Institutional Investor

Thanks to huge advances in electronic trading — and extraordinarily calm markets — it has never been cheaper for institutions to buy and sell stocks.

Keep the change

By Pierre Paulden

Friday, October 6, was a momentous day for the New York Stock Exchange. That morning the Big Board broke with 214 years of tradition when it began phasing in a new hybrid market structure that can execute trades electronically, bypassing face-to-face auctions on its famed floor. During the hybrid's first three weeks of operation, 91 percent of trades in the 109 stocks that are part of the initial phase were executed automatically, up from just 29 percent before the new system was introduced. The electronic executions accounted for 80 percent of the shares traded in these stocks, up from 19 percent under the old structure, according to the exchange.

The NYSE floor has been the last major holdout to technological progress. Over the past decade investors and exchanges the world over have embraced electronic trading as faster and far less costly than manual executions. In the late 1990s, electronic matching networks snatched a big chunk of order flow from Wall Street firms that made telephone-based markets in Nasdaq Stock Market–listed stocks. More recently, institutions have flocked to trading systems that chop up their giant orders and use complex algorithms to route the pieces to electronic exchanges that offer the best available prices at a given moment. Money managers now execute nearly 40 percent of their trades using such low-touch systems, up from just 3 percent in 2001, according to Boston-based research firm Aite Group.

The widespread adoption of hyperefficient trading techniques is driving the most profound reduction in costs in recent history. This magazine has measured global equity transaction costs for institutional investors annually since 1997, using figures provided by New York–based cost-measurement firm Elkins/McSherry. The results of the most recent survey show that for the 12 months ended June 30, the cost of trading U.S.-listed shares declined by a record margin. The average cost of trading an NYSE-listed stock, 17.51 basis points (0.175 percent of the dollar value of the trade), fell by 25 percent, making NYSE shares the cheapest to buy and sell globally. Big Board shares displaced Japanese stocks as having

GLOBAL TRADING

Top investment managers and brokerages, benchmarked against volume-weighted average price

07/05–06/06 rank	INVESTMENT MANAGER[1] (No. of countries firm traded in)	Difference vs. E/M universe (basis points)
1	**First Quadrant** (19)	20.3
2	**Genesis Asset Mgmt** (28)	19.5
3	**Morgan Stanley Investment Mgmt** (37)	15.9
4	**Lazard Asset Mgmt** (24)	15.8
5[2]	**Batterymarch Financial Mgmt** (26)	15.7
6[2]	**Capital Guardian Trust Co.** (39)	15.7
7	**Baillie Gifford & Co.** (39)	15.2
8	**JPMorgan Asset Mgmt** (26)	13.9
9	**Merrill Lynch Investment Managers**[3] (33)	13.1
10	**Mondrian Investment Partners** (33)	12.7

07/05–06/06 rank	BROKERAGE FIRM[4] (No. of countries firm traded in)	Difference vs. E/M universe (basis points)
1	**Liquidnet** (13)	21.9
2	**Investment Technology Group** (32)	20.0
3	**Eden Financial** (15)	17.1
4	**Sanford C. Bernstein & Co.** (21)	14.9
5	**Redburn Partners** (17)	14.7
6	**Macquarie Securities** (15)	12.9
7	**Mirabaud Securities** (18)	12.6
8	**State Street Global Markets** (36)	12.2
9	**Dresdner Kleinwort Securities** (18)	11.5
10	**ABN Amro** (37)	11.4

Top brokerages, benchmarked against arrival price

07/05–06/06 rank	BROKERAGE FIRM[5]	Difference vs. E/M universe (basis points)
1	**Macquarie Securities**	53.6
2	**Nomura Securities Co.**	52.6
3	**Cheuvreux de Virieu**	50.5
4	**Redburn Partners**	48.4
5	**Crédit Lyonnais**	40.2
6	**NeoNet Securities**	40.0
7	**Sanford C. Bernstein & Co.**	39.6
8	**Morgan Stanley**	35.9
9	**Goldman, Sachs & Co.**	35.3
10	**Citigroup**	30.7

[1] Includes managers with greater than $1.5 billion in principal traded.
[2] Order determined by actual results before rounding.
[3] Became part of BlackRock in September.
[4] Includes brokerages with greater than $2.25 billion in principal traded.
[5] Includes brokerages with greater than $250 million in principal traded.

