



On-Line Discount Brokers

by Kenneth J. Michal

As we enter the next millenium, only a few new on-line discount brokers join our year 2000 comparison—the total number increases by just four, from 72 brokerage firms last year to 76. The small increase can be explained by the consolidation taking place within the industry.

As the industry continues to settle into the consciousness of the mainstream, it appears as though a couple of plateaus have been reached. The growth in the number of firms appears to have slowed down, as has the downward trend of commissions. Over the past couple of years, our comparisons were characterized by large increases in the number of on-line brokers and steep declines in average commissions charged. Heightened competition among the brokers led to lower commission rates.

The bar chart in Figure 1 traces the growth in the number of registered on-line discount brokerage firms over the nine years since we started comparing them. A big jump took place in 1996 soon after the first of the Internet brokers was born. Today, as was the case last year, all the on-line brokers in our survey are Internet-based.

Figure 2 depicts the plateau for commissions, displaying the movement of commissions for a 100-share trade charged by on-line discount brokers over the last nine years. It should be noted that the firms driving the flat high and low graphical lines are the same two firms from last year (Brown & Co. representing the lowest commission charged and Max Ule as the perennial highest commission broker).

With commissions at low levels, brokers are trying to focus on features that differentiate them from each other such as research tools, better access for active investors, and even the promise of participating in IPOs. Over the last few years, bonus features, such as research tools and free real-time quotes, have given certain firms an added benefit, a competitive advantage over other bro-

kerages offering less.

For example, in today's on-line broker arena some firms still charge for real-time quotes and some only offer delayed quotes—a non-competitive stance one would expect to end by the year 2000. Delayed quotes are available for free at any investment-related site on the Web and some sites are now even offering free real-time “snapshot” quotes to their registered users. Brokers with meager offerings are at a clear disadvantage in this competitive on-line broker world.

The comparison grid on the following pages details these services and reports any associated fees charged, if any. Firms that offer trading via the Web are able to package the widest range of information and coverage as a result of the multitude of resources that can be linked through the Internet.

As always, verify the information presented here by contacting the brokers before making any final decisions.

Behind the Numbers

In the early years, when discount brokers first ventured on-line with direct

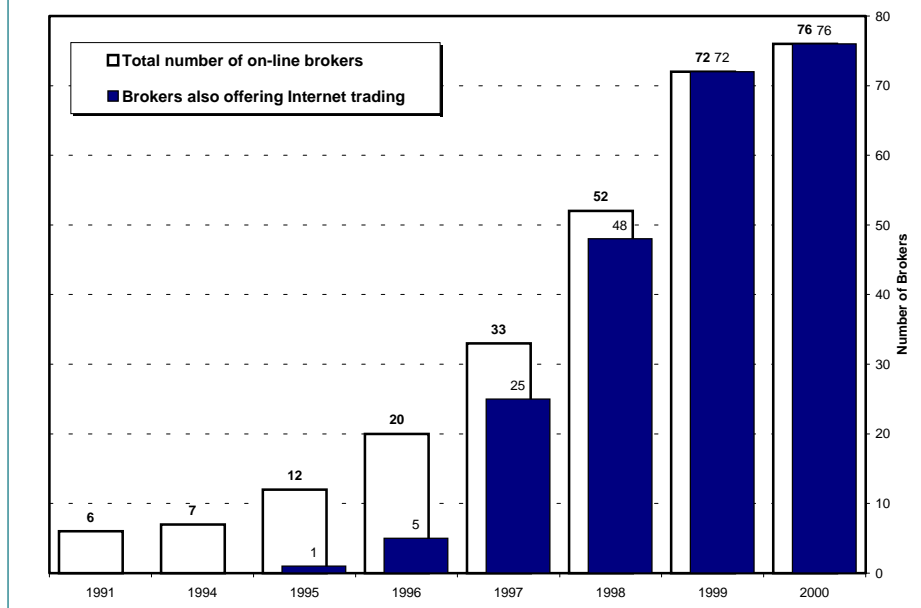
dial-up software, on-line commissions decreased only moderately. Two years ago, however, we witnessed the first significant dip in commission charges, with the average minimum commission decreasing from \$34 to \$20. Last year we saw only a slight drop in commission charges, as the average minimum fell to \$18. The average commission charged by this year's roster of brokers has not changed from last year, remaining at \$18.

Last year, 46% of the on-line discount brokers surveyed reported minimum commissions below \$15. This year almost half (49%) of the 76 firms report minimum commissions below \$15, and 11 brokers have minimum commissions under \$10.

The movement to flat-fee commission schedules continues to provide big savings for the individual investor. Flat-rate pricing decreases the confusion for the investor and broker as well. This year, 70 out of the 76 brokers in our comparison report a flat-rate commission schedule.

Keep in mind that these deep-discount

Figure 1.
Growth of On-Line Brokers



commissions typically apply to market orders filled at the available bid/ask price when your order reaches the exchanges. As indicated in the grid, most firms extend their flat-rate schedule when you move into limit orders, but commission fees do change at some brokers.

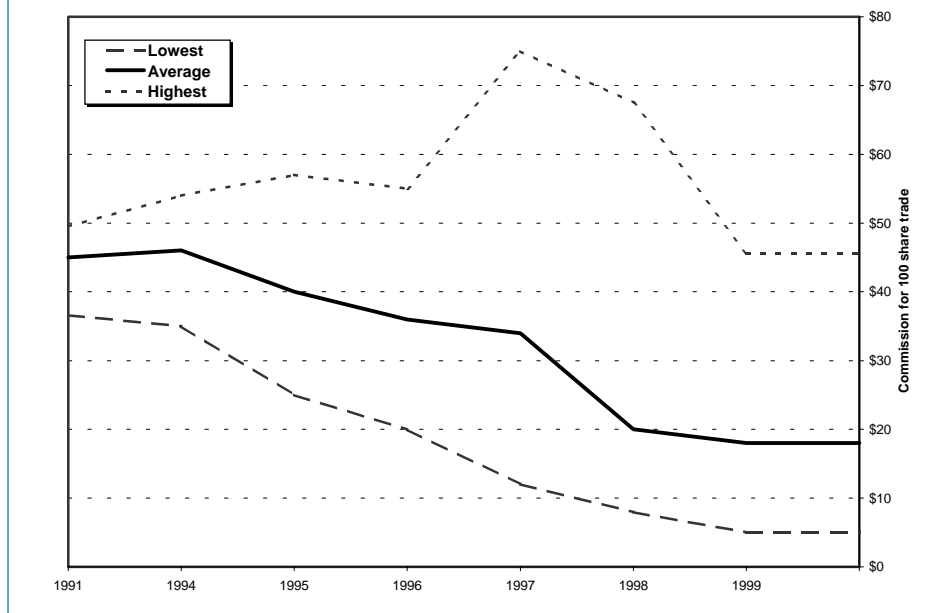
The Comparison Grid

Anyone familiar with our annual comparison of on-line discount brokers will notice some major changes to the comparison grid this year. The on-line discount broker industry has changed dramatically over the last few years and we thought it was time that our comparison grid follow suit.

The redesign is one part content and another part layout. In terms of layout changes, we have removed a couple of things and moved around some others. We deleted the questions regarding additional on-line fees because they were no longer meaningful in today's industry. The only real fee to be concerned with is a possible execution fee charged for processing your transactions. But be sure to thoroughly study the fee structure of any prospective brokerage firm in order to understand all of the possible expenses. We have also taken out the sections discussing software as a trading interface, as brokers have discontinued their programs in the last year in favor of direct Internet trading. Securities handled information has been moved closer to the more meaningful section discussing orders so that commissions could be placed in the front half of the grid, closer to the broker names—making comparison and study easier in each case.

The commissions section has seen a major overhaul. Gone are the three sample trades, which lose their significance in the flat-fee commission world of today. This section on commissions now features a Flat-Fee Commission Rate column. If the broker does not offer a flat-rate schedule, then "none" appears. Also new this year is a Maximum Number of Shares column, which corresponds to the flat-rate figure. The 500 shares at \$50 per share sample trade is presented, along with the percentage of trade, to allow comparison with brokers that do not have

Figure 2.
On-Line Commissions 1991–1999



flat-fee schedules. Two other new pieces of information have been added that have frequently been requested by our readers: whether commissions vary depending on exchange (denoted by an asterisk) and the additional charge for limit orders.

For example, let's look at E*Trade's commission situation. E*Trade has a flat \$14.95 fee for up to 5,000 shares. Its commission schedule does change depending on whether orders are placed for a Nasdaq stock or an exchange-listed stock, and the commissions move up to \$19.95 for limit order trades.

Additional new content will be discussed later in corresponding sections.

Trading Options

The Other Trading Options section of the grid shows alternatives to Internet trading. In addition to being able to place trades via an on-line trading module hosted at the firm's Web site, brokers may offer a telephone option and a choice for the investor who is on-the-go.

Touch-Tone Service simply allows you to place your trades over the phone automatically using your phone's keypad.

Today, the standard hand-held wireless unit for placing trades is 3Com's best-selling Palm VII, allowing

two-way communication throughout the U.S. Personal digital assistants (PDAs) have become popular tools for contact management, task management, and even basic spreadsheet work, in addition to their trading capabilities. As indicated in the grid, a few firms now offer trading through these devices (hand-held wireless units).

Flexibility of a firm's trading system is a key component in the evaluation of any broker's offerings. If the firm's Web site is down due to heavy trading volume or merely experiencing technical problems and you cannot get in to access your accounts—the touch-tone service option becomes very valuable.

Commission Discounts

Discounts are detailed in the column labeled On-line Commission Discount. This percentage figure is versus a minimum commission fee for speaking with a live broker to directly place a trade.

No-Load Mutual Funds

The figures entered in the Minimum Fee for a No-Load Mutual Fund Transaction column are calculated by figuring the associated commission of purchasing one share at \$1.

(continued on p. 18)

PRODUCT COMPARISON: ON-LINE DISCOUNT BROKERS

Broker Name Web Address	Phone Number	Other Trading Options			Commissions (asterisk denotes price may vary depending on exchange)					Minimum Fee for No-Load Fund Transaction	Other Securities Handled							
		Touch-Tone Service	Hand-Held Wireless Unit	On-Line Commission Discount	Flat-Fee Commission Rate	Maximum No. of Shares at Flat Rate	500 Shares@\$50 per Share	% of 500 Share Trade	Additional Charge for Limit Orders		Bonds	Mutual Funds	Options	Futures	Annuities	CDs	Offers Cash Management Account	Market & Limit
A.B. Watley Group, Inc. www.abwatley.com	888/229-2853	✓	✓	58%	\$9.95	5,000	\$9.95	0.04%	none	\$40.00		✓	✓		✓	✓	✓	✓
AccuTrade www.accutrade.com	800/494-8939	✓	✓	none	\$29.95	1,000	\$29.95	0.12%	none	\$27.00		✓	✓			✓	✓	✓
AFTrader www.aftrader.com	888/682-6973	✓		50%	\$14.95	5,000	\$14.95	0.06%	none	\$30.00		✓	✓				✓	✓
American Express Brokerage www.americanexpress.com/trade	800/297-7378	✓		67%	\$14.95	3,000	\$14.95	0.06%	none	varies		✓			✓	✓	✓	✓
Ameritrade www.ameritrade.com	800/669-3900	✓	✓	55%	\$8.00	unlimited	\$8.00	0.03%	\$15.00	\$18.00		✓	✓			✓	✓	✓
Banc of America Inv't Services www.bankofamerica.com/investments	800/926-1111	✓		38%	\$24.95	1,000	\$24.95	0.10%	none	\$40.00		✓	✓			✓	✓	✓
Barry Murphy & Co. www.barrymurphy.com	800/221-2111	✓		none	\$29.95	2,000	\$29.95	0.12%	none	none	✓	✓	✓			✓	✓	✓
Bidwell & Co. www.bidwell.com	800/547-6337	✓		40%	\$12.00	1,500	\$12.00	0.05%	\$3.00	varies		✓	✓			✓	✓	✓
Brown & Co. www.brownco.com	800/822-2021	✓		58%	\$5.00	5,000	\$5.00	0.02%	varies	n/a			✓			✓	✓	✓
Bull & Bear Securities www.bullbear.com	800/262-5800	✓		36%	\$19.95	1,000	\$19.95	0.08%	none	\$23.00		✓	✓			✓	✓	✓
Burke Christensen & Lewis Sec www.bcnet.com	800/621-0392	✓		62%	\$13.00	5,000	\$13.00	0.05%	\$5.00	n/a	✓					✓	✓	✓
Bush Burns Securities www.bushburns.com	800/821-4803			29%	\$25.00	5,000	\$25.00	0.10%	none	none	✓	✓	✓		✓	✓	✓	✓
Charles Schwab www.schwab.com	800/435-4000	✓		23%	\$29.95	1,000	\$29.95	0.12%	none	varies	✓	✓	✓	✓		✓	✓	✓
CompuTel Securities www.computel.com	800/432-0327	✓		42%	\$14.00	1,000	\$14.00	0.06%	\$5.00	none		✓	✓		✓	✓	✓	✓
CyBerCorp.com www.cybercorp.com	888/762-9237			none	\$14.95	1,000	\$14.95	0.06%	none	none							✓	✓
Datek Online www.datek.com	888/463-2835			none	\$9.99	5,000	\$9.99	0.04%	none	\$9.99		✓					✓	✓
DLJdirect Inc. www.dljdirect.com	800/825-5723	✓	✓	none	\$20.00	1,000	\$20.00	0.08%	none	none	✓	✓	✓		✓	✓	✓	✓
Downstate Discount www.trade4less.com	800/780-3543			43%	\$19.95	5,000	\$19.95	0.08%	none	\$40.00	✓	✓	✓		✓	✓	✓	✓
Dreyfus Brokerage Services www.edreyfus.com	800/421-8395		✓	40%	\$15.00	10,000	\$15.00	0.06%	none	varies	✓	✓	✓			✓	✓	✓

*RT = real-time; ID = intraday; ED = end of day

Types of Orders That Can Be Placed On-Line										Open Orders		Confirmation of Order Fulfillment Delivered				Portfolio Information Available On-Line				Portfolio Information Updated *	Quote Data Available						Type of Quotes (Real-Time/Delay/Both)			Real-Time Quote Fees (per month, rounded)			Live Broker Availability (EST)			After-Hours Trading	Research Offered On-Line									
Stop-Limit	Day/Good-Until-Canceled	Short Sell	Do Not Reduce	Versus Purchase	Examine & Change	Cancel	Via an On-Line Link	Via an E-Mail Message	Via a Telephone Call	Via Regular Mail	Cash Balance	Positions and Values	Dividends Received	Transaction Record	ID	Bid / Ask Price	Last Trade	Volume	High / Low (Day)	High / Low (52-Week)	Dividend / Ex-Dividend Date	both	free	8:00am-8:00pm	am & pm	Fundamental Data	Earnings Estimates	Analyst Reports	Mutual Fund Reports	Portfolio Tracking	Screening	Charts	News	Web Site Offers a Trading Demo												
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PRODUCT COMPARISON: ON-LINE DISCOUNT BROKERS

Broker Name Web Address	Phone Number	Other Trading Options		On-Line Commission Discount	Commissions (asterisk denotes price may vary depending on exchange)					Minimum Fee for No-Load Fund Transaction	Other Securities Handled								
		Touch-Tone Service	Hand-Held Wireless Unit		Flat-Fee Commission Rate	Maximum No. of Shares at Flat Rate	500 Shares@\$50 per Share	% of 500 Share Trade	Additional Charge for Limit Orders		Bonds	Mutual Funds	Options	Futures	Annuities	CDs	Offers Cash Management Account	Market & Limit	Stop
E*Trade Securities www.etrade.com	800/786-2575	✓	✓	50%	\$14.95*	5,000	\$14.95*	0.06%	\$5.00	none	✓	✓	✓				✓	✓	✓
Empire Financial Group www.empirenow.com	800/900-8101			63%	\$6.95*	unlimited	\$6.95*	0.03%	\$5.00	\$25.00	✓	✓	✓				✓	✓	✓
Fidelity Brokerage Services www.fidelity.com	800/544-8666	✓	✓	58%	\$25.00	1,000	\$25.00	0.10%	\$5.00	none		✓	✓		✓	✓	✓	✓	✓
Firstrade Securities, Inc. www.firstrade.com	888/988-6168	✓	✓	77%	\$6.95	unlimited	\$6.95	0.03%	\$3.00	\$25.00		✓	✓		✓		✓	✓	✓
Freedom Investments www.freedominvestments.com	800/381-1481	✓		67%	\$15.00	unlimited	\$15.00	0.06%	none	n/a	✓		✓					✓	✓
Freeman Welwood www.freemanwelwood.com	800/729-7585	✓		56%	\$14.95	2,000	\$14.95	0.06%	\$5.00	varies		✓	✓				✓	✓	✓
GFN Investments www.gfn.com	800/354-7429			57%	\$14.95	1,000	\$14.95	0.06%	\$5.00	none		✓	✓			✓	✓	✓	✓
InternetTrading.com www.internettrading.com	800/696-2811	✓		varies	\$14.00*	5,000	\$14.00*	0.06%	none	n/a			✓					✓	✓
InvestEXpress On-line www.investexpress.com	800/392-7192			54%	\$13.95	unlimited	\$13.95	0.06%	\$4.00	\$45.00	✓	✓	✓			✓	✓	✓	✓
InvestIN Securities Corp. investin.com	800-327-1883		✓	none	\$9.95	1,000	\$9.95	0.04%	none	none		✓	✓					✓	✓
Investors National Corp. www.investorsnational.com	800/728-1266			none	none	n/a	\$62.50	0.25%	none	\$59.00		✓	✓				✓	✓	✓
Investrade www.investrade.com	800/498-7120	✓	✓	65%	\$7.95	unlimited	\$7.95	0.03%	\$4.00	\$29.00		✓	✓				✓	✓	✓
J.B. Oxford & Company www.jboxford.com	800-946-1776	✓		41%	\$14.50	1,000	\$14.50	0.06%	\$5.00	\$25.00		✓	✓		✓	✓	✓	✓	✓
Levitt & Levitt www.trustrade.com	800/671-8505			63%	\$12.95	unlimited	\$12.95	0.05%	\$5.00	\$12.95	✓	✓	✓			✓		✓	✓
Max Ule www.maxule.com	800/223-6642			20%	none	n/a	\$156.00	0.62%	none	varies	✓	✓	✓			✓	✓	✓	✓
Mercantile Discount Investing www.mercantile.com/misi	800/899-6878			23%	\$29.95	1,000	\$29.95	0.12%	none	\$25.00		✓				✓		✓	✓
Morgan Stanley Dean Witter Online www.online.msdcw.com	800/688-3462	✓	✓	25%	\$29.95	1,000	\$29.95	0.12%	none	none	✓	✓	✓				✓	✓	✓
Mr. Stock www.mrstock.com	800/470-1896	✓		25%	\$14.95	5,000	\$14.95	0.06%	\$5.00	\$25.00		✓	✓					✓	✓
Muriel Siebert www.siebertnet.com	800/872-0711	✓	✓	60%	\$14.95	1,000	\$14.95	0.06%	none	\$35.00	✓	✓	✓				✓	✓	✓

*RT = real-time; ID = intraday; ED = end of day

Types of Orders That Can Be Placed On-Line				Open Orders		Confirmation of Order Fulfillment Delivered				Portfolio Information Available On-Line				Quote Data Available				Research Offered On-Line																			
Stop-Limit	Day/Good-Until-Canceled	Short Sell	Do Not Reduce	Versus Purchase	Examine & Change	Cancel	Via an On-Line Link	Via an E-Mail Message	Via a Telephone Call	Via Regular Mail	Cash Balance	Positions and Values	Dividends Received	Transaction Record	Portfolio Information Updated *	Bid / Ask Price	Last Trade	Volume	High / Low (Day)	High / Low (52-Week)	Dividend / Ex-Dividend Date	Type of Quotes (Real-Time/Delay/Both)	Real-Time Quote Fees (per month, rounded)	Live Broker Availability (EST)	After-Hours Trading	Fundamental Data	Earnings Estimates	Analyst Reports	Mutual Fund Reports	Portfolio Tracking	Screening	Charts	News	Web Site Offers a Trading Demo			
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PRODUCT COMPARISON: ON-LINE DISCOUNT BROKERS

Broker Name Web Address	Phone Number	Other Trading Options			Commissions (asterisk denotes price may vary depending on exchange)					Minimum Fee for No-Load Fund Transaction	Other Securities Handled							
		Touch-Tone Service	Hand-Held Wireless Unit	On-Line Commission Discount	Flat-Fee Commission Rate	Maximum No. of Shares at Flat Rate	500 Shares@\$50 per Share	% of 500 Share Trade	Additional Charge for Limit Orders		Bonds	Mutual Funds	Options	Futures	Annuities	CDs	Offers Cash Management Account	Market & Limit
Mydiscountbroker.com mydiscountbroker.com	888/882-5600		✓	52%	\$12.00	5,000	\$12.00	0.05%	none	none		✓	✓			✓	✓	✓
National Discount Brokers www.ndb.com	800/888-3999	✓		41%	\$14.75*	5,000	\$14.75*	0.06%	\$5.00	varies		✓	✓			✓	✓	✓
Net Investor www.netinvestor.com	800/638-4250			none	none	n/a	\$24.95	0.10%	none	\$35.00	✓	✓				✓	✓	✓
Newport Discount Brokerage www.newport-discount.com	800/999-3278	✓		37%	\$19.00	50,000	\$19.00	0.08%	none	none	✓	✓	✓			✓	✓	✓
Norwest Brokerage Direct www.norwest.com	800/433-0738	✓		30%	\$27.95	1,000	\$27.95	0.11%	none	\$40.00	✓	✓	✓			✓	✓	✓
Peremel & Co. www.peremel.com	800/666-1440	✓	✓	53%	\$18.00	2,000	\$18.00	0.07%	\$2.00	none		✓	✓		✓	✓	✓	✓
Preferred Trade www.preferredtrade.com	888/889-9178			varies	\$15.00*	750	\$15.00*	0.06%	\$0.01/sh	\$15.00	✓		✓			✓	✓	✓
Quick & Reilly www.quick-reilly.com	800/672-7220	✓		60%	\$14.95	unlimited	\$14.95	0.06%	\$5.00	\$25.00	✓	✓	✓		✓		✓	✓
Recom Securities www.trustrade.com	800/328-8600			63%	\$12.95*	1,999	\$12.95*	0.05%	\$5.00	\$12.95	✓	✓	✓			✓	✓	✓
Regal Discount www.eregal.com	800/786-9000	✓		24%	\$18.95	5,000	\$18.95	0.08%	varies	\$35.00		✓	✓			✓	✓	✓
Scottsdale Securities www.scottrade.com	800/283-1950	✓		78%	\$7.00	unlimited	\$7.00	0.03%	\$12.00	\$17.00	✓	✓	✓				✓	✓
Scudder Financial Services www.scudder.com	800/700-0820	✓		14%	\$29.95	1,000	\$29.95	0.12%	none	varies		✓				✓	✓	✓
Seaport Securities Corp. www.sea-port.com	800/732-7678	✓		41%	\$19.95	1,000	\$19.95	0.08%	none	\$35.00	✓	✓	✓		✓	✓	✓	✓
Securities Research www.securitiesresearch.com	800/327-3156			varies	\$35.00	n/a	\$35.00	0.14%	none	\$35.00	✓	✓				✓	✓	✓
Sherry Bruce's State Discount www.state-online.com	800/222-5520	✓		60%	\$14.00	5,000	\$14.00	0.06%	none	\$25.00		✓	✓			✓	✓	✓
Spider Securities www.spideronline.com	877/477-4337	✓		none	\$14.95	5,000	\$14.95	0.06%	none	\$29.95		✓				✓	✓	✓
StockCross www.stockcross.com	800/225-6196			30%	none	n/a	\$47.25	0.19%	\$10.00	n/a			✓				✓	✓
Strong Investments www.strong.com	800/328-4854	✓		33%	\$24.95	1,000	\$24.95	0.10%	none	\$35.00	✓	✓	✓		✓	✓	✓	✓
Summit Financial Serv Group www.sfsg.com	800/631-1635	✓		14%	\$29.95	1,000	\$29.95	0.12%	none	n/a			✓				✓	✓

*RT = real-time; ID = intraday; ED = end of day

Types of Orders That Can Be Placed On-Line				Open Orders				Confirmation of Order Fulfillment Delivered				Portfolio Information Available On-Line				Quote Data Available				Type of Quotes (Real-Time/Delay/Both)				Real-Time Quote Fees (per month, rounded)				Live Broker Availability (EST)				After-Hours Trading				Research Offered On-Line					
Stop-Limit	Day/Good-Until-Canceled	Short Sell	Do Not Reduce	Versus Purchase	Examine & Change	Cancel	Via an On-Line Link	Via an E-Mail Message	Via a Telephone Call	Via Regular Mail	Cash Balance	Positions and Values	Dividends Received	Transaction Record	Portfolio Information Updated *	Bid / Ask Price	Last Trade	Volume	High / Low (Day)	High / Low (52-Week)	Dividend / Ex-Dividend Date	Type of Quotes	Real-Time	Quote Fees	per month, rounded	Live Broker Availability	EST	After-Hours Trading	Fundamental Data	Earnings Estimates	Analyst Reports	Mutual Fund Reports	Portfolio Tracking	Screening	Charts	News	Web Site Offers a Trading Demo				
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	RT	✓	✓	✓	✓	✓	✓	both	free	8:30am-10:00pm	pm	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				
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✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	ED	✓	✓	✓	✓	✓	✓	real	free	8:30am-5:00pm	pm																

PRODUCT COMPARISON: ON-LINE DISCOUNT BROKERS

Broker Name Web Address	Phone Number	Other Trading Options		On-Line Commission Discount	Commissions (asterisk denotes price may vary depending on exchange)					Minimum Fee for No-Load Fund Transaction	Other Securities Handled							
		Touch-Tone Service	Hand-Held Wireless Unit		Flat-Fee Commission Rate	Maximum No. of Shares at Flat Rate	500 Shares@\$50 per Share	% of 500 Share Trade	Additional Charge for Limit Orders		Bonds	Mutual Funds	Options	Futures	Annuities	CDs	Offers Cash Management Account	Market & Limit
SureTrade www.suretrade.com	401/642-6900	✓	✓	73%	\$7.95	unlimited	\$7.95	0.03%	\$2.00	none	✓	✓	✓				✓	✓
T. Rowe Price Brokerage www.troweprice.com	800/638-5660	✓		29%	\$24.95	1,000	\$24.95	0.10%	none	none			✓				✓	✓
TD Waterhouse Securities www.tdwaterhouse.com	800/934-4443	✓		65%	\$12.00	5,000	\$12.00	0.05%	none	none		✓	✓			✓	✓	✓
Trade-Well Discount Investing www.trade-well.com	888/907-9797	✓		19%	\$22.00	3,000	\$22.00	0.09%	none	none	✓	✓	✓			✓	✓	✓
TradeStar www.4tradestar.com	800/961-1500	✓		42%	\$14.00	unlimited	\$14.00	0.06%	\$5.00	\$29.00	✓	✓	✓		✓	✓	✓	✓
Trading Direct www.tradingdirect.com	800/925-8566	✓		none	\$9.95	unlimited	\$9.95	0.04%	none	\$15.95		✓	✓		✓	✓	✓	✓
U.S. Rica Financial Inc. www.usrica.com	888/887-7422	✓		86%	\$10.00	500	\$4.95	0.02%	none	n/a		✓					✓	✓
USAA Brokerage Services www.usaa.com	800/531-8343	✓		31%	\$24.00	5,000	\$24.00	0.10%	none	\$35.00		✓	✓			✓	✓	✓
Vanguard Brokerage Services www.vanguard.com	800/992-8327	✓		56%	\$20.00	1,000	\$20.00	0.08%	none	\$35.00		✓	✓		✓		✓	✓
Vision Securities www.visiontrade.com	800/374-1940	✓		67%	\$14.95	2,000	\$14.95	0.06%	none	\$25.00		✓	✓		✓		✓	✓
Wachovia Investments www.wachovia.com	800/922-9008	✓		25%	\$29.95	2,000	\$29.95	0.12%	none	\$40.00		✓	✓			✓	✓	✓
Wall Street Access www.wsaccess.com	800/925-5781	✓		44%	\$25.00	5,000	\$25.00	0.10%	none	n/a			✓				✓	✓
Wall Street Electronica www.wallstreete.com	888/925-5783	✓		42%	none	n/a	\$29.95	0.12%	none	\$35.00	✓	✓	✓		✓	✓	✓	✓
Wall Street Equity, Inc. www.wsei.com	800/321-4877			none	\$15.00	10,000	\$15.00	0.06%	\$9.00	\$15.00						✓	✓	
WellsTrade www.wellsfargo.com/wellstrade	800/872-3377	✓		14%	\$29.95	1,000	\$29.95	0.12%	none	\$34.95		✓	✓				✓	✓
Wilshire Capital Mgmt, LLC www.wilshirecm.com	800/926-9991			none	\$20.00	5,000	\$20.00	0.08%	none	n/a						✓	✓	✓
WIT Capital www.witcapital.com	888/474-4281	✓		70%	\$14.95	5,000	\$14.95	0.06%	\$5.00	none	✓	✓				✓	✓	✓
York Securities www.yorktrade.com	800/221-3154	✓		10%	none	n/a	\$38.70	0.15%	none	none		✓	✓				✓	✓
Your Discount Broker www.ydb.com	800/800-3215	✓		14%	\$29.95	5,000	\$29.95	0.12%	\$5.05	none	✓	✓	✓			✓	✓	✓

*RT = real-time; ID = intraday; ED = end of day

Types of Orders That Can Be Placed On-Line				Open Orders		Confirmation of Order Fulfillment Delivered				Portfolio Information Available On-Line				Quote Data Available				Type of Quotes (Real-Time/Delay/Both)			Real-Time Quote Fees (per month, rounded)			Live Broker Availability (EST)			After-Hours Trading	Research Offered On-Line								
Stop-Limit	Day/Good-Until-Canceled	Short Sell	Do Not Reduce	Versus Purchase	Examine & Change	Cancel	Via an On-Line Link	Via an E-Mail Message	Via a Telephone Call	Via Regular Mail	Cash Balance	Positions and Values	Dividends Received	Transaction Record	Portfolio Information Updated *	Bid / Ask Price	Last Trade	Volume	High / Low (Day)	High / Low (52-Week)	Dividend / Ex-Dividend Date	Type of Quotes	Real-Time	Quote Fees	Live Broker Availability	After-Hours Trading	Fundamental Data	Earnings Estimates	Analyst Reports	Mutual Fund Reports	Portfolio Tracking	Screening	Charts	News	Web Site Offers a Trading Demo	
✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	RT	✓	✓	✓	✓	✓	✓	both	free	8:00am-6:00pm		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
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	✓	✓	✓		✓	✓		✓	✓	✓	✓	✓	✓	✓	ED	✓	✓	✓	✓	✓		both	free	24 hrs/7 days		✓	✓		✓		✓	✓	✓	✓	✓	
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	RT	✓	✓	✓	✓	✓	✓	real	free	8:00am-6:00pm		✓									✓	
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	RT	✓	✓	✓	✓	✓	✓	both	free	8:30am-9:00pm			✓		✓		✓	✓	✓	✓	✓	
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Securities Handled

All on-line brokers included here handle stock trades, so this is not shown in the grid as a check mark. Most of the brokers allow you to trade other basic securities such as options, bonds, mutual funds, annuities, and certificates of deposit.

Unfortunately, only one of the firms in this year's survey allows individuals to trade futures contracts on-line. This is primarily due to the highly leveraged nature of futures and their accompanying liability concerns.

Commission structures vary for different types of securities traded, so be sure to ask for a detailed commission schedule from any potential broker and review it carefully. Most brokers describe basic commissions and fees on their Web site, however, you may have to contact the firm directly for details involving specific situations.

Cash Management Account

A cash management account is simply a special money management account made available to clients of the brokerage firm. Cash management accounts offer check writing abilities, debit card use, and sweep account capabilities.

Placing Orders

Most brokers allow basic trades to be placed on-line, such as market orders, stop orders, and limit orders.

The simplest of all orders is the market order, which is usually executed at the best available price. Before placing a trade, it is important to first examine the market price by looking at the last trade price and its time of execution, the current inside bid/ask spread, the size of these offers, and the volume. While a market order offers you the quickest and surest way to accomplish a trade, it comes with the risk that a quickly moving or thinly traded market may lead to a poor execution price.

A limit order reduces this transaction risk by setting the minimum price that an investor is willing to sell a security at, or the maximum price that an investor is willing to pay to purchase a security. As mentioned above, the flat-fee commissions are based upon entering a market

order. Some firms are extending their flat commission schedules to include limit orders as well. Ask any prospective brokers if their stated commissions extend to limits orders—that added flexibility could put one firm ahead of the others under consideration.

Stop orders are also tied to market moves. While a limit order establishes a set price or better, a stop order becomes a market order when the security's price hits the stop price. This order will then be filled at the prevailing market price, with no guarantee of a specific price.

Length of time can also be assigned to on-line orders, such as a day order (good through that day only) or good-until-canceled (usually good through the end of the month in which the transaction was placed).

A do-not-reduce order is an instruction not to automatically reduce a stop or limit order by the amount of the dividend when a stock goes ex-dividend.

Specifying which lots are to be sold is done through a versus purchase order. A versus purchase order helps individuals limit their tax liability by allowing them to sell shares that were purchased at a specific price.

Order Confirmations

The section entitled Confirmation of Order Fulfillment Delivered refers to how you are notified that your recent order was filled. This order fulfillment confirmation can appear on-line at a designated area on the broker's Web site. Confirmation can arrive in your inbox as an E-mail message. A confirmation can also come in the form of a telephone call or be sent via regular mail.

In most cases, more than one means of receiving confirmation is available.

Portfolio Data

Immediate access to account information is a huge benefit of on-line trading. It is important for the broker to make this type of portfolio data available and easy to access. It allows you to see how much cash you have in your account to purchase new securities, as well as to view those securities you already own.

In addition to reporting on the availability of cash balances and positions,

the comparison grids will also indicate which on-line brokers provide a record of dividends received from your securities and which keep a detailed ledger of your account transactions.

A new item surveyed brokers on when portfolio information is updated following a transaction or change in the portfolio holdings or cash account. Real-time (denoted by RT in the grid) infers that the portfolio is updated immediately following a change. Intraday (ID) updating is on a delayed basis, like 15-minute delay or every hour. End of day/next day (ED) simply means that changes to the portfolio would not be reflected in your records until the next trading day.

Quotes

Current quotes on securities are a vital part of placing a trade. An investor needs fresh data no matter how volatile the market to make informed decisions.

The bid/ask price refers to the spread between the bid and the ask price of a stock. Last trade denotes the price at which the security last traded. Volume refers to the total amount of shares that has changed hands for that security. We also report on the high/low price for the day and for the year, which aids in determining a security's relative price standpoint.

We have broken down the quotes section by the type of quotes available—real-time, delayed, or both. In the past, real-time quotes were quite expensive and rarely free. Today, the popular means of offering real-time quotes is with a quote bank. Many brokers offer a quote bank with 50–100 free real-time quotes with all new accounts opened. Most often, 100 additional free real-time quotes are added to the quote bank with each executed trade, and these quotes can accumulate. Firms that offer quote banks are noted in the grids as offering free real-time quotes. If necessary, additional quotes can be purchased for a fee. Some brokers charge for real-time quotes, most often on a per month basis—if so, the fee is identified in the grids.

Live Broker Availability

In addition to touch-tone trading or wireless trading option, the availability

Full-Service Brokerages Enter the On-Line Trading Game

For the veteran on-line discount broker in the new world of Internet trading, it must seem like attacks come at them from all sides.

Over the last couple of years, firms like Charles Schwab and Fidelity have had to fight off a new breed of discount broker hungry for a piece of market share pie. Since 1997, 56 of these youngblood brokerages have set up shop on-line. The old-standbys appear to have weathered the storm and Schwab has even gained some market share. However, an old nemesis has entered the fray and could change things forever.

After years of ignoring and flippantly objecting to the idea of trading via the Internet, a group of full-service brokerage firms—led by Merrill Lynch—is finally recognizing the impact and value of self-directed on-line trading.

The full-service brokerage industry saw on-line trading as a passing fad, a game played by gamblers, not investors. Upon learning that some of their clients were participating in this on-line trading game, the full-service firms slowly changed their way of thinking about trading on-line.

Only after conducting studies of clientele trading habits did the full-service firms finally acknowledge the Internet as a viable trading option. These studies and others like them showed that many account holders were moving monies out of full-service accounts and into new on-line discount broker accounts to test out their luck on their own.

Their dilemma—how to offer a service to their clientele that they now require without alienating their brokers, account executives, and money managers.

The final decision was a difficult one for the leaders of the full-service industry. Offering an on-line trading option to clients created a direct conflict with the backbone of the full-service firms—their brokers. Obviously, the self-directed individual investor trading on-line does not need a broker. They do not want to pay the steep commissions charged for utilizing a broker's insight and wisdom—they prefer to go it alone, winning or losing on their own merits.

This conflict is referred to as "channel conflict" where competing channels of business offer a service at different prices, in this case full-service versus on-line discounts. This channel conflict is best portrayed in the example of the new Morgan Stanley Dean Witter Online, formerly Discover Brokerage.

In 1997, just before merging with Morgan Stanley, Dean Witter acquired an

on-line brokerage house, then Lombard Securities. Following the merger, the brokerage conglomerate renamed the on-line arm of the firm Discover Brokerage, taking the name from Dean Witter's Discover consumer credit card operations. By giving the on-line arm its own new identity, Morgan Stanley Dean Witter executives planned to keep it completely separate from their full-service brokerage business. Industry outsiders and most new investors had no idea the two were under the same umbrella.

With competitors like Merrill Lynch deciding to roll out new on-line trading operations, Morgan Stanley Dean Witter had to decide whether Discover Brokerage would remain a separate on-line discount operation with lower commission or to transform the brand name again and jump into the on-line game along with their full-service competition.

In the end, Morgan Stanley Dean Witter's Discover Brokerage became Morgan Stanley Dean Witter Online—offering clients a combination of products and services called ichoice, where individuals can create a financial relationship that best meets their needs—albeit at higher commissions than those charged last year by Discover Brokerage. A ChoiceSM account is an option that offers account holders virtually unlimited transactions for a single, asset-based fee—so far the standard offering set out by the full-service brokerages. The flat-fee commission schedule for Morgan Stanley Dean Witter Online is now set at \$29.95, pegged to target Schwab's long-standