Written Statement

of

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Hearing to Review

Current Investigations and Regulatory Actions Regarding the Mutual Fund Industry: Examining Soft Dollar Practices

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American Century Investments

Introduction

Thank you Chairman Shelby, Ranking Member Sarbanes, and Members of the Committee, for inviting me to offer the perspectives of American Century Investments on the need to fix our industry's "soft dollar" problem. American Century has always taken the position that commissions are investor assets and, as such, should be transparent and used only to directly benefit the investor – not the investment adviser. Our business practice and public advocacy for more than a decade have reflected this point of view.

American Century Investments is an investment manager for institutional accounts and more than 60 retail mutual funds. We manage about $90 billion for 1.5 million investors. Today, I oversee twenty investment professionals, including ten stock analysts, who manage six investment portfolios. I am also the portfolio manager for two funds and serve on our firm's Investment Oversight Committee – I understand the role Wall Street research plays in the effective management of mutual fund portfolios.

Earlier in my career at American Century, I established and managed our global trading operation with day-to-day responsibility for trading equity securities. Thus, my views reflect a career spent both managing AND trading equities for mutual fund portfolios.

It is clear to me that the present law governing brokerage transactions needs to be changed. Previously, I offered testimony before Congress to support pro-investor reforms in the areas of decimal trading and stock exchange structure improvements. Today, I ask you to consider significant action to address complex and arcane soft dollar practices.

What Should Congress Do?

Section 28(e) of the Securities Exchange Act provides a "safe harbor" for investment advisers to use their discretion in paying brokerage commissions that exceed the execution-only rate without violating their fiduciary duty to achieve "best execution". Excess commissions are called "soft dollars". While Section 28(e) implies the investment adviser's discretion is to be exercised for the investor's benefit, SEC interpretations of the provision allow advisers to "pay up" for almost anything that assists their investment decisions. In practice, soft dollars often find their way back to the adviser directly or in the form of research or other ancillary services. This activity transfers billions of dollars from investors to market intermediaries. To ensure that investors' commissions truly benefit only the investors who pay them, to cure conflicts of interest confronting money managers and traders and to address real and perceived soft dollar abuses, we recommend Congress:

1. **Amend section 28(e) or direct the SEC to define "research" in a way that precludes soft dollars being used for:**
    - **Computer hardware and software;**
    - **Publications, including books, periodicals, newspapers and electronic publications;**
    - **The costs and fees associated with professional development seminars;**

- **Exchange data fees for quotes and services; or**
- **Any service from third party providers otherwise available for cash to the general public, such as compensation consulting, printing, phone bills, etc.;**

2. **Prohibit fund advisers from taking into account sales of fund shares in allocating fund brokerage;**
3. **Require the SEC to gather and publish an industry average execution-only rate from all registered broker dealers. The SEC should do this to preserve and encourage competitive rate-making that does not currently exist in what appears to be a "fixed" commission rate environment.[1]**
    - **Require that this execution-only rate be reported as a percent of principal traded, as is the custom in most markets outside the U.S.[2]**
    - **Direct the SEC to define "best execution," consistent with guidelines put forth by the Association for Investment Management and Research.**
4. **Mandate soft dollar record-keeping.**

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[1] This would be significantly analogous to the use of SEC rule 11Ac1-5 which compels periodic reporting by exchanges of uniform measures of execution quality. Instead, the SEC would gather and report a uniform measure of execution-only rates. Those firms paying more than the average rate, by definition, are acquiring additional research and services. Fund boards will then be able to explore and understand what additional costs are being borne by investors.

[2] A 5c per share charge on a 100,000 share trade of a $50 stock yields a $5,000 commission to a broker on a $500,000 investment in the publicly traded company; when that stock splits 2:1, a 5c per share charge on a 200,000 share trade of the now $25 stock yields a commission of $10,000 on the same $500,000 investment in the company. If the commission were charged as a percent of the "principal" amount traded, say .10%, the commission would remain $5,000 in either situation.

- **Require investment advisers to maintain records of brokerage payments in excess of the average execution-only rate and to justify the services provided for the excess commission.**
- **Require brokers that pay soft dollars to third parties for services provided to investment advisers to provide a record to the investment adviser of all third party payments.**
- **Mandate annual or more frequent disclosure of soft dollar records to the mutual fund's Board of Directors and to the SEC during periodic audits.**

5. **Direct the SEC Division of Corporate Finance to adopt new regulations of investment bank activity where excess commissions paid by the industry's largest and most dominant players secure access to the "hottest" deals, to the exclusion of smaller fund companies and retail investors. Require underwriters to publish the size and identity of the 20 largest participants in new public offerings to make transparent any commission "pay to play" practices.**

The following discussion supports these recommendations.

<u>The Time for Soft Dollar Reform Is Now</u>

American Century began aggressively seeking soft dollar fairness for investors in 1992 when we asked the SEC to look again at Section 28(e).[3] We warned of potential abuse, scandal and embarrassment and have since echoed our concerns repeatedly in publications and industry conferences.[4] Congressional hearings, regulatory sweeps, and intense lobbying by the beneficiaries of this investor largesse have delayed meaningful reform in the area of soft dollar practices. We do not believe further study is needed. Soft dollars are largely undisclosed.[5] They damage investor interests when used for things that don't directly benefit them. And they represent huge, hidden costs on savings and investment. The time to act is now. Prominent industry participants other than American Century realize this.

Recently Janus Capital Group, Bank of America and Morgan Stanley all publicly signaled their retreat from soft dollar usage. Fidelity Investments told the Securities and Exchange Commission (SEC) that "soft dollar research expenses are the least transparent of fund expenses, because they are "bundled" with payments for a distinctly separate service –

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[3] "One might argue that allowing soft dollar trading to pay "research" bills under 28(e) constitutes a fleecing of investors who are billed twice--implicitly and explicitly--for the same service. Investors pay a fee for a professionally managed investment. IRC believes this fee should pay for **all** necessary information to make intelligent investment decisions. However, soft dollar trades imply that a cost above the management fee is required to purchase appropriate investment research. Soft dollars in many respects serve only to pad the margins of money managers." Nov. 18, 1992 letter to Jonathan Katz, SEC, from Investors Research Corp. (predecessor of American Century Investment Management).

[4] See Appendix A, "Views of an Informed Trader," Harold S. Bradley, May, 2002, AIMR Conference

[5] Soft dollars are currently only disclosed in the fund's Statement of Additional Information or the adviser's semi-annual Form NSAR, filed with the SEC, and only available to fund investors upon request.

the execution of securities trades."[6] Robert C. Pozen, non-executive chairman of MFS Investment Management said, "We are asking Wall Street firms to give us an execution-only price…We are valuing their research at zero."[7] American Century urges Congress to seize this unique opportunity for soft dollar reform.

Prior to New York Attorney General Eliot Spitzer's activism, excess commissions were used to purchase Wall Street research that reportedly was an unfettered disinformation machine meant to promote "friends of the investment bank" and to attract new banking clients. Venture capital firms and CEOs of promising yet-to-be-public companies benefited from an option on the "hottest" new deals, according to the public record. Allotment of those "hot" deals to investment advisers depended, in large part, on the size of the commission flows through the investment bank's doors. Favorable research coverage of newly issued companies and the "star power" of the analyst assigned to cover the stock was an important consideration in choosing the underwriter of the company's public offering. Recent regulation and huge fines have impacted this behavior.

At the same time, the unique attributes of Wall Street's access to company management for an "inside" look at the company's prospects have vanished in the post-Regulation Fair Disclosure environment. Broker dealers used to be the

[6] March 2, 2004 letter from David Jones, Fidelity Management and Research, to SEC.

primary source of public company information. A company could not communicate in a timely or effective manner with all interested investors without the publishing power of Wall Street firms. Today, the internet allows virtually unlimited investor access to a company's quarterly earnings conference call. And the former insider advantage to Wall Street research has vanished with regulatory and technological advancement.[8] So, one should ask: Why are the rates for "research and services" so expensive as compared to the cost of basic execution? Execution only rates on some electronic brokerage platforms are less than 1c per share, and yet Wall Street still charges most investment advisers 5c per share (Exhibit 1).

How Big is the Soft Dollar Problem?

In its letter to the SEC, Fidelity estimated that the cost of investment research to fund investors approximates the fee equivalent of 4 to 5 basis points of mutual fund assets. However, research by Richard Strauss of Deutsche Bank estimates that only 45% of commissions pay for the execution of a trade; meaning 55% of the $12.7 billion paid in commissions in 2002 are used for Section 28(e) goods and services, including research and third party services. If that estimate is correct, then investors may be paying as

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[7] March 16, 2004, "Mutual Fund Tells Wall Street it Wants A La Carte Commissions," NYTIMES.COM.

much as 15 basis points in extra undisclosed management fees. Money manager Whitney Tilson estimated in a recent column using this same data that investors pay about $6.3 billion in extra fees -- $21 for every man, woman and child in this country.[9] This is a huge hidden cost to investors.

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[8] George Bodine, direct of trading for General Motors Asset Management, was quoted in the February 2004 Traders Magazine as saying that after Reg FD buyside traders no longer have to "direct business to specific brokers so we'd be a first call in the event their top analyst was changing his opinion." p. 40.

[9] See Appendix B, "The Disgrace of Soft Dollars," Whitney Tilson, March 19, 2004, The Motley Fool.

So, How Do Some Money Managers Use the Safe Harbor?

American Century and others have long urged regulators and legislators to shine a bright light on burgeoning industry use of the Section 28(e) safe harbor. [10] A 1975 Amendment to the Securities Exchange Act allows investors to "pay up" for research services that benefit the investor, in the best judgment of the investment manager. Subsequent SEC interpretations of what constitutes "research" under Section 28(e) have expanded the safe harbor's use.

Soft dollars may be "negotiated" in a number of ways. Some companies and clients prefer commission recapture programs whereby a broker will return 1c or so of "extra commissions" by check to investment managers and clients. If this occurred in the construction industry, it would be called a "kickback", but curiously in the investment management industry, it's called using the "safe harbor." To avail themselves of the safe harbor, other brokers and clients use so-called soft dollar converters who promise to pay $1,000 of the investment manager's expenses for every $1,600 of commissions directed to that broker, consistent with expectations of best execution. Most of these arrangements are not recorded on paper. Tax practitioners

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[10] A 1989 Trader Forum bulletin quotes former SEC Director of Market Regulation Lee Pickard as saying; "There was some controversy at that time as to whether 28(e) should have been put on the books. There were people then, perceptive perhaps, who realized 28(e) was going to result in some abuses. But it's part of the law. The SEC can't change it by itself." **Institutional Investor**, "*The Gray Areas of Directed Commission,*" 1989, p. 3.

have suggested that written contracts might trigger a requirement for accounting treatment of soft dollars by investment advisers.[11] Currently, accounting literature does not count soft dollars as either income or expense on a manager's income statement because the value of those services is described as difficult to ascertain. One accounting manager described this practice to us as not unlike "off balance sheet accounting."

Two examples highlight how an investment adviser might employ the safe harbor to defray operating expenses in today's market environment.

Last year, American Century investigated new technology systems that would link portfolio management research databases to trading and back office systems. Leading competitors were invited to "pitch" their services, capabilities and costs. Sophisticated systems like this can carry price tags in the millions of dollars. Based on their experience with many other investment managers, the vendors competing for our business assumed we would want to "soft" the service. The installation of a $2 million system could be paid over a couple of years for $3.2 million in commissions – a drop in our $140 million commission bucket. They expressed surprise at our longstanding position on the appropriate use of our investors' commissions. It was clear

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[11] While not "officially" on paper, virtually all investment adviser trading desks keep and maintain complete spreadsheet billing systems to make sure that investment adviser commitments are kept to vendors – and most receive a complete accounting from the soft dollar converters on whom they rely.

to us that "softing" was a customary part of their sales pitch and common means of payment for their services within the industry. In a soft dollar environment, there is no incentive to negotiate lower costs of service to the detriment of investors.

Second, Mr. Tilson tells the tale in his commentary of a search for office space in Manhattan[12]. He says a good setup for a four to five man shop might cost $10,000 each month – a big cost for a small money manager. He says he can reduce that cost by half if he does sufficient full brokerage commissions with certain firms that have office space available. It works this way. If he pays six cents per share for every trade, rather than the two cents he might otherwise pay, the broker pockets the extra four cents. If he buys or sells only 125,000 shares of stock every month with that broker, the extra four cents adds up to $5,000, which the broker returns via a break in the rent. At American Century, we trade more than 1 million shares almost every day. Obviously, Mr. Tilson and American Century forego significant profits by avoiding soft dollar arrangements and adhering to the principle that soft dollars are not fair to investors who already pay a negotiated management fee.

Research Costs Six Times More Than Execution-Only

[12] See Appendix B.

Last year, American Century traders executed approximately 55% of U.S. equity trading volume through various electronic, execution-only facilities at an average cost of about .85c per share. The average industry commission rate remains between 5.1c and 5.5c per share, according to Greenwich Associates. (Exhibit 1) That effective rate has changed little since 1991 despite a six-fold increase in trading volume because lower commission rates imply lower profits for both institutional money managers and their partners in the brokerage business. (Exhibit 2)

A reading of the legislative background of section 28(e) suggests that it was intended to keep fund managers out of regulatory hot water if they paid more than the lowest prevailing commission rate for services. But that was a different time. Industry practitioners feared that deregulated commissions would force a race to the bottom in price.

Recent reports indicate that while the average commission rate in cents per share has dropped marginally, commission costs have increased as a percent of total dollars (principal amount) traded.[13] The U.S. and Canada are the only marketplaces in the world that do not use percent of principal as a trading cost barometer. In U.S. trading, during periods of falling equity prices, fixed costs per

[13] Capital Research Associates report to American Century as of 12/31/2002.

share represent a higher portion of trading costs. In markets with rising prices, brokers encourage publicly traded companies to split their shares – effectively doubling the cost of trading for the same dollar amount of the company when fixed costs per share are used. There is no incentive for this kind of behavior in markets where commissions are calculated as a percent of the principal amount traded.

Commission rates, measured in cents per share, have moved very little since 1986 when the SEC liberalized its interpretation of research under section 28(e). Now the pool of equity trading volumes eligible for soft dollar use is expanding. At the end of 2001, the SEC expanded its interpretation of the safe harbor to cover "flat" risk less principal trades by market makers in NASDAQ securities. This action reversed a longstanding SEC position that such trades fell outside provisions of section 28(e). Decimalization and electronic networks have pushed most of Wall Street away from principal market making in NASDAQ securities. As brokerage firms move to an explicit commission-based system for NASDAQ stocks, investment managers will likely access this new pool of available dollars for still more research and services.

We now have the systems and the data to create meaningful disclosures of these costs to investors. At best, insufficient disclosure provides investment managers little incentive to rationalize and manage the commissions, which are paid directly by investors. At its worst, section

28(e) allows some managers to boost profits during bad market conditions by paying more bills with investor commissions (Exhibit 3). Greenwich Associates reported that a 27% decline in assets under management for the typical institutional manager in 2001 sharply reduced management fee income. Investment managers responded to the decline in assets, in part, by boosting soft dollar amounts paid by 17%, according to the self-reported study.[14]

What Is Best Execution?

The Section 28(e) safe harbor has been predicated on the notion that an investment adviser can pay up "when consistent with best execution." Assumption of "best execution" appears just about everywhere: due diligence manuals, marketing pre-sentations, consultant questionnaires, and requests for proposals. But no legal definition currently exists. Thus, the search for best execution has proven elusive despite the many assurances otherwise. "We know it when we see it, but it is really hard to measure," is an oft-quoted expression on trading desks when alluding to the concept of best execution. In some environments, traders are not paid to make decisions that really work to achieve best execution and have disincentives to doing so. They have soft dollar chits to pay and shares waiting to trade for impatient, demanding, and often unrealistic portfolio managers. Traders operate under

[14] **Greenwich Associates**, *A Closer Focus on Trading Costs*, April 2002

what I call "maximum risk aversion for maximum pay on the desk." As a portfolio manager, when I made a bad decision, I blamed the trading desk. Trading is a function in which it is difficult to claim "value added" and easy to look bad in a handful of trades. As a result, it is no surprise that traders give the ambivalent answers they do when asked about best execution. Traders do not often confess that directed commissions might put best execution at risk – that would instead put the adviser's ability to attract new clients and ultimately, the company's profitability at risk instead. [15]

[15] Chris Orndorff, managing principal of Payden & Rygel Investment Management, Los Angeles was quoted in the February issue of Traders Magazine saying: "Getting rid of soft dollars would be one of the best things that could happen in the relationship between traders and portfolio managers…Then you'd have trader truly trying to make the best execution, rather than seeking best execution and at yet at the same time knowing they must feed the soft dollar broker" noting that these are typically contradictory efforts.