Source: Elkins/McSherry.

NYSE TRADING

Top investment managers and brokerages, benchmarked against volume-weighted average price

07/05–06/06 rank	INVESTMENT MANAGER[1]	Difference vs. E/M universe (basis points)
1	**Jacobs Levy Equity Mgmt**	16.8
2	**AXA Rosenberg Investment Mgmt**	16.3
3	**LSV Asset Mgmt**	15.5
4	**Third Avenue Mgmt**	14.8
5	**Lord, Abbett & Co.**	14.0
6	**Numeric Investors**	13.8
7	**Capital Growth Mgmt**	11.1
8	**Aronson + Johnson + Ortiz**	10.1
9	**Main Street Bank & Trust**	9.6
10	**Fidelity Investments**	8.8

07/05–06/06 rank	BROKERAGE FIRM[2]	Difference vs. E/M universe (basis points)
1	**Thomas Weisel Partners**	17.5
2	**M.J. Whitman**	16.1
3	**Lava Trading**[3]	13.6
4	**Cantor Fitzgerald**	11.8
5	**Investment Technology Group**	11.3
6	**Liquidnet**	10.6
7	**EdgeTrade**	8.4
8	**Instinet**	7.7
9[4]	**Morgan Stanley**	6.9
10[4]	**CIBC World Markets**	6.9

Top brokerages, benchmarked against arrival price

07/05–06/06 rank	BROKERAGE FIRM[5]	Difference vs. E/M universe (basis points)
1	**Sanford C. Bernstein & Co.**	27.1
2[4]	**C.L. Glazer & Co.**	24.3
3[4]	**Investment Technology Group**	24.3
4	**Banc of America Securities**	23.9
5	**LaBranche Financial Services**	23.5
6	**State Street Global Markets**	21.7
7	**Raymond James & Associates**	20.4
8	**Vandham Securities Corp.**	20.0
9	**Robert W. Baird & Co.**	19.6
10	**Liquidnet**	14.5

[1] Includes managers with greater than $1 billion in principal traded.
[2] Includes brokerages with greater than $1.75 billion in principal traded.
[3] Subsidiary of Citigroup.
[4] Order determined by actual results before rounding.
[5] Includes brokerages with greater than $250 million in principal traded.

Source: Elkins/McSherry.

the least expensive transaction costs in the world. Trading Nasdaq-listed issues cost 20.66 basis points on average, a reduction of 32 percent over the preceding year.

To be sure, it is important to note that these cost reductions don't necessarily reflect the quality of the market where shares are listed. Elkins/McSherry measures the overall costs of trading both NYSE-listed and Nasdaq-listed shares but doesn't break down costs for the venues where trades are executed. The NYSE, for instance, has been steadily losing market share in its own listed stocks to competitors like Nasdaq and crossing networks such as Liquidnet. Today about 63 percent of trades in NYSE-listed shares are executed at the NYSE, down from more than 80 percent just a few years ago. No wonder CEO John Thain is pushing the hybrid market and closing a big chunk of the floor. Just 48 percent

NASDAQ TRADING

Top investment managers and brokerages, benchmarked against volume-weighted average price

07/05–06/06 rank	INVESTMENT MANAGER [1]	Difference vs. E/M universe (basis points)
1	Numeric Investors	17.4
2	AXA Rosenberg Investment Mgmt	17.2
3	Jacobs Levy Equity Mgmt	15.6
4	First Quadrant	11.9
5	AllianceBernstein	10.9
6	Capital Guardian Trust Co.	10.3
7	Fidelity Investments	9.6
8	Wellington Mgmt Co.	8.9
9	Batterymarch Financial Mgmt	8.5
10	Mazama Capital Mgmt	8.4

