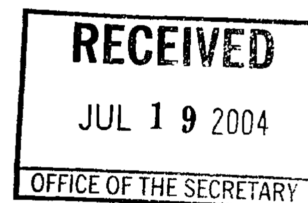

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July 9, 2004

Jonathan G. Katz
Secretary
Securities and Exchange Commission
450 Fifth Street, NW
Washington, DC 20549-0609

Re: Regulation NMS - File No. S7-10-04

Dear Mr. Katz:

Citadel Investment Group, L.L.C. ("Citadel") appreciates the opportunity to comment on the Securities and Exchange Commission's ("SEC" or "Commission") NMS Proposal.[1] Citadel fully supports the Commission's decision to consider updating its rules and regulations to address the important market structure issues raised by the many exciting developments in the U.S. equity markets. Citadel believes that the NMS Proposal is a significant step toward a better and more efficient marketplace for all investors. In particular, the Commission's recognition of the material value to investors of speed and certainty when considering the quality of order execution is a critical breakthrough in protecting investors.

A. Executive Summary

Citadel believes the market structure issues identified by the Commission would be best addressed by:

- Eliminating the existing trade-through rule and instead relying on robust economic competition and best execution responsibilities to maximize market efficiency and trade execution quality.
- Prohibiting internalization or alternatively, only permitting internalization of orders to the extent that an internalizing broker-dealer is already quoting at the price at which it will internalize.
- Limiting access fees to a *de minimis* amount.
- Banning sub-penny quoting, while re-examining the effects of decimal trading on higher priced securities in order to establish a rational framework for determining appropriate minimum quoting increments.

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[1] Securities Exchange Act Release No. 49325 (Feb. 26, 2004), 69 Fed. Reg. 11126 (Mar. 9, 2004) ("NMS Proposal"); Securities Exchange Act Release No. 49749 (May 20, 2004), 69 Fed. Reg. 30142 (May 26, 2004) ("NMS Supplement").

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B. Citadel's Activities and Interests

Citadel and its affiliates have over 800 employees, with headquarters in Chicago and offices in New York, San Francisco, London and Tokyo. Citadel provides administrative and investment-related services to a number of private investment funds and investment vehicles. Citadel's affiliate, Citadel Limited Partnership ("Citadel LP"), acts as portfolio manager for or general partner to these investment funds and vehicles. Citadel LP is the manager of Citadel Derivatives Group LLC ("Citadel Derivatives Group"). Citadel Derivatives Group is registered with the Commission as a broker-dealer and is a member of the International Securities Exchange, the Chicago Board Options Exchange, the Philadelphia Stock Exchange, the American Stock Exchange, the Pacific Exchange, and the Boston Options Exchange.

As an active and substantial buy-side investor in the equities markets, Citadel has a vital interest in the development of fair, efficient, transparent and liquid financial markets. The benefits that accrue to market participants from fair, efficient, transparent and liquid markets include improved price discovery, increased market participation and a greater ability to diversify and manage risk. Ultimately, such markets both strengthen investor confidence and reduce the cost of capital. Citadel strongly believes that rules and regulations that encourage the development of efficient financial markets, where order flow is earned through contribution to the price discovery process, innovation, service and competition, are important to the public interest and the protection of retail and institutional investors.

C. Price Discovery, Price Transparency and Liquidity

Efficient markets, characterized by robust price discovery, transparency and depth, are of paramount importance to Citadel – and to all investors. The development of such markets in a cost effective and efficient manner should be an important regulatory goal. Any market structure proposals adopted by the SEC should reflect both the technological and market structure innovations that have emerged over the recent years. Many of the trading practices of today's manual markets impair price discovery to the detriment of all market participants. In particular, market efficiency is materially harmed by slow and indicative (i.e., non-firm) quotes, internalization, high access fees and inappropriately small quote increments.[2] We propose constructive solutions to each of these issues in this letter.