New Definitions of Best Execution

In 2000, before leaving the SEC, former Chairman Arthur Levitt started the process of articulating new standards for best execution. At the same time, both the Investment Company Institute (ICI) and AIMR were asked to convene best practices groups to help define best execution. At the December 2000 ICI Securities Law Development Conference, Gene Gohlke, associate director of the SEC Office of Compliance Inspections and Examinations, offered this definition of best execution:

> *"In placing a trade, the trading desk will seek to find a broker/dealer or alternative trading system that will execute a trade in a way that the trader believes will realize the maximum value of the investment decision."*

Given the conventional wisdom surrounding best execution, this definition presents a challenge to the industry. The "investment decision" referred to in Gohlke's definition pertains to <u>the particular trade being executed</u>—not to yesterday's research from some broker dealer or consultant who directs a lot of business to the firm. In terms of words, the change is minor, but in terms of policy, the change is substantial. And the addition of "alternative trading systems" in the definition is a big change. The use of electronic communication networks (ECNs) and nontraditional trading systems has expanded dramatically during the past 10 years. Yet, on the buy side, institutional money managers still directly use these systems less than 7-

8 percent of the time.[16] Recognizing that trading cost reductions directly boost investor returns, at American Century we use lower cost electronic brokers for approximately 55% of our U.S. equity trades.

In his presentation at the ICI Conference, Gohlke identified possible areas in which SEC auditors will spend more time. Investment managers have fiduciary obligations to boards as well as to investors in the areas of compliance systems, compliance evaluation procedures, and record keeping. Congress should ask the SEC to continue down this path by reviewing the business practices of investment advisers to achieve best execution, including:

- Adequacy of order-handling systems
- Trade error experience
- Timeliness of execution reports
- Allotment of initial public offering (IPO) shares against requested allocations
- Use of ECNs as a low cost execution-only vehicle for investors

AIMR Trade Management Guidelines

[16] Paula Peter, manager of equity trading at Mello Private Wealth Management, was quoted in the February 2004 Traders Magazine as saying that the elimination or scaling back of soft dollars would provide traders more discretion over order flow. "Then we wouldn't have to trade with particular brokers…We would more actively pursue alternative sources of execution, controlling more of the execution on our desk." p. 38.

AIMR's proposed Trade Management Guidelines on best execution were announced in November 2002.[17] The AIMR recommendations are consistent with the direction of the SEC. The guidelines recommend the establishment of trade management oversight committees that will be responsible for developing a trade management policy and a process to manage the efficacy of trades. Are you getting what you are paying for? Are you evaluating the service you received? And are you evaluating the providers of that service? Specifically, the implications of these guidelines are as follows:

- Substantial infrastructure spending will occur to build record-keeping and reporting systems to track and audit trading information appropriately because so many firms still operate with inadequate order management systems.
- The negotiation of acceptable commission ranges and documentation of the variance between negotiated and actual commission rates will become necessary. Commission rates that held at 5–6 cents a share for more than a decade should and will be negotiated down to a level closer to the 1.00–1.25 cents a share rate paid on ECNs for execution-only services.
- Trade management oversight committees will be established, and the internal documents prepared for these committees will be auditable by the SEC.

[17]The guidelines are available at www.aimr.org.

- Real and potential conflicts of interest must be documented.
- The choice of a particular trading system must be supported, and the review and evaluation of trades, broker selection, and execution performance can be expected.

What Are Soft Dollars Really Buying?

In Gohlke's definition of best execution, traders are charged with maximizing the value of the trade decision. But Robert Schwartz, the Marvin M. Speiser Professor of Finance at Baruch College, City University of New York, and Benn Steil, at the Council of Foreign Investors, have studied how little control traders actually have over the execution decision. They sent questionnaires to the chief investment officers of major investment companies that asked, "Who at your firm controls institutional commission payments?" They found that 62 percent of all trades are not controlled by traders.[18] (This finding is consistent with my experience as a trader and portfolio manager.) The report also addresses how often commissions are used to pay for things other than best execution. And Steil, aggregating information from a variety of reports on commission bundling, has stated that nearly two-thirds of soft dollar agreements are unwritten and

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[18]Robert Schwartz and Benn Steil, "Controlling Institutional Trading Costs," *Journal of Portfolio Management* (Spring 2002):39–49.

more than one-third of brokers are a party to illegal soft dollar arrangements.[19] Clearly, soft dollar agreements play an important role in the execution decision and are often in direct conflict with an investment firm's fiduciary duty to the client.

In his speech to the Securities Industry Association in November 2000, SEC Chairman Levitt asked whether portfolio managers were bringing to bear the pressure they should on brokerage commission rates and why the emergence of electronic markets had not driven full-service commissions lower. If a trade on an ECN costs a penny or less a share, why do most people on the buy side still pay 5–6 cents a share? Do portfolio managers and independent directors think 6 cents is safe, that it falls within the safe harbor exception of Section 28(e)?

Levitt warned then that 6 cents was not a safe rate. And yet there appears to be no evidence to date that the Commission has done more than use a bully pulpit – the Commission requires the help of the Congress to fix this problem.

I once was convinced that the more business American Century executed on ECNs, the more our market impact costs would rise because of a structural reversion to the mean. **Table 1** illustrates, however, that the mean for all-in

[19]Benn Steil, "Can Best Execution Be Achieved in the Current Market Structure?" Presentation given at the AIMR conference "Improving Portfolio Performance through Best Execution," November 30–December 1, 2000, Chicago.

trading costs is down, not up. As our business on these nontraditional systems increases, our overall efficacy, as measured against other brokers doing similar business in the same time frame, has widened. This means that the total cost of trades in anonymous, electronic venues – both the commissions and market impact -- are far more effective than with brokers and traditional exchanges. Such systems remove structural, intermediated costs. The nontraditional players, highlighted in bold in Table 1, are important; in particular, B-Trade, Archipelago, and Instinet have lowered our costs of trading. Broker 3, one of the most respected Nasdaq market-making firms in the business, produced costs equal to 2.03 percent of principal, round-trip, on Nasdaq trades, whereas Archipelago and Instinet both produced a negative cost. According to Capital Research Associates' methodology, "negative cost" means that the day after our order is finished, the price of the stock we sold is still falling. In other words, we have not telegraphed our intentions to the rest of the market in moving big orders, and we have succeeded in executing at a relatively fair price.

Use of electronic trading for listed stocks has only recently begun to accelerate; Archipelago linked into the Nasdaq system to display orders in the public market early in 2001. Traders can now put their order indications into the public quote system and split the spreads charged by the specialists. The ability to lower costs this way is compelling.

Table 1.Capital Research Associates' Study of ACIM All-In Trading Costs

Broker	Dollars Traded	Average Market Cap (billions)	Average Volatility	Cost as Percentage of Principal	
				OTC	Listed
ACIM funds average	$47,607,820,875	$56.76	51%	0.49 bps	0.32 bps
Broker 1	4,263,056,375	48.67	45	0.66	0.28
Broker 2	2,637,630,000	47.28	45	0.93	0.23
Broker 3	1,672,943,750	42.69	56	2.03	0.40
Broker 4 (a)	1,738,325,000	35.23	51	1.00	0.24
Instinet	2,219,195,000	61.35	61	0.23	2.72
Crossing Network	923,983,750	45.17	53	0.61	0.25
B-Trade	3,697,211,250	56.24	63	0.84	0.28
Archipelago	5,855,745,250	65.83	64	0.06	0.46
Traditional brokers (b)	10,311,955,125	43.47	49	0.66	0.09
Electronic brokers	12,696,135,250	57.15	60	0.29	0.93

Note: Data reflect non-dollar-weighted mean of 10 six-month periods, June 30, 1997, through June 30, 2001 (post-order-handling rules).

a Negative OTC costs are a function of aftermarket IPO performance.

b The "traditional brokers" category reflects four large brokers only.

Market Stability

For decades, brokers have justified all types of structural cross-subsidies by claiming that when markets are under stress, the broker will help stabilize the market. The popular theory was that the ability to get best execution depends on a broker's willingness to lay capital on the line during times of market distress, when that capital infusion is really needed. In their article, Schwartz and Steil conclude, instead, that the buy-side institutions' call on street capital for immediacy of execution is an insurance or option to protect the investment manager's identity and order size from being captured by intermediaries and transmitted to competitors—to avoid being front-run. To support this contention, Schwartz and Steil point out that, based on the responses to their survey, portfolio managers rarely create orders based on seeing the other side through a telephone call, trading activity, or order flow in the market. Investment managers appear to be attributing their willingness to pay up for liquidity to a reason that is not borne out in practice. Recent, well-publicized regulatory actions and huge fines against NYSE specialist firms further augment these arguments and remove the notion that brokers and specialists stand prepared to lose money for investors during difficult market environments. The violations committed by the specialist firms occurred during the worst three year market environment since the Great Depression. If those weren't bad times, I'm afraid to consider the alternative.

A History of Worries About 28(e) and Investor Interests

It is interesting to review the regulatory history of section 28(e). The topic has been revisited often since 1975. Original interpretations of the statute by the Securities Exchange Commission did not permit a "safe harbor" for commissions used to purchase services "customarily available to the general public."[20] In 1986, after intense industry pressure, the SEC allowed that an investment advisor could use commissions and "pay up" for any service that assists him in making investment decisions on behalf of his clients.

Austin George, then head trader at T. Rowe Price, was quoted in 1989 as saying:

> "And, then of course, what's happening is people are starting to work backwards through all those things that for years were ordinary and expected business expenses to see how they could recover their costs. This is my personal area of greatest concern – in terms of the industry, not T. Rowe Price – because you suddenly put the trader in the position of being a potential deterrent to enhancing the profitability of the firm."[21]

The SEC subsequently reopened debate on aspects of section 28(e) with the concept release called Market 2000, in 1992. The House Subcommittee on Telecommunications and

[20] **Institutional Investor**, *The Gray Areas of Directed Commissions*, 1989, p. 4.

Finance held hearings on this matter in July 1993. David Silfen, a Goldman Sachs partner, testified:

"[C]onflicts of interest are inherent in soft dollar arrangements. The money manager receives the products and services paid for by soft dollars. The client, often unknowingly, pays for these products and services as part of the brokerage commissions charged to his account. This situation presents an obvious temptation to the manager to buy items that benefit itself rather than the client, or items, such as general research reports, quotations services and computer hardware and software, that other managers consider their own responsibility under their basis management fee. The money manager may also pay too much in commission or engage in unnecessary trading so as to generate more commission and thus more soft dollars."[22]

The possible misuse of commission dollars received additional SEC scrutiny in 1998 during a well-publicized soft dollar "sweep" during which broker dealers were audited for possible abuses.

Again and again, rightly placed concerns have foundered on the inadequacy of audit trails, the unrecorded nature of many soft dollar arrangements and the mutual benefit derived by industry players who work to preserve the opacity of the payment system.[23] [24]

Congress or the SEC should mandate record keeping requirements for soft dollar transactions.

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[21] **Institutional Investor**, *The Gray Areas of Directed Commissions*, 1989, p. 8.
[22] Oral Testimony of David Silfen, partner, Goldman Sachs and Co., July 12, 1993, House Telecommunications and Finance Subcommittee
[23] Nearly two-thirds of soft dollar agreements are unwritten and more than one-third of brokers are a party to illegal soft dollar arrangements, Benn Steil, *"Can Best Execution be Achieved in the Current Market Structure*?" AIMR Conference, December 1, 2000
[24] A check with our auditor determined that funds do not record income or expense from soft dollar practices because of the difficulty in assigning a value to research services and because of the undocumented nature of most agreements.

In 1975 when the soft dollar safe harbor was born, the idea of "paying up" was an abstract notion. Personal computers didn't appear until 1982. Complex networks, commercial adoption of the Internet, and central data repositories were all a decade or more away. Today, the execution only cost of trading is readily identifiable and should be reportable to support soft dollar disclosure and oversight.

Commissions, Accounting Bills, Phones and Exchange Fees

A major wirehouse-sponsored soft dollar broker who "converts" investor commissions into bill-paying arrangements could pay 264 third party "research" providers/vendors in 1988. In 1994, that same broker had bill-paying relationships with 573 vendors. ***Today, the list has grown to more than 1,200 service suppliers*** (Exhibit 4).

Accounting firms Ernst & Young and PricewaterhouseCoopers now can be paid with soft dollars.[25] Telephone companies such as SBC Corp. can be paid with commissions. Professional development programs at the Kellogg School of Management and the Wharton School can be financed with commission streams. Recruiting firm Kforce.com is on the list. So are Compaq, Dell and CompUSA. The Standard Club of Chicago, "a private retreat of luxury and tranquility…home to Chicago's fashionable society and the

[25] See Exhibit 4, approved vendor relationships with major wirehouse soft dollar broker.

business elite for over 125 years,"[26] also appears as a destination for some commission dollars.

An investment manager requires a phone, a newspaper and a stock quotation service to open his doors and to manage money. Is the management fee intended to pay only the management salaries of the investment company? We think not. Without specific regulatory action from the SEC and Congress that compels better disclosure and assignment of the economic value of this undisclosed income stream, more and more costs of business may soon fit the elusive and ever-expanding definitional framework of "research" under section 28(e).

SEC staff members have explained to me that definitions of best execution and research are so vague as to defy enforcement action. Recent attempts to define best execution "best practices," such as the Association for Investment Management and Research (AIMR) guidelines, have been watered down by qualified language offered by those with compelling commercial self-interests. Congress needs to stop the stalling.

Conclusion

As an investment manager, my experience is that good thinking by brokerage firm analysts is often invaluable in making wise investment decisions for my investors, especially in the universe of "under-followed" small companies. As an

[26] Quote from Standard Club website.

equity trader, I know that brokers can critically augment our execution capabilities by facilitating block trades and by supplementing our internal trading resources during periods of heavy trading activity. The brokerage industry provides valuable service to mutual fund advisors and other investment managers. However, our industry has failed thus far to adequately measure and report on the cost of these services to investors. The structural profit incentives of current practices will not change without the intervention of Congress to better define and limit the scope of section 28(e). For these reasons, and with the interests of investors foremost in mind, we offer the forgoing recommendations and discussion.

Thank you for the opportunity to share my ideas on behalf of American Century and its investors.