07/05–06/06 rank	BROKERAGE FIRM [2]	Difference vs. E/M universe (basis points)
1	Wave Securities [3]	16.5
2	B-Trade Services [4]	15.2
3	Lava Trading [5]	12.8
4	Investment Technology Group	10.8
5	Credit Suisse	10.6
6	Liquidnet	10.2
7	EdgeTrade	9.4
8	Goldman, Sachs & Co.	8.7
9	Jefferies & Co.	8.5
10	UBS	8.0

Top brokerages, benchmarked against arrival price

07/05–06/06 rank	BROKERAGE FIRM [6]	Difference vs. E/M universe (basis points)
1	Piper Jaffray & Co.	58.4
2	Jefferies & Co.	40.1
3	LaBranche Financial Services	40.0
4	Instinet	31.4
5	EdgeTrade	26.9
6	Vandham Securities Corp.	26.3
7	UBS	25.2
8	JPMorgan Chase & Co.	20.4
9	Goldman, Sachs & Co.	17.7
10	Deutsche Bank Securities	15.6

[1] *Includes managers with greater than $500 million in principal traded.*
[2] *Includes brokerages with greater than $750 million in principal traded.*
[3] *Acquired by Merrill Lynch & Co. in March.*
[4] *Unit of Bank of New York.*
[5] *Subsidiary of Citigroup.*
[6] *Includes brokerages with greater than $250 million in principal traded.*

Source: Elkins/McSherry.

of the trades in Nasdaq-listed stocks are actually executed within Nasdaq's own trading systems.

The reduction in the cost of trading U.S. stocks marks a sharp acceleration in a decadelong trend. This year's decline for NYSE shares, for instance, is greater than the cumulative 20 percent drop recorded over the previous three years. And the pace of the cost drop-offs for U.S. shares is far greater than that for all stocks globally. The overall cost of trading in 42 countries around the world, according to Elkins/McSherry, is 44.44 basis points, down 13 percent from last year. Among the cheapest markets are Japan, Germany and France — all of which are entirely automated (see table, page 58).

Elkins/McSherry measures total transaction costs as the sum of three components: brokerage commissions, exchange fees and market impact, which is the effect that a big order can have on a stock's price during execution. The firm (a subsidiary of State Street Corp.) defines market impact as the difference between an investor's actual execution price and the volume-weighted average price, or VWAP, of the same stock during the same trading session. Elkins/McSherry's survey examined more than 400 billion shares traded globally by 235 institutions through more than 1,400 investment managers and 2,000 brokers.

Widespread electronic trading attacks the two biggest components of costs: commissions and market impact. Low-touch systems typically charge commissions of 2 cents or less per share, compared with about 4 cents on traditional trades. And algorithmic tools help to control market impact by slicing blocks into small pieces that are executed at the best available prices over time. According to the Elkins/McSherry survey, the average commission for all institutional trades globally fell by 9 percent during the 12 months ended June 30, to 24.53 basis points. Market impact declined by 23 percent, to 12.67 basis points. In the U.S. the reductions were more dramatic: Commissions shrunk by 19 percent for NYSE stocks and 21 percent for Nasdaq stocks, even as market impact fell by 40 percent and 48 percent, respectively, for the two markets.

Not only is the technology that brokers and investors use to route orders improving by leaps and bounds, the executing markets themselves are more advanced than ever. Paradoxically, in an era of exchange consolidation, executing markets are also more plentiful than ever. New electronic matching systems and crossing networks seem to pop up every day. Established systems such as Liquidnet, Investment Technology Group's Posit and Pipeline Trading Systems are growing rapidly. Liquidnet, which lets institutions negotiate block trades directly with one another, bypassing traditional brokerages, now has 348 member firms that manage assets totaling $6.6 trillion, up from $3.8 trillion in the first quarter of 2005.

