

# **Execution Excellence and Investor Protection**

U.S. House of Representatives  
Committee on Financial Services

Subcommittee on Capital Markets, Insurance and  
Government Sponsored Enterprises  
“Market Structure III: The Role of the Specialist in the Evolving Modern  
Marketplace”

Testimony of John A. Thain  
Chief Executive Officer  
New York Stock Exchange, Inc.

Field Hearing  
February 20, 2004  
New York, NY



Written Testimony of John A. Thain, CEO, New York Stock Exchange  
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New York, NY

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Good morning Mr. Chairman, Congressman Kanjorski, and members of the Subcommittee.

Thank you for extending an invitation to appear before you to discuss the critical market structure issues that confront us. Thank you also for selecting New York City and its financial district as the site for your hearing. The presence of the committee is a strong vote of confidence and support for our great city and your efforts are very much appreciated.

***Update on the Status of NYSE***

Five weeks ago I assumed the responsibilities of Chief Executive Officer of the New York Stock Exchange (NYSE). As you know, my appointment came after a tumultuous year in which the failures of the Exchange's governance had become evident. Under the leadership of Interim Chairman John Reed a new governance architecture was created, adopted by the NYSE membership and approved by the Securities and Exchange Commission (SEC). These governance changes are now in place, and we are moving quickly to get the Exchange back on its feet and to address the issues at hand.

The NYSE is a great institution with a history dating back to 1792, and it has played an important role in the U.S. financial system since the early days of the American republic. It is with pride and humility that I assume stewardship of the Exchange. John Reed provided me with full disclosure on the challenges I would face in taking the job before I signed on, and I of course had my own views about the NYSE.

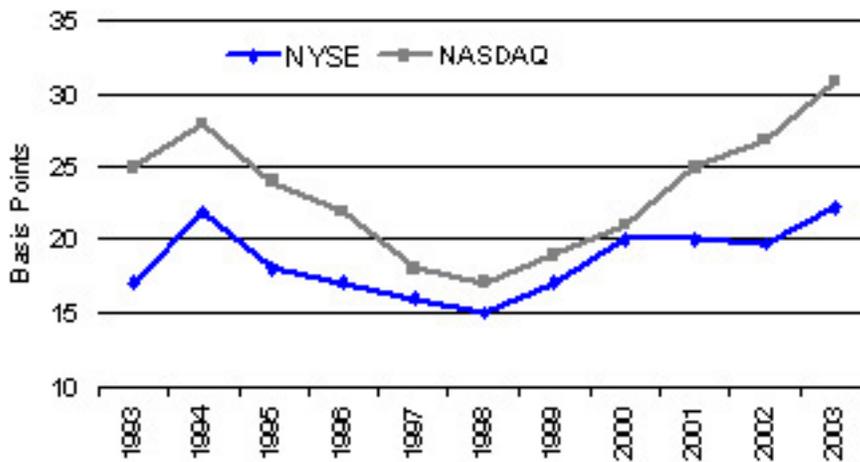
The good news is that while the Exchange has had its reputation tarnished, it is not broken. The NYSE's technology and infrastructure are actually very solid, and it has the best operating record in the industry. Its systems are in good working order, and its staff and traders are dedicated and highly professional. I have been focused on listening to our customers, our listed companies, and our other constituents. In responding to what they are telling me, my goal is to ensure that we remain the most liquid, most efficient, and most investor-friendly exchange in the world, and that we

continue to provide the United States with unquestioned leadership in global equity trading.

I am pleased to report the NYSE is serving investors well in one essential area; we are the lowest trading cost venue in the U.S. We have been able to attract the deep liquidity that makes the market efficient and effective across all types of stock, large-cap, medium, or small-cap, and across all sizes of orders.

### **Institutional Trading Costs**

*Costs are lower for NYSE-listed stocks.*



Source: Abel/Nos er Corp. - Q2 2003

Trading Costs = Execution Cost (Trade Price - VWAP) + Commission

The NYSE utilizes advanced technology to offer customers a breadth of choice in accessing the auction, including automatic execution, electronic order routing for price improvement, and electronic delivery to agency brokers' hand-held devices.

While I am still developing my ideas for what the NYSE needs to do to prepare itself for the future, progress is underway on a number of fronts. One of the areas our customers have told me we need to improve is in our speed of execution. I will speak about that in a moment, but for now will say we are working to expand and broaden our offering which caters to investors and traders who prioritize speed, and I can promise you more improvements are coming in the future.

I am aware the Committee's past deliberations have included discussion of the competition between markets for trading in NYSE-listed shares. It is a fact of life that competition between markets is tough. We are

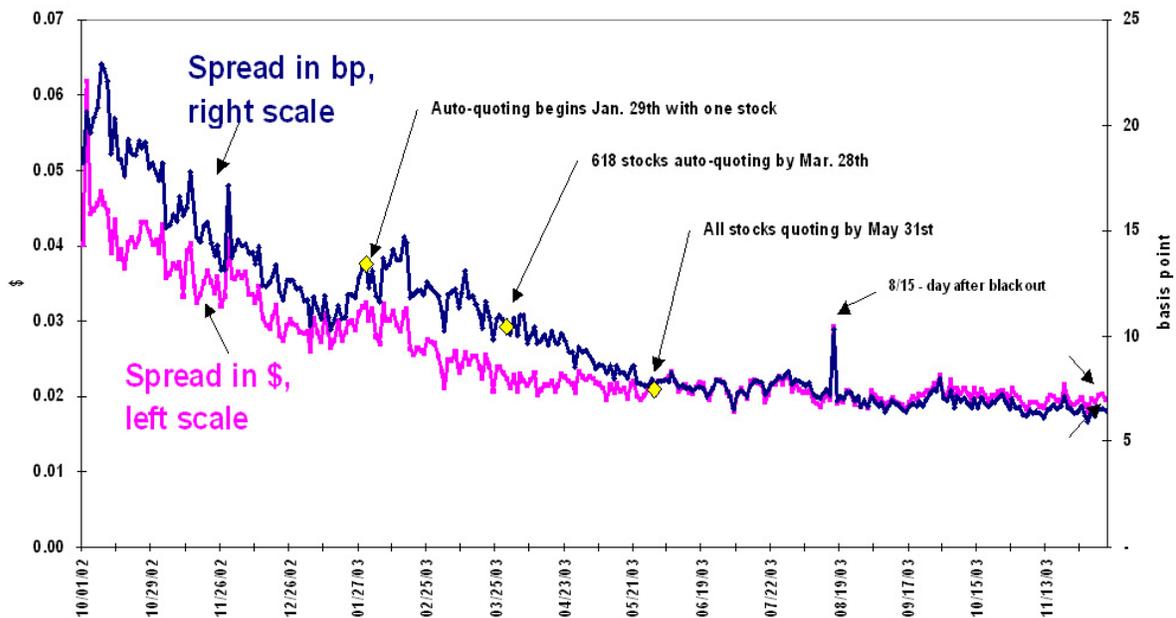
proud of the fact that the NYSE posts the best price in our listed securities 93% of the time. By itself, that fact is far from a guarantee for our success. Nothing today prevents investors from deciding where to send their orders. Our competitors, who have generally had about 20% of the market share of NYSE listed stocks, have recently added several percentage points to that number.