[2] We raised similar concerns in our comment letter regarding the SEC's concept release entitled "Competitive Developments in the Options Markets." Letter from Adam C. Cooper, Citadel, to Jonathan G. Katz, SEC, re Rel. No. 34-49175 (Apr. 13, 2004).

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1. Trade-Through Rule

a. Myth of the "Speed vs. Price" Trade-Off

The public controversy over the trade-through rule has been mischaracterized by many as a choice between a faster fill and a better price. We strongly believe that such mischaracterization is in the vested interests of the few who benefit from the inefficiencies created by manual markets. The trade-through rule, as it exists today, is simply a regulatory barrier to competition, utilized aggressively by many manual markets to protect the privileged competitive position the current trade-through rule affords them.

We believe that the true choice faced by investors today is not a choice between speed and price. On the contrary, the true choice is the between speed and certainty of execution on an electronic market (a bird in hand) versus delay and uncertainty on a manual market (two in the bush). Even in the case where a manual market posts a better price than an electronic market, the slow and inefficient nature of a manual market means an investor may or may not be able to execute an order against the price that the manual market has advertised. Although it is possible an investor will receive a better price quoted by a manual market, it is also quite possible that an investor attempting to trade on a manual market will receive a worse (or even much worse) price – or even no fill at all. Indeed, the potential downside of receiving no fill is unlimited, as the market may continue to run away. This market uncertainty is the product of two primary factors: (1) delay from manual order handling and (2) the indicative nature of quotes on manual markets.

It is a universally accepted principal – in the securities markets and elsewhere – that time equals risk.[3] In the financial markets, risk is created by the ever-changing price of securities. Securities prices are continuously changing to reflect evolving market conditions, including changes in order flow, changes in the prices of index futures, exchange-traded funds and other securities, and of course, news – and the prices are changing at a rapid pace.[4] Therefore, each time an investor sends an order to a slow, manual market, the investor faces a greater risk of the price moving prior to execution than the investor would face on a fast, electronic market.[5]

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[3] See, e.g., Securities Exchange Act Release No. 49405 (Mar. 11, 2004), 69 Fed. Reg. 12922, n. 41 (Mar. 18, 2004) (recommending shortening settlement cycle because "time equals risk").

[4] For example, the trading data published by electronic markets demonstrates the speed with which prices change. Correspondingly, the SEC discusses in the NMS Proposal the rapid nature of changes in security prices after decimalization. See NMS Proposal at 11166.

[5] The 30 second/two minute delay contemplated by the current ITS Plan exacerbates the delays inherent in the manual markets, and hence, the inherent risk. See NMS Proposal at 11132, n. 37.

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Consider, for example, an order sent by a retail investor to buy a security at the published offer price of a manual market. During the time it takes to manually handle the order, the specialist may choose to fill the order at the published quotation. If the value of the security has declined during the manual order handling, the specialist may complete the order at an "improved" price. During the delays attendant to human intervention, however, it is also equally possible that the price of the security may appreciate. Under such circumstances, the investor generally will not receive a fill for his order. When an investor receives no fill at all – because the market price has moved – the investor is forced to forego the benefits of his research, labor and capital commitment. The foregone profits may, of course, be unlimited.

As the above example demonstrates and as the Commission recognizes, the inherent delays in a manual market essentially grant an option to the specialists in a manual market and "this option has value, as there is risk that the market for the stock may move before the order is executed especially if a significant amount of time passes before the order is executed."[6] We estimate that for a typical S&P 500 stock, the value of a 30 second option to execute an immediately executable order has a theoretical value of approximately 0.3 cents per share. We further estimate that over the last 12 months, the value of this "execution option" across all of the non-automated stock exchanges in the United States totaled approximately three-quarters of a billion dollars.[7] In contrast, electronic markets provide nearly instantaneous fills for investors, thereby all but eliminating this "execution option."