What Does "Paying Up" Mean

Imputed Cost of Research in 2002

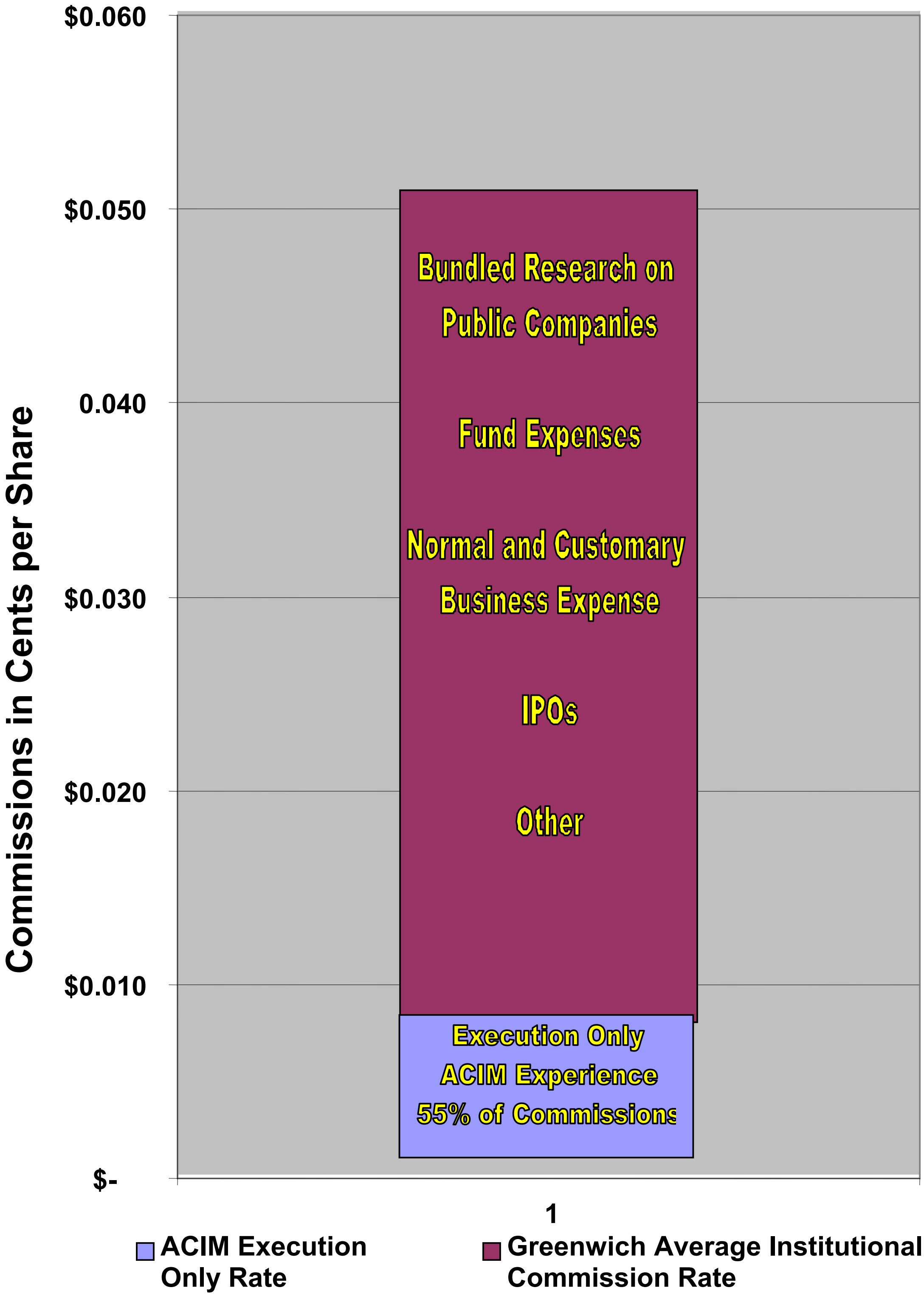
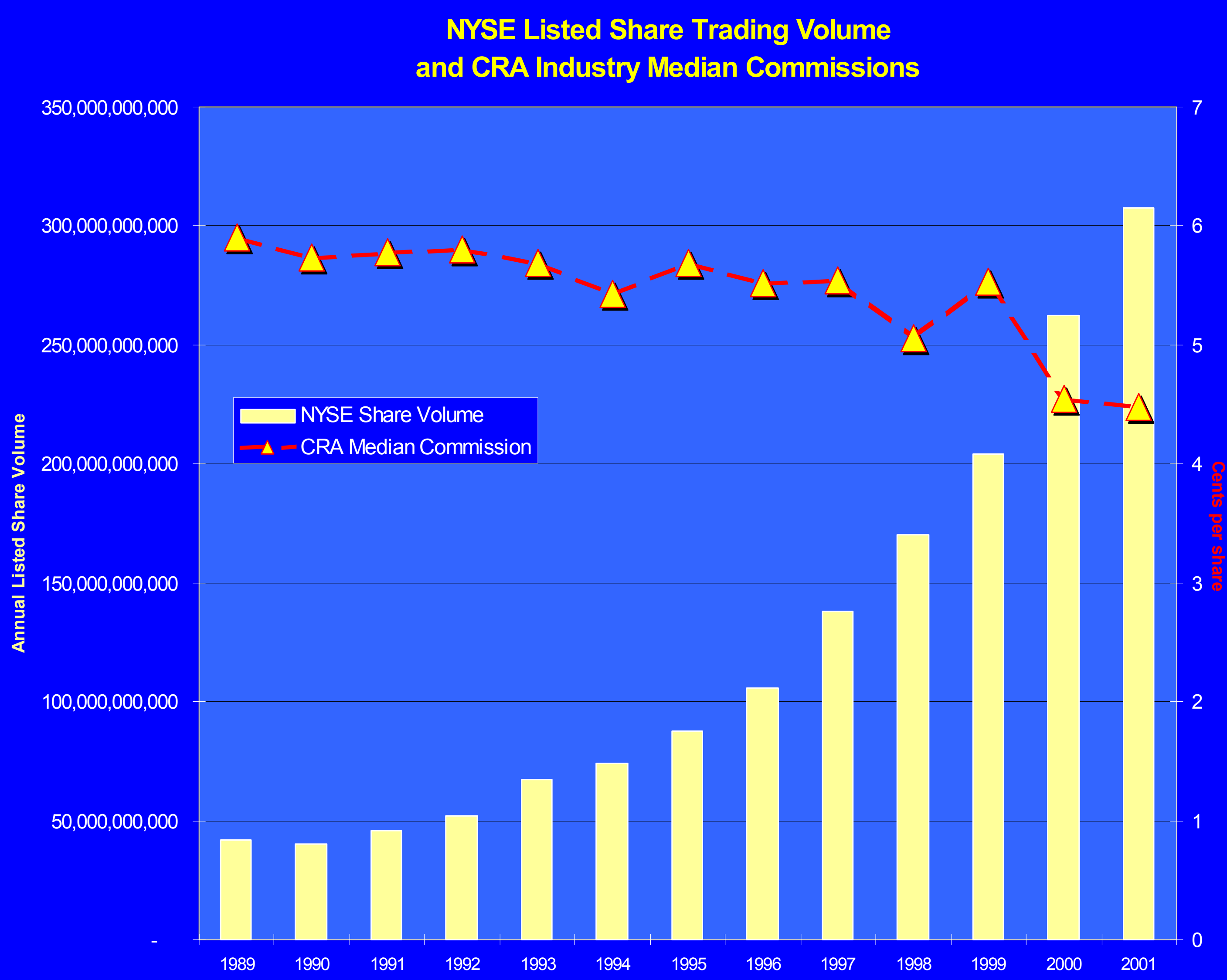


Exhibit 1



Commission chart inclusive of ECN agency fees.

Exhibit 2

Impact of 28(e) on Management Company Earnings
Who Would You Rather Be?

Investor Invests $100,000 in Fund with 1% Management Fee and Pays All Commissions

Investment Company A Collects $1,000

Company A pays the following bills with cash as part of normal and customary business expense

Revenues	$1,000
• Salaries/Benefits	400
• Computer Hdwr & Telecom	250
• Marketing & Distribution Activities	
• Exchange Fees	
• Wall Street Journal	
• Trade Association Dues	
• Proxy Voting Services	
• Printing & Annual Report Prep	150
(Services Otherwise Available for Cash)	
Profit	$ 200

Margin 20%

Commissions paid consider only best execution – at lowest possible commission.

Investment Company B Collects $1,000

Company B pays the same bills under 28(e) because of a manager's good faith determination that the service will benefit investors.

Revenues	$1,000
• Salaries/Benefits	400
• Marketing & Distribution Activities	300
Profit	$ 300

Margin 30%

Company B negotiates a rate for services – not usually in writing – that generates commissions sufficient for a broker to pay "manage money" bills and make a profit. Typically $1,600 in commissions pays $1,000 in bills.

Company B directs 35% of commission business to specific brokers – realizes dramatic earnings improvement with little incentive to rationalize expense.

Company B Benefits and the Investor Pays

Exhibit 3

Exhibit 4

Leading Soft Dollar "Converter"
About 1,200 Vendors

Acadia Research Group
Accent Systems, Inc.
A.G. Bisset & Co., Inc.
American Health Consultants
ACNeilsen
Acromedia Systems, Inc.
Active Graphics
ADP Investor Communication Services
Advantage Data Inc
Agra Europe (London) Ltd
Airco Mechanical Inc.
Alan Reynolds Associates
Alliance Capital Management, LP
Alliance-Ibbotson Research Institute
Alliance of Healthcare Advisors
Allied Riser Operations Corporation
Allmerica Financial
Alpha Enterprises International
American Express Financial Advisors
American Skandia Investors Services, Inc.
American Stock Exchange
Ameritech
AMG Data Services
AMR Research
Analytic Systems Corp.
Anari Incorporated
ANB Investment Management
Annuity Price Center
Arbor Trading Group Inc.
Argus Research Corporation
Aristadata, Inc.
Armstrong Teasdale, LLC
APT Partners
Ark Asset Management Co., Inc.
Arrow Group
ASG Companies
Asia Society (The)
Asian Wall Street Journal (The)
Asia Pacific Communications Limited
Aspen Publishers, Inc.
Aspen Research Group, Ltd.
Asset Performance Partners
Asset Strategy Consulting
Associated Investment Services
Astro Office Products, Inc.
Atec Group
A-T Financial Information Inc.
Atlantic Group FPPM, Inc.
Atlanta Journal and Constitution, The
Attronics
Autex Group
Automotive News
Avalon Research
Avenue Technologies
Aviation Week Group
Axiometrics Inc.
B/C Computing, Inc.
Banc of America Securities
Bader Computer
BAMAR Enterprises Inc.
Bank of America
Bankers Trust Company-NY
Bargerhuff & Associates, Inc.
BARRA International
Barron's
Barrow Hanley Mewhinney
Baseline
BB&T Capital Markets
BCA Publications
Becker Vanetten, Inc.
Behavioral Economics, Inc.
Benderly Economic Associates
Berge Consulting Group
Berkeley Program in Finance
Big Dough.com
Billings Research
Biopharma Consulting Group
Bioscience Securities
Birinyi Associates Inc.
BIRR Portfolio Analysis, Inc.
BITS Inc.
Black Box Network Services
Blakeney Management
Blitz Computer
Bloomberg, LP
Bloombury Minerals Economics Ltd.
Blue Chip Growth Letter
Blue Heron Consulting
Bobbi Trading Corporation
Bogdan Computer Services, Inc.
Bond Buyer, The
Bond Investor Newsletter (The)
Bond Market Semiotics
Bonneville Market Information
Book Industry Study Group

Boston Capital Markets Group, Inc.
Boston Company Asset Management, Inc., The
Boston Energy Research
Boston Safe Deposit & Trust Co.
Boyd Watterson Asset Management LLC
Bowne of Chicago, Inc.
Boxalls
BPS Consulting Services
Brandywine Asset Management, Inc.
Breaking Views
Brean Murray & Co., Inc.
Bridge Japan Inc.
Bridgewater Associates
Brinson Partners, Inc.
British American
Brookside Corporation
BSP Solutions
BT North America
Buck Consultants
Bulls Eye Research
Burgiss Group (The)
Business Cycle Perspectives Inc.
Business Intelligence Advisors
Business Research Publications
BuzzCompany.com

C.S. McKee & Co., Inc.
Cabletron Systems
Cable Television Tokyo Ltd
Cableworx
Cadence Capital Management
Cadogan International Conferences Ltd
California Technology Stock Letter
Calamos Asset Management, Inc.
Calab Fund LP
Callan Asociates, Inc.
Cambridge Associates Inc.
Cambridge Energy Research Associates
Capital Analysts Network
Capital Hill Research
Capital Insights Group
Capital Management Sciences
Capital Market Publishers India Ltd.
Capital Reflections Inc.
Capital Resource Advisors
Capitol Publications Inc.
Carty Mailloux Consulting, Inc.
Cast Software, Inc.
CCBN.Com (Street Events)
C-Call.Com
CCH Washington Service Bureau Inc.
C.D. Crary & Co
CDrive Corp.
CDW
Center for Management Research, Inc.
Center for Research in Security Prices
Century Securities Associates Inc.
Charter Investment Group
Charter Research Corporation
Chaumont, Inc.
Check Free Corp-Investment
Chemical Institutional Asset Services
CHR Metals Limited
Cimino Associates
Citicorp-North America/Leasing Inc
Clarendon Marketing & Production
Clarsen Investment Research
Clydsedale Bank PLC
CML Market Letter Inc., The
Coach Comp America
Coleman/Bartlett's Washington Focus
Columbine Capital Services
Comerica Bank & Trust
Comline Business Data, Inc.
Commerce Bank of St. Louis
Commercial Estate Secondary Mkt.&Sec.
Commercial Property News
Commercial Real Estate
Commodity Accounting Systems
Commodity Metals Management Company
Commodity Trend Service Charts
Comp USA, Inc.
Compass Bank
Compaq Computer Corp.
Compaq Direct Plus
Complete Communications, Inc.
Comprehensive Computer Center
Compucom
Computer & Application Inc.
Computer Express, Inc.
Computer Merchants LTD
Computer Horizons Corporation
Computerwire, Inc.

Computerized Portfolio Mgmt Services Inc
Commscan, L.L.C.
Comscore Networks
Comtrade
Condor Advisers
Consensus Economics Inc.
Consolidated Natural Gas Company
Container Consulting
Containerisation International
Contravisory Research Corp.
Convergent Media Systems Corp.
Conway Pedersen Economics, Inc.
Corestates Bank
Cornerstone Peripherals Technology
Corporate Access/Condor
Cortex A[[lied Research Inc
Cost Effective Measurement Inc
CotLook Ltd.
Council of the Americas
Covato Research Corporation
Cramer Rosenthal McGlynn, LLC.
Crandall Pierce and Company
Credit Sights
CrossBorder Capital
Crowley Micrographics, Inc.
CSK
CRU International LTD
CTC Illinois Trust Company
CTS Financial Publishing
Customized Data Systems, Inc.
Cutler and Company, Inc.
CWR Computer Consultation

DAC Easy Software, Inc.
Daily Deal, The
Daily Variety
Dallah Media Productions
Dalton, Greiman, Hartman, Maher & Co
Dan Royer & Co.
Daniel Morton & Company, Inc.
Darwin Partners, Inc.
Data Broadcasting Corporation
Data Comm Warehouse
Data Transmission Network Corporation
Datastream International Ltd.
Dataware Solutions
Davis, Mendel & Regenstein, Inc.
Decision Software, Inc.
Dell Direct Sales Corporation
Dell Quotation
Dell'Oro Group
Denver Gold Group
Depository Trust Company, The
DePrince, Race & Zollo
Derivative Solutions
Des Plains Office Equipment Company
DeScenza & Co., Inc.
Detroyat Associates, Inc.
Dial Data
DiBiasio & Edgington, Inc.
Directv
Disclosure Incorporated
Docupro
Dodge & Cox
Dollarlink Software
Dorsey, Wright & Associates, Inc.
Dow Jones Financial Publishing, Co..
Dow Jones Markets, Inc.
Dowling & Partners Securities, LLC
DPC Data Inc.
Duff & Phelps Credit Rating Co.
Dunedin Fund Managers Ltd
Dympna Clarke
Dynamic Traders Group, Inc.

Eagle Development Group
Ebsco Subscription Services
Eclipse Computer Systems, Inc.
Econoclast, The
Economatica
Economic Analysis Associates, Inc.
Economic Cycle Research Institute, Inc.
Economics from Washington
Economist, The
Edgar Online
Edward Walter Design
EEI Effron Enterprises, Inc.
EFM Technical Research Limited
Egan-Jones Ratings Company
EGS Securities
Electric Power Daily
Electric Utility Week
Eliassen Group, Inc.
Elliott Wave International
Elkins & McSherry Co. Inc.
Emap Business Communications
Emery Consulting Services

Empire Group LLC
Energy Argus
Engineering News-Record (McGraw-Hill Cos.)
Ennis Knupp & Associates
Enteract Corp.
Enterprise Communications
Entex Information Services, Inc.
Equant Resources
Equity Research Associates
Ernst & Young LLP
Estima
Euromonitor International, Inc.
Eurohedge
European Investors
European Private Equity & Venture Capital
Evans-Novak Political Report
Exabyte Corporation
Excalibur Management Corporation
Excite@Home
Eze Castle Integration, Inc.

F-D-C Reports, Inc.
Fair Disclosure Financial Network
FAME Information Services
Farallon Capital Management, LLC
Farrell Advisory Associates, LLC
Faxon Company, The
Federal Filings Inc.
Federal Reserve Bank of Boston
FICOMP, Inc.
Fidelity Management Trust Company
Financial Control Systems Incorporated
Financial Information Services
Financial Planning Resources
Finucane, J.W. Financial Consulting
First Data Investor Services Group, Inc.
First Equity Corporation of Florida
First Interstate Bank of California
First Pacific Advisors, Inc.
First Source International Inc.
First Union
Fitch Investors Service
Fleet Bank of MA
Fleischman Richard & Associates
FMH Investments, LC
Forbes
Ford Investor Services
Formprint
Formula Research
Foundation for Intl Business & Eco. Res.
Fourteen Research Corporation
Franklin Research's Insight
Fraser Management Associates
Free Market Inc.
Freedom Capital Management Corporation
FRI Corporation
Front Line Systems
Frontier Analytics, Incorporated
FTSE International Limited
Future Source
Future Data Systems Inc.
Futures Magazine Group
Futures Trading Center

G A T Integrated Financial Services
G. A. Clarke & Associates, Inc.
G7 Goup, Inc.
Gabriel, Roeder, Smith & Company
Galaxy Consultancy Limited
Gann, AWD Treasure Discovered
Gancarz Software Consultants
GARP Research Company
Gartner Group
Garzarelli Outlook, The
Gateway 2000
Gateway Companies
Gateway ShopStop.Com
GE Capital Information Technology
GE Information Services Inc.
Gerson Lehrman Group
Giga Information Group, Inc.
Gilder Publishing
Gilder Technology Report
Gimme Credit Publications Inc.
Glenmede Trust Company
Global Advanced Technology Corp.
Global Information Resources, Inc.
Global Investment Research, Inc.
Global Investor Publishing
Global Market Consultants, Ltd.
Global Network (The)
Global Technology Consulting, Inc.
Global Technologies, Inc.
Global Trend Alert
Gold Stock Analyst
Golden Star Technology/Micro City

Goldman Sachs Asset Management
Gordian Institute
Gordon, Haskett & Company
Gorham Advanced Materials Institute
Grant's
Green Tree Vendor Services Corp
Greenhill
GRI Companies
Grotevant Walker Research Ptners.
Group of Thirty
Gylmesi & Wedinger P.C.

