orders**

Flash orders have been in the news as the SEC is proposing to ban them. The rationale stated by the SEC is that flash orders, which are presently legal, no longer serve the interests of long-term investors, could result in a two-tier market and could detract from the efficiency of the national market system.

Flash orders operate as follows: Executing brokers, before routing an order to an exchange or ECN, show (or “flash”) the order among a private network of brokers, for a period such as a half or full second, to see if there is interest in filling the order. Flash orders are not included in the Consolidated Quotation System (CQS) and thus are not seen by the general public. These orders are used to attract new, rather than use existing, liquidity (shares available on the *Displayed Markets*). The benefits to the brokers in these private networks are: (1) the filling of orders in this manner avoids paying exchange fees (see: *Add or Remove Liquidity*); (2) provide information about the market that is not shared with other participants; and (3) the half or full second flash period provides an eternity to a High Frequency Traders or market maker’s pre-programmed routines using powerful supercomputers to take advantage of this private information. If there is no response to the flashed order, then the order is normally routed to the market for execution. See: *Add or Remove Liquidity and High Frequency Trader*

### **Fragmented Market Structure**

Fragmented market structure refers to a change from years ago when almost all orders were routed to the NYSE and the NYSE’s quote reflected all the available shares in an issue. Today, with multiple exchanges, ECNs and dark pools, the available shares are spread out (fragmented) across dozens of trading venues. The significant regulatory event resulting in the development of a fragmented market structure was the rescinding of Rule 390 in May 2000. Previously, Rule 390 prohibited companies listed on the NYSE prior to April 1979 (consisting of 30% of the NYSE’s companies totaling 50% of the NYSE’s trading volume in May 2000) from engaging in off-floor transactions away from a national exchange.

### **High Frequency Trading (HFT)**

High Frequency Trading (HFT) is a term that reflects the behavior of aggressive trading firms, armed by powerful servers, sophisticated computer programs and superfast connectivity, that seek and exploit intraday price and volume movements that occur in the trading of securities. Thus, a money manager may initiate a daylong buying program only to find that the price of the security is continuously and unexpectedly rising in front of their orders. This increase may reflect “gaming” by High Frequency Trading firms as they buy shares in front of the money manager’s buy program only to turn around and sell them to the money manager at a higher price. As a result of High Frequency Trading, a war of technology has broken out between High Frequency Trading firms and executing brokers, who now provide sophisticated anti-gaming technology in their algorithms to better protect their clients.

### **High Touch Orders**

High Touch Orders are those orders with significant expected market impact. 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.

### **HiLo Engine (HLE)**

UAT, Inc.'s patent pending HiLo Engine (HLE) technology is a module within the UAT System. The HLE captures, in real-time using a private communications network, orders entered by external money managers, categorizes the orders as High Touch or Low Touch, and routes the order to the UAT System's rules-based compliance module (whereby the Plan, Trust or Fund conducts a pre-trade compliance review of each order). The HLE utilizes historical trading volume and current liquidity data for a rules-based analysis of each order relative to the expected market impact of that order. The HLE provides external money managers' with control over the rules parameters (such as 4.0% or 5.0% of Average Daily Volume or ADV) that determine categorization of orders as High Touch or Low Touch. Based on this categorization, the HLE assigns trading discretion over High Touch Orders to the money manager to "work" while assigning trading discretion over Low Touch Orders to the Plan, Trust or Fund to execute through a low-cost executing broker network.

### **Indications of Interest (IOIs)**

Indications of interest (IOIs) are messages routed between buyers and sellers of equities notifying, without disclosing the identity of the sender, that a firm is willing to buy or sell a certain number of shares of an issue. Once another firm responds to an IOI, an electronic mating ritual occurs and, ultimately, the responding party is introduced to the initiating party for further discussion.

### **Low Touch Orders**

Low Touch Orders are smaller orders with little, if any, expected market impact. Low Touch Orders are an easily automated commodity whose execution occurs in an all-electronic world under tight regulatory oversight, in thousandths or millionths of seconds, and at low cost.

### **Maintain Anonymity**

The need to maintain anonymity reflects the desire to hide the identity of the organization that is entering the order from the remainder of the market. For example, if a large money manager desires to accumulate a large position in an issue, the organization will seek prevent information about their buy program leaking out to competing money managers or High Frequency Trading firms. *See High Frequency Trader*

### **Market Impact**

Market impact refers to the potential change on the price of an issue resulting from the execution of an order. For example, an order to buy 1 million shares of an issue that trades 4 million shares per day will cause the price of the issue to rise while the buy program is occurring only to see the price drop as soon as the 1 million share order is filled. Such a drop in the price after the order is filled results in an immediate loss.