It is important to note that this "execution option" benefits specialists on manual markets at the expense of investors. The "execution option" creates the opportunity for a significant transfer of wealth from both retail and institutional investors to specialists on manual exchanges. Upon receiving an order, a specialist is free, as a practical matter, to trade with the incoming order at his or her discretion. Although, a specialist is subject to affirmative and negative obligations, these obligations are ambiguous and difficult to enforce. In addition, a specialist on a manual exchange has a significant commercial advantage over a market maker on an electronic market. The quotations disseminated by a manual market can be more aggressive because they reflect the "execution option" of the specialist – an option that is all but eliminated on electronic markets.

Even if the difference in speed of execution were not an issue between manual and electronic markets, the difference in quoting practices on the two types of markets would still be problematic. Manual markets, unlike electronic markets, are plagued by "phantom quotes," (i.e., "where a market participant is unable to interact with another

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6 Id. at 11134.

7 This value was computed by multiplying 0.7 bps/option by the average monthly New York Stock Exchange volume of $900 billion, which equals $756 million/year.

market's quote because the quote faded upon receipt of the order"[8]). Indeed, we believe that quotes that require manual execution are, as a practical matter, merely indications of interest. Because traditional auction markets rely on oral interactions on the floor, there may be no realistic way to reliably enforce or audit compliance with the firm quote rule – a rule that is of paramount importance to transparency and price discovery.[9] In contrast, electronic markets, with their full and complete audit trail of orders, face certain – and appropriate – regulatory scrutiny for failing to provide firm quotes. The lack of truly firm quotes on the manual markets only compounds the execution uncertainty already inherently present as a result of their slower response times.

The trading uncertainty and execution risks caused by manual markets, both in the form of delays in execution and the existence of effectively indicative quotes, create more than just a transfer of wealth from retail and institutional investors to market specialists. The liquidity and pricing of derivative instruments, such as equity options, equity index futures and equity futures also are affected adversely by the necessity of interacting with the manual equity markets. Because manual equity markets publish little more than "indications of interest," market specialists in derivatives instruments relating to securities traded principally on manual equity markets must factor in risk premiums to compensate for execution uncertainty when quoting the prices of derivatives. The economic effect of this risk premium is wider bid-ask spreads for such derivative instruments than would otherwise be the case. If firm and immediately executable quotes replaced the indicative quotes of manual equity markets, competitive forces would cause market makers in options and other derivatives to narrow bid-ask spreads. Evolution of the equity markets from slow, indicative quotes to firm and immediately executable quotes will create efficiencies extending far beyond the equity markets.

b. Achieving Best Execution

In markets for listed stocks, the trade through rule prohibits a trade in one market at a price inferior to the price quoted in another market. While this rule may have been justified in a world predominated by manual markets, it is unnecessary and indeed counter-productive in today's world of automated markets.

We believe that when securities are traded in an automated environment without a trade-through rule, as they are in the markets for Nasdaq stocks today, investors benefit.

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8 Id. at 11134, n. 47.

9 Some electronic markets report that the New York Stock Exchange trades-through their markets regularly. See, e.g., Written Statement of Gerald Putnam, Archipelago Holdings, L.L.C., Committee on Financial Services - Subcommittee on Capital Markets, Insurance and Government Sponsored Enterprises, U.S. House of Rep. (Feb. 29, 2004). Given the human intervention in the open outcry market, however, these trade-throughs are difficult to establish, and thus, difficult to detect or deter.

There is robust competition in these automated markets, resulting in greater liquidity at and near the inside quotes and the availability of fast and reliable executions at published prices. Moreover, these automated markets afford the Commission and self-regulatory organizations with a superior audit trail to ensure that investors are protected by the duty of best execution. As a result, we recommend that the SEC eliminate the trade-through rule and rely on robust competition and the duty of best execution to ensure the protection of investors and the public interest.

We believe that the issues of execution uncertainty, execution risk and "phantom quotes" inherent in manual markets reduce the value of quotations by manual markets to little more than indications of interest. As a result, we strongly believe that the bids and offers that are not immediately electronically executable (i.e., those quotes that do not provide an incoming order with immediate execution) should be treated as indicative quotes and, therefore, should not receive price protection pursuant to any trade-through rule.