H. Buff Herr
H. Clark & Company Limited
HC Instanbul
HSBC Broking (Data Service) Ltd.
Haimovilch Medical Technology Company
Hammer Consulting Group, The
Hanner Consulting Group (The)
Hanson, Perry & Jensen, PA
Harris Corp. Digital Telephone System
Harris Investment Management
Harris Trust and Savings Bank
Harry Hansen Management, Inc.
Helix Investment Partners, LP
Hellenbrand Consulting, LLC
Hewitt Associates
High Frequency Economics, LTD.
HK Ventures
HKC Securities
HLH/Panoramic
Holt Value Associates
Hood Company (The)
Horace W. Brocking Consulting
Howe Barnes Investments
HSBC Bank USA
Hub Data, Inc.
Hueler Analytics
Hughes Design/Communications
Huntington Investment Company

I.D.E.A. Incorporated
I/B/E/S International, Inc.
Ibbotson Associates, Inc.
IBCA Limited
IC Insights, Inc.
ICM Conferences
ICMS International
IDC Portfolio Management Inc.
IDS Advisory Group, Inc.
Imark Communications, Inc.
Imprima Management Services Inc.
IMS America, Ltd.
IMI Systems Inc.
IMS Health, Inc.
Inacom Information Systems
Income Research & Management, Inc.
Independent Investor Digest
Independent Perspectives
Independent Professional Services
Independent Strategy
Indepth Data Inc.
Industrial Contractor, Inc.
Infinity (A Sunguard Company)
Info USA Marketing Inc.
Information Management Network
Information USA Marketing Inc.
Information Resources Inc.
Informix Software, Inc.
Info-Reach, Inc.
Infoshare Communications, Inc.
Infosys Technologies Limited
Infotech
ING Baring Furman Selz, LLC
Ingalls & Snyders LLC
Innotech Solutions, LLC.
Inside Mortgage Finance Publications
Inside Radio
Insight
Insight Capital Management, Inc.
Institute for International Economics
Institute for International Research, The
Institute of International Finance
Institute for Private Investors
Institutional Capital
Institutional Investor Services
Institutional Property Consultants, Inc.
Institutional Real Estate, Inc.
Institutional Research Services, Inc.
Institutional Shareholder Services
Institutional View (The)
Insurance Forum (The)
Interactive Data
Intergrated Circuit Engineering Corp.
Inter-Logic Associates, Inc.
International Capital Market Corp.

International Cement Review
International Data Corp.
International Data Corp., Asia/Pacific
International Finance Corporation
International Forecasting
International Fund Administration
International Management Services
International Monetary Fund
Internet Network Technologies
Internet Systems Design Group, Inc.
Intersec Research Corporation
Intersoft Corporation
Interstudy Publications
Intex Solutions, Inc.
Intraspect Software
Investec, Inc.
Investek, Inc.
Investment Advisers, Inc.
Investment Analytics
Investment Company Institute
Investment Counsel Association of America
Investment Data Corporation
Investment Dealers' Digest, Inc.
Investment Research Institute
Investor Economics Inc.
Investors Bank and Trust Company
Investors Business Daily
Invesco, Inc.
InvestWorks
Ista Mielke GMBH
IPC Information Systems, Inc.
IPL Technologies, LTD.
IPO Financial Network
Ira Sohn Investment Res. Conf.
J. Glass & Associates
JG Kilan Company
J.L. Kellogg Graduate School of Management
Jag Notes
Jerome Levy Forecasting Center
JM Cannell, Inc.
JMA Research Institute Inc
JMR/Financial, Inc.
John Wiley & Sons
Johnson Custom Strategies, Inc.
Johnson Rice & Company LLC
Jolson Merchants Partners
Jos Technology Inc.
Joseph DeCosimo and Company
Journal of Finance (The)
Journal Watch
J.P. Morgan Investment Management
JT Sorrells Inc
Jupiter Media Metrix
J.W. Finance Consulting

Kagan World Media
Kaufman Brothers, LP
KEA Capital
Keane Inc
Kforce.com
KMI Corporation
Kenny Information Services
Kenwood Group, Inc.
Kestrel Technologies, L.L.C.
Kilpatrick Stockton LLP
Kinder, Lydenberg & Domini, Inc.
King & Spalding
Kingsley Associates
Kinsley Power Systems
Kirkpatrick and Company
KLD Research & Analytics Inc
KMI Corporation
Knight-Ridder Information, Inc.
Knobias.com
Kobren Insight Management, Inc
Koch Financial Corporation
K.P.A. Advisory Services

LaJolla Economics
Lamers Equity Research
Lande Group/Micro Computer Systems
Lark Research
LaSalle National Bank
Laurence H Meyer & Associates, Ltd
Lavery Consulting Group
Legg Mason Wood Walker, Inc.
Lehrman Bell Mueller Canon, Inc.
Leigh Bureau
Lend Lease Rosen
Leuthold Group, The
Lexis Document Services
Lexis/Nexis
Leylegian Investment Management, Inc.
Liebert Corporation
Lifeline Industries, Inc.
Little Black Box Forecasts
Line Data Services, Inc.
Lincoln Capital Management

Company
Lipper & Company. LP
Little Black Box Forecasts
Liscio Report (The)
Lloyd George Investment
Management
LMC International, Ltd.
Loan Pricing Corporation
LongView Group (The)

M. Shanken Communications
MacKay-Shields Financial
Corporation
Macro Computer Products, Inc.
Macroeconomic Advisers, LLC
Managed Account Reports
Manufacturing & Network Solutions
Market.com, The
Market News Service Incorporated
Market Profile Theorems, Inc.
Market Research Corporation
MarketNet Group
MarketSoft Research
Market Statistics
Market Systems Newsletter
MarketSoft Research
Market Trends Investors
Market Vane Corporation
Marquette Associates, Inc.
Marquette Financial Group
Marsico Capital Management, LLC
Martaus & Associates, Inc.
Martin Currie, Inc.
Marvin Zonis & Associates, Inc.
MBH Commodity Advisors Inc
McAffee Associates, Inc.
McCarthy, Crisanti & Maffei, Inc.
McCartney Construction Company
McClellan Financial Publications, Inc.
McDonald Investments
McDonnell Information Systems
Limited
McSherry & Company
MCSI Computer Supplies
Measurisk .com
Mealey's Group, The
MediaOne
Medley Investment Group, LLC (The)
Megent Fis
Mehta Partners
Mellon Bank
Mellon Trust
Merritt Communications
Mesirow Financial
Meta Group Inc
Metal Bulletin Inc.
Metriplex, Inc.
Metropolitan West Asset
Management
Metzler Services
MFS Telecom, Inc.
Michigan National Bank
Micro Design Resources
Microage Computer Stores
Microhedge, Inc.
Microland-Macroland "HQ"
MicroMedia Inc
Micron Electronics, Inc.
Micropoint Computers
Mi-Kro Computer World
Midas-Kapiti International
Middle East Economic Survey
Miller Anderson & Sherrerd, LLP
Millennium Investment Corporation
Milliman & Robertson, Inc.
Milken Institute Conference Center
Missing Link, The
Mitchell Hutchins Institutional
Investors Inc.
Mitchinson Napier Bedford
ML Consulting Services
ML Trust of America
Mobile Plant
Modern Healthcare (Crain
Communications)
Mondiale Partners, Ltd.
MoneyLine Network, Inc.
Money Manager Review
Money Market Directories, Inc.
Monis Software Limited
Montgomery Investment Technology
Montag & Caldwell, Inc.
Moody's Investors Services
Morgan Stanley Capital Intl Research
Morningstar, Inc.
Mosaic Research
MRL Trade Limited
MSNBC Desktop
MST Research, Inc.
Multex Systems, Inc.
Multichannel News
Municipal Emp. Rtmt. Sys. of

Michigan
Municipal Market Advisors
Municipal Market Data
Municipal Treasurers' Association
Murex North America, Inc.
Murenove Inc.
Muzea Insider Consulting Services

NAA Foundation
NAIC Securities Valuation Office
Nasdaq Stock Market, Inc., The
N.A.S.I.P
Nat City Investments
Nat Institute of Investments
National Association of Real Estate Trust
National Center for Cont. Education
National City Cleveland/Trust
National Institute of Investment Research
National Mortgage News
National Order Educators
National Planning Corporation
Nationwide Financial
Navellier-MPT Review
Navigant Consulting, Inc.
NBC Levesque International Ltd.
NCM Capital Management Group, Inc.
Nebrask Investment Council
Nelson Industries Profit Sharing
Neo Technologies
Neovest, Inc.
Netteks Technology Consultants
Network Appliance
Network Access Solutions
Neovision Hypersystem
Nevada Institutional Investors
New Economy Watch
New Edge Networks
New Pittsburgh Courier
New York University Stern School of Business
New York Stock Exchange, Inc.
New York Times, The
NewsEdge Corporation
Newsware, Inc.
New Vernon Associates Inc
Nicholas-Applegate Capital Management
Nielsen Media Research
Niemeyer, Korwin-Krystyna
Nikkei Data
Nilson Report, The
Nirvana Systems Inc.
Noah Financial, LLC
North River Ventures
North Shore Printers
Northern Trust Quantitative Advisors
Northfield Information Services Inc.
Novalink Limited
NYU Stern School of Business

Oak Associates, Inc.
Oasis ComputerSolutions
Oasys
Object Design
Oceanview Financial Research, Inc.
Omgeo LLC
One Source Information Services, Inc.
Onsite Access, Inc.
Open Systems Technologies
Optima Investment Research, The
Options Price Reporting Authority
Oracle Corporation
OrbiMed Advisors, LLC
Orderpoint TIS
Orford Capital Management
Orion Research Partners
OTA-Off The Record Research
OTC, Inc.
Outstanding Investor Digest

P. C. Quote, Inc.
Pacific Bell
Pacific Growth Equities
Pacific Pension Institute
Pacific Select Distributors
Paladin Investment Associates
Pan Pacific Software LLC
Patrick Hayden (Consultant)
Patriot-News Co., The
Patterson Capital Corporation
Paul Kagan Associates
Payden & Rygel
PCI (Xylenes & Polyesters) LTD.
PC Magazine
Peachtree Software
Penfold Limited
Pensions 2000
Pennisula H/V Beach EN, The
Penobscot Group Inc., The

Pensions 2000
Pension Benefit Information
Pensions and Investments
Perception International
Performance Services Group
Performance Technologies, Inc.
Peter Cole and Company
Peter Mikolaj & Associates
Petroleum Intelligence Weekly
PharmaBooks Ltd
Philadelphia Newspapers, Inc.
Philadelphia Tribune (The)
Phileo Allied Securities
Philip S.P. Randolph, Inc.
Phillips Global Media
Phillips Office Products, Inc.
PictureTel Japan Co. Ltd
Pillette Investment Management, Inc.
Pittsburgh Post Gazette
Pira Energy Group
Pittsburgh Post Gazette
Plan Sponsor Network, Inc.
Platformedia LLC
Platt's Oilgram Price Report
Platt's Newsletter/Newswire
Plexus Group
PNC Bank
Polyconomics, Inc.
Pomeroy Computer Resources, Inc.
Portfolio Management Technology
Portfolio Solutions
PREA
Precision Timing
Precursor Group
Premier Solutions
Preservation Research
PricewaterhouseCoopers
Primark Canada, Inc.
Primark Decision Economics, Inc.
Prime, Buchholz & Associates, Inc.
Princeton Economic Institute, Inc.
Princeton Financial Systems
Princeton Retail Analysis
Private Equity Analyst, The
Proequities Inc
Professional Alternative Inc.
Professional Expert Trading Systems
Professional Training Services, Inc.
Protel Communications Ltd.
Provident Investment Counsel
Proxy Monitor, Inc.
Proxy Voter Services
PRS Group (The)
Publishers Service Exchange
Puget Sound Economic Forecaster
Putnam Advisory Company, Inc.
Putnam Investments Inc.
Pzena Investment Management

Q-Tech Communications
QED Information Systems
Quantec Investment Technology
Quantitative Analysis Service, Inc.
Queens City Financial Consultants
Quest
Quick, Moneyline, Telerate Corp.

R & B Financial Solutions
RCG Information Technology Inc.
R.H. Wrightson & Associates Inc
R.W. Mansfield Co., Inc.
Ranking Service, The
Radio Business Report
Rampart Investment Management
Real Estate Alert
Real Estate Transformation Group
Reference, Inc. The
Regulatory Research Associates
Reininga & Company
Reinganum Consulting
Reliable Corp (The)
Renaissance Capital
Renaissance Worldwide IT Consultants
Republic Security Bank
Research Network (The)
Research Works
Research Vision Limited
Resource Advisory, Inc.
Resource Center (The)
Reuters America, Inc.
Reuters India Limited
Reuters LTD (Austria)
Reuters Singapore Pte Ltd.
Richard L. Hanley Associates
Richards & Tierney Inc.
Ried Thunberg & Co Inc.
Righteous Intl. Subscription Services
Risk Conferences and Training Courses
Riskmetrics Group LLC
Rittenhouse Financial Services

Riverplace Consulting Services
Robert F. Fargo & Co., Investment Res.
Rockefeller Treasury Services
Rogers, Casey and Associates
Roxbury Capital
Roxin and Company
Royal Oaks Consultants Group
Royal Institute of International Affairs
Ruarte's Report
Rudd and Wisdom, Inc.
Ryan Labs, Inc.

Salomon Analytics Inc.
Santa Fe Institute
Sayers Consulting Services
Schroeder Advisory Services, Inc.
Schulte Roth & Zabel LLP
Schwab Performance Technologies
Schwab Washington Research Group
Scientific Investing
Seagate Software
Seamans Capital Management
SEC Insight
Sector, Inc.
Sectorbase.com, Inc.
Securities Data Publishing
Securities Industry Automation Corp.
Securities Operations Forum
Securities Research Company
Securities Software & Consulting, Inc.
Segal Company (The)
Segall Bryant & Hamill
Seidel Associates Incorporated
Select Equity Group, Inc.
Semantic Architects
Seneca Capital Management
Sentinel Pension Institute
Seward & Kissell LLP
Shands Jacksonville Medical Center
Shartsis, Friese & Ginsburg, LLP
Short Capital LTD
Siemens Business Communication
Sierra Investment Partners
Sigma Systems, Inc.
Silverback Networks, Inc.
Simplified Computer Services
Simon-Hunt Strategic Services
Sims Moss Kline & Davis LLP
Simsbury Electronics, Inc.
SIT Investment Associates, Inc.
Sitelis Design Studio
Skytel Pagers
Smith's Research & Rating Review
Smithers & Co. Ltd.
Software Spectrum
Solsource Computers, Inc.
Soliton Associates, Inc.
South African Inst. Of Race Relations
Southland Sound Corporation
Sovran Capital Management Corporation
Soyata Computers of Rochester
Spartan Institutional Research, Inc.
Spencer F. England & Co., Inc.
Spencer Fane Britt & Brown LLP
Sprucegrove Investment Management Ltd.
SSI Technologies PTE., LTD.
St. Louis Business Journal
Stafford Publications
Stalla Seminars
Standard Club (The)
Standard Valuations, Inc.
Starmine
Startspot Mediaworks
State Street Bank and Trust
State Street Global Advisors
Statsci
Statsoft
Stax Inc
Stellcom Technologies
Stern Stewart & Company
Stevens Publishing Corp.
Stock Data Corporation
Stock Management, Inc.
Stock Market Geometry
StockVal, Inc.
Stone & McCarthy Research Associates
Strain Consultants Inc.
Stratecon Corporation
Strategic Economic Decisions, Inc.
Strategic Insight
Strategic Investment Solutions
Strategic Morning Line
Street Software Technology, Inc.
Stremkal Inc.
Stroh Corporation
Sturza's Institutional Research
Sugarman and Susskind, P.A.

