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House Committee on Financial Services

Subcommittee on Capital Markets, Insurance and Government Sponsored Enterprises

March 12, 2003

Thank you for the opportunity to present my thoughts to the committee.

Today I will present some ideas relating to transaction costs. They will have a bearing on such questions as whether transaction costs are significant to investors, whether investors could make better choices if they knew more about them, and whether markets could be better organized to minimize the effect of transaction costs on institutional performance.

Let me explain how I have come to the evidence I am about to present. I first became concerned about transaction costs in the early 70's while devising operating procedures for running index funds. As Mr. Bogle can attest, index funds have no ability to recover costs through research, and understanding how to minimize them is crucial to the success of indexing. In 1990, my firm, Plexus Group, began to focus exclusively on consulting with money managers, plan sponsors, brokers and exchanges to help them understand and control the costs, leading hopefully to better performance. Today we analyze trading decisions that cover approximately 25% of exchange volume worldwide. Under our new affiliation with JPMorgan we are expanding the study of transaction costs into a broader charter of Equity Research, Trading and Settlement, or the full Supply Chain that brokers provide to money managers.

Let's begin at the bottom line: transaction costs hurt performance. They immediately reduce the assets of the investor. They impede the ability of investors to capture the fruits of research. They reduce liquidity by making fewer ideas actionable. Finally, they interfere with the informed pricing of financial assets and the ability of firms to efficiently raise capital for investment. Congress and the Securities and Exchange Commission have repeatedly recognized the deleterious effects of costs and acted many times to create movement toward lower costs.

It is impossible to argue that uninformed investors are better investors. As long as the information is not misinformation, more information is preferred over less. To be usable, cost information must (1) be put forth in a form that can be understood by the recipient; (2) accurately measure the magnitude of the cost,

and (3) respect proprietary information that might harm the interests of the investors.

I will explain all three of these criteria.

Institutional Transaction Costs

The work of Plexus Group shows the significance of transaction costs. We measure average costs exceeding 1.5%, or 45¢ for the average \$30 share that institutions are buying and selling. A round-trip costs double that, or 3%, certainly large enough to adversely affect returns in a world where 100% annual turnover is common. I personally believe that total transaction cost is the largest cost borne by investors over time, in most cases being a larger drag on performance than management and administrative fees. Yet these figures are never disclosed, and often are dismissed by a manager as merely "part of the process."

This number may seem extraordinarily large to you in a world where 5¢ commissions are common and where retail trades can be executed for under ten dollars apiece. The truth is that institutional trading is very different from retail trading. Yet we should never forget that the "end investor" is in fact the public, through their retirement plans and mutual funds.

To a retail investor, the market may seem like a vending machine: put in your coins, push the button and out pops your selection. Institutional trading is much more difficult because a large portion of the dollar trading is done in remarkably few and extraordinarily large trades. Imagine buying 400,000 cans from a vending machine!

The best way to illustrate this is via a study of the nature of institutional trading recently completed at Plexus Group. In this study we divided our entire trade universe into five groups, with each group representing the same number of dollars traded. The first group represented the smallest orders; the fifth group the largest orders. For simplicity, the three middle groups are not presented. The table below summarizes the results of that study.

Group	Percent Of Dollars Traded	Number of Orders	Percent Of Orders	Median Order Size In Shares	Average Dollars Traded / Order	Median Percent Of Day's Volume	Median Trading Cost
Smallest Trades	20%	801,538	92.5%	2,000	\$53 thou	0.4%	0.28%
Largest Trades	20%	2,512	0.27%	2,000,000	\$77 mil	52.6%	1.07%

Remember that each group represents the same number of trading dollars, and is thus of equal interest to investors. The small-trade group is not all that

different from retail trading. But most institutional activity occurs in non-retail sized block trades. Because of the potential impact of these trades, institutional traders carefully orchestrate the execution of these orders.

These large trades represent major portfolio commitments that cannot be traded vending-machine style. They must be metered into the market slowly enough to allow the market to absorb the shock and recover. In the process, costs are generated in the form of commissions, impact, delay-induced search costs, and missed opportunities. We represent this cost structure as an iceberg, shown in the exhibit.