In addition, we do not believe that there is any need for trade-through protection for electronic markets. Market participants have no incentive to ignore a better priced quote that provides a fast and certain execution. Indeed, in the markets for Nasdaq stocks, where there is no trade-through rule and quotes are generally immediately, electronically accessible, trade-throughs have not been a problem.

Furthermore, we believe that, as a practical matter, the application of the trade-through rule to electronic markets will damage market efficiency and liquidity. As the Commission acknowledges, administering a trade-through rule will present many difficulties, like false-positive and false-negative trade-throughs. Unless the Commission creates a central limit order book, application of a trade-through rule could, under certain circumstances, force numerous market participants to pursue an execution against the same quotation, causing a storm of message traffic, nothing dones and a general slowdown of executions, particularly for larger trades.[10]

In contrast, eliminating the trade-through rule would greatly improve execution quality for all investors. The SEC has long defined best execution as the duty to seek to obtain the most favorable terms available under the circumstances.[11] This definition focuses on a number of diverse factors which includes not just price, but also speed, liquidity, certainty and other factors. The evolution of the market towards an

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[10] Given the small size at the NBBO in today's trading environment and the many orders that would be forced chase the NBBO under a trade-through rule, it may take repeated efforts to obtain access to available quotes in order to receive a complete execution of a particular order. For example, the mutual funds owned by tens of millions of American families will almost certainly need to send many orders to buy or sell any material position.

[11] Id. at 11128.

appreciation of the value of speed and certainty is clear. Even relatively unsophisticated retail investors are learning the importance of speed in cutting their true cost of execution, as evidenced by the recent massive advertising campaigns of financial houses that focus on retail clientele. These campaigns are using speed of execution as a principal selling point for attracting new customers.

Finally, the reliance on best execution will reward firm quotes and encourage manual market centers to improve and upgrade their trading systems and methods – while, at the same time, providing manual and hybrid markets the flexibility to evolve towards automation as they see fit.[12] The elimination of the trade-through rule will dismantle the unfair advantages it provides to manual markets, thereby allowing competition to flourish. Indeed, the mere discussion of trade-through rule reform already has encouraged existing manual markets, like the New York Stock Exchange and American Stock Exchange, to begin planning to enhance their trading capabilities.[13] We applaud this result and believe that the elimination of the trade-through rule will only accelerate these improvements to the benefit of all investors.[14]

2. Internalization

Internalization is one of the greatest threats to price discovery in the financial markets.[15] Broker-dealers internalize the orders most advantageous to the broker-dealer (usually retail orders) and expose less advantageous orders to the market. To compensate for the resulting adverse selection costs of internalization, market makers are forced to factor a risk premium into their public quotes to reflect the mix of orders sent to the public market – i.e., what portion of the order flow coincides with little market price impact and little concurrent price change and what portion of the order flow is expected to coincide with significant market price impact or significant concurrent price change. The effect of this risk premium is to widen bid-ask spreads in the public market; and, the greater the degree of internalization of orders with little market impact and little concurrent price change, the greater this risk premium must be to compensate for the

[12] This flexible approach would eliminate the need for a highly charged political debate about whether certain markets or systems (e.g., NYSE Direct Plus) qualify as "fast markets." See NMS Supplement at 30143; and NMS Hearing Transcript at 57 (panelist noting that focusing on quotes, rather than markets, provides the markets with more flexibility in choosing a business model).

[13] See NMS Supplement at 30142. See also "Highway to Hybrid," Securities Industry News (May 3, 2004) (asserting that "[b]y the end of the year, virtually all U.S. equity and options exchanges will be electronic or hybrid to respond to competition and regulatory reforms").

[14] Although we strongly favor elimination of the trade through rule in its entirety, the Commission might consider taking the incremental step of eliminating trade-though protection for manual quotes, and leaving current rules in place with respect to the markets for Nasdaq stocks.