Sun America Capital Services, Inc.
Sun Microsystems
Superstock Investors
Syscom, Inc.
Symmetria Software LLC
Syntegra
Synergistics Technology Inc.

13D Research
Taj Technologies, Inc.
Taylor Consulting Inc.
Team Systems
Tech Hackers, Inc.
Technology Investing
Technology Solutions International
Telecommunications Reports
Telemet America Inc
Teleport Bermuda Limited
Telerate Systems, Inc.
Telesphere Corporation
Tempus International Ltd.
THL Managers V LLC
Thomson Asia PTE LTD.
Thomson Corporation HK
Thomson Financial Media
Thomson Financial Muni Group
Thomson Financial – Portfolio Solutions
Thomson Financial – Solutions
Thomson Wealth Management
Tiboco Financial Technology
Thomson Asia PTE LTD.
Tillinghast-Towers Perrin
Time Inc. Asia
Time Magazine
TIS Group, Inc.
Tokyo Stock Exchange Computer System
Topline Investment Graphics
Toronto Stock Exchange, The
Torch Capital Corporation
Toyo Keizai, Inc.
Townsend Group, The
Track Data Corp
Trade Management Systems, Inc.
Trade Web
Trade Winds
Trade Wins Publishing
Trading & Investment Programs & Systems
Tradenet Corporation
Tradition Financial Services Inc.
Trans-Lux Corporation
Transmarco Data Systems Pte Ltd.
Trans-National Research Corporation
TRD Consulting, Inc.
Trepp Management Group
Tri-State Envelope Corporation
Trias Capital Management
Trim Tabs Financial Services, Inc
TRS Staffing Solutions,Inc.
True Solutions,Inc.
Tuff Management Co.
Turnaround Letter (The)
T.W. Cooney & Associates
Twin Capital Management, Inc.

U. S. Offshore Funds Directory
U.S. Communication, Inc.
U.S. Micro
UCLA – Anderson Forecast
Unisys Corporation
United Data
United System Solutions
University of Miami Diagnostic Clinic
UNIWEB-NET
US Connect
US West Communications
Utility Pension Fund Study Group
UUNET Technologies, Inc.
Uvest Investment Services

Vanstar
Veneroso Associates
Venture Financial Systems Group, Ltd.
Venture One
Vertex Computer Cables & Products
Vestek Systems
Vickers Stock Research Corp.
W.H. Brown & Co., Inc.

Walker's Manual, LLC
Wall Street Calendar Corporation
Wall Street Journal, The
Wall Street Source, LLC
Wall Street Strategies
Warwick Business School
Washington Research Group
Wedge Capital Management, Inc.
WEFA Group, The

Wellington Management Company
Wells Fargo, Institutional Trust Division
Wharton Real Estate Review
Wharton School Executive Education
WHO Investment Consulting Company
William R. Hough & Co.
Williams Inference Service, The
Williams & Jensen
William Smith Special Opportunities Research
Williamsburg Investment Co.
Windhover Information, Inc.
Winter, Wyman & Company
Wipro Limited
WM Company, The
WM Smith Special Opportunity Research
Woodmentum Technical Research
World Steel Dynamics, Inc.
World Bank, The
World View, Inc.
Wyatt Investment Consulting, Inc.

Yankee Prognostics, Inc.
Yanni-Bilkey Investment Consulting
Yelton Fiscal, Inc.
Yon Drake & Associates

Zacks Investment Research, Inc.
Zephyr Associates, Inc.
ZPR International, Inc.,

Appendix A

Views of an "Informed" Trader

Harold S. Bradley
Senior Vice President
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Kansas City, Missouri

The traditional and customary practices of order execution, including the use of soft dollars, are too often in conflict with achieving best execution for investors. Thus, these practices have come under scrutiny by the U.S. SEC and industry standard setters (such as AIMR), and firms have come under pressure to increase trade transparency and improve record keeping and accountability. Among the steps firms should take in this new environment is to demonstrate dedication to reducing trading costs, and among the best tools for that purpose (despite what many in the industry believe) is the electronic communication network.

As a former trader and portfolio manager at American Century Investment Management (ACIM), I have observed firsthand the difficulties involved in trading and the achievement of best execution. In particular, I have noticed how much of the investment management business uses the trading desk as a bill-paying function to support the business enterprise rather than as a mechanism for carrying out the fiduciary obligations owed to the client to provide best execution and to maximize the value of investment decisions. In this presentation, I will discuss the problems that stem from the myriad cross-subsidies that have been built into the commission stream and discuss how the current research payment systems may be subject to regulatory scrutiny and reform.

What Is Best Execution?

A definition of best execution appears just about everywhere: due diligence manuals, marketing presentations, consultant questionnaires, and requests for proposals. No legal definition exists, however, or at least traditionally, there has not been one. Thus, the search for best execution has proven elusive, despite the many assurances otherwise. "We know it when we see it, but it is really hard to measure," is an oft-quoted expression on trading desks when alluding to the concept of best execution. Traders are not paid to make decisions that really work to achieve best execution and have disincentives to doing so: They have soft dollar chits to pay and shares waiting to trade for impatient, demanding, and often unrealistic portfolio managers. Traders operate under what I call "maximum risk aversion for maximum pay on the desk." As a portfolio manager, when I made a bad decision, I blamed the trading desk. Trading is a function in which it is difficult to claim "value added" and easy to look bad in a handful of trades. As a result, it is no surprise that traders give the ambivalent answers they do when asked about best execution.

New Definition. In 2000, before leaving the U.S. SEC, former commissioner Arthur Levitt started the process of articulating new standards for best execution. At the same time, both the Investment Company Institute (ICI) and AIMR were asked to convene best practices groups to help define best execution. At the December 2000 ICI Securities Law Development Conference, Gene Gohlke, associate director of the SEC Office of Compliance Inspections and Examinations, offered this definition of best execution:

> In placing a trade, the trading desk will seek to find a broker/dealer or alternative trading system that will execute a trade in a way that the trader believes will realize the maximum value of the investment decision.

Editor's note: This presentation is reprinted from the AIMR proceedings *Organizational Challenges for Investment Firms* (Charlottesville, VA: AIMR, May 2002).

Given the conventional wisdom surrounding best execution, this definition presents a challenge to the industry.

The "investment decision" referred to in Gohlke's definition pertains to the particular trade being executed—not to Goldman Sachs' research yesterday, First Boston's research last week, or a consultant who directs a lot of business to the firm. In terms of words, the change is minor, but in terms of policy, the change is rather substantial. And the addition of "alternative trading systems" in the definition is a big change. The use of electronic communication networks (ECNs) and nontraditional trading systems has exploded in the market in the past 10 years. Yet, I am told that on the buy side, institutional money managers still directly use these systems less than 7–8 percent of the time.

In his presentation at the ICI Conference, Gohlke identified possible areas in which SEC auditors will spend more time. Note that he was not talking to investment professionals but, rather, to the lawyers who advise the outside directors who, in turn, advise funds and money managers. Investment managers have fiduciary obligations to boards as well as to investors in the areas of compliance systems, compliance evaluation procedures, and record keeping. Accordingly, the SEC is saying that the hiring of a consultant to measure execution quality is not sufficient proof that a manager is in compliance with getting best execution; the adequacy of order-handling systems, trade-error experience, and timeliness of execution reports will be reviewed; and the allotment of initial public offering (IPO) shares against requested allocations will be assessed.

Basically, the SEC appears to have serious concerns about how Section 28(e) of the Securities Exchange Act of 1934, which provides a "safe harbor" for firms to pay up for research, has been used and interpreted. In addition, the use of ECNs—as venues that provide greater liquidity, price improvement, and lower commission rates—will be evaluated. Many people on the buy side are not using ECNs, and this new mandate from the SEC means that the regulators want to know why.

AIMR Trade Management Guidelines. AIMR's proposed Trade Management Guidelines on best execution were announced in November 2001.[1] The AIMR recommendations are consistent with the direction of the SEC. The guidelines recommend the establishment of trade management oversight committees that will be responsible for developing a trade management policy and a process to manage the efficacy of trades. Are you getting what you are paying for? Are you evaluating the service you received? And are you evaluating the providers of that service?

Specifically, the implications of these guidelines are as follows:

- Substantial infrastructure spending will occur to build record-keeping and reporting systems to track and audit trading information appropriately because so many firms still operate with inadequate order management systems.
- The negotiation of acceptable commission ranges and documentation of the variance between negotiated and actual commission rates will become necessary. Commission rates that held at 5–6 cents a share for more than a decade should and will be negotiated down to a level closer to the 1.00–1.25 cents a share rate paid on ECNs for execution-only services.
- Trade management oversight committees will be established, and the internal documents prepared for these committees will be auditable by the SEC. The SEC has already been asking for these materials.
- Real and potential conflicts of interest must be documented.
- The choice of a particular trading system must be supported, and the review and evaluation of trades, broker selection, and execution performance can be expected.

What Are Soft Dollars Really Buying?

In Gohlke's definition of best execution, traders are charged with maximizing the value of the trade decision. But Robert Schwartz, the Marvin M. Speiser Professor of Finance at Baruch College, City University of New York, and Benn Steil, at the Council of Foreign Investors, have studied how little control traders actually have over the execution decision. They sent questionnaires to the chief investment officers of major investment companies that asked, "Who at your firm controls institutional commission payments?" They found that 62 percent of all trades are not controlled by traders.[2] (This finding is consistent with my experience as a trader and portfolio manager.) The report also addresses how often commissions are used to pay for things other than best execution. And Steil, aggregating the information from a variety of reports on commission bundling, has stated that nearly two-thirds of soft dollar agree-

[1]The proposed guidelines are available at www.aimr.org/pdf/standards/proposed_tmg.pdf, and the final guidelines are expected to be issued in November 2002.

[2]Robert Schwartz and Benn Steil, "Controlling Institutional Trading Costs," *Journal of Portfolio Management* (Spring 2002):39–49.

ments are unwritten and more than one-third of brokers are a party to illegal soft dollar arrangements.[3]

Clearly, soft dollar agreements play an important role in the execution decision and are often in direct conflict with an investment firm's fiduciary duty to the client. What are soft dollars really buying? How extensively is soft dollar business affecting the trading decision and ultimately usurping the goal of best execution?

Research. Investment managers pay up for execution and have a safe harbor to do so to some extent under Section 28(e), because in exchange for paying up, they receive company proprietary research services, including access to analysts and road shows with corporate executives. But now that these executives are subject to Regulation Fair Disclosure (FD), why are managers still willing to pay up?

The willingness to pay up is especially thought-provoking because most investment management firms choose to "buy" their research from brand-name companies (paying up relatively more), even when firm or brand name is obviously not a proxy for quality. Based on the following observations, this attraction to brand appears to be quite misplaced: Only 41 percent of analysts at the 10 largest brokers (what I consider the brand-name brokers) rank as StarMine four- or five-star analysts, compared with 35 percent of analysts at all firms having 10 or more analysts.[4] Rankings are based on the earliest directional correctness and accuracy of the analysts' EPS estimates for the trailing four quarters and two years as well as on the accuracy of buy, sell, and hold recommendations. The top five firms with the largest percentage of four- and five-star analysts are regional or niche research firms without significant investment banking activities, namely, Buckingham Research Group, Gerard Klauer Mattison, Pacific Growth Equities, U.S. Bancorp, and WR Hambrecht + Company. At the 10 largest brokers, 25 percent of the analysts ranked poorly, as one- or two-star performers. Obviously, the rationale that brand-name research is a worthy use of the client's commission dollar is suspect at best. Yet, the industry persists in supporting the practice of "buying" research with soft dollars, which is a major factor in holding negotiated commission rates at the 6 cent level.

A safe harbor? In his speech to the Securities Industry Association in November 2000, Levitt asked whether portfolio managers were bringing to bear the pressure they should on brokerage commission rates and why the emergence of electronic markets had not driven full-service commissions lower. If a trade on an ECN costs a penny or less a share, why do most people on the buy side still pay 5–6 cents a share? Do portfolio managers and independent directors think 6 cents is safe, that it falls within the safe harbor exception of Section 28(e)?

Levitt said that 6 cents is not a safe rate and that those who think it is should reexamine the part of their business that is predicated on 6 cents being safe. The status quo of the industry's trading and execution practices is being seriously challenged by the SEC. And **Figure 1** shows that, although the median commission rate has been steadily decreasing since 1989 because of technological advances and commission unbundling, immediately following Levitt's speech in 2000, the median rate dropped below 5 cents a share. Apparently, the market heard and understood the message.

The real cost of research. Understandably, investors must pay a cost for block trading, capital facilitation, value-added research, and IPOs, but what is that cost (i.e., the real cost of trading)? **Figure 2** compares average cost-per-share rates at ACIM with the industry median. The solid dark line depicts the rates our agency brokers have been willing to negotiate. The rate has not dropped significantly since 1989, even though we have tried, with minimal success, to move it lower. (Of course, with regulators and professional organizations such as AIMR and ICI moving the issues of best execution and soft dollar business to the forefront, the tenor and tone of the market changed markedly in 2001.)

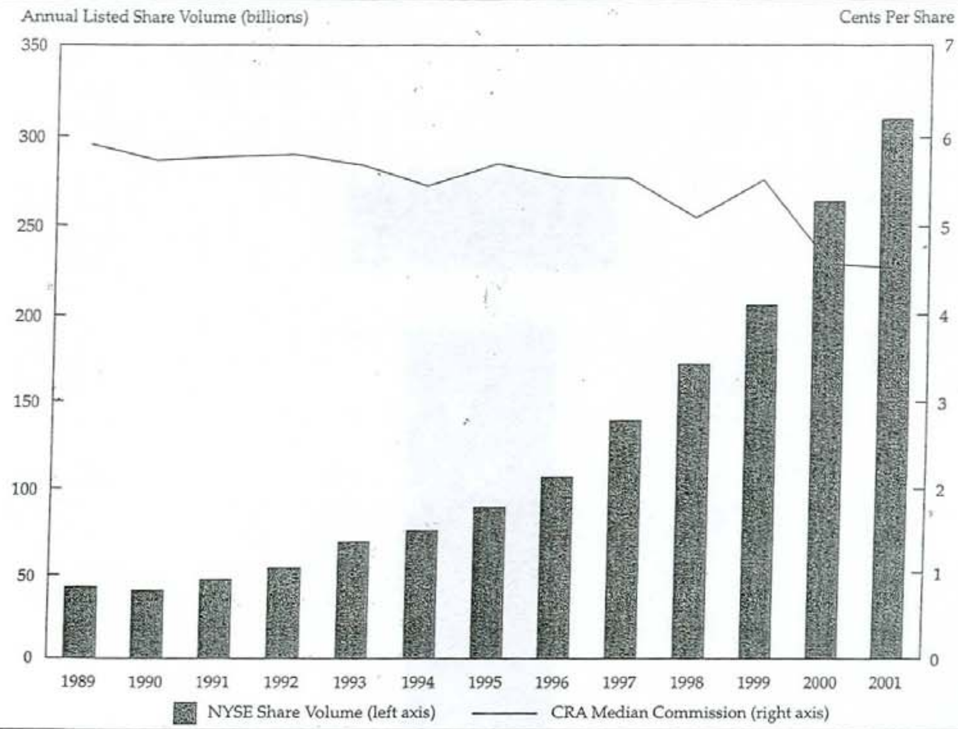
The dashed line in Figure 2 shows ACIM's average cost for using ECNs, where we do 35–40 percent of our business. The difference in the rate charged by our agency brokers and the rate charged by the ECNs can be thought of as a premium paid for research. In 2001, this premium was at an all-time high. When the value of research should be worth far less than ever before, given Regulation FD and the information overload via the Internet, the cost of soft dollar research is at a record high mainly because technology has lowered the *real* cost of trading while the "old rules" of trading and execution have kept the actual cost of trading artificially high.

I used to be convinced that the more business we did on ECNs, the more our costs would rise (and the less the marginal benefit would be) because of a structural reversion to the mean. **Table 1** illustrates, however, that the mean for all-in trading costs is down, not up. As our business on these nontraditional systems increases, our overall efficacy, as measured against other brokers doing similar business in

[3]Benn Steil, "Can Best Execution Be Achieved in the Current Market Structure?" Presentation given at the AIMR conference "Improving Portfolio Performance through Best Execution," November 30–December 1, 2000, Chicago.

