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Regulation NMS
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Having read nearly all of the comment letters sent in on proposed Regulation NMS, I would like to make some additional comments of my own, which should be added to my earlier submission.

The crux of the market structure issue is whether ***all*** bids and offers in the national market system should be accessible and executable instantly. Competition should be among orders and order types, rather than among market execution mechanisms. Fragmentation has been—and unfortunately remains—the Sisyphian stumbling block to a national market system. Today's advances in technology no longer require multiple venues where multiple disparate collections of bids and offers cannot seamlessly aggregate.

Let me start with an analogy:

Back in the 1960s there was a "back office" crisis in Wall Street. The biggest single problem then was "fails," the failure to make timely delivery of securities on settlement date. The exchanges had created "clearing houses" to consolidate the results of trades made on their floors. Each exchange had its own clearing house; the over-the-counter market had none.

As volumes built up (5 million shares a day on the NYSE was "huge!"), deliveries of sold securities were delayed, sometimes for weeks and months, and several very large firms lost bookkeeping control.

I was in the thick of the crisis, and worked hard to alleviate many of the problems, including being deeply involved in the creation of the now-standard CUSIP number for securities, as well as the creation of the National Clearing Corporation for over-the-counter securities.

The Congress became involved and started the hearings that led eventually to the Securities Reform Act of 1975. During this period, CUSIP was developed (1968), and in the 1970s, steps were taken modernize clearing houses and to immobilize securities in depositories, thus speeding up settlements and reducing deliveries.

However, there were still multiple clearing houses and depositories, and often securities needed at one were at another. The Commission engaged our firm to conduct a study as to whether securities clearing houses and depositories should be consolidated. The Commission's main concern was whether consolidating these entities would stifle "competition." Our study determined there were overwhelming benefits to consolidation, and that became the objective of the Commission. Efficiency trumped competition.

There was little or no objection from the industry, despite the fact that several entities would disappear, and jobs would be lost. The reason for that lack of concern was because the industry recognized that clearing, settling, and storage of securities was an expense, rather than an income, item. Where expenses were concerned, the industry believed competition unimportant; where income was concerned, competition was crucial.

That history brings me to ask a question: "Is the creation of a 'national market system' that maintains multiple trading venues that are not seamlessly integrated with each other an expense, or is it a revenue source?" The Commission, ever since 1975, has focused far more on competition among market centers, rather than on price competition among and between orders to buy and sell securities across market centers. Continuing competing market execution centers (as contrasted with competing order entry centers) is like endorsing the idea of having competing air traffic controllers at the same airport.

For investors, multiple market execution centers are an expense—a huge expense. Investors (and issuers) ultimately pay for the entire cost of the operation of market centers and the telecommunications infrastructure required to "link" them together. I know of no recent data available to show the entire cost of this enormously complex and expensive set of systems and market centers on an annual basis. Based on my back-of-the-envelope estimate it is in the many billions of dollars.

The proposals concerning "opt-outs" in Regulation NMS continues what I believe to be the biggest stumbling block to the national market system envisaged by the Congress in 1975, and proclaimed to be the objective by the Commission prior to the withering lobbying of the New York Stock Exchange shortly after enactment. The Commission's continued belief that a national market system that encouraging multiple market centers unable to integrate—either because of lack of communications or access—is at the heart of the proposal's deficiencies.

In a properly designed and implemented national market system, every execution would be "best execution," because no inferior price could be hit or taken. Locked and crossed markets would be impossible, because when bids and offers were entered at an executable price, there would always be an execution. Internalization would be greatly reduced.

What is needed by investors of every stripe—individual and institutional alike—is a national market system that guarantees best bid and offer information and access to ***all*** counterparties, not just a subset. There is no need for any "opt out" from best price if instant and equal access to all market centers is provided.