[15] The Commission is grappling with the issue of internalization at the various options exchanges, and we applaud the Commission for examining the impact of internalization on public markets.

adverse nature of the remaining orders sent into the market. As more and more brokers engage in the practice of internalization, bid-ask spreads in the public markets will continue to be wider than they otherwise would, quoted liquidity will continue to fall and the role and value of the public markets will be greatly diminished. Furthermore, as bid-ask spreads widen in response to internalization, aggressive broker-dealers will be able to internalize an ever increasing portion of their order flow, sending only the most challenging of orders into the market place for execution – and only further worsening the situation corroding the value of the market. In the long run, unfettered internalization will result in substantially poor executions for all retail and institutional investors. The SEC's efforts in other areas have contributed to narrower spreads in recent years; addressing internalization in the markets will have the effect of narrowing spreads even further.

We believe that the potential long-term impact of internalization is so corrosive to our national market system that the Commission should take every possible step to curtail this business practice. Indeed, the dramatic fall in processing costs in recent years almost completely eviscerates the arguments in favor of internalization. Therefore, we believe the Commission ultimately should require all market participants to route their order flow to any one of the regulated securities exchanges or alternative trading systems. Notwithstanding our view on internalization, however, broker-dealers should continue to be permitted to engage in block trades with customers. The magnitude of liquidity provided for in a block trade may not be readily provided by a traditional market structure on an instantaneous basis.

In the alternative, a more incremental approach to internalization in the equity markets would be to permit a broker-dealer to internalize an order only if the broker-dealer is already quoting on an immediately accessible electronic market at the NBBO for a size no less than the size of the order the broker-dealer is seeking to internalize. In other words, if a broker-dealer is willing to offer a certain price to its customers, then it should be willing to expose that price to the marketplace.

The combination of this requirement and the trade-through structure discussed above will minimize internalization and moderate payment for order flow practices. The profit characteristics of internalization and payment for order flow will be whittled away, thereby greatly diminishing the economic rents that are often being unfairly captured at investors' expense.

3. Access Fees

Another feature of the current market structure that impedes price transparency and price discovery are the hidden access fees charged non-subscribers by certain electronic communication networks ("ECN") for trading with the ECNs' public quote. Because of the access fee, an ECN's displayed price is actually a base price to which an

access fee is subsequently appended. Therefore, the published quote does not reliably indicate the true price that is actually available to investors. Indeed, in the current decimal trading environment where penny spreads are commonplace, these price differences can add significant non-transparent costs to securities transactions.

Furthermore, although access fees generally have decreased to *de minimis* levels at the more prominent ATSs, certain smaller ATSs continue to rely on a business model that utilizes excessive access fees to subsidize large rebates for the ATS's subscribers. Such large rebates place in stark relief the concerns regarding access fees that the SEC highlights in its NMS Proposal, including adverse effects on transparency, best execution and locked and crossed markets.[16]

Because large access fees impair price transparency and distort the accuracy of market information, we agree with the SEC's proposal to limit these fees to a *de minimis* amount.[17] Capping access fees in this way will prevent certain ECNs from using best execution and other regulatory requirements as a means to force market participants to pay profit-generating fees.[18]

4. Sub-Pennies and Decimalization

Citadel believes that sub-penny quoting degrades price discovery and market liquidity, which are vital to smoothly-functioning markets. Sub-penny quoting generates price fragmentation in the market because it creates too many price points, each of which offers too little depth.[19] In doing so, it reduces market liquidity while producing "flickering" quotes that can impede meeting best execution obligations. As a result, sub-penny increments increase transaction and other costs without adding price discovery. Instead, certain market participants use sub-pennies to "step ahead" of existing quotes or limit orders (while adding truly *de minimis* incremental price discovery), thereby providing a strong disincentive for posting limit orders.[20] For these reasons, Citadel supports the Commission's proposed sub-penny quoting ban.[21]

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[16] NMS Proposal at 11156-57.