### **Mid Point of Bid and Offer (MBBO)**

The Mid Point of Bid and Offer (MBBO) represents the average of Best Bid and Best Offer (Ask). Orders executed at MBBO are executed within the spread (the difference between bid and offer) and both the buyer and seller realize an amount equal to one-half of the spread as price improvement. Any realized price improvement is also referred to as “implicit savings”. *See: Best Bid and Best Offer*

### **Order Management Systems (OMS)**

Trading technology systems are referred to as Order Management Systems (OMS). Order management systems, such as Linedata’s LongView<sub>sm</sub> Trading System, include some or all of the following capabilities: order entry, trading, compliance, reporting, risk analytics and connectivity to executing brokers. However, the heart of the order management system is the trade blotter, which provides real-time status on every order in the system or being executed in the market. These systems truly represent one-stop trading technology shops. Recently, OMS vendors have begun to offer low-cost ASP (Application Services Provider) systems that provide the full suite of capabilities, at a low monthly cost, running on desktop PCs.

### **Price Improvement (Implicit Savings)**

Price improvement occurs when an order is executed within the Best Bid and Offer, that is, within the spread. For example, if the spread between Best Bid and Best Offer is one cent, then an execution within the spread offers price improvement. Thus, when the execution occurs at the mid-point of the best bid and offer (MBBO), then both the buyer and seller of the issue save one-half cent per share in the price of the issue. *See: Mid Point of Bid and Offer and Best Bid and Best Offer (Ask)*

### **Protected Markets Price Protection or**

Protected markets are, under Reg NMS, required to submit their Best Bid and Best Offer (Ask) for equity issues to the Consolidated Quotation System (CQS). Orders executed against the shares shown on the Consolidated Quotation System are “price protected”, in that all orders must receive the best price shown. Exchanges and ECNs, if holding an order for an issue and another exchange or ECN shows a better price, are required to route that order through to the venue offering the best price. As such, Reg NMS prohibits “trade throughs”, that is, the execution of an order at a price that is inferior to the best available price. *See: Best Bid and Best Offer (Ask) and Reg NMS.*

### **Protecting Anonymity**

Protecting anonymity is important as money management firms seek to maintain secrecy regarding their buy and sell campaigns. The advantages of this privacy are two-fold: (1) High Frequency Trading (HFT) firms will try to “game” any large movement of shares, for example, by acquiring the desired shares at a lower price and selling these shares to the money manager at progressively higher prices; and (2) Money managers have a strong desire to protect their investment strategies from leaking to their competition.

### **Reg National Market System or Reg NMS**

Regulation National Market System (Reg NMS) is a series of SEC rules that went into effect beginning in 2007. The most important part of Reg NMS is the “order protection” rule that eliminates “trade-throughs” that occur when an order is executed at a price that is inferior to another price shown on

the market. So, if the NYSE receives an order while a better price is available on the Philadelphia Exchange, the NYSE must route the order to the Philadelphia Exchange. Thus, each order is protected to receive execution at the best available price, regardless of where or from whom the order originated. Clearly, the SEC intends Reg NMS to protect the average retail investor. See: *Protected Markets*.

Reg NMS has two interesting side effects: The first is that each executing broker has first and foremost responsibility for best execution ("best ex"). The second is that Reg NMS's protection only applies to the shares shown at "top of book". For example, a 15,000 share order is best price protected for the 2,500 shares that may be shown at "top of book", but not for the remaining 12,500 shares. The result is that a proprietary trading firms can execute the remainder of the order from their inventory at their desired price. See: *Agency Only and Proprietary Executing Brokers*.

### **SEC Rule 605 Reports**

SEC Rule 605 requires that OTC market makers, exchange market makers, national securities exchanges, and others publicly disclose, on a monthly basis, basic standardized information concerning their handling and execution of "covered" orders, which consists of market orders or limit orders that are received and executed by a market center during regular trading hours. Included in this information is how market orders, for example, in various size categories, are executed relative to the public quotes. These statistics are necessary for these organizations to properly fulfill and supervise their "Best Execution" responsibilities.

### **Sell Side Trader**

A sell side trader works for executing brokers, known as the sell side.

### **Smart Order Routers**

Smart order routers are sophisticated trading technologies that, in real-time, scan all the available shares listed for an equity in the *displayed markets* and *dark pools* in order to create an aggregate picture of available liquidity (shares). The smart order router then determines the most cost effective combination of execution venues and shares to complete the execution of an order. Thus, a smart order router may examine shares available on 15 or 20 different venues, determine the most cost-effective combination of venues needed to fill the order, route shares from the order to several selected venues and monitor the resulting fill reports for the executed orders.