The article (*NYSE's Automatic Transition*) in the June 23rd edition of *The Wall Street Journal*, dramatizes succinctly the fatal flaw of non-integrated market centers. It reports on a plan being considered by the New York Stock Exchange ("NYSE") to *"…allow buyers and sellers to opt* (out) *for automatic execution not only at the so-called best* *price, but also at either up to five cents or several price quotes above or below that* (so-called) *best price."*

The article gives an example of the execution of a 10,000 share order under the new proposal. The hypothetical order would have 5,000 shares executed at $32.50. The remaining 5,000 shares would be executed at $32.51. Sounds good? Right? Not necessarily!

What if the next best offer available on the NYSE were not $32.51, but rather $32.55, while at the same instant of time a second market center was offering 3,000 shares at $32.51, and a third was offering 2,000 shares at $32.52? Presumably the NYSE's system would not execute the last 5,000 shares at $32.51 and $32.52 at the other market centers, but would execute them at $32.55 on the NYSE. The buyer would have given up $180 under the NYSE's proposal. (And two sellers with the best offers would go unexecuted.) Best execution under any definition? No way!

This illustrates the fatal flaw in the Commission's proposal. Allowing access only to a subset of the available supply/demand curve is inefficient, costly and unnecessary in this age of technological capabilities.

Fidelity Investments—among many others—recognizes this reality. In their June 22, 2004 comment letter on Regulation NMS, Senior Vice-President and General Counsel, Eric D. Roiter, wrote to the Commission, as follows:

*"No market should be deemed fast unless **all** limit orders (by definition, orders that specify prices and amounts at which a willing investor has already committed to trade) may be accessed automatically and contemporaneously be a willing counterparty."*

Bruce N. Lehmann and Joel Hasbrouck, Organizers, writing on behalf of 10 academics known as the "Reg NMS Study Group," commented as follows on the proposal:

"Trade-through prohibitions restrict the prices at which investors are allowed to transact. They are a form of price control; the American economic system is relatively free of such controls. For example, a consumer shopping for a car (which is a fairly big-ticket item) generally has many choices about where to buy. Consumers are not required to buy a specific car at the lowest offered price. In fact, consumers may pay more because they haven't bothered to comparison shop or because the dealer provides better service or can deliver a chosen car more quickly.

*"However, securities markets and new car markets are obviously not identical, and we see two main economic arguments in support of trade-through prohibitions. The first is an agency problem between brokers and their customers. **Individual investors do not always make the order-routing decision.** Instead, they typically hire a broker as their agent, and this introduces the potential for moral hazard. In simple terms, the broker may have an incentive to deliver a low quality execution, and it may be very difficult for the customer to monitor execution quality."* [Emphasis added.]

Investors should ***never*** have to make order routing decisions. All orders should automatically flow into a true national market system and should be able to be executed on the basis of price-time priority. (There goes the moral hazard issue!) There would never be the opportunity to deliver a low quality execution. This is what the Congress wanted in 1975, and presumably still wants.

The Reg NMS Study Group went on to write:

"There are also different prices at different security market venues. Again, better prices may represent better deals, but ***price differences may also reflect different product attributes****.* ***Market venues differ in execution speed, anonymity, certainty of execution, and possible order types, among other things. The proposed Regulation NMS elevates price above all other product attributes****".* [Emphasis added.]

It seems curious, to say the least, to analogize the trading of equities with buying automobiles. Equities are fungible intangibles—contractual promises made by the issuer to the owner—whereas automobiles are non-fungible products that are required to be delivered physically.

Best execution price available at that instant is the only objective sought by buyers and sellers of stocks. At the time an executable order is sent to the trading arena—physical or electronic—buyers want to pay the least; sellers want to receive the most in each execution. All of the product attributes of a stock are identical; product attributes of automobiles are not. Stock traders—especially institutional traders—want to remain anonymous; there is nothing to prevent them from disclosing their identities.

When an executable order is sent to the market, the investor also would like it to be filled as rapidly as possible. Speed is important, especially if a slower market's delay can adversely affect the price.