[17] NMS Proposal, Proposed Rule 610(b).

[18] We believe that any fee greater than a *de minimis* amount negatively affects price transparency. Therefore, if the SEC were to allow markets to charge a fee greater than a *de minimis* amount, the SEC should require that the fee be reflected in the quote itself by rounding to the nearest full trading increment.

[19] See, e.g., Testimony of Daniel G. Weaver, SEC Hearing on Proposed Regulation NMS (April 21, 2004) ("NMS Hearing"); Investment Company Institute, Summary of Intended Testimony, NMS Hearing (Apr. 12, 2004) ("ICI Testimony"); Thomas Joyce, Outline of Testimony, NMS Hearing (Apr. 21, 2004).

[20] The Commission's Office of Economic Analysis' ("OEA") findings on sub-penny clustering activity supports this contention. NMS Proposal at 11170. See also American Stock Exchange, Summary of Proposed Testimony, NMS Hearing (Mar. 26, 2004) ("Amex Testimony"); Financial Services Roundtable, Statement on Proposed Regulation NMS and Market Structure Issues, NMS Hearing (Apr. 26,

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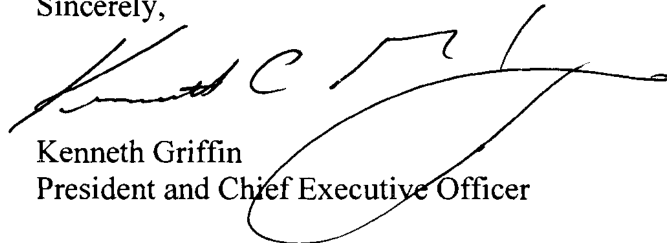
Experience with decimalization to date, however, has demonstrated that these fragmentation and liquidity problems are not limited to sub-penny increments. Trading patterns suggest that even a penny increment for certain higher priced securities (i.e., above the $25-$30 range) create proportional price fragmentation similar to the use of sub-pennies on lower-priced stocks.[22] Indeed, not all quotes and trades have the same value,[23] so it is counter-intuitive to have the same increment for all stocks with all their variety in price levels and trading characteristics (e.g., liquidity and volatility). As a result, we recommend that the SEC re-examine the adverse effects that decimal trading may have on the transparency and liquidity for different categories of stocks and develop a rational approach for establishing minimum increments. One possibility might be to generate quoting increments based on what percentage of the average daily volume, or aggregate dollar value of securities is on the best bid or offer.

* * * * *

We appreciate the opportunity to comment on these critically important issues. If we can answer any questions or provide further insight, please feel free to contact the undersigned.

Sincerely,



Kenneth Griffin
President and Chief Executive Officer

2004); ICI Testimony; New York Stock Exchange, Summary of Testimony, NMS Hearing (Mar. 26, 2004); Vanguard Group, Testimony of George U. "Gus" Sauter, NMS Hearing (Apr. 7, 2004).

[21] See NMS Proposal at 11170-11171 and Proposed Rule 610.

[22] See Amex Testimony (citing William G. Christie, A Minimum Increment Solution, Traders, Nov. 2003, at 40). One commentator notes that when the Toronto Stock Exchange moved to trading in decimals, it adopted nickel ticks for stocks trading above $5 Canadian. Daniel G. Weaver, Intended Testimony, NMS Hearing (Mar. 26, 2004).

[23] See, e.g., NMS Proposal at 11179 (proposing revisions of market data allocation fees to "reward market centers that generate the highest quality quotes -- i.e., those quotes that have the best prices and the largest sizes").

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cc: Chairman William H. Donaldson
Commissioner Paul S. Atkins
Commissioner Roel C. Campos
Commissioner Cynthia A. Glassman
Commissioner Harvey J. Goldschmid
Annette L. Nazareth, Director, Division of Market Regulation
Robert L.D. Colby, Deputy Director, Division of Market Regulation