"We are signing up more clients per month than we ever have," says Alfred Eskandar, Liquidnet's head of corporate strategy.

Brokerage firms, meanwhile, are frantically investing in alternative electronic trading platforms, partly to keep order flow from migrating to upstart networks. In September, Citigroup; Goldman, Sachs & Co.; Lehman Brothers; Merrill Lynch & Co.; Morgan Stanley; and UBS launched a joint crossing system called Block Interest Discovery Service. Citi, Credit Suisse and Goldman also have launched their own electronic matching systems. According to research firm Tabb Group, brokerages increased spending on electronic trading technology from $350 million in 2003 to $790 million in 2005. Tabb predicts this will rise to $970 million next year when the Securities and Exchange Commission will implement new rules — known as Regulation National Market System — mandating that investors always get the of the most efficient brokerage firms globally (see table, page 56). Electronic trading firms such as Wave Securities (which was acquired by Merrill earlier this year), B-Trade Services (a Bank of New York unit), Citi's Lava Trading subsidiary and ITG also dominate the ranks of the most efficient brokerages for NYSE and Nasdaq trading.

Not everyone, however, agrees on how best to measure costs. One developing school of thought focuses on a methodology known as implementation shortfall, which compares the average execution price of a block with the price at which the stock was trading when an order originated. Also known as arrival price, this method can be used to measure more precisely the performance of buy-side traders and brokerage firms. A brokerage firm, for example, may not receive an order from an institution until halfway through the trading day and may complete the execution just before the close. Using the VWAP for the entire trading session, many experts say, is not the best way to judge how well that firm did for its client.

For this reason, *Institutional Investor* asked Elkins/McSherry this year to also produce a set of brokerage firm rankings using the arrival price methodology. The results differ somewhat from the VWAP-based rankings. Brokerage firms that offer skilled, hands-on execution in addition to low-touch systems tend to outperform electronic-only competitors. In global trading, local brokerages like Macquarie Securities (based in Australia) and Nomura Securities Co. (Japan) turn in strong performances. For NYSE and Nasdaq stocks, firms that specialize in small-cap names, which generally are more volatile and therefore harder to trade efficiently, rank highly. Piper Jaffray & Co. and Jefferies & Co., smaller brokerages that devote sales-traders to manually executing tough small-cap orders, finish first and second, respectively, in the Nasdaq arrival price ranking. And the savings that brokerage firms were able to get for clients over the arrival price benchmark were generally higher than the margin by which they beat the VWAP. Piper on average saved its clients 58.4 basis points; Jefferies executions beat the arrival price by 40.1 basis points. The top two Nasdaq firms in the VWAP brokerage ranking, Wave and B-Trade, beat that benchmark by just 16.5 and 15.2 basis points, respectively.