### **Source Liquidity**

Liquidity is a term that refers finding (locating) the shares available for completing a buy or sell transaction. For example, an order to buy 5,000 shares must first find (source) 5,000 shares that someone is willing to sell. Once the 5,000 shares are located, which can be on the *Consolidated Tape* or in a *dark pool*, then the transaction can proceed. However, in this example, let's assume that only 3,000 shares are available on the Consolidated Tape. Then, the trader must continue to "work" the order to find another 2,000 shares.

### **Sweeping Top of Book**

When a money manager places an order to buy, for example, 20,000 shares and *top of book* for that issue shows 10,000 shares available, the executing broker may use their *smart order router* to simultaneously place buy orders in every trading venue showing shares in the issue. This

simultaneous execution of these purchase orders is referred to as an *aftermarket sweep* or *sweeping top of book*.

### **Top of Book**

Exchanges and ECNs are required to submit the number of shares and most favorable price to the Consolidated Tape. The aggregate amount of shares available at the best price, such as \$20.25 per share, is referred to as “Top of Book”, meaning that five venues showing 500 shares each at the best price results in a top of book of 2,500 shares. The number of shares and best price are dynamically updated as orders are posted and executed throughout the course of the trading day. *See: Depth of Book*

### **Top of Book: Why Not Show All The Shares In Inventory?**

Today’s tight spreads (as low as one cent per share) in equity securities creates an environment where *proprietary trading firms* have little desire to show all the shares that they are holding in inventory. For example, a trading firm holding 25,000 shares of an issue may only publicize 500 shares as *top of book* at \$20.25 per share. Proprietary trading firms often use their shares posted at top of book as bait to snare the remainder of a large order. This practice reflects SEC regulations that permit a trading firm more advantageous pricing once the shares at the top of book have been removed from the market. Then, the proprietary trading firms can fill the remainder of the order from their inventory (this is referred to as “internalizing the order”) at a higher, and more profitable, price per share.

### **Trading Algorithms**

Trading algorithms are sophisticated computer programs provided by executing brokers as a means to attract order flow. These programs enable a buy side trader to control parameters that automatically slice up a large “parent” (or High Touch Order) order into many smaller “child” (or Low Touch Order) orders and execute them over a designated time period. In this fashion, a large order is dripped into the market a little at a time, with the goal of minimizing the market impact of the order on the price of the issue. Algorithms come in many shapes and sizes, with the most common being VWAP (Volume Weighted Average Price), TWAP (Time Weighted Average Price), INLINE (which follows the market trends), OPTIMIZE (which directs orders to the both displayed markets and dark pools as liquidity is available), CROSSFINDER (which searches across multiple dark pools for a match). Newer algorithms, if they detect the any “gaming” by other trading firms, dynamically adjust parameters or even switch to another algorithm(s).

### **Trading Volume Rule of Thumb**

A good rule of thumb in estimating trading volume is that an investment complex will trade 1 billion shares annually for every \$20 BB of active equity assets (excluding index and emerging market assets) at 70% annual turnover. This rule of thumb was developed prior to 2008’s financial crisis and, as such, the amount of trading may be even higher for a given amount of assets. Remember: A drop in an accounts market value does not change the number of shares held by that account.

## **About UAT, Inc.**

### **UAT, Inc.**

UAT provides *iPerX*, a multi-patented Commission Savings system\* that provides the following benefits to sub-advised and externally managed assets:

- More than double the Commission Savings compared to current industry programs.
- Real-time governance reporting across holding, activity and brokerage costs.
- Web-based system with no install costs or minimums.
- *iPerX* algorithm automates order selection and trading for money managers (to maximize commission savings), thereby eliminating manual trading tasks for money managers.
- *iPerX* helps money managers protect existing mandates and compete more effectively for new mandates.
- Optional real-time pre- and post trade compliance supervision system for organizations operating sub-advised and externally managed Plans, Trusts and Funds.

For more information on how iPerX can dramatically increase commission savings and provide real-time reporting to your organization, please contact Tom Warren at [tom.warren@uatinc.com](mailto:tom.warren@uatinc.com) or (303) 881-1825 or visit our web site at [www.uatinc.com](http://www.uatinc.com).

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\* United States Patents 7,685,057; 7,809,632; 7,831,503; 7,856,396 and patents pending