[4]StarMine is an ACIM portfolio company.

Figure 1. NYSE-Listed Share Trading Volume and Capital Research Associates' (CRA's) Industry Median Commissions, 1989–2001



Note: Commission chart inclusive of ECN agency fees.

the same time frame, has widened. ECNs are far more effective than the traditional exchanges. They remove structural, intermediated costs.

The nontraditional players, highlighted in bold in Table 1, are important; in particular, B-Trade, Archipelago, and Instinet have helped lower our costs of trading. Broker 3, one of the most respected Nasdaq market-making firms in the business, produced costs equal to 2.03 percent of principal, round-trip, on Nasdaq trades, whereas Archipelago and Instinet both produced a negative cost. According to Capital Research Associates' methodology, "negative cost" means that the day after our order is finished, the price of the stock we sold is still falling. In other words, we have not telegraphed our intentions to the rest of the market in moving big orders, and we have succeeded in executing at a relatively fair price.

Use of electronic trading for listed stocks has only recently begun to pick up steam; Archipelago linked into the Nasdaq system to display orders in the public market early in 2001. Traders can now put their order indications into the public quote system and split the spreads charged by the specialists. The ability to lower costs this way is compelling.

Market Stability. For decades, brokers have justified all types of structural cross-subsidies by claiming that when markets are under stress, the broker will help stabilize the market. The popular theory was that the ability to get best execution depends on a broker's willingness to lay capital on the line during times of market-distress, when that capital infusion is really needed.

In their article, Schwartz and Steil conclude, instead, that the buy-side institutions' call on street capital for immediacy of execution is an insurance or option to protect the investment manager's identity and order size from being captured by intermediaries and transmitted to competitors—to avoid being front-run. To support their contention, Schwartz and Steil point out that, based on the responses to their

Figure 2. Historical Commission Trends, 1989–2001

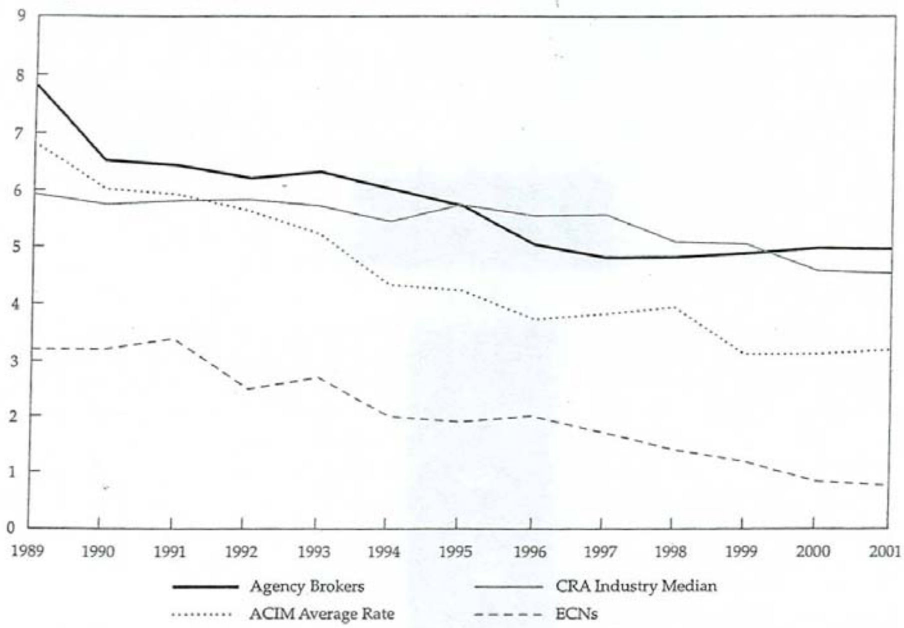


Table 1. Capital Research Associates' Study of ACIM All-In Trading Costs

Broker	Dollars Traded	Average Market Cap (billions)	Average Volatility	Cost as Percentage of Principal: OTC	Cost as Percentage of Principal: Listed
ACIM funds average	$47,607,820,875	$56.76	51%	0.49 bps	0.32 bps
Broker 1	4,263,056,375	48.67	45	0.66	0.28
Broker 2	2,637,630,000	47.28	45	0.93	0.23
Broker 3	1,672,943,750	42.69	56	2.03	−0.40
Broker 4[a]	1,738,325,000	35.23	51	−1.00	0.24
Instinet	2,219,195,000	61.35	61	−0.23	−2.72
Crossing Network	923,983,750	45.17	53	0.61	−0.25
B-Trade	3,697,211,250	56.24	63	0.84	−0.28
Archipelago	5,855,745,250	65.83	64	−0.06	−0.46
Traditional brokers[b]	10,311,955,125	43.47	49	0.66	0.09
Electronic brokers	12,696,135,250	57.15	60	0.29	−0.93

Note: Data reflect non-dollar-weighted mean of 10 six-month periods, June 30, 1997, through June 30, 2001 (post-order-handling rules).

[a]Negative OTC costs are a function of aftermarket IPO performance.
[b]The "traditional brokers" category reflects four large brokers only.

survey, portfolio managers only rarely create orders based on seeing the other side through a telephone call, trading activity, or order flow in the market. Investment managers appear to be attributing their willingness to pay up for liquidity to a reason that is not borne out in practice.

Order Life Cycle

Understanding how orders are executed and how the trading system is changing can shed light on the challenges of achieving best execution because of competing interests in the trading process. The life cycle of an order at the NYSE follows a convoluted route littered with at least seven intermediaries: An order travels from a portfolio manager to the trader; to a broker sales trader; to a "block," "position," or "upstairs" trader; to a floor broker; and finally, to the specialist post. Here is how it works. A portfolio manager decides to buy a stock and calls his institutional trader at the trading desk. That trader then tries to figure out which broker she might have heard from in the last two days that might have an order in that stock or, as likely, identifies a broker to whom the manager owes a consultant bill or who holds a soft dollar chit. She then gives the trade to the trader at that brokerage firm. The broker sales trader is the most frequent and trusted point of contact for the institutional sales trader.

But then there is the broker "upstairs" trader, whose job is to trade the firm's block capital. The reason brokers staff a sales trader position is ostensibly to protect the investor from the upstairs trader. For example, if the investor gives a 500,000-share order to the sales trader in Chicago, a trusted sales trader will not immediately disclose this information to the upstairs trader in New York. If the upstairs trader communicates this information throughout the system and is then asked to bid someone else's stock, that information alone might trigger "go along" activity and have an unfavorable impact on the price of the first trader's order. Investors need protection from the upstairs trader, but that upstairs trader is also the broker's representative for the investor's interest with the NYSE floor broker. The floor broker may be representing not only the firm representing that investor but also other firms and, therefore, other investors. The floor broker then goes to the specialist, who posts the order to the tape as part of the National Best Bid and Offer (NBBO) system, as seen on Bloomberg. The whole process is repeated on the other side of the trade.

Now consider order half-life. Orders travel from investor to specialist, with successively smaller order amounts passing from trader to trader within this sort of "bucket brigade." Everybody buys and sells exactly the same way. After an investor gives the institutional trader 500,000 shares to trade, that institutional trader gives the sales trader 250,000 shares to trade. The sales trader gives the upstairs trader 125,000 shares to trade, and the upstairs trader, through the floor broker, tells the specialist to post 25,000 shares. With such a system, no wonder traders believe that trading is a win–lose function.

In a market driven by eighths (before decimalization), commissions and trading spreads were plentiful and the mix of traditional roles in the execution process was sufficient assurance that everyone on the sell side would do well. In a market now driven by decimals, the life cycle of an order has not changed but the economics of the business certainly has. In the retail universe, a theory exists that payment for order flow and internalization of orders has been a large part of the profits of the business. This precedent is collapsing because both ECNs and decimalization have so markedly changed the economics of the execution process.

The Specialist. Because of the completely counterintuitive auction rules that govern trading on the NYSE, getting the best price in the market is often difficult. Let me explain what I mean with the following example. Say I go to a wine auction to buy a special case of wine. I want this wine badly because it is rated as one of the top wines of the new vintages; in 10 years, it will be worth a bundle, plus I will have good wine in the cellar. The bidding starts and quickly rises to $3,000 a bottle. I know I should not pay that much, but the auctioneer calls the bid and says I just purchased the wine. The case is opened, and I am handed four bottles—and then four bottles go to a person who was sitting three feet away from me who never opened her mouth, and another four bottles go to someone on the telephone. Before the bidding started and unknown to me, these two people said that they wanted to participate in the trade and buy at the highest price that cleared the supply.

Such are the rules of trading at the NYSE. The rules allow free options to third parties, so despite the theory published in the academic literature on auction markets, serious obstacles exist to discovering an appropriate clearing price. As long as a third party is allowed to forgo the risk of price discovery, that third party gets a free option on whatever is being traded. I find that situation fundamentally wrong. In my earlier example, the wine seller did not get the right price because I, as an interested buyer, was not allowed to bid for all the bottles I wanted and the other bidders were essentially removed from the bidding process altogether.

Little information is available on the profitability of specialists. A major NYSE specialist firm, LaBranche & Company, did recently go public, however, which provided some clues. The initial offering prospectus showed that LaBranche consistently earned more than 75 percent of its profits from dealer trader activity, had been profitable every quarter for 22 years, and averaged consistent returns on capital and equity of more than 70 percent. If LaBranche's numbers are typical of the economics of NYSE specialists, are investors benefiting from the intervention of the specialist, or do specialists simply impose another layer of expense?

Clean Cross Rule. The clean cross rule (Rule 72[b]) at the NYSE also grants a free option for liquidity takers and proprietary interests. A clean cross is a trade involving a matched pair of buy and sell orders of 25,000 shares or more that cannot be broken up (that is, disclosed floor interest is not included in the trade). Rule 72(b) currently gives priority to clean crosses at or within the prevailing quotation, and crosses are not allowed if any part of the cross is an order for the account of a member or member firm. An amendment to Rule 72(b) filed by the NYSE provides for clean crosses even if all or part of the order is for a member or member firm. Say you are a buyer bidding for 25,000 shares at $20 and the order is on the book as a limit order displayed for the whole world to see on Bloomberg. A broker has a customer who wants to sell 100,000 shares at $20 and another customer (or the broker himself) who wants to buy 100,000 at $20. They trade with each other, and your order remains unexecuted. Such a situation is worse than the situation with the specialist I just described because under the amendment, a broker can trade proprietarily on one side of a block trade and ignore preexisting orders on the trading floor.

The rules of trading are designed for the intermediaries and grant absolute free options to limit order traders in the market. Transparent limit orders provide the basis for price discovery in listed equities markets. I believe limit orders are an endangered species.

Institutional Xpress. The NYSE has finally paid attention to the ICI, which has been saying for a long time that limit orders are being subjected to free options. Accordingly, the NYSE established Institutional Xpress, which is designed to allow the institutional investor to take an offering or hit a displayed limit order through the NYSE DOT (designated order turnaround) system without an attempt to gain price improvement. Ironically, the rules governing Institutional Xpress provide an opportunity for, instead, price improvement of a market order. This is but another example of rules beneficial to brokers and inimical to the interests of buy-side traders.

Why *Not* ECNs?

ECNs improve the traditional execution mechanism and eliminate the requirement of dealing with the specialist. An ECN is a limit order book, and limit orders have primacy. The most important aspects of primacy are price priority, time priority, anonymity, and an order cancellation privilege—absolute control over entry into and exit from the market. The ability to cancel orders at will establishes a potential time value on options; they are no longer free. Nicholas Economides and Schwartz found that investors appreciate the motives for trading on ECNs but that the soft dollar arrangements that traders must satisfy may stymie ECN use.[5]

Nevertheless, despite the electronic trading systems' proven advantages, the buy side still has not welcomed ECNs with open arms. Ian Domowitz and Steil concluded:

> An examination of total trading costs, inclusive of commissions, reveals electronic trading to be superior to traditional brokerage by any measure of trade difficulty for buy trades and to be comparable for sells.[6]

Traders give several reasons for not trading on ECNs. Traders claim that large orders cannot be executed efficiently on ECNs and that executing through ECNs conflicts with the immediacy required to execute before an anticipated market move. Traders need to recognize that, in fact, ECNs not only offer the anonymity they seek but can also effectively execute large orders through rapid-fire, small, block-equivalent trades—as do brokers and market makers today.

Anonymity. Above all, both buy-side *and* sell-side traders seek order anonymity in the market. Yet, the identity of the firm, the size of the firm, and its trading practices are all known by the intermediary chosen to execute an order for a buy-side client. That intermediary has a relationship with at least 200 other high-commission-paying firms. Certainly, a relationship with some degree of trust exists between the trader and the sales trader, but that trust can break down rather easily. Because of the very nature of the

[5]Nicholas Economides and Robert A. Schwartz, "Equity Trading Practices and Market Structure: Assessing Asset Managers' Demand for Immediacy," *Financial Markets, Institutions & Instruments* (November 1995):1–45.

[6]Ian Domowitz and Benn Steil, "Automation, Trading Costs, and the Structure of the Securities Trading Industry," *Brookings-Wharton: Papers on Financial Services*, edited by Robert E. Litan and Anthony M. Santomero (Washington, DC: The Brookings Institution, 1999):33–81.

system, then, believing that a firm is working just for you or not leaking information about your order into the system is naive. ECNs, however, are the very definition of anonymity in trading.

Size. Traders have been heard to say, "Look at these screens. The orders are all for 1,000 shares, and on Nasdaq, they are offering 100 shares; there is no liquidity." This liquidity argument is largely moot; large, hidden limit orders, which are basically reserve quantities, exist on ECNs. The Nasdaq has just petitioned for a rule change that would allow market makers to show only 100 shares of an order to the market while at the same time placing as much as tens of thousands of shares in a nontransparent order queue. A benefit of this capability is that to trade 1,000 shares, you can execute 10 trades of 100 shares electronically and virtually simultaneously without advertising to adversaries what you are doing.

Buy-side traders prefer to trade large blocks of stock because blocks are easier to account for and to book. The typical trader's viewpoint is that block trades cannot be executed on ECNs. But we find that when we use an ECN for listed trades and an order is published and highly visible, we tend to attract the other side of an order more easily. That advantage has interesting implications, especially considering the recent merger between Archipelago and REDI-Book and the SEC's approval of Archipelago becoming a fully electronic exchange. With the emergence of a fully electronic exchange, the buy side will apparently be able to drive the best price in the market while avoiding unnecessary intermediation.

A block trade that uses a broker's capital is not a charitable gift. Brokers traditionally "rent" capital when trading a block because natural counterparties are said to occur only about 20 percent of the time. Brokers regularly make capital for block facilitation available only to payers of the largest commissions—which is functionally identical to offering a commission discount. Then, if they lose money on the trades, they earn full "rents" from smaller full-commission players, so they are making up the difference with commissions from the smaller firms that do not have that same kind of leverage with the broker. This "loss ratio" is a major component of the cross-subsidies that underpin the soft dollar business. Ultimately, the little guy loses.

Historically, brokers served as "small order aggregators" working off negotiated block transactions in small increments over the phone, SelectNet, or ECNs. ECNs, however, eliminate the risk premium that institutions pay to trade; technology replaces capital in the aggregation process.

Our traders work aggressively to get the best price for block size on ECNs. At ACIM, we use FIX technology, the financial information exchange protocol, to send orders to ECNs, and we have been successful in trading extremely large orders on ECNs; we regularly execute orders of more than a million shares. Surprisingly, the average trade size for a Nasdaq stock on an ECN is fewer than 1,000 shares. We use DOT and Archipelago to access the liquidity on the NYSE, and we are increasingly successful at trading large orders in NYSE-listed securities on ECNs.

A good example of our success in trading blocks on ECNs is what we were able to accomplish during the period from June 1 to August 31, 2001, the summer doldrums, when the entire equity market's volume is at its lowest level. We averaged on a daily basis more than 13 orders of more than 50,000 shares; 6 orders between 50,000 and 100,000 shares; 4 orders between 101,000 and 250,000 shares; and almost 2 orders between 251,000 and 500,000 shares. And these trade sizes are fairly conservative in terms of what can be executed on ECNs. For example, during the same period, we used ECNs to trade 12.1 million shares of AOL with an average order size of 202,000 shares and a total principal value of $526 million. We also traded 12.1 million shares of Pfizer ($494 million of principal and average order size of 181,000 shares).

We chose to make these trades on ECNs because we wanted anonymity. When the market sees you trading in a name, the other buyers immediately look to see how big you are in the name and make inferences about why you are selling or buying. That is how the Street anticipates price action.