How to solve the problem? Require that all market centers be seamlessly interconnected so buyers and sellers have instant access to all bids and offers and the ability to execute against the ones with the best prices. Market centers will still be able to differentiate their services by offering new and innovative proprietary order types, and selling those products to encourage customers to enter these orders through their facilities.

Gus Sauter, Chief Investment Officer and Managing Director of The Vanguard Group, testified April 21, 2004 before the Commission, as follows:

"If there were only one marketplace, or a centralization of the marketplace in a Central Limit Order Book (CLOB), then there would be no need for a trade-through rule. An order could simply 'walk the book,' taking all the successive inside orders on its way to completion."

Interestingly, the Commission argued in favor of a CLOB for many years, but abandoned that approach without good cause. Instead, for a quarter of a century the Commission has attempted to design a modern market system using attorneys as their design teams. What has resulted still resembles far more the design work of the late cartoonist, Rube Goldberg, than it does the national market system the Congress ordered them to "facilitate."

In 1998, the Commission published *"A Plain English Handbook*," which stated:

"This handbook shows how you can use well-established techniques for writing in plain English to create clearer and more informative disclosure documents."

This, however, is a random example from the Release:

"c. Opt-Out - Provision of National Best Bid or Offer

"The Commission also is proposing to require a broker-dealer to disclose to its customers that have opted-out the national best bid or offer, as applicable, at the time of execution for each execution for which a customer opted out. If the order were a purchase, the broker-dealer would be required to provide the national best offer at the time of execution and if the order were a sale, the broker-dealer would be required to provide the national best bid at the time of execution. Such disclosure would be required to be given as soon as possible, but in no event later than one month from the date on which the order was executed. The bid or offer that would be required to be disclosed to the customer pursuant to this exception would need to be displayed in close proximity to, and no less prominently than, the execution price for the applicable transaction that is provided to the customer pursuant to the requirements of Rule 10b-10 under the Exchange Act. The required disclosure could be made on the confirmation for the transaction sent to the customer pursuant to Rule 10b-10 under the Exchange Act, or the monthly account statement relating to that trade sent to the customer pursuant to applicable SRO rules. Alternatively, the broker-dealer could provide the bid or offer information on another form of disclosure document, as long as it is clear to which transaction the bid or offer information refers (i.e., the bid or offer must be displayed in close proximity to, and no less prominently than, the execution price for the relevant transaction).

"The Commission intends this requirement to help ensure that customers who opt out of the proposed rule's protections are informed of the consequences of opting out, and are able to compare the execution they received to the best-displayed bid or offer at the time of execution. This disclosure would provide the customer with valuable execution quality information upon which to base future determinations as to whether to opt out of the proposed rule's protections.

"The Commission requests comment on the extent to which this information would be useful to investors. The Commission also seeks comment on whether this requirement should apply when the "customer" is another broker-dealer. The Commission further requests comment on whether there would be any practical difficulties in implementing this requirement. In particular, the Commission requests comment as to how this requirement would, or should, apply to transactions that are reported to the customer on an average price basis. Further, the Commission seeks specific comment as to the monetary costs of system or other modifications necessary to provide this information to customers who choose to opt out."

And, by the way, the Commission staff estimated costs for this single part of the proposal in their Release as follows:

"...(T)he Commission staff estimates that there would be a one-time burden of 893,376 hours for broker-dealers to make changes to their systems necessary to provide disclosure to investors regarding the impact of opting out of the protections offered by the proposed rule for a total onetime cost of approximately $83,923,200, plus a one-time capital cost of approximately $16,243,200 resulting from outsourced legal work."

However, there was one bright spot in the Release, in which the Commission asked:

"…the Commission requests comment on whether there is a continued need for the opt-out exception if it were to adopt an automatic execution requirement. The Commission also requests comment if there is a continued need for the proposed automated market exception, if the Commission were to adopt an automatic execution requirement, because all market centers would be required to provide the same basic level of automatic execution functionality, and thus there would be no distinction for purposes of the proposed rule between manual markets and automated markets."

What a great idea!