Especially for harder-to-trade stocks, having a team of human

The cost of executing trades in 42 countries

COUNTRY	Average price of stock (dollars)	Average commissions (basis points)	Average fees (basis points)	Market impact (basis points)	Average 07/05–06/06 total (basis points)	Average 07/04–06/05 total (basis points)
Argentina	$4.24	35.00	0.42	27.68	**63.10**	67.99
Australia	8.43	20.75	0.90	8.31	**29.96**	29.28
Austria	54.42	16.70	0.66	10.55	**27.91**	33.21
Belgium	61.61	17.17	0.54	10.22	**27.93**	29.59
Brazil	6.47	25.61	1.35	14.49	**41.45**	49.04
Canada	30.71	13.35	0.40	10.23	**23.98**	35.93
Chile	8.57	38.76	1.89	15.26	**55.91**	69.59
Colombia	9.25	50.50	2.93	18.73	**72.16**	99.75
Czech Republic	114.18	39.02	2.11	15.04	**56.17**	61.41
Denmark	50.34	17.71	0.65	15.82	**34.18**	36.46
Finland	18.58	16.59	0.69	20.18	**37.46**	43.59
France	50.61	16.02	0.47	6.58	**23.07**	27.37
Germany	55.08	16.24	0.38	5.51	**22.13**	22.38
Greece	25.01	25.44	11.63	12.11	**49.18**	62.56
Hong Kong	2.26	20.53	11.53	6.55	**38.61**	40.94
Hungary	47.30	34.79	5.94	12.35	**53.08**	55.07
India	16.34	39.96	8.29	14.65	**62.90**	65.80
Indonesia	0.40	39.96	11.01	14.86	**65.83**	71.64
Ireland — Buys	15.46	18.51	100.00	13.60	**132.11**	137.53
Ireland — Sells	15.23	16.43	0.38	12.95	**29.76**	33.69
Italy	10.25	16.62	0.51	10.65	**27.78**	32.36
Japan	21.80	14.08	0.32	5.90	**20.30**	19.55
Korea	74.72	26.38	14.76	11.17	**52.31**	58.49
Luxembourg	31.32	20.02	0.16	16.56	**36.74**	49.73
Malaysia	2.06	30.14	6.13	9.55	**45.82**	59.92
Mexico	4.73	25.66	0.01	11.22	**36.89**	40.71
Netherlands	26.16	16.54	0.40	8.56	**25.50**	27.38
New Zealand	3.11	21.97	0.30	12.35	**34.62**	40.60
Norway	21.84	17.34	0.05	13.13	**30.52**	34.31
Peru	6.29	40.03	16.01	17.61	**73.65**	86.42
Philippines	6.60	41.75	30.85	12.20	**84.80**	99.41
Portugal	6.53	17.07	0.09	11.79	**28.95**	38.92
Singapore	3.45	24.11	2.74	12.19	**39.04**	40.23
South Africa	14.31	23.13	12.72	12.10	**47.95**	51.26
Spain	20.23	16.66	0.39	10.28	**27.33**	32.02
Sweden	14.37	17.33	0.67	10.24	**28.24**	35.22
Switzerland	88.86	16.31	0.68	10.38	**27.37**	31.85
Taiwan	2.00	26.99	11.55	8.52	**47.06**	53.99
Thailand	1.69	36.06	1.75	16.37	**54.18**	65.69
Turkey	5.57	33.85	2.68	20.14	**56.67**	66.11
U.K. — Buys	8.23	15.18	49.91	7.45	**72.54**	76.14
U.K. — Sells	8.77	15.10	0.52	8.80	**24.42**	28.80
U.S. — NYSE	33.68	12.05	0.46	5.00	**17.51**	23.26
U.S. — Nasdaq	27.06	13.17	0.42	7.07	**20.66**	30.32
Venezuela	9.01	47.19	9.79	35.10	**92.08**	99.30
Overall	23.27	24.53	7.25	12.67	**44.44**	51.00

Source: Elkins/McSherry.

best possible prices when buying or selling shares, regardless of where those prices are available.

Not surprisingly, brokerage firms that offer sophisticated low-touch systems do the best job of minimizing costs for clients. Liquidnet and ITG, for instance, top Elkins/McSherry's ranking beings with deep client relationships and market knowledge can often produce a better result for clients than simply putting an order into a computerized black box. The best brokerages are combining these approaches. Jefferies has long been known for employing sales-traders who are familiar with all the potential buyers and sellers of the small-cap stocks that are the firm's specialty. But it also has been developing algorithms that focus on less-liquid stocks.

"We're combining a very large human crossing network with small- and midcap-focused execution algorithms," says Ross Stevens, Jefferies's co-head of equity products. "We think it's the best of both worlds for our clients."

Another big reason transaction costs are continuing their downward rush is that more institutions are measuring them than ever before. Some pension plan sponsors began monitoring the costs they incurred when buying and selling stocks after the U.S. Department of Labor published a paper in 1986 urging them to do so. But during the long 1990s bull market, returns were so good for most investors that few worried about the fractions of percentage points lost to inefficient executions. Once the technology bubble burst and a bear market set in, institutions changed their tune.