Perhaps the clearest reflection of the very high degree of competition in the market is the price spread between bids and offers. Over the past year the average spread of the National Best Bids and Offers on the 93 NYSE-listed stocks in the S&P 100 Index has fallen from about 5 cents to 2 cents—a fraction of their historical spreads and reflective of the fact we and every other market maker in NYSE shares are competing harder than ever for orders. Clearly, the NYSE does not in any way have a monopoly position.

**Average NYSE Quoted Spread: Listed S&P 100 Stocks**

**October 1, 2002 – December 31, 2003**

*NYSE-quoted spreads have continued to fall.*



These narrowed spreads are a sign of an efficient, liquid market that is disciplined by competition. And they are great news for investors, who can buy and sell with lower transaction costs.

## *The Role of the Specialist*

Today's hearing focuses on the role of the specialist. Specialists play a number of roles and contribute to the smooth and effective functioning of our market.

- Specialists facilitate best price by maximizing public order interaction which, in turn, generates opportunities for better pricing of existing buy and sell orders, thus saving investors millions of dollars.
- Specialists help ensure fair, orderly markets, dampen volatility, and serve as a source of accountability for investors and issuers.
- They have an affirmative obligation with regulatory accountability to cushion price movement and dampen volatility. Only specialists have an obligation to trade against the trend—trades that most other market participants choose not to make.
- Specialists inject liquidity by bridging temporary gaps in supply and demand—not only for large, liquid issues, but also for small- and mid-cap companies where these temporary imbalances, if not addressed, can introduce significant volatility.
- Specialists act as catalysts—proactively bringing buyers and sellers together, thus creating trades that wouldn't have otherwise occurred.
- As auctioneers, at the start of each trading day, they help to establish a fair market price for each of their stocks.
- And throughout the trading day, they ensure markets respond quickly and effectively to news about companies, or to shocks to the entire economy or trading system.

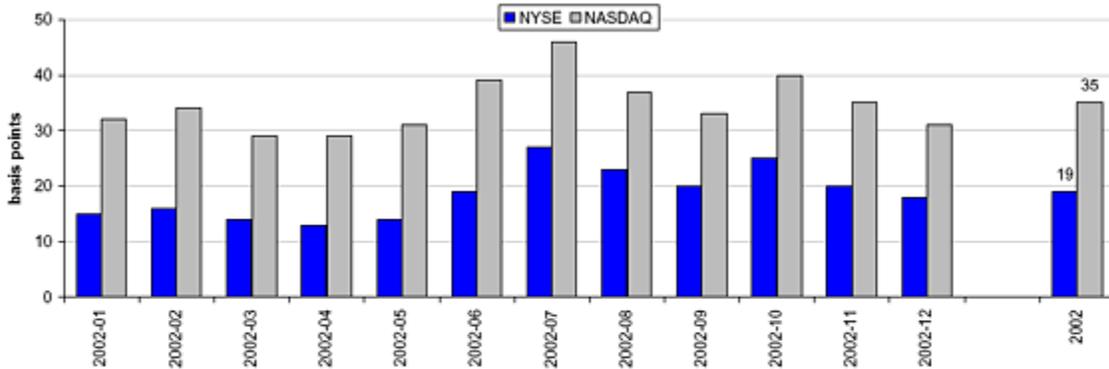
Mr. Thomas S. Caldwell, Chairman, Caldwell Asset Management, wrote in a letter published by the Financial Times October 17, 2003:

During dramatically changing markets there is always a specialist ready to call a market at the NYSE. This is often not the case in a dealer-only market, where traders simply stop calling markets or become unavailable.

The specialist is one reason our 5-minute volatility is about half that of Nasdaq.

## 5 Minute Relative Volatility: (High-Low)/High

*NYSE shows consistently lower volatility than comparable Nasdaq stocks.*

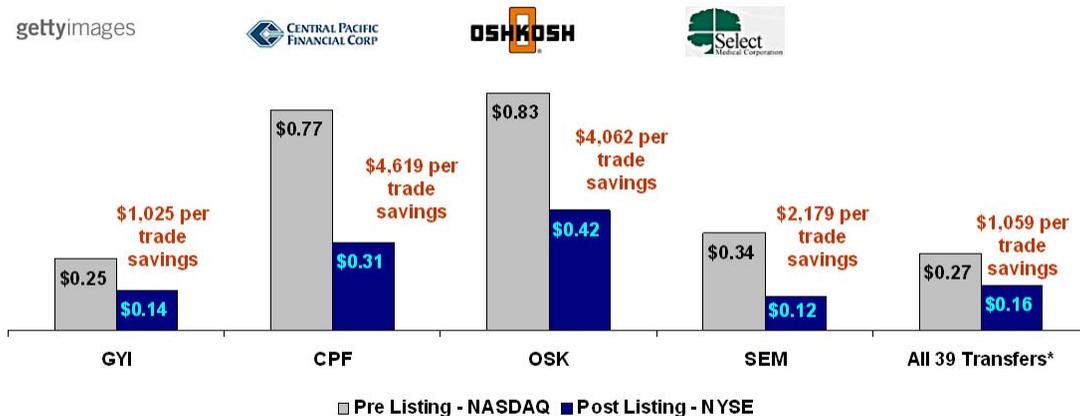


Source: Consolidated tape trades during normal trading hours (9:30am - 4:00pm).  
 Observations excluded if no activity occurs within the 5 minute time segment.  
 Trading on primary market only. Excludes Regional and UTP trading. Results are weighted by # of 5 minute observations.  
 249 stocks matched on trading activity, price and market capitalization in same manner as the SEC's 2001 comparison of order execution across market centers.

And the specialists are one reason NYSE-listed companies have significantly less price fluctuation produced by market impact. Investors in the 39 companies transferring from Nasdaq to the NYSE from February 2001 to January 2003 found the average price change per share for every 10,000 shares traded dropped from 27 cents to 16 cents, saving them on average \$1,059 per 10,000-share transaction.

## Market Depth

*Transferring to the NYSE lowers volatility, reducing market impact costs.*



\* Average across all 39 stocks transferring to from NASDAQ to the NYSE between February 2001 and January 2003.



This volatility is particularly critical at market opening and market closing, when the lack of a specialist often leads to spikes in Nasdaq-listed shares. As reported in the New York Times January 29, 2004, Standard & Poor's, in reaction to investor concerns about volatility and possible price manipulation at the close of Nasdaq trading, will begin a pilot using the closing prices on the American Stock Exchange for certain Nasdaq stocks when compiling daily information for the S&P 500 index. The American Stock Exchange presently provides a market in a select group of Nasdaq listed stocks while the NYSE does not. David M. Blitzer, chief investment strategist at S&P, is quoted in that article:

It's clear there are times when there are a lot of concerns about prices on Nasdaq. Our big concern is the close. I think it offers a real opportunity for mischief.

Our fill rate for NYSE-listed stocks, that is, the number of orders sent in which are actually executed, is 84%, compared to 45% for Nasdaq. These numbers show clearly that specialists play a useful role in providing liquidity and in matching buyers and sellers, to the benefit of all market participants.

Specialists never have been, nor will they ever be, allowed to trade for their principal account ahead of customers. Our Board of Directors recently approved a rule change now before the SEC which would restrict the specialist from participating even in trades alongside brokers' customers. If our proposal is approved, our customers will always have the right to transact first.

Sometimes lost in the public debate over the role of the specialist is the role of the floor brokers in the execution chain. Each broker attempts to obtain the best price for his or her customer. Brokers compete against brokers in the auction model, and it is this interaction of buy and sell interest that leads to the price improvement, order size improvement, and unequalled fill rates found at the NYSE.

It would be easy to conclude from the ongoing investigation by the NYSE and SEC of the major specialist firms that there is something inherently wrong with the specialist system, and indeed of the entire floor auction model. It is evident to me there were abuses in the past. We have made substantial investments in technology which, coupled with changes in practice, will go a long way to preventing future abuses. And we will monitor behavior carefully going forward and ensure violators are identified

and punished. I am confident that the operation of the floor in its current form works to the benefit of all investors.

### ***The Role of Technology in an Exchange***

I believe that to look at the role of specialists as a question of man vs. machine is to misstate the proposition. I have spent much of my professional life examining the most efficient means to utilize information technology in the financial services industry. I understand how electronic trading systems work, their strengths and their limitations. And I also understand the importance of the human element in an equities trading operation.

While I was at Goldman Sachs, we invested heavily in technology, and automated as many systems as possible. But we still had thousands of people working on trading floors. An exchange operates differently than an investment bank, but it is evident to me that human interaction, human judgment, and common sense have a role to play in keeping the markets functioning efficiently.

We are moving quickly to leverage technology to the benefit of our investors and all constituents of the Exchange. Two weeks ago, our Board of Directors approved a proposal to make the speed and execution certainty of our existing automatic execution platform—known as NYSE Direct +—available to a wider range of investor orders. If approved by the SEC, this program will respond to requests we have received from some customers for faster speed of execution even if it means foregoing price improvement that often occurs in the agency auction process. Trades that are executed using Direct+ would still be guaranteed the best price available within the national market system, whichever market may be displaying that price.

Expansion of our automatic execution feature in this fashion would not eliminate the need for the specialist because he or she will still need to inject the liquidity that is often needed to maintain an orderly market to protect investors from sudden fluctuations in stock prices. And in fact, specialists at present are participating as principal only when necessary, some 10% of total buy and sell volume. Routine orders where supply and demand are matched are already being executed electronically in the majority of cases, and that percentage is going to increase in the future. But large and complicated orders, or shares of any companies during times of major news or crisis, will continue to benefit from the role of floor brokers and specialists. And these changes will enable us to address the concerns of those who want an immediate and anonymous transaction at a known price.

## *Market Structure*

Mr. Chairman, we believe that our technology intensive, hybrid exchange model will continue to maintain the NYSE as the venue where your constituents can buy stocks at the lowest price and sell them at the highest price. We believe that the interests of Main Street investors should remain paramount. Assuring investors that they will receive the best price when their individual stocks or mutual funds are traded is fundamental to market integrity and investor confidence.

Technology has indeed advanced to the point where trades can be executed at lightning speed, but technology should not drive market structure decisions—principles should.

Mr. Chairman, I know you and all your colleagues on the Committee share the view that the most important mission we have is to ensure that investors can participate with confidence in a market that is fair, liquid, transparent and responsive to their needs.

As you know, the Securities and Exchange Commission is considering a number of changes to market structure rules. One of the issues under consideration is a change to the trade-through rule. The rule guarantees that investors in NYSE listed stocks will receive the best price regardless of which market they send their order, and that investors who provide the best prices are protected. I believe some of the changes proposed to the rule would be contrary to the interests of investors, listed companies, and the integrity of our public markets.

The trade-through rule is an essential part of the national market system established in the 1970's by Congress. The system was designed to recognize that vibrant markets would result from the intermingling of all buy and sell interest. That is why the SEC, when it approved the trade-through rule, said nation-wide price protection was a “critical” national market system goal.

The principle behind the trade-through rule is, in my view, critical to protecting investor interests. Particularly as regulators and our industry confront the pricing issues related to market timing among mutual funds, it is difficult to see how investors would be served by a rule which weakens their protection. Why should investors ever receive anything other than the best price? There is talk of the importance of speed, anonymity, and other factors. But in a commoditized market like that which exists for equities, if displayed prices across all markets are available immediately, there is

absolutely no reason to allow agents to buy and sell on behalf of their clients for anything other than the best price.

The trade-through rule is crucial to the entire price discovery process. When it is violated, there are four victims:

- 1) The investor who bought or sold shares at something other than the best price;
- 2) The investor or seller whose order was traded-through and was left hanging;
- 3) The market price discovery system, since a trade is recorded at something other than the true price;
- 4) And finally, market liquidity, since investors will lose confidence in the fairness of the market and will be less willing to submit limit orders knowing they may be traded through.

There has been some discussion of keeping the rule in principle but allowing a so-called “de minimus” exception where agents could execute not at the best price but a price within several cents of the actual best price. To adopt such an exception would be tantamount to giving financial intermediaries an SEC-approved waiver of one, two, or three cents per share from their fiduciary responsibility to obtain the best price for investors. As our research has shown, these pennies quickly become billions of dollars when they are multiplied by the number of shares traded in our equities markets each day.

| Additional Cost to Investors From Relaxing or Eliminating Trade-Through Rules for NYSE Listed Stocks Traded Off the NYSE |                   |
|--|-------------------|
| Action on the Trade-Through Rule   | Cost to Investors |
| 1 cent Exemption**   | \$1,507,281,200   |
| 2 cent Exemption**   | \$2,299,369,458   |
| 3 cent Exemption**   | \$3,121,665,767   |
| Complete Opt-Out (4.21 cents/share)**  | \$3,465,737,036   |
| * Assumes 20% of volume traded off of the NYSE   |                   |
| ** 2004 estimate of NYSE-listed off-exchange consolidated share volume.  |                   |

The principle of best price is also critical for listed companies. NYSE-listed companies currently enjoy the advantages of head-to-head price competition — where all buyers and sellers bid against one another in real time for shares. Companies find their share prices are less volatile and more reflective of fundamentals. The reduced volatility helps attract investors and raise share prices. Companies are thus able to raise new capital more easily, allowing them to expand and modernize their factories and create more jobs.

And finally, I would argue, the trade-through rule is good for the integrity of the markets. It ensures the exchanges and ECN's remain linked and in open competition with one another. It enables the smallest investor to receive the same price as the largest institution. It enables the market price to reflect the true supply-demand balance for shares, ensuring stocks are properly valued even for those not participating in the trade. And it is crucial to transparency. Transactions are visible to all market participants, and can be properly tracked for regulatory purposes. In sum, the principle of best price is one worth defending.

### *Conclusion*

Mr. Chairman, again, thank you and the members of the Committee for giving me an opportunity to share my thoughts with you. I thank you for your focus on these important matters, and look forward to working with you on behalf of America's investor community.

### Attachments:

“Potential Costs of Weakening the Trade-Through Rule” NYSE Research, February, 2004

NYSE Policy Perspective “The Trade-Through Rule: Protecting Investors, Helping Companies, and Preserving the Integrity of Markets” NYSE, February, 2004



# Potential Costs of Weakening the Trade-through Rule

New York Stock Exchange Research  
February 2004

**Editor's Note:** The trade-through rule, which ensures that America's 85 million investors can get the best price when trading stocks, is under attack. This research paper outlines the potentially significant costs to investors should the trade-through rule be weakened or eliminated.

For additional information about this important issue, please call NYSE Senior Vice President Robert McSweeney at 212-656-6766.

# Potential Costs of Weakening the Trade-through Rule

February 2004

## Background: Quoted Price Competition in NYSE-Listed Stocks

Companies listed on the New York Stock Exchange are traded on the New York and regional stock exchanges, Nasdaq dealers, and Electronic Communications Networks (ECNs). These various markets attract orders from stockbrokers by competitively quoting bid and ask prices, with orders flowing to the markets with the best-quoted prices. One or more markets can simultaneously quote the most competitive prices. Other markets may quote worse prices and consequently not receive many orders until their quotes improve. If a market center displays a better quote than is available on another market, then specialists and market makers are generally required by SEC regulation (“trade-through rule”) to route orders to the market with the better price. This helps assure that investors receive the best available price. At the same time it encourages the competitive vitality of markets by assuring that investors who provide the most competitive quotes and priced limit orders do not have their orders ignored (“traded-through”). In today’s market, most quotes reflect the public orders of customers, who are thus protected by the trade-through rule.

## Benefit of the Trade-through Rule to Public Investors

How important is this trade-through rule? The answer depends significantly on how large a gap there is between the most competitively priced quotes versus other, less competitive quotes.

To measure this gap, we compared the national best and the national second-best quoted prices for the 93 NYSE-listed stocks in the S&P100 Index. The results are detailed in Table 1 and Figure 1 (pages 5 to 7):

- The best bid-offer price spreads are generally about 1 to 3 cents per share, with an average of 1.83 cents per share for the 93 stocks.
- The *second-best* bid-offer spread ranges from about 4 cents to over 20 cents per share, averaging 10.25 cents per share.
- If a buyer or seller of a stock had his or her order routed to trade at the second-best price, then this would **add an average cost of 4.21 cents per share** to the transaction. This additional transaction cost on public-customer orders would go to the dealer or trader who had quoted a worse price but nevertheless received and executed the order, while the most competitively priced orders are ignored.
- Significantly, in the absence of a trade-through rule, it is also possible that a market with *third-best* or *fourth-best* or even worse quotes would execute orders.

## Quality of Markets with and without Trade-through Rules

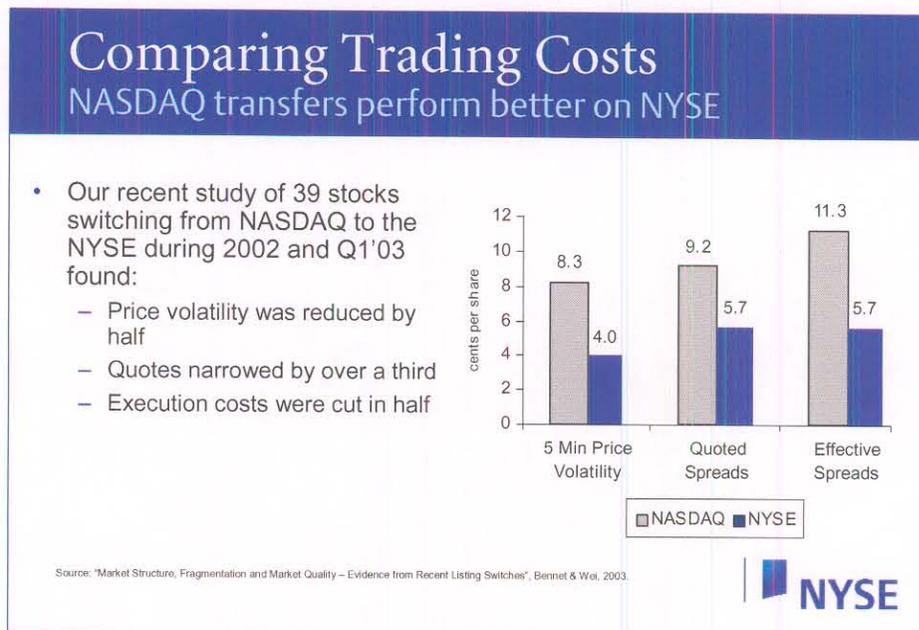
Stocks listed on the Nasdaq market are **not** subject to trade-through rules. This provides an opportunity to compare the quality of markets (NYSE listed versus Nasdaq listed) that result with a trade-through rule and without a trade-through rule. Such a comparison can be tricky because it is necessary to compare the same or very similar stocks to obtain meaningful results.

Academic research has developed two basic approaches:

(1) The first approach is to examine stocks that switched listings from Nasdaq to the NYSE, and compare their market quality before and after the switches. A recent study looked at:

- 39 stocks that switched listings between January 2002 and March 2003 (Figure 2).
- Quoted spreads for the exact same stocks trading on Nasdaq were about half as wide after the companies switched to the NYSE.
- This in turn translated into correspondingly lower execution costs on the NYSE compared to Nasdaq, as well as lower volatility of the publicly reported transactions prices.

**Figure 2**



(2) The second basic approach is to compare trading of carefully matched sets of stocks on the two markets.

- A comparison conducted in May 2003 used the same matching criteria as in the 2001 SEC study of market quality to avoid methodological biases (Figure 3).
- The comparison showed that execution costs for the 249 NYSE-listed stocks, which are subject to the trade-through rule, averaged 45 basis points, compared with 67 basis points for the matched Nasdaq sample trading, which are not subject to the trade-through rule.
- These results echoed the findings of many earlier studies that showed trading in the listed market (subject to the trade-through rule) significantly lowers trading costs for investors.
- Other systematic comparisons also show that trading in NYSE-listed stocks provides lower execution costs. For example, Abel-Noser (Figure 4) estimates trading costs for very large orders, placed by institutional investors. NYSE-listed stocks have lower trading costs — which ultimately nets back to better results for pensioners and mutual fund investors who would bear the burden of relaxed trade-through rules.

Figure 3

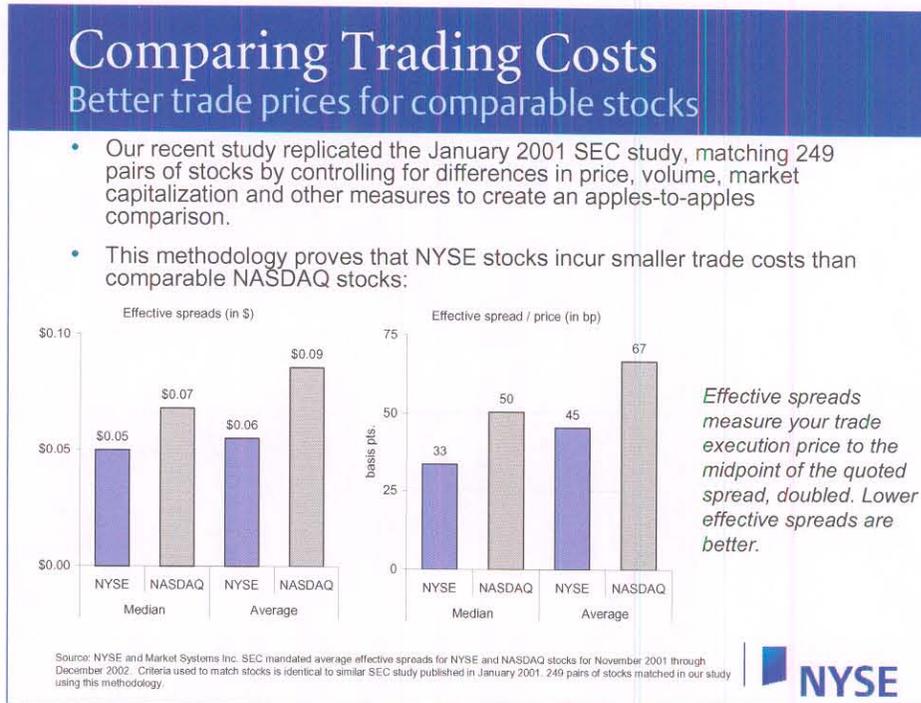
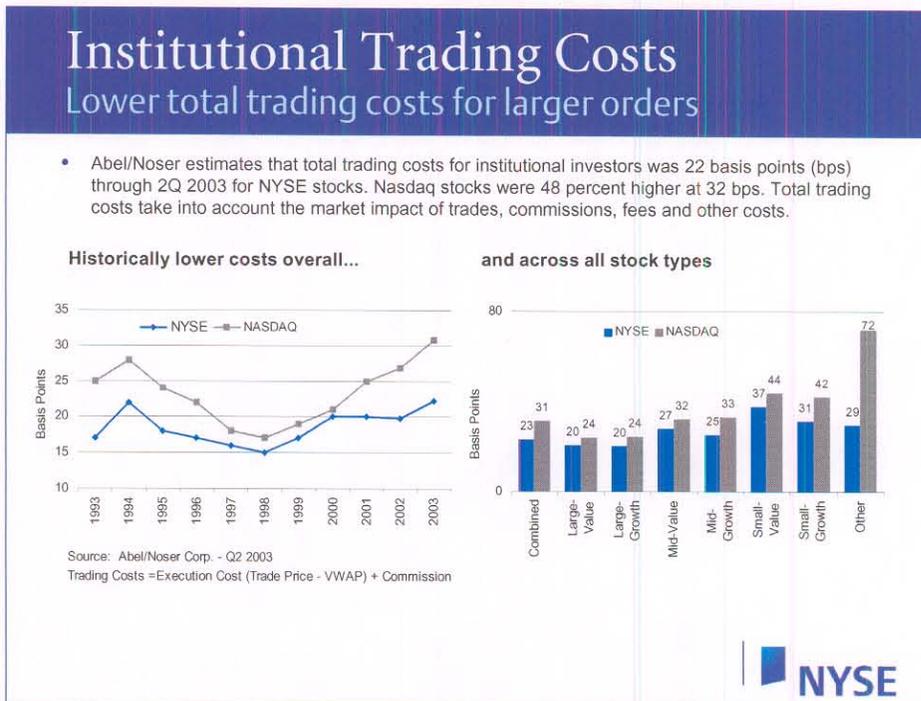


Figure 4



## Estimating the Cost to Investors

The cost to investors of relaxing the trade-through rule can be divided into scenarios. We assume that (consistent with current practice) four-fifths of total trading volume in NYSE-listed stocks would continue to trade on the NYSE and would, therefore, be unaffected by the rule change. As alternatives, we compute the cost of allowing 1-cent, 2-cent and 3-cent exemptions to the trade-through rule (i.e., shares trading off the NYSE could be executed for 1 to 3 cents worse prices than the National Best Bid or Offer prices). We also examine the scenario in which all off-NYSE trading migrates to the second-best price costing an extra 4.21 cents per share. The last scenario can be viewed as conservative because of the likelihood that third, fourth, or worse quotes would also attract orders.

Table 2 shows the scenario of steadily rising costs per year to investors, starting with \$1.5 billion for the 1-cent exemption scenario and rising to \$3.5 billion for the opt-out scenario (here conservatively assuming second-best quotes only are accessed).

In short, the cost to investors would be significant. In addition, if the exemption caused dealers to internalize more trades or send a larger fraction of orders to markets not observing trade-through provisions, the cost would be higher.

**Table 2**

| Additional Cost to Investors<br>From Relaxing or Eliminating Trade-Through Rules<br>For NYSE-Listed Stocks Traded Off the NYSE* |                          |
|---|--------------------------|
| <u>Action on the Trade-Through Rule</u>   | <u>Cost to Investors</u> |
| 1-cent Exemption**  | \$ 1,507,281,200         |
| 2-cent Exemption**  | \$ 2,299,369,458         |
| 3-cent Exemption**  | \$ 3,121,665,767         |
| Complete Opt-Out (4.21 cents/share)**   | \$ 3,465,737,036         |

\* Assumes 20 percent of volume traded off the NYSE.  
\*\* 2004 estimate of NYSE-listed off-exchange consolidated share volume.

Table 1

## National Best and Second-best Bid and Offer Prices for the 93 NYSE-Listed S&amp;P 100 Stocks

| NYSE-Listed S&P 100 Stock | National Best Bid (\$) | National Best Offer (\$) | National Best Spread (cents) | National Second-Best Bid (\$) | National Second-Best Offer (\$) | National Second-Best Spread (cents) | Cost to Investors without Trade-Through Rule (cents) |
|---------------------------|------------------------|--------------------------|------------------------------|-------------------------------|---------------------------------|-------------------------------------|--|
| AA                        | 34.65                  | 34.67                    | 1.69                         | 34.61                         | 34.70                           | 9.06                                | 3.69   |
| AEP                       | 28.15                  | 28.17                    | 2.01                         | 28.12                         | 28.20                           | 8.56                                | 3.27   |
| AES                       | 8.02                   | 8.04                     | 1.43                         | 7.99                          | 8.07                            | 7.66                                | 3.11   |
| AIG                       | 59.99                  | 60.01                    | 2.03                         | 59.94                         | 60.05                           | 11.26                               | 4.61   |
| ALL                       | 41.22                  | 41.24                    | 1.77                         | 41.18                         | 41.28                           | 9.82                                | 4.03   |
| ATI                       | 9.81                   | 9.84                     | 2.47                         | 9.75                          | 9.90                            | 15.20                               | 6.37   |
| AVP                       | 63.35                  | 63.38                    | 3.38                         | 63.27                         | 63.46                           | 19.26                               | 7.94   |
| AXP                       | 45.50                  | 45.52                    | 1.71                         | 45.46                         | 45.55                           | 9.23                                | 3.76   |
| BA                        | 38.89                  | 38.91                    | 1.88                         | 38.86                         | 38.95                           | 9.17                                | 3.65   |
| BAC                       | 75.71                  | 75.73                    | 1.73                         | 75.68                         | 75.76                           | 7.85                                | 3.06   |
| BAX                       | 29.68                  | 29.69                    | 1.89                         | 29.62                         | 29.73                           | 10.51                               | 4.31   |
| BCC                       | 30.26                  | 30.28                    | 2.08                         | 30.18                         | 30.34                           | 16.37                               | 7.14   |
| BDK                       | 48.07                  | 48.09                    | 2.28                         | 47.98                         | 48.15                           | 16.56                               | 7.14   |
| BHI                       | 30.28                  | 30.29                    | 1.66                         | 30.24                         | 30.33                           | 8.90                                | 3.62   |
| BMY                       | 26.12                  | 26.13                    | 1.45                         | 26.09                         | 26.16                           | 7.08                                | 2.82   |
| BNI                       | 31.04                  | 31.06                    | 1.87                         | 30.98                         | 31.10                           | 11.94                               | 5.04   |
| BUD                       | 52.42                  | 52.44                    | 2.00                         | 52.37                         | 52.48                           | 10.71                               | 4.36   |
| C                         | 47.35                  | 47.37                    | 1.37                         | 47.34                         | 47.38                           | 4.60                                | 1.61   |
| CCU                       | 44.16                  | 44.18                    | 1.85                         | 44.11                         | 44.22                           | 10.89                               | 4.52   |
| CI                        | 55.71                  | 55.74                    | 3.02                         | 55.61                         | 55.82                           | 20.49                               | 8.74   |
| CL                        | 53.10                  | 53.12                    | 2.12                         | 53.05                         | 53.17                           | 11.64                               | 4.76   |
| CPB                       | 25.90                  | 25.92                    | 1.87                         | 25.84                         | 25.97                           | 13.17                               | 5.65   |
| CSC                       | 41.70                  | 41.73                    | 2.88                         | 41.62                         | 41.80                           | 18.14                               | 7.63   |
| DAL                       | 11.47                  | 11.49                    | 1.58                         | 11.43                         | 11.53                           | 10.00                               | 4.21   |
| DD                        | 43.87                  | 43.88                    | 1.33                         | 43.83                         | 43.91                           | 7.93                                | 3.30   |
| DIS                       | 22.30                  | 22.31                    | 1.21                         | 22.26                         | 22.33                           | 6.76                                | 2.77   |
| DOW                       | 39.47                  | 39.48                    | 1.72                         | 39.43                         | 39.52                           | 8.59                                | 3.44   |
| EK                        | 23.84                  | 23.85                    | 1.38                         | 23.80                         | 23.88                           | 7.99                                | 3.30   |
| EMC                       | 12.68                  | 12.69                    | 1.10                         | 12.67                         | 12.71                           | 3.98                                | 1.44   |
| EP                        | 6.72                   | 6.73                     | 0.83                         | 6.70                          | 6.75                            | 4.85                                | 2.01   |
| ETR                       | 54.38                  | 54.40                    | 2.50                         | 54.30                         | 54.48                           | 18.06                               | 7.78   |
| EXC                       | 63.64                  | 63.67                    | 2.83                         | 63.56                         | 63.75                           | 18.31                               | 7.74   |
| F                         | 13.45                  | 13.47                    | 1.16                         | 13.43                         | 13.48                           | 4.91                                | 1.87   |
| FDX                       | 72.52                  | 72.55                    | 3.01                         | 72.46                         | 72.60                           | 13.84                               | 5.42   |
| G                         | 34.95                  | 34.96                    | 1.39                         | 34.89                         | 35.00                           | 10.71                               | 4.66   |
| GD                        | 84.67                  | 84.71                    | 3.84                         | 84.61                         | 84.77                           | 16.91                               | 6.53   |
| GE                        | 29.77                  | 29.78                    | 1.06                         | 29.76                         | 29.80                           | 4.00                                | 1.47   |
| GM                        | 48.50                  | 48.52                    | 1.54                         | 48.47                         | 48.55                           | 8.44                                | 3.45   |
| GS                        | 98.47                  | 98.50                    | 3.32                         | 98.43                         | 98.54                           | 11.44                               | 4.06   |
| HAL                       | 24.74                  | 24.76                    | 1.39                         | 24.71                         | 24.79                           | 8.28                                | 3.45   |
| HCA                       | 41.67                  | 41.69                    | 1.79                         | 41.62                         | 41.74                           | 11.21                               | 4.71   |
| HD                        | 34.26                  | 34.27                    | 1.25                         | 34.23                         | 34.30                           | 6.81                                | 2.78   |
| HET                       | 47.45                  | 47.48                    | 3.40                         | 47.36                         | 47.56                           | 19.44                               | 8.02   |
| HIG                       | 58.00                  | 58.03                    | 2.42                         | 57.92                         | 58.11                           | 19.01                               | 8.30   |
| HNZ                       | 36.16                  | 36.18                    | 1.66                         | 36.11                         | 36.23                           | 11.59                               | 4.97   |
| HON                       | 30.58                  | 30.59                    | 1.68                         | 30.55                         | 30.61                           | 6.21                                | 2.27   |
| HPQ                       | 22.22                  | 22.23                    | 1.26                         | 22.20                         | 22.26                           | 5.61                                | 2.18   |

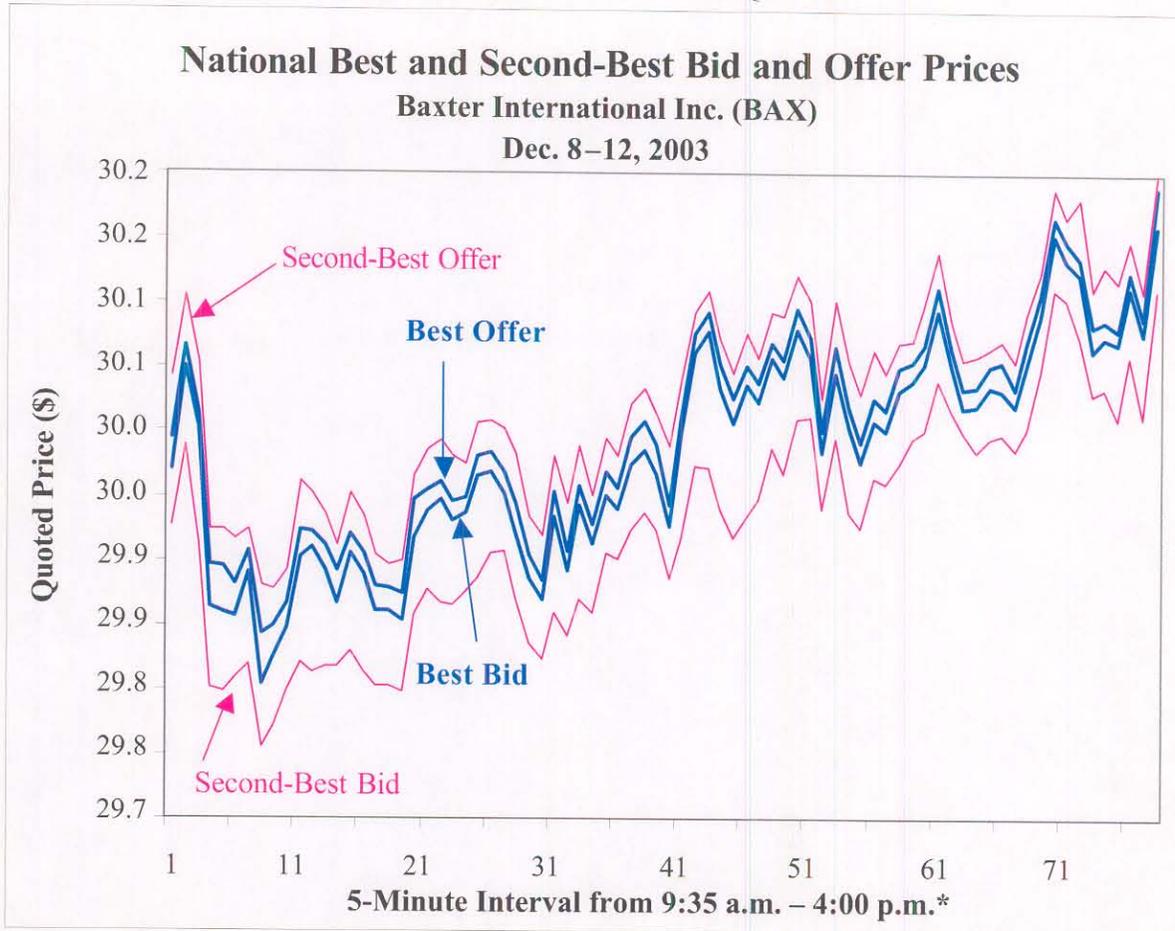
**Table 1 (cont.)**

| NYSE-<br>Listed<br>S&P 100<br>Stock | National<br>Best Bid<br>(\$) | National<br>Best Offer<br>(\$) | National<br>Best Spread<br>(cents) | National<br>Second-<br>Best Bid<br>(\$) | National<br>Second-<br>Best Offer<br>(\$) | National<br>Second-<br>Best Spread<br>(cents) | Cost to Investors<br>without Trade-<br>Through Rule<br>(cents) |
|-------------------------------------|------------------------------|--------------------------------|------------------------------------|---|---|---|--|
| IBM                                 | 91.92                        | 91.94                          | 2.21                               | 91.88                                   | 91.97                                     | 9.12  | 3.46   |
| IP                                  | 40.55                        | 40.57                          | 1.73                               | 40.51                                   | 40.61                                     | 10.13   | 4.20   |
| JNJ                                 | 49.94                        | 49.96                          | 1.45                               | 49.91                                   | 49.98                                     | 7.63  | 3.09   |
| JPM                                 | 34.99                        | 35.01                          | 1.42                               | 34.97                                   | 35.04                                     | 7.16  | 2.87   |
| KO                                  | 48.10                        | 48.11                          | 1.44                               | 48.06                                   | 48.14                                     | 8.43  | 3.49   |
| LEH                                 | 71.94                        | 71.97                          | 3.18                               | 71.90                                   | 72.02                                     | 11.78   | 4.30   |
| LTD                                 | 17.50                        | 17.52                          | 1.67                               | 17.44                                   | 17.56                                     | 12.13   | 5.23   |
| LU                                  | 2.93                         | 2.94                           | 0.97                               | 2.90                                    | 2.96                                      | 6.13  | 2.58   |
| MAY                                 | 28.39                        | 28.41                          | 1.88                               | 28.32                                   | 28.47                                     | 15.27   | 6.69   |
| MCD                                 | 25.66                        | 25.67                          | 1.42                               | 25.63                                   | 25.71                                     | 7.99  | 3.28   |
| MDT                                 | 47.44                        | 47.46                          | 1.71                               | 47.39                                   | 47.50                                     | 10.73   | 4.51   |
| MER                                 | 55.52                        | 55.54                          | 2.18                               | 55.47                                   | 55.58                                     | 10.86   | 4.34   |
| MMM                                 | 81.46                        | 81.48                          | 2.26                               | 81.41                                   | 81.53                                     | 11.43   | 4.58   |
| MO                                  | 52.49                        | 52.51                          | 1.67                               | 52.47                                   | 52.54                                     | 6.96  | 2.65   |
| MRK                                 | 43.46                        | 43.48                          | 1.47                               | 43.43                                   | 43.50                                     | 7.06  | 2.80   |
| MWD                                 | 55.80                        | 55.82                          | 1.94                               | 55.75                                   | 55.85                                     | 10.60   | 4.33   |
| NSC                                 | 22.84                        | 22.86                          | 1.65                               | 22.78                                   | 22.91                                     | 12.90   | 5.63   |
| NSM                                 | 39.53                        | 39.55                          | 2.69                               | 39.48                                   | 39.60                                     | 12.42   | 4.86   |
| ONE                                 | 44.12                        | 44.14                          | 1.67                               | 44.08                                   | 44.18                                     | 9.89  | 4.11   |
| PEP                                 | 47.32                        | 47.34                          | 1.73                               | 47.28                                   | 47.39                                     | 10.31   | 4.29   |
| PFE                                 | 34.38                        | 34.39                          | 1.27                               | 34.36                                   | 34.41                                     | 5.87  | 2.30   |
| PG                                  | 96.45                        | 96.47                          | 1.98                               | 96.40                                   | 96.51                                     | 10.68   | 4.35   |
| ROK                                 | 34.57                        | 34.60                          | 2.57                               | 34.48                                   | 34.67                                     | 19.09   | 8.26   |
| RSH                                 | 28.68                        | 28.70                          | 1.86                               | 28.61                                   | 28.77                                     | 16.41   | 7.28   |
| RTN                                 | 28.68                        | 28.70                          | 2.35                               | 28.61                                   | 28.75                                     | 13.38   | 5.51   |
| S                                   | 46.99                        | 47.01                          | 1.94                               | 46.94                                   | 47.05                                     | 11.05   | 4.55   |
| SBC                                 | 24.36                        | 24.37                          | 1.25                               | 24.33                                   | 24.40                                     | 6.29  | 2.52   |
| SLB                                 | 49.90                        | 49.91                          | 1.49                               | 49.85                                   | 49.95                                     | 10.11   | 4.31   |
| SLE                                 | 20.98                        | 21.00                          | 1.43                               | 20.95                                   | 21.02                                     | 7.24  | 2.91   |
| SO                                  | 29.58                        | 29.60                          | 1.62                               | 29.55                                   | 29.63                                     | 7.61  | 2.99   |
| T                                   | 19.70                        | 19.71                          | 1.27                               | 19.67                                   | 19.74                                     | 6.49  | 2.61   |
| TOY                                 | 10.71                        | 10.73                          | 1.54                               | 10.67                                   | 10.78                                     | 10.84   | 4.65   |
| TWX                                 | 16.71                        | 16.73                          | 1.20                               | 16.69                                   | 16.74                                     | 4.77  | 1.79   |
| TXN                                 | 28.26                        | 28.28                          | 1.34                               | 28.24                                   | 28.30                                     | 6.05  | 2.36   |
| TYC                                 | 24.45                        | 24.47                          | 1.36                               | 24.43                                   | 24.49                                     | 5.47  | 2.05   |
| UIS                                 | 15.55                        | 15.57                          | 1.86                               | 15.52                                   | 15.62                                     | 10.88   | 4.51   |
| USB                                 | 27.84                        | 27.85                          | 1.45                               | 27.80                                   | 27.88                                     | 7.73  | 3.14   |
| UTX                                 | 89.15                        | 89.17                          | 2.50                               | 89.10                                   | 89.22                                     | 11.86   | 4.68   |
| VIAB                                | 40.77                        | 40.79                          | 1.72                               | 40.72                                   | 40.82                                     | 10.04   | 4.16   |
| VZ                                  | 33.10                        | 33.12                          | 1.44                               | 33.07                                   | 33.15                                     | 8.11  | 3.34   |
| WFC                                 | 56.69                        | 56.70                          | 1.57                               | 56.66                                   | 56.73                                     | 7.48  | 2.95   |
| WMB                                 | 9.71                         | 9.72                           | 1.42                               | 9.66                                    | 9.75                                      | 8.56  | 3.57   |
| WMT                                 | 52.90                        | 52.91                          | 1.47                               | 52.88                                   | 52.93                                     | 5.69  | 2.11   |
| WY                                  | 59.99                        | 60.02                          | 2.57                               | 59.92                                   | 60.08                                     | 16.72   | 7.07   |
| XOM                                 | 37.67                        | 37.69                          | 1.20                               | 37.64                                   | 37.71                                     | 6.34  | 2.57   |
| XRX                                 | 11.91                        | 11.93                          | 1.40                               | 11.88                                   | 11.95                                     | 6.79  | 2.70   |
| Average                             | 39.88                        | 39.89                          | 1.83<br>(cents)                    | 39.83                                   | 39.93                                     | 10.25<br>(cents)                              | 4.21<br>(cents)  |

Note: The intraday time period starts from 9:35 a.m. to avoid the unreasonable bid and offer from some market centers. Data are from week of Dec. 8-12, 2003.

### Figure 1: Sample Stock

Comparing the National Best Quotes with the Second-Best Quotes



# NYSE Policy Perspective

## **The Trade-Through Rule: Protecting Investors, Helping Companies, and Preserving the Integrity of Markets**

Intermarket competition based upon best prices has benefited U.S. investors and contributed to making the market for NYSE-listed stocks the most liquid and efficient in the world. The trade-through rule, at the heart of the National Market System, is now under threat. Weakening or eliminating the rule could cost investors as much as \$3.5 billion annually in increased execution costs. It would increase the volatility of markets, lessen transparency, and damage or destroy the intermarket system, which is central to maintaining competition across the markets and dealers in the United States.

### ***What is the trade-through rule?***

Bids and offers for NYSE-listed shares offered on the NYSE, as well as on Nasdaq, the regional exchanges, and ECNs, are linked together and visible to all market makers. The trade-through rule is intended to foster competition and transparency among all markets, while guaranteeing investors receive the best prices and the lowest execution costs when they buy or sell shares. The rule, while protecting investor interests, does not prevent broker-dealers or buy-side firms from sending customer orders in NYSE securities to other venues willing to compete on best price. In fact, 20 percent of the volume in NYSE stocks is currently executed in other markets.

### ***Why does the trade-through rule matter to investors?***

The trade-through rule protects investors from receiving something other than the best price when they trade their shares. Weakening of the trade-through rule would take away investors' assurances that their representatives are working to execute their trades at the best price. The difference between the best price and the second best price can be significant—more than 4 cents per share for the S&P100 stocks listed on NYSE. These additional expenses would affect all investors, large and small. But the brunt of them would be borne by small investors who are less able to monitor closely execution costs and to question their brokers or agents about prices received. Investors deserve and demand the highest quality order executions and the best price on their transactions.

*(over)*

**Cost to Shareholders of Trading Through  
NYSE-Listed S&P 100 Stocks (93 companies)**

*Average National Best and Second-best Bid and Offer Prices*

| NYSE-<br>Listed<br>S&P100<br>Stock | National<br>Best<br>Bid (\$) | National<br>Best<br>Offer (\$) | National<br>Best<br>Spread<br>(cents) | National<br>Second-<br>Best Bid<br>(\$) | National<br>Second-<br>Best Offer<br>(\$) | National<br>Second-<br>Best<br>Spread<br>(cents) | Cost to Investors<br>without Trade-<br>Through Rule<br>(cents) |
|------------------------------------|------------------------------|--------------------------------|---------------------------------------|---|---|--|--|
| <b>Average</b>                     | <b>39.88</b>                 | <b>39.89</b>                   | <b>1.83</b><br>(cents)                | <b>39.83</b>                            | <b>39.93</b>                              | <b>10.25</b><br>(cents)                          | <b>4.21</b><br>(cents)   |

*Note: Based on intra-day price quotes for week of December 8-12, 2003.*

***Why does the trade-through rule matter to companies?***

NYSE-listed companies currently enjoy the advantages of head-to-head price competition — where all buyers and sellers bid against one another in real time for shares, rather than in a fragmented system where different clusters of traders transact at different prices in the same security. Companies benefit since their share prices are less volatile and more reflective of fundamentals. Owners find that their holdings are more liquid. Retail investors are not pushed aside by buyers and sellers of very large positions, and the same prices apply to all. Quoted bid-ask spreads are narrower in the marketplace for NYSE stocks, lowering execution costs and particularly benefiting medium and smaller companies. Companies with more liquid securities are thus able to raise new capital in IPOs or in secondary offerings in a marketplace that brings together the largest number of buyers and sellers within a unified pricing mechanism.

***Why is the trade-through rule good public policy?***

The trade-through rule promotes both best price and competition among markets. Eliminating or diluting the trade-through rule would mean a return to the uncoupled markets of 30 years ago. It would weaken competition and transparency by licensing each market to ignore better prices elsewhere. It would increase the likelihood that intermediaries charged with managing households' wealth would put their own convenience or interests above that of their clients; more freely engaging in practices such as internalization and payment for order flow, which increase their own profitability at the expense of investors. It would seriously impair the fair and accurate price discovery and stock valuation. And at the end of the day, the trade-through rule is about preserving a principle at the core of our markets: the ultimate investor must always get the best price.