Immediacy. Another buy-side trader objection to using ECNs is the need to implement a trade "right now" in one block at a single price. Part of the trader's demand for immediacy is the culture of blame transfer—that is, portfolio managers blaming traders for the portfolio managers' own mistakes. When the buy-side trader hands an order to a broker, the trader has someone to yell at on behalf of an impatient portfolio manager.

Schwartz and Steil surveyed portfolio managers and chief investment officers about how much weight they give in stock purchase decisions to an estimate of share price in one day, one week, one quarter, one year, and two years or more. Most managers profess that they do not care what the share price will be one day or even one quarter out but do care about the price at one to two years out. That finding has profound implications. Why would portfolio managers, who may take days or weeks to make a purchase or sell decision, expect a trade to be done "right now" unless their ego is heavily invested in micromanaging the trader? Schwartz and Steil also asked how soon the managers expected a price correction to occur when buying or selling a stock that was believed to be mispriced. Most answered one month to one year or more than one year, not less than an hour or one week to one month. So, again, managers' timing expectations do not appear to align with their demands. Immediacy is simply not the impetus for trading that many managers claim.

Changes Affecting ECNs

In 1975, the Exchange Act called for a linked national market in which prices in one market would be respected in other markets. More than 20 years passed before the SEC took another major step toward encouraging market linkage with the enactment of the order-handling rules in 1997. These rules were an attempt to tie together markets fragmented by Instinet and other ECNs. It required ECNs to include orders in the public display of the NBBO. Although the Nasdaq intermarket gives ECNs a path to the listed market and exchange-traded funds, barriers to unification of the markets exist, such as the access fee the ECNs are charged. Archipelago chose to voluntarily comply with the order-handling rules but is the only ECN to have done so. The SEC has suggested that the application of the order-handling rules and Regulation ATS (alternative trading systems) to listed stocks is unfinished business. ECNs, however, represent an estimated 40 percent of Nasdaq volume, and ECN quotes drive the inside market.

The intermarket trading system (ITS)/Computer Assisted Execution System (CAES) link to the NBBO offered by Nasdaq to its members, who include Archipelago, is rapidly changing the marketplace. For the 62 days ending March 31, 2001, before Archipelago linked to the market through ITS/CAES, we traded only 35 orders for NYSE-listed stocks, compared with 121 listed orders in the 65 days after the linkage on August 31, 2001. Pre-ITS/CAES, these orders were excluded from market quotes, but post-ITS/CAES, the orders were transparent as limit orders to all market participants. We can now advertise our intention to trade.

Nevertheless, some traders are expressing frustrations similar to those expressed about Nasdaq trades before the instigation of the order-handling rules. The complaint is about "trade-throughs" and "backing away" (the latter occurs when one linked market trades at an inferior price to another market's price—say, the NYSE— as reflected in the NBBO). We started putting our listed orders into the system, and because of trade-throughs, we could not get some trades executed without compromise. As a result, Archipelago and Nasdaq built so-called whiner software (because we whined a lot). The "whine" is automatically triggered when (1) the public quote exceeds 100 shares at a price in the NBBO and (2) the order in Archipelago's ARCA book is at a superior price to the competing exchange and (3) the ARCA order is displayed for 15 seconds before a trade takes place at the inferior price in the NYSE and (4) the trade remains unexecuted for at least 10 seconds after the trade at the inferior price.

Whining is a frequent occurrence. The specialists believe the market resides with them, and an imputed belief is that the regional exchanges are not contributing to price discovery, which has, in fact, been true historically. Prior to decimalization, the regional exchanges were used primarily by retail firms, such as Charles Schwab & Company, to maximize profitability by routing orders and earning payment for order flow from the regional exchanges.

Since decimalization, the practice of payment for order flow appears to be breaking down, which has changed the economic structure of many order flow arrangements. Now, as real electronic orders flow through Nasdaq (and, soon, through the Pacific Coast Exchange), the NYSE is trying to make sure orders have to come to it. A good audit trail does not exist that reveals the primary exchanges' failure to recognize better prices on regional exchanges. But from mid-June through August 2001, Archipelago and Nasdaq recorded more than 1,500 NYSE whines a day, which is a big concern. It means that either the specialists cannot keep up with both an electronic market and a physical market, which is a reasonable explanation, or that they are ignoring the electronic market because they are granting free options to the floor crowd.

Until the market adjusts to a more integrated system, these whines have important implications for how managers manage, especially given the environment of 2–4 percent real expected stock returns suggested by Robert Arnott and Peter Bernstein[7] and the fact that the cost of trading is estimated to be 1–3 percent for small- and mid-cap stocks.

The impediments to trading are regulatory—that is, driven by market regulations designed to protect the owners of the marketplace. I am a big fan of Archipelago's move to partner with the Pacific Stock Exchange to form a new for-profit stock exchange. A for-profit stock exchange is not owned by intermediaries and not run for intermediaries; it is owned by and run for the stockholders.

[7]Robert D. Arnott and Peter L. Bernstein, "What Risk Premium Is 'Normal'?" *Financial Analysts Journal* (March/April 2002):64–85.

Conclusion

The problems with achieving best execution cannot be separated from the existing economics of trading systems and the reluctance of traders and portfolio managers to change the way they approach the trading function. Roughly 65 percent of ECN users are broker/dealers and hedge funds and 25 percent are day traders. As I mentioned earlier, only about 7–8 percent of ECN users are on the buy side. Schwartz and Steil wrote:

> Survey results clearly suggest that the traditional explanation for immediacy demand . . . is overstated. We conclude that the buy side's demand for immediacy is in appreciable part endogenous to an intermediated environment that is characterized by front-running.

Although some may find this view to be too cynical, the statement summarizes the behavior and rationale that I have witnessed over the course of my career.

Is unbundling of commissions and research and other soft dollar services desirable and feasible? In the same Schwartz and Steil survey mentioned previously, they found that 51 percent of managers believe unbundling commissions from the research process is desirable and only 8 percent believe it is undesirable. The bundled process, however, has a major positive impact on the earnings stream of many investment managers.

In the United Kingdom, Paul Myners, chairman of the Gartmore Group and one of the most respected money managers in the United Kingdom, was asked to investigate the inefficiencies of capital formation for small- and mid-cap U.K. firms. One of the recommendations he made was that all commissions be paid by the manager out of the management fee. U.K. firms have been given two years to respond to and implement the recommendations.

Although such action is a long way off in the United States, in light of the SEC's direction and AIMR's new guidelines, U.S. firms should begin to address the following questions:

- Is the commission you pay really protected by the safe harbor? It probably is not safe at 6 cents, or even 5 cents.
- Do you use ECNs? When? How much? How do you make that choice? You must first give your traders permission to be traders.
- Do you pay the same brokerage rate to all vendors and the same rate on all trades? If so, why? Lower negotiated rates alone are not sufficient. The SEC is looking for some variance within the rates paid to the same broker among trades. Some firms are paying 2–3 cents for taking the other side of a trade and paying 6 cents for capital commitment. These investment management firms have a formula for determining what they pay for various kinds of trades.
- How do you measure best execution? Whether you use Capital Research Associates, Plexus Group (implementation shortfall methodology), or volume-weighted average price, part of the answer to achieving best execution lies in having a process to measure it.
- Have you invested in sufficient trading technology? Or are your traders bill-paying order clerks?
- Do you know where your orders go? The order execution process is, in my opinion, sausage making at its worst. It is where the source of performance resides, especially in a potentially low-return environment.
- Regarding step-outs, are the rates and best execution promises consistent with what your marketing agent tells the sponsor? A lot of firms use step-outs and think they are getting best execution by using them. But almost everybody I talk to on the sell side tells me they have an A list and a B list, and the firms that step out are on the B list. If you are calling a potential buyer with merchandise and you know there are three or four buyers around and you have a seller for something that is hot, you call the buyer that will maximize your income. You cannot maximize your income on that trade if 40 percent of the trade is going to be stepped out to a third party.

Attention to these issues will help firms get on the right track and avoid problems in the future.

The bottom line is that trading decisions are not driven simply by the search for best execution. Too many conflicting economic currents and motivations affect the execution decision, which more often than not is made by someone other than the trader. Paying up to execute is a function of the traditional and customary practice of buying broker services—research and market stability—with soft dollars, but this practice has been targeted by the SEC and industry standard setters (such as AIMR) as needing increased transparency and improved record keeping and accountability.

Question and Answer Session

Harold S. Bradley

Question: Should soft dollars be outlawed?

Bradley: That is a complicated question. The answer is not simply yes or no, which is why the SEC changed the standard in 1986. It did not want to get into a categorical approval or denial of a specific use of soft dollars. As a firm, we have relied on the pre-1986 standard for a long time, which says that if a service is available for cash, pay cash. We think that practice is consistent with our clients' interests. Many smaller firms have said that they have to use soft dollars, which I would categorize as paying third parties for services that are allowed under Section 28(e). The real key to the appropriate use of soft dollars is commission rates, which explains why Levitt said 6 cents is not safe.

Question: What do you think about the AIMR soft dollar standards?

Bradley: AIMR has had a tough time establishing soft dollar standards because of the diversity of opinions in the business. What bothers me about the AIMR guidelines are the complex issues, such as mixed use. How am I going to audit and control whether 40 percent of my computer system is related to benefiting the investor? In addition, Section 28(e) gets a different spin when you have to answer Gohlke's question: Have you maximized the value of this trade decision? That's a far different question in terms of paying up than the old 28(e) safe harbor, which said you can pay up as long as you are benefiting your investor.

Question: How does ECN use affect how large-cap stocks or small-cap stocks are traded?

Bradley: We started relying on ECNs in 1992, and we've found tremendous value in using them for small-cap and illiquid securities. Telegraphing a 10,000-share order to a broker was far more damaging in those stocks than it was in, say, Microsoft. Using ECNs to trade in small-cap, illiquid stocks provides the most value because then people do not know who you are. With ECNs, you can disguise the size and reserve order requirements and control the market impact going in. Brokers don't commit their capital for free. When you give them a 10,000-share order on small-cap stock, they know they're going to lose money if they don't price it high enough.

Question: What is your opinion of the mergers, actual or potential, between the exchanges?

Bradley: Through my private equity activities, I have been close to Tradepoint in the United Kingdom and the Swiss exchanges. I was on the Tradepoint board and serve as an advisor to the Archipelago board. That said, I see these trends as an inevitable consolidation process that will affect both ECNs and exchanges.

Last week, Archipelago, by some measures the fourth largest ECN, announced a merger with REDIBook, the third largest ECN. REDIBook is owned by Spear, Leeds & Kellogg, or was until Goldman Sachs bought Spear Leeds in 2000. REDIBook is also owned by Charles Schwab and Fidelity. Archipelago is owned in part by J.P. Morgan Chase & Company, American Century, Merrill Lynch & Company, Goldman Sachs, and E*Trade.

A month ago Archipelago was granted stock exchange approval by the SEC and will be operational as a fully electronic stock exchange, the only one of its kind in the country. In merging with Archipelago, REDIBook is choosing to make a bet that it can produce a book for exchanges much like existing exchange structures in Europe, which provide limit order primacy, ease of entry and exit from the market, and multiple points of technology failure. This merger has major implications for both the Nasdaq and the NYSE, both of which have been slow in responding to some of the technological changes that threaten to remake the basic infrastructure at the management level and the trading level.

The biggest change in the next couple of years will be the payment structure. Decimalization is happening at the same time that commissions are starting to fall, so the Street is losing a primary source of revenue. The commission structure has been a major source of cross-subsidies, and its change will also have an impact on research, so it bears watching. This merger creates an interesting exchange opportunity.

Archipelago, a shareholder in Tradepoint, has also been engaged globally for some time, so electronic markets can be global. The problem in terms of cross-border investing is that the SEC's rules have kept foreign non-GAAP-denominated shares from being traded electronically in the United States. Ironically, I can call a broker to trade non-GAAP issues; I just cannot do it on a computer screen.

Question and Answer Session

Harold S. Bradley

Question: How do you measure trading costs when Elkins/McSherry, Plexus Group, and others are using "fuzzy math" to calculate the costs?

Bradley: Elkins/McSherry is the biggest consultant in the VWAP (volume-weighted average price) measurement service. Generally speaking, its study of VWAP simply says if your buys are under the VWAP, that's good, and if your sells are over, that's bad. I think the VWAP mechanism is flawed; in fact, it is influencing price discovery processes in the market, and some dealers have even structured trades so that they look good in that study. A trader trying to "game" this system would simply stop buying shares of a large order if the day's price exceeds the trade-weighted price for the day. Many vendors report this price throughout the day. At its logical extreme, a trade that might be done in one day is stretched over several days if the price continues to trade higher. Several years ago, we had one trade that looked wonderful on a VWAP basis but was actually the worst when measured with the Capital Research Associates (CRA) market impact study.

Having been a portfolio manager, I know that the Plexus function is also troublesome because of difficulties in effectively capturing data. Plexus bases its analyses on the Perold implementation shortfall methodology, which tries to measure the implementation cost from the time a portfolio manager has the original trade idea, through the time the trader gets the order, to the time the order is executed, including the opportunity cost of cancelled orders.[1] The problem with this methodology is that a portfolio manager often "sits" on an analyst's recommendation or idea for a couple of days (or even weeks) as the portfolio manager considers the analysis in a market context. The portfolio manager often does not act on the analyst's recommendation until the stock starts to move and it looks as though the analyst was right. That kind of behavior might handcuff a trader asked to join the crowd. When did the portfolio manager really get the idea on which the Perold methodology is predicated? That's a difficult data-gathering problem. What is a fair measure? Many traders I know think that there should be more science behind the ability to capture the information on the front end. For most firms, that is a major potential flaw in the methodology, as I understand it.

At American Century, we like the market impact methodology used by CRA, which uses Gil Beebower's method of looking at day-after performance as measured against the market and industry groups. This technique contains biases and flaws, as well. None of these methods is perfect. Simply put, Beebower's method says that if you buy a stock over a period of five days and tomorrow it decreases more than its industry group sector, you suffer a positive trading cost or market impact. If the stock goes up more than the market or sector on the day following completion of the trade, you get credit for "negative" trading costs.

Question: How does Beebower's method of measuring trading costs differ from the other methods?

Bradley: The Beebower methodology tries to quantify a "rubber-band" effect that often occurs, what in trader slang is called "window shading." Wall Street's sell-side traders talk about the "window shade" of principal block trades. Many buy-side traders are not even familiar with the term. Let me try and explain: I sell 100,000 shares of a million share order to a broker's principal bid as that broker "gets me started." The broker uses his capital on the first part of the order and then widely communicates to other buyers that "he's long and working a big seller." The market will trade down to a clearing price, at which point the broker's phone rings off the hook. A typical buy-side trader doesn't want to look bad and might leave the broker instructions to "call me when the seller doesn't have any more (sell orders) behind." A good principal trader at the block-trading houses assesses the latent demand and knows when to bid the seller for big size at a dislocated price. He effectively pulls the window shade down and buys the rest of the block, cleaning up the seller. Then, the window shade snaps back with a vengeance as buyers are left with unfilled orders. The sell-side brokers are making calls to let the formerly cautious and patient buyers know that the seller is gone and the market "looks better."

This ritual dance raises costs to both sellers and buyers. The buyers now panic because they missed the best prices (but, of course, they're still under the VWAP!). The broker may stay "long on his book" maybe 200,000 shares that he sells into recovering prices; that is the only way he can fight back to even with that first badly priced 100,000 shares. So, what Beebower measures is a longer-term window shade.

[1] André F. Perold, "The Implementation Shortfall: Paper vs. Reality," *Journal of Portfolio Management* (Spring 1988):4–9.

Again, I think that what happens in shorter time periods in the market also happens in longer time periods. Different ways to measure trading costs exist. Plexus and CRA at least use a standardized method across the industry, which allows a firm to evaluate its relative trading effectiveness. That is why we began using ECNs in the first place. The data were counterintuitive, but we simply kept pushing the envelope as long as the data supported it, and we eventually became rabid sponsors of these new efficient electronic trading approaches because the data suggested we were removing significant trading costs from both easy and difficult trades.

Question: What would you estimate the Street's costs for basic brokerage to be—a penny a share? Why not separate research from execution; that is, write a check for research and pay a penny a share for execution?

Bradley: The real cost of execution is the ECN rate, not the cost of a heavily human-intermediated function. The ECN rate has been under a penny a share for a year. The agency broker rate, or the fully bundled rate, has been about 5 cents a share, but this rate is on the verge of being undercut for the first time in more than a decade.

In fact, over the years, we have been made aware that some brokers who would not budge on 5-cent bundled rates for American Century shareholders and clients would provide our clients a 1 cent or 2 cent rebate as part of a commission recapture program. In effect, they are saying to my client that the real cost of an agency execution is only 3 cents or 4 cents per share. That makes me irate: You are going to do cheaper business for my customer, whom I am trying to manage money for, but you are not going to give me that same rate? That is because there are two different operating subsidiaries for these firms trying to do the same business. These subsidiaries are in a price war within their own firms. The spread between the execution-only rate assessed by ECNs and the bundled rate for research, execution, liquidity, and other services is the effective payment rate for research, which I argue is near a historical wide point—about 4.25 cents.

The question I have is whether research is of more value today than it was before Regulation FD and the advent of Web-based systems that allow for an infinite number of participants on a company's earnings release conference call. I believe that some research and access to specific research analysts may well be worth this 28(e) investment (the so-called safe harbor in federal securities legislation that allows for an investment firm to "pay up" for research that benefits a fund's shareholders). That is why I believe so strongly in what StarMine is trying to do. StarMine has created a four star system to evaluate which analysts in which stocks are courageous, right, and early. StarMine is attempting to provide a quality brand, and I am willing to pay for a product that is valuable.

Regarding the question of unbundling, the Street is afraid that they will not be paid enough. This concern has major implications for how firms structure and conduct business. I argue that there is value to be had, but you have to know how to find it. So, I am investing in such companies as StarMine to try to brand some of this research as valuable for investors who really think and are not afraid to be different from the crowd.

Question: Are ECNs effective on short sales?

Bradley: ECNs are awesome on short sales. ECNs have always allowed for trading in increments of 1/256th. So, even as people argued over decimals on the Nasdaq and NYSE, you could regularly trade in 64ths, 128ths, and 256ths on Instinet, Archipelago, Bloomberg, and other ECNs. A decimal is a fraction, after all; ECNs simply split the 8th to infinity.

Hedge funds have been big users of short-selling strategies on ECNs for a long time for this reason. When the market was a fixed-eighth market five years ago, a hedge fund could go into an ECN up 1/32nd or 1/64th and get off a short that was on an uptick, not recognized on the public tape. And by using smaller orders, I found that the efficacy of my short selling on the Nasdaq was far superior in terms of time of execution, percentage of fulfilled orders, and price impact than it was on the NYSE, where I had a much higher opportunity cost for unfilled orders and a much longer duration before execution.

Question: Do you expect the impact of Nasdaq's SuperMontage on ECNs to be positive or negative?

Bradley: A huge change is under way. I was invited to participate on a Federal Advisory Committee by Chairman Levitt before he left the SEC, and we looked at the pricing mechanisms for the exchanges. Not many people clearly understand regulatory funding mechanisms and the significant income that exchanges derive from sharing tape print revenues. For every trade printed on what is called the "consolidated tape," the exchanges get paid. When the plan for sharing tape print revenues was established in the late 1970s, it was intended to fund the exchanges' self-regulation costs. I am told that those "plans" have become a major source of exchange revenue and marketing budgets.

Recently, however, Island ECN, now the largest ECN, made a deal with the Cincinnati Stock Exchange; the exchange will share revenues with Island for all trades printed on the exchange. Also, Archipelago acts as a facility for the

Pacific Coast Stock Exchange (PCX) and is in the process of turning the exchange into a fully electronic exchange. Archipelago wants the regulatory status and the ability to be a member of "the club" that the exchange can bestow. By belonging to the club, Archipelago gains a share of tape revenues; so, every trade that gets printed on the PCX will bring in revenue for Archipelago.

When Island did its deal with the Cincinnati Stock Exchange, Island was one of Nasdaq's biggest customers. If Island is now going to print and show all its business through Cincinnati because of the revenue arrangement, that is about 20 percent of the daily trading volume of the Nasdaq stock market. Archipelago and REDI (who recently merged) represent a large percentage of the Nasdaq stock market trading volume, and Archipelago now is going to be doing the same thing on the PCX. Therefore, I see equalization and competition based on the "revenue and trade print revenue" screen. The details of this change may seem arcane and complicated, but the change is interesting because billions of dollars are at stake.

Question: Do brokerage firms take advantage of buy-side order flow? If so, how?

Bradley: Of course brokerage firms take advantage of buy-side order flow. They are intermediaries. Some firms take advantage of it proprietarily, but not all firms do. The real issue is how brokerage firms take care of their customers and what kind of customers they have. For example, floor constituents from the NYSE have asked me to try and bring attention to a large hedge fund and its relationship with Wall Street because they are convinced this fund pays as much as 15 cents a share simply to find out where big orders are from other customers. There are many different ways—with revenue streams that are opaque—to leverage and harness operating margin and relationships. That is why anonymity is so important.

Question and Answer Session

Harold S. Bradley

Question: How many trades can a trader work on ECNs?

Bradley: The number depends on whether the trader has spent any money developing technology or whether the trader wants the ECN to work the business, which is how a lot of people deal with Instinet. Instinet Corporation didn't start out with a roomful of traders, but it has them now because the buy side would not build the appropriate infrastructure.

At our trading desk, when I started in 1990, we had about six traders. The firm is now 10 times bigger, but we nevertheless have only about 14 traders because of our efficient infrastructure. We have a lot of internal systems in place to monitor the trading of our brokers. Depending on how active and volatile a stock is, a good trader can handle six to eight stocks at one time, just as a good broker can handle six to eight stocks. If you are not a good trader, you cannot handle nearly that many.

Question: What percentage of your firm's trades require broker capital to get them started?

Bradley: Using broker capital to get a trade done rarely works. Instead, it becomes a huge cost. We can go to ECNs and hit the buttons. The trades we're not doing on ECNs are those for which our FIX indications tell us a natural is on the other side. We have built the systems to try to see through the need to go to a broker.

The only time we use capital is to create an advertisement. The problem is that the risk-adjusted price makes the advertisement far less efficient than simply going to the floor of the NYSE and letting the crowd spread the word in two minutes.

Question: Do you use ECNs and brokers simultaneously?

Bradley: No, using ECNs and brokers at the same time would be imprudent. A trader uses an ECN for anonymity and control of the order. When you're using an ECN on a big block, if a broker calls, the broker can figure out what you're doing, and the value to the broker lies in controlling what you're doing. So, we would typically not respond to a broker about an order we were working on an ECN.

We believe that doing business the right way should lower costs. Brokers know when you're doing things in two places; they know exactly what you are doing and where because they call each other. In fact, a network has been established of calls that are made to certain hedge funds—the information-clearing people. When brokers know what you are doing, your cost of capital with those brokers will rise. They know that if you are going to beat the bids out on Instinet, Archipelago, or Bloomberg, you are compromising them. It is also a question of right and wrong. Going to ECNs and brokers at the same time may seem expedient, but it raises your cost of doing business and is not ethical.

Question: What do you think of blind principal bids transferring the risk to the broker?

Bradley: Programs are a different animal altogether from individual stock transactions because programs are affected by portfolio construction issues, such as beta, volatility, and liquidity. The ability to access that principal bid on a block of stocks does transfer significant execution risk, but it's good only up to a certain size. If the broker chooses to accept risk in that case, it can be hedged.

Question: What is the perfect scenario for trading?

Bradley: I am a huge believer in the need for a central limit-order book (CLOB) with price/time priority and electronic access and egress. It would allow people to be paid for wisdom and knowledge and for putting a price on an idea, not for how well they can transfer information about one client's intentions to another. The problem with creating a CLOB is that New York says, "We'll build and own it." I say, "No way!" In an ideal world, Cisco Systems would build and own it. The trading cost would be the bandwidth charges, not the economic rents charged for intermediating on behalf of the members. That kind of system is the stuff of dreams.

What I would settle for is that best execution would truly matter to everyone. I work for a firm that is aligned with the idea that best execution does matter. Best execution is an ethical issue. Legal is always mentioned in the same breath as ethical, but legal is what you can do and not go to jail; ethical is what you should do.

I also dream about making the trader a professional and integral part of the investment process. It can be done at any firm. If all the trader is doing is handing orders off to a broker, he or she is not valuable and may be easily replaced. But if a trader is adding value to the investment process and helping generate returns or reduce costs (which, over time, generates returns), the trader is valuable. We believe ECNs saved us $220 million last year, but bucking historical practices requires courage. Most of us were trained and educated by brokers about how to do our business. Traders seem to be afraid to be valuable.

Question: How do you think a firm should handle step-outs? What is the maximum?

Bradley: Traders tell me there's no way they can do ECN business because they have way too many step-outs. It's a nightmare. They have to pay too many bills. Virtually every trader I know feels impaired by this practice, and I think when you feel impaired, you've hit your maximum.

Step-outs are one way to use client commissions to pay your firm's bills. If the manager can't survive on the management fee, however, then the manager shouldn't be in the business. Trading commissions are supposed to be used to facilitate execution and the other services we are willing to pay for. So, the question becomes whether stepping out is right. Step-outs happen because best execution is a threat.

Appendix B

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Previous Page

The Disgrace of Soft Dollars

Investment funds are secretly lining their pockets by inappropriately charging billions of dollars' worth of expenses to investors. These "soft-dollar" arrangements allow managers to overpay in brokerage commissions in exchange for research, office space, magazine subscriptions, etc. -- with shareholders unwittingly footing the bill. With scandals rocking the industry, now is the time for mutual funds and hedge funds to correct their ways voluntarily -- or have it done for them.

By Whitney Tilson
March 19, 2004

Massachusetts Financial Services Co. (MFS), the oldest and 11th-largest mutual fund company, announced this week that it has stopped paying brokers in "soft dollars." I can hear the yawns across America, but this is an important issue because investors are being bilked out of billions.

Soft dollars (don't you love such benign-sounding euphemisms?) are excess trading commissions that funds pay to brokerage firms, which are then rebated to the funds in the form of investment research and software, Bloomberg terminals, magazine subscriptions, office space, and the like. These are expenses that in almost all cases would be paid for by the fund out of its management fee income, but instead are shifted to the fund's investors via inflated trading costs.

These costs are especially insidious because they're nearly invisible. Do you know how much your mutual funds spent last year on trading costs and commissions? Would you know how to find this information? According to an excellent column on high fund costs by fellow Fool Robert Brokamp, "To find out how much a fund pays its broker -- money that comes straight out of the fund shareholders' pockets -- an investor must dig through the fund's Statement of Additional Information, which is filed with the SEC, or the semi-annual filing of form NSAR. Raise your hand if you've heard of these documents."

In short, the general counsel of mutual fund giant Fidelity was exactly right when he admitted that soft-dollar payments are among the "least visible" and "least understood" expenses for investors.

Soft dollars in practice

To see how soft dollars work, let me tell you about my recent experiences looking for office space in Manhattan. A good setup for four to five people can cost as much as $10,000 per month, which is a significant cost for a small money-management firm like mine. I can cut this cost substantially, however -- perhaps by $5,000 per month -- if I agree to do enough trading at full brokerage commissions with certain firms that have office space available.

Here's how the math works: If I pay six cents per share commission rather than the two cents I might otherwise pay, the broker pockets an extra four cents per share. If I buy or sell only 125,000 shares each month with the broker, the extra four cents adds up to $5,000, which the broker returns to me via a break on my rent.

As with most funds, the partnership agreements that govern my funds explicitly permit soft dollars, and I certainly have strong incentives to use them since every dollar I save on rent is one more dollar of pretax profit.

So why am I not leaping at a soft dollar-subsidized rent deal? Because I'd be screwing my investors! They already pay me a 1% management fee, which is supposed to cover all of my expenses. Paying inflated commissions so that my broker will pay expenses like rent (or a Bloomberg terminal, third-party research, etc.) would simply be shifting costs that are supposed to be paid out of the management fee to my investors in the form of hidden, extra commission charges.

I won't go so far as to call using soft dollars stealing -- as discussed below, it's typically disclosed, at least in the fine print -- but it's pretty darn close.

Billions at stake

Lest you think this is a minor issue in the grand scheme of things, think again. An article in *The Wall Street Journal* this week reported that "Mutual funds and other institutional investors paid about $12.7 billion in commissions in 2002, about half of which was compensation for research and other forms of soft-dollar services, according to the latest numbers from research firm Greenwich Associates." Another study showed that commissions were inflated to an even greater degree. Richard Strauss of **Deutsche Bank** (NYSE: DB) concluded that 40% of the commission paid by a fund company relates to research, 45% to execution, and the rest (15%) goes to third-party research and computer aids.

This is consistent with back-of-the-envelope math: Funds pay an average of five cents per share commission at the major brokerage houses, yet according to another *Wall Street Journal* article, "Most Wall Street firms acknowledge that only about two cents [e.g., 40%] of the standard five-cent commission goes toward trading execution."

This adds up to big numbers. If half of the $12.7 billion in commissions paid by mutual funds (not even counting the billions generated by hedge funds) are used to pay for research and other services that should be paid from management fees, then mutual fund investors are paying roughly *$6.3 billion* that they shouldn't be! That's about $21 for every man, woman, and child in this country. As I was saying, big numbers...

It's easy to see why money-management firms are reluctant to get off this gravy train. MFS estimates that its new policy will cost it $10 million to $15 million per year, and Fidelity, the largest fund company in the country, estimates that it pays about $275 million annually in soft-dollar research.

The excuses

The fund industry does try to defend these soft-dollar arrangements. Here are the four biggest rationalizations I've heard:

1. Research benefits investors

The most common defense of soft dollars is that they are mostly used to pay for research and information services that help fund managers make better investment decisions, which in turn benefits shareholders. I have two problems with this argument. First, I question whether Wall Street research helps managers generate better returns (in fact, I think most of it is worse than useless, but I'm hardly an expert since I almost never read it).

But my main objection is who ends up paying. If a fund manager believes that access to certain research (or a Bloomberg terminal, etc.) will result in superior investment returns, then he/she should by all means pay for it -- but this is precisely the type of expense that should be paid for *out of the management fee*!

2. It's disclosed

Another defense of soft dollars is that their use is disclosed in fund prospectuses. My answer: So what? Does anyone really read those dense documents? Even if investors did, how many would have the foggiest notion what soft dollars were? The reality is that the overwhelming majority of investors have no idea that they're in effect being charged a significantly higher fee than they think.

3. It's OK to pay for good execution
A recent article in *Barron's* defended soft dollars by arguing that in the case of big trades by large funds, "Unless the executing broker takes great care to disguise the underlying source and character of the trade, the dilution of portfolio returns from price impact can overwhelm any savings from low-cost brokerage services. Investors are better off if the manager pays the broker a higher commission to take greater care in executing trades."

Well, no kidding, but what does this have to do with soft dollars? In some cases, when I have a difficult order in which a trader might spend days carefully buying an illiquid stock without running it up (or selling it without crashing it), I'm quite happy to pay a higher commission than usual. But this has nothing to do with soft dollars or expenses that would otherwise be paid for out of my management fee.

4. That's the way it's always been done
When all the rationalizations are stripped away, the only defense I hear is that "this is the way it's always been done, and everyone else does it." Sorry, but that's not good enough for me -- and it shouldn't be for you either.

An analogy
Here's the question I would pose to any fund-management company that uses soft dollars. Let's say your funds' auditor came to you and whispered, "Pssssst! Instead of paying me the usual $1 million this year to audit all of your funds, instead pay me $2 million. [Audit expenses, like commissions, are typically paid by the fund, not out of the management fee.] Then, I'll give you a $900,000 credit that you can use to pay for pretty much whatever you want related to your business: a research analyst that we'll hire so you don't have to, office space, etc."

I think any self-respecting fund-management company would be outraged and immediately reject such an offer. Yet I see no difference between this and the current soft-dollar system -- other than the starting point (e.g., the soft-dollar gravy train is already well established), which is what humans naturally anchor on, especially when it is in their self-interest to do so.

Conclusion
So what can you do about this? First, call your money managers and ask if they use soft dollars and what they pay, on average, in commissions. If the answers are yes and/or more than three cents per share (unless there's a really good explanation for paying more), tell them that you object to soft dollars and/or paying high commissions in exchange for research and threaten to close your account.

Second, some firms do not use soft dollars -- for example, Vanguard never has, and now MFS doesn't -- so consider investing your money with such firms. Finally, contact your senator and congressperson. A mutual fund bill that cleared the U.S. House of Representatives last year would require greater disclosure of soft-dollar arrangements while a bill introduced in the U.S. Senate would ban them altogether. Neither bill appears likely to pass, given the lobbying clout of the investment-management industry, so phone calls could help a lot.

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