"When the market is giving you 35 to 40 percent returns, everyone is fat and happy, and no one complains," says John Wheeler, head of U.S. equity trading at mutual fund house American Century Investments. "When you overlay 100 basis points of cost on a 6 percent market return, everyone cares."

More recently, a series of scandals has highlighted the hidden costs of moving big blocks. For instance, in 2003 regulators alleged that some mutual funds were using trading commissions to compensate brokerages for distributing their funds to retail investors rather than handing out orders solely on the basis of which firms would execute them most efficiently. Last year the SEC investigated whether traders at Fidelity Investments received excessively lavish gifts and entertainment from brokerage firms in exchange for directing trading to those firms. Several traders have since left the firm. The investigation is ongoing.

Mutual fund directors and pension plan sponsors have put portfolio managers and traders on notice that costs matter. Four out of five money managers surveyed this year by Tabb say they use outside transaction-cost analyses, up from 64 percent two years ago. State Street Global Advisors, a $1.5 trillion-in-assets investment manager, has a staffer dedicated to transaction-cost analysis; NWQ Investment Management Co., a $14 billion-in-assets subsidiary of Nuveen Investments, is adopting an internal system that will measure the performance of various brokerage algorithms and provide real-time cost analysis.

Some managers, like Fidelity, are negotiating agreements with brokerage houses to unbundle nonexecution services, such as research, from the brokerage services for which they pay commissions. Instead of paying 4 or 5 cents per share for trade execution and ancillary services, they pay lower rates for trading only. In the U.K., regulators this year began requiring investment managers to show their clients what portions of brokerage commissions are allocated to trade execution and to nontrading services like research.

"Trading departments, asset managers and independent directors have been increasingly focused to make sure these costs are as small as possible," says Jameson Baxter, independent vice chairman of the mutual funds managed by Putnam Investments, a firm that measures the performance of both in-house traders and executing brokers. "Trading costs are an enormous part of shareholder returns. If you can reduce those, you can improve returns."

There is still another reason for the dramatic decline in transaction costs — one that has nothing to do with analysis or trading skill: calm markets. By definition, volatile stocks are more costly to trade because their prices fluctuate wildly. And volatility is near all-time lows. Since the second quarter of 2002, the Chicago Board Options Exchange's volatility index, known as the VIX, has fallen by 76 percent. The VIX tracks the expected movement of prices of Standard & Poor's 500 index options over the next 30 days. When investors are bearish, options prices rise and the VIX level climbs. As fear wanes, options prices decline and the VIX falls. In the past year the fear gauge, as it is also known, has traded at historical lows.

"Trading costs are an enormous part of shareholder returns. If you can reduce those, you can improve returns."

No one knows how much reduced volatility has contributed to the decline in trading costs, but some traders fear that the long cycle of low volatility has created a false sense of security in the industry, leading money managers and brokerage firms to rely too much on computer programs that may not be able to handle more-volatile markets. Should volatility increase, investors may find themselves wishing for exactly the brand of full-service trading that Wall Street has been deemphasizing as commission rates have shrunk and institutional brokerage has become less profitable, these critics say.

"There will come a time — and it may be when volatility increases — when the resources we used to count on aren't available because they aren't being paid for," remarked Andrew Brooks, head of equity trading at Baltimore mutual fund giant T. Rowe Price Associates, during an Investment Company Institute conference in September. "I hope we are prepared for that day — or realize when it comes that it may be our own fault."

Still, most investors believe that even if volatility increases, they are better off measuring costs and taking advantage of technology to minimize them. "If volatility goes up dramatically, then costs will increase," says Roger Petrin, head of trading at State Street Global Advisors. "But not as much as they would have without the availability of these tools."

In other words, NYSE floor traders needn't put their job searches on hold. ii