When my colleagues, Professor Morris Mendelson, R.T Williams, Jr. and I wrote our proposal to the Commission's National Market Advisory Board for a "National Book System" in 1976, we stated:

"Finally, we are confident that the development and implementation of the National Book System is in the best interest of the entire broker/dealer community as well as the investing public. By providing a single 'book,' all bids or offers at each price have the opportunity to displace orders, thus assuring participants that every execution is in fact the 'best execution' available at that time. The complex routing systems being developed by brokers and contemplated to connect market centers may be abandoned in favor of a single path to the best market."

As with the decisions made by the Commission to consolidate clearing houses and depositories, so consolidation of the mechanism for execution of all transactions will bring about a true national market system, one that costs far less, is much more efficient, and, like the clearing houses and depositories, brings a 21st Century market system to the United States.

Matt D. Lyons, of Capital Research and Management Company expressed the solution well in his comment letter dated June 28, 2004:

"We firmly believe that if the trade-through rule is imposed across all markets that there must be 'frictionless access and instantaneous executions.' The Commission has requested comment on whether there is a need for an opt-out exception if it imposes an automatic execution requirement. Market centers that participate in a National Market System that provides price protection must offer automatic execution on the orders that they are displaying. If this is the case, we see no need for any opt-out provisions."

"We believe that to be considered an automated market, the entire limit order book of a participating market center must be available for instantaneous execution. The Commission has requested comment whether it should expand the scope of the proposed trade-through protection beyond the best-displayed bid and offer. We think that the scope should be expanded, as this will provide the most incentive to display limit orders in the market and increase efficiency."

Here's an idea to test the proposition:

Google is probably going to be the most important and innovative new issue ever being sold. Why doesn't Google decide to list solely on ArcaEx, and let the other market centers give it unlisted trading privileges. ArcaEx operates on a price-time priority basis, and that would be a wonderful test bed for a national market system.

I also incorporate, as a portion of this comment, my article, *"Regulation NMS: Pools or an Ocean of Liquidity*, just published in the 2004 edition of *"The Handbook of World Stock, Derivative and Commodity Exchanges*." (Reprinted with permission.)

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Regulation NMS: Pools or an Ocean of Liquidity?

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Introduction[1]

On February 26, 2004, the United States Securities & Exchange Commission published for comment Release No 34-49325,[2]"Regulation NMS" which, in addition to routine matters:

"…would incorporate four substantive proposals that are designed to enhance and modernize the regulatory structure of the U.S. equity markets. First, the Commission is proposing a uniform rule for all NMS market centers that, subject to certain exceptions, would require a market center to establish, maintain, and enforce policies and procedures reasonably designed to prevent "trade-throughs"—the execution of an order in its market at a price that is inferior to a price displayed in another market. [3] [Emphasis added.]

This article deals with the Release's first proposal, and as a public policy objective, recommends that a properly-modified trade-through rule would be appropriate. It argues against the opt-out provisions proposed because a properly designed and operated national market system could guarantee "best execution" for each transaction within an order.

A trade-through is the execution of an order in a market at a price that is inferior to a price displayed in another market.

The proposed "opt-out" provision in Regulation NMS would permit informed investors to elect to "opt-out" of the trade-through rule on an order-by-order basis. Depending on the price of the stock, the opt-out provision would allow trades to be made from one cent to five cents worse than the best displayed bid or offer.

The "trade-through rule," and its proposed "opt-out" exceptions, is by far the most controversial piece of proposed Regulation NMS.

The Commission noted that it *"... believes that these changes (opt-out exceptions to the trade-through rule) require it to revisit the issue of trading at inferior prices across markets. Clearly,* ***in a fully efficient market with frictionless access and instantaneous executions, trading through a better-displayed bid or offer should not occur."*** *[4]* [Emphasis added.]

The decision to be made by the Commission between maintaining or modifying the trade-through rule or introducing the opt-out exception will have a defining effect on the structure of U.S. equity markets.