These costs are measured by a technique known as implementation shortfall, which compares the return on the trade on a costless and a fully-costed basis. Academicians widely agree that this is the most comprehensive trade cost measure. Several commercial services can produce these numbers. The mathematics are simple enough; managers can compute them easily. While all cost measures are volatile on individual trades, when aggregated together over total trading activity they provide insights on a big-picture level.

A trade is not an event, it is a process; a series of linked activities involving a portfolio manager selecting securities, his or her trader placing instructions with brokers, and the brokers executing the trades using exchange facilities. While there are other popular measurement techniques, they do not show the complete process. They only measure some of the components and can be misleading. Take for example a 'transaction cost' measure consisting only of commissions paid. Plexus measures total costs at roughly ten times the commission cost! Thus reducing commissions while ignoring the bulk of the cost will not truly benefit investors.

Worse, it may actually harm investors. Commissions buy research, execution, clearing, and other services valuable to managers. A higher commission may buy higher quality execution services better suited to these complex and bulky trades. Thus disclosure of partial costs may mislead investors and create pressures for the manager to reduce commissions, even though that may be ineffective, or even perverse, to truly reducing costs to investors.

Is information on transaction costs valuable to investors?

We believe that cost information, properly conveyed, can help investors assess the skills and business practices of their managers. Simpler measures are a partial solution, but carry a risk of misleading the investors. As Albert Einstein famously said, "We should keep things as simple as possible – but no simpler."

Consider how an individual could use these numbers. We presume such information would become part of the standard fund description services like Morningstar, Lipper, and Value Line. Perhaps it could be communicated better if coded into categories of Very High, High, Average, Low and Very Low Cost. High

turnover levels combined with high turnover costs would forewarn investors that a manager's performance is dependent on very high quality of stock picking to pay the very high transaction cost.

From my knowledge, these recommended disclosures are wholly consistent with the recommendations of the AIMR Trade Management Guidelines, statements put forth by the SEC, and the Myners Report and the Pension Fund Disclosure Code put forth by the Investment Management Association/National Association of Pension Funds in the U.K.

Here's the good news: these costs can be managed, and potentially reduced by a significant amount. How much? A recent study by Plexus Group shows that our clients were able to reduce their transaction costs on average by 40% with two years of concentrated effort. How much is that worth?

Let's work through some possibilities. Start with a \$10 billion fund with 100% turnover per year. Neither of these assumptions are outlandish. Assuming a 1.5% cost, double it for buys and sells, and transaction costs amount to \$300 million per year. If it's possible to save 40% of that, savings of \$120 million would be available *per year*. This total is larger than that consumed by a 1% investment management fee, and it is enormous compared to the cost of monitoring and reporting them. Extrapolating the example above to the \$2 trillion in equity mutual funds leads to a potential savings of \$24 billion per year, triple the income of Wal-Mart, the largest US company.

As a lawmaker, I would be interested in the cost to investors and the cost to the economy. Many of the best mutual fund companies have pursued trade cost-reduction programs to the benefit of the investors. While disclosure does not in itself save money, it creates an incentive for each mutual fund to focus on the potential for cost savings.

Shareholders, perhaps saving for retirement, will be the big winners.

Should managers divulge their trading?

Another question recently discussed in the press is whether managers should be required to disclose their trading activity in the same manner in which they disclose fund holdings. When thinking about this idea, it is important to remember that the large institutional orders cannot be completed in a day. It has been said that "unfilled trading interest is the most valuable commodity on Wall Street." Thus it would not be beneficial to the clients of money managers to have this information disclosed before the trade is complete.

I would recommend, should you choose to require that this information be divulged, that it be published no more frequently than quarterly, and delayed sufficiently after the quarter to preserve the confidentiality of quarter-end trades.

I believe that an important part of this disclosure would be to disclose their quarterly total commission expenditures, to whom the commissions are paid, and the services they acquired. This was one of the key recommendations of the AIMR Trade Management Guidelines taskforce.

Best Execution

To quote Einstein again, "The important thing is to keep the important thing the important thing." The important thing about institutional securities transactions is Best Execution. The AIMR Trade Management Guidelines¹ have defined Best Execution simply and very well:

. . . the trading process Firms apply that seeks to maximize the value of a client's portfolio within the client's stated objectives and constraints.

The guidelines draw a parallel to the concept of prudence as it applies to investment management:

"Prudence addresses the appropriateness of holding certain securities, while Best Execution addresses the appropriateness of the methods by which securities are acquired or disposed. Securities selection seeks to add value by evaluating future prospects; Best Execution seeks to add value by reducing frictional trading costs. These two activities go hand in hand in achieving better investment performance and in meeting standards of prudent fiduciary behavior.

The guidelines recognize that Best Execution:

- is intrinsically tied to portfolio-decision value and cannot be valued independently,
- is a prospective, statistical and qualitative concept that cannot be known with certainty *ex ante*,
- has aspects that may be measured and analyzed over time on an expost basis, even though such measurement on a trade-by-trade basis may not be meaningful in isolation; and
- is interwoven into complicated, repetitive, and continuing practices and relationships.

The investment management industry has put forth these principles to guide the parctice of institutional trading. In my opinion, they can serve as the underpinnings for the Committee as it considers related issues.

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¹ AIMR Trade Management Guidelines, © 2002, Association for Investment Management and Research

Are our markets delivering the services large investors need?

The average trade on both NASDAQ and the New York Stock Exchange is around 1700 shares. Plexus data shows the average institutional order is 44,660 shares. For institutional trades to squeeze through the market, they must be ground down to a size that can be accommodated in the market. In the process, the time to complete the order necessarily lengthens. This creates opportunities for market insiders and middlemen to make money through unnecessary interpositioning and parasitical front-running. The resulting delay and impact costs reduce investment performance.

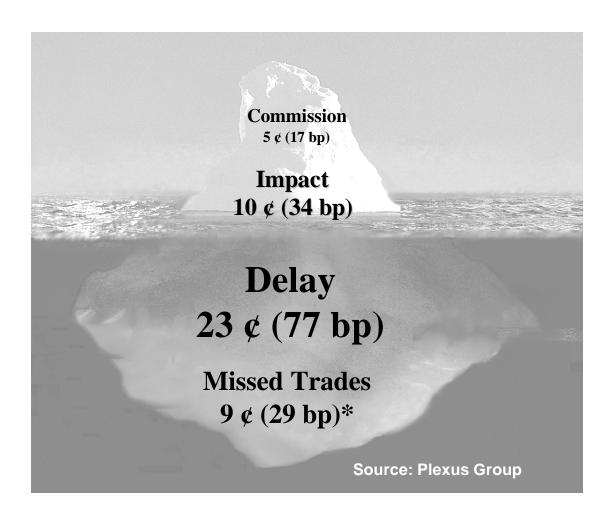
This is not a new problem, and many new market solutions have led to great benefits to investors. This level of innovation needs to continue to be encouraged. The best market for small investor trades may not serve very well those same small investors who invest via mutual funds and other commingled investments. Facilities where large buyers can meet large sellers without leakage will benefit all investors.

The best professional managers do what they can to operate within market constraints. However, without disclosure requirements, the end investor cannot assess whether his or her manager operates an effective measurement and management process.

Recommendations

- Managers should disclose quarterly their trading costs. Anything less is potentially misinformation.
- Managers should disclose quarterly their total commission expenditures, to whom they are paid, the services they acquired, and any potential conflicts of interest.
- Managers should disclose their trading activity on a delayed quarterly basis.
- Best Execution, as defined by the AIMR, is the guiding principle when considering rules and regulations that influence securities transactions.
- Congress and the SEC should continue to press for market innovation, especially innovations that facilitate large buyers meeting large sellers without revealing valuable information on pending trades.

EXHIBIT The Iceberg of Transaction Costs



Visible to the market:

Commission: Paid to broker for executing and clearing trade Impact: Effect of trading pressure on market price

Hidden costs: (Not visible to the market)

Delay: Search costs: Waiting for price or liquidity

Missed trades: Opportunity cost of failure to trade

All costs hurt performance.