The New York Stock Exchange, which has been the principal beneficiary of the trade-through rule, is fighting tooth and nail to maintain the *status quo.* Its competitors (and would-be competitors, such as ECNs), believe the present iteration of the trade-through rule to be old fashioned because it frequently requires manual intervention before an order can be executed, and gives an unfair advantage to NYSE specialists, who have time to make up their minds whether or not to participate in a trade.

The Intermarket Trading System, ("ITS") is also a major part of the problem in enabling "best execution." ITS is a system linking certain market centers that slows down executions. A quarter of a century ago, the then President of Merrill Lynch, William A. Schreyer, derided ITS in sworn testimony before two congressional subcommittees as follows: *"It is as far from the concept of an automated, efficient marketplace as a tom-tom is from a communications satellite.*"[5] ITS has not changed very much since then, except cosmetically.

Transactions, Executions and Orders

This article discusses the implications of the differences among the terms "Transactions," "Executions" and "Orders," and how the appropriate use of the terms will affect the decisions made by the Commission with regard to proposed Regulation NMS, and whether the Nation will finally achieve the national market system the Congress ordered the Commission to "facilitate" in 1975. (Note: "Facilitate" is defined as "to make easy.")

In the 1963 Special Study of the Securities Industry, the Securities & Exchange Commission wrote:

"The Report concludes that the factors contributing to or detracting from the public's ready access to all markets and its assurance of obtaining the best execution of requires the continuous attention of the Commission and the Policy and Planning Unit."[6] [Emphasis added.]

41 years later, in 2004, the Commission wrote in Proposed Regulation NMS:

"*c. Opt-Out - Provision of National Best Bid or Offer*

"The Commission also is proposing to require a broker-dealer to disclose to its customers that have opted-out the national best bid or offer, as applicable, at the time of execution ***for each execution for which a customer opted out.***"[7] [Emphasis added.]

Notice the proposed regulation uses the term **"execution,"** rather than

"order," even though the proposed opt-out exemption is required for each "**order**." In reality, however, the exemption is required for each execution within an order, since the proposed regulation requires the broker-dealer choosing the opt-out provision to certify to the investor the NBBO at the time each execution occurs, and report back to the investor the amount of any possible loss that might have occurred.

Section 11A of the Securities Exchange Act also contains these words:

"…it is in the public interest and appropriate for the protection of investors and the maintenance of a fair and orderly market to assure:

- *the economically efficient* ***execution of securities transactions"*** [Emphasis added.]

It is interesting to note the words chosen: "execution" and "transactions." More recently the Commission has defined the word "order" as a synonym for "transaction" or "execution." That is often incomplete, because every order which is filled (in whole or in part) must have at least one execution or transaction. Many orders, however, have multiple executions or transactions.

In 1968, the Commission directly addressed the definition of the term "transaction":

"One of the basic duties of a fiduciary is the duty to execute securities transactions for clients ***in such a manner that the client's total cost or proceeds in each transaction*** is the most favorable under the circumstances…"[8] [Emphasis added.]

The reality is that investors and other traders want only one thing: buyers want to pay the smallest total amount for each execution; sellers want to receive the greatest total proceeds for each execution. When an order requires execution by more than a single transaction, the investor would like to receive the highest aggregated proceeds for each sale transaction and the total lowest cost for each purchase transaction. The Commission has the ability precisely to define the term "best execution" for each transaction in a national market system, but ***it is impossible precisely to define "best execution" for any specific order requiring multiple transactions to fulfill[9]***

In 1996, Jonathan R. Macey and Maureen O'Hara of Cornell University, wrote "The Law and Economics of Best Execution," in which they stated:

"Despite the seeming simplicity of this concept, *few issues in today's securities markets are more contentious than the debate surrounding* *best execution.* ***Does clearing a trade in one market at the best available current quote constitute best execution if trades frequently clear between the quotes in another market?***

Does the mechanism that provides best execution change when trade size is considered?

Can investment professionals comply with their legal best execution obligation if their trade price implicitly provides a rebate to the broker rather than a better price to the trader?

How can exchanges, investment professionals, and regulators guarantee the provision of best execution? Is best execution an achievable (or even definable) goal, or is it a more amorphous concept akin to market efficiency?

These questions represent just a part of what is becoming an issue of increasing complexity".

Clearly, proposed Regulation NMS's ability to describe "Best Execution" today is even more complicated than it was in 1996.

Orders requiring more than a single transaction to complete have but one thing in common: They need the professional skill and judgment of the person or persons responsible for fulfilling the order. ***There is no single way to assure best execution of a complex and large order, any more than there is for a competent and skilled attorney to have only one way to try a case.***

Many orders—especially large orders for hundreds of thousands or millions of shares entered by institutional investors—require multiple trade executions, sometimes taking one or more days. This may be required to achieve what is believed to be the lowest overall cost or the highest proceeds. But if each and every trade execution at the time it is made is made at the highest bid (for a purchase) or the lowest offer (for a sale), the total cost or proceeds of the entire order will assure "best execution," ***provided reasonable judgment and care is taken with the order.***

The Commission defines "best bid" and "best offer," as follows: "The terms *best bid* and *best offer* shall mean the highest priced bid and the lowest price offer."[10]

If there is any spread at all between best bid and best offer, there cannot be an execution. ***At the moment of execution, the spread must always be zero***. There can be no "price improvement," since the bid must be hit or the offer taken. The true issue is: Who gets to see and trade with the best bid or offer? “Price improvement” is only possible if the market system hides either bid or offer (or both) from some market participants. ***“Price improvement" is an oxymoron if the market system is properly designed and implemented.***

The Commission is seeking to facilitate a national market system. There are multiple market centers in which the same securities are being traded at the same time, and in which various “pools” of liquidity (bids and offers) are collected and shown. There is no capability for any investor to be able to see and access the entire “ocean” of liquidity which would result by integrating all the pools of liquidity.

The reasons for this inability are many, but start by a failure of the present market structure to aggregate all bids and offers for each security into a single, instantly-accessible whole. However, if all market centers operated at the same speed, making instantly accessible all separate “pools” of liquidity, this would create an “ocean” of liquidity.

The Commission earlier wrote:

“The Commission anticipates that the proposed rule (11Ac1-5) will help broker-dealers fulfill their duty of best execution. That duty requires a broker-dealer to seek the most favorable terms reasonably available under the circumstances for a customer's order. ***Routing orders to a market center that merely guarantees an execution at the best published quote does not necessarily satisfy that duty****…”[11]*
[Emphasis added.]

The definition of best execution goes on to state:

“*A broker-dealer must consider several other factors* [besides best price] *affecting the quality of execution, including, for example, the opportunity for price improvement[12], the likelihood of execution (which is particularly important for customer limit orders), the speed of execution, the trading characteristics of the security, and any guaranteed minimum size of execution.”*

In a properly-designed national market system, routing orders to an integrated set of market centers operating at the same speed would satisfy the duty of best execution, and a modified trade-through rule could be maintained. Under such a system, there would be no difference in “execution quality.” In the proposed Regulation NMS Release the Commission makes this point:

"In short, Section 11A of the Exchange Act envisions a market structure characterized by full transparency where competing markets are linked together to provide the ability to effectively and efficiently execute customer orders in the best available market. It is these core principles that have shaped the Commission's actions to foster the development of a true NMS".[13]

The problem with the Commission's approach is that "the best bid and offer" is seldom, if ever, made up of ***all*** the bids and offers available at a moment in time. There are often better undisclosed bids and offers (which could have been and should have been published), but there is no practical or economical way for all orders to interact with them, since they are not known to exist. In addition, even under Regulation NMS's proposed rules, locked and crossed markets would still be possible. Any trading system that permits locked and/or crossed markets should not be allowed to exist as a part of a national market system.

The only way for "best execution" of each transaction to be guaranteed is for all bids and offers in any particular security to be able to interact, preferably on a price-time priority basis. "Best execution" of a multiple transaction order will still require skill and judgment, as it should. But the cost of such a system would probably be at least one order of magnitude less than the present multiple, cobbled-together systems that are the result of the Commission's actions since 1975.

Let me postulate the execution of a large order as follows under the "opt-out" proposal: An order is entered under the proposed opt-out provision to buy 100,000 shares. The NBBO in hypothetical stock XYZ is 20.15 bid for 15,000 shares, 10,000 shares offered at 20.23. The last sale was 20.20.

The buyer bids 20.25 for 50,000 shares, and buys the 50,000 shares at that price, bypassing the 10,000 shares at 20.23. There are now 110,000 shares remaining to be bought, which are may be completed in several transactions with or without employing the opt-out provision.

In this scenario, the presumptive reason the buyer is willing to buy above the best offer price is because of foreknowledge there is a specific quantity of stock available to be bought at that price, and the seller does not want to have to deal with 10,000 shares being bought away. That information is concealed from the rest of the market.

In addition, the buyer does not wish to allow a "slow" market center to be able to delay execution for some period of time.

This would appear to fly in the face of the congressional edict that:

"It is in the public interest and appropriate for the protection of investors and the maintenance of fair and orderly markets to assure--

the availability to brokers, dealers, and investors of information with respect to quotations for and transactions in securities"[14]

The law certainly suggests that the same information about bids, offers and executions of securities transactions, as well as executions ("transactions") be made available to all brokers, dealers and investors at the same time, and not just to a subset.

The "Market" Order

Another defect of the present market structure is the ability to enter "market orders." A market order is defined as an unpriced buy or sell instruction delivered to the trading arena. It is never included as part of the NBBO [15], since it contains no bid or offer price.

The "market order" was needed only when order entry personnel could not know what was going on in the trading arena. That was true in the 1950s, when I arrived on Wall Street, and earlier, but today, market orders are no longer needed, because in an electronic market system all participants should be able to see and interact with the very best prices at all times. Market orders increase volatility, since they must be executed immediately, regardless of prices available.

A true national market system would require that all orders be entered into the trading arena with a mathematically-calculable price or algorithm for execution at the time it is entered. In other words, no "market" orders are needed, which is the way specialists get their 30-second, free, unpriced valuable options.

Not only traditional limit orders could be entered. Orders to trade at the opening price, at the closing price, at the volume weighted average price ("VWAP"), the median price of the day, Immediate or Cancel ("IOC"), Fill or Kill ("FOK"), best bid or offer when received at the trading arena, or similar type orders, would also be able to be entered. Short sale execution restrictions could still be met, and other regulatory restrictions, such as buy "minus" or sell "plus" could also be continued, with the present "market order" condition replaced with either highest bid or lowest offer.

But all orders should contain a predeterminable, mathematically calculable price or algorithm at the time of entry. Unexecuted orders or portions of orders should be cancelable either by direction or by the previously entered algorithm. Execution should occur on a strict price-time priority basis. First, disclosed bids or offers would trade, and next, reserve orders (undisclosed, but entered orders) at the same prices as disclosed executed orders.

Bids and offers entered into the market should be able, if designated to do so, to “walk up or down” the “books” of displayed bids or offers that have been sent to the market through various market centers. Merely permitting immediate electronic executions only at the best bid or offer price would be anticompetitive and unnecessary.

Price Continuity

In the year 2004, information technology advances allow disclosed supply and demand to be made instantly available in the electronic trading arena. There is no longer any need to pay a monopolist for "price continuity." If the best bid is lower than the best offer by any amount, no trading can occur. As noted above, only when bid and offer are equal can there be a trade. If there is a spread, and no trading occurs, there is no need for a mandated "circuit breaker" when there is an order imbalance, and as a result, each stock would have its own natural circuit breaker.

Once again, the issue is whether any market participant has immediate and full access to all bids and offers when they are entered. If so, price continuity will become irrelevant, since whenever there is a spread, no executions could occur.

Market makers would be free to enter any bids or offers they wished to narrow spreads. There would be no need for “affirmative” or “negative” trading obligations. Regulatory halts would, of course, also be able to continue.

The idea of maintaining subsidized "price continuity" in an electronic age is unnecessary and anticompetitive. If market conditions create an imbalance between bids and offers, and there is a spread between the highest bid and the lowest offer, there should be no forced trading. Traders should only trade at the price at which buyers and sellers voluntarily agree (other than for a regulatory trading halt, which is very different from a market imbalance halt). If no trading takes place, it is solely because no buyer is willing to meet the seller’s offer and *vice-versa*.

If news occurs that should result in a significant price change, it should move to the new equilibrium price as quickly as possible. To move a stock slowly up or down to the new equilibrium price is a fraud on the market.

Professor Hans Stoll noted the lack of need for specialists' affirmative obligations as long ago as 1997, as follows:

"It is time to reconsider the affirmative obligation, certainly as a regulatory obligation. It is not evident that an affirmative obligation reduces volatility or makes markets more efficient. The cost to the public of the privileges granted to market makers—such as a quasi monopoly position and access to trading information—are likely to outweigh any benefits. Finally the cross subsidization between easy trades and hard trades implicit in the affirmative obligation is increasingly impractical in today's more competitive markets." [16]

Conclusion

In 2004 there is no reason a properly-modified trade-through rule should not be promulgated. If that were to happen, would be no need for any opt-out provisions.

A good vision of what the national market system should become was attributed to Professor Charles Jones of Columbia University in an article in a recent newspaper column, as follows:

"Nobody would complain about the trade-through rule if all the markets got back to one another instantly and everyone was guaranteed that so-called best price when an order was sent someplace else," Jones said.[17]

It is long past the time the Commission should have enabled a market structure which met Professor Jones' wish. We are nearly halfway through 2004, and the Commission has had nearly three decades to get it right. Now is its best chance, and the Commission should finally get it right.

It will be more than a bit interesting to see the result of the Commission's deliberations, and how the politics of economics plays out. The stakes for the market centers are huge; the biggest risk is to the New York Stock Exchange, since their market structure is old, cumbersome, and people-intensive.

[1] Portions of this article incorporate ideas from several previous writings by the author.

[2] The Release, No. 34-49325, is 247 pages in length, has 105,804

words and contains 377 footnotes.

[3] Ibid., Summary,

[4] Ibid., p.16

[5] "Progress Toward the Development of a National Market System," Joint hearings before the Subcommittee on Oversight and Investigations and the Subcommittee on Consumer Protection and Finance, 96th Congress, Serial 96-89, U.S. Government Printing Office, Washington DC, p.70.

[6]Special Market Study, Release No. 32, July 17, 1963

[7] Release No. 34-49325, p.36.

[8] Investor Advisors Act of 1940, Release No. 232; Securities Exchange Act of 19344, Release No. 8426, October 16, 1968.

[10] Rule 11Ac1-1 Dissemination of Quotations (Definitions). (Securities Exchange Act of 1934 as amended.)

[11]Release No. 34-43084; File No. S7-16-00 Disclosure of Order Routing and Execution Practices

[12] See discussion of "price improvement" above.

[13] Regulation NMS, Page 19.

[14] Securities Exchange Act of 1934, § 11A (1) C iii.

[15] The "NBBO," is the "National Best Bid and Offer, a term applying to the SEC requirement that brokers must guarantee customers the best available ask price when they buy securities and the best available bid price when they sell securities. NBBO is the bid and ask the average person will see. The NBBO is updated throughout the day to show the highest and lowest offers for a security amount at all market centers.

[16] Hans Stoll, 1997, "Affirmative Obligation of Market Makers: An Idea Whose Time Has Passed?", Financial Markets Research Center, Owen Graduate School of Management, Vanderbilt University, Working Paper 97-14. p. 17.

[17] Newark Star Ledger April 18, 2004, "Test by SEC supports 'trade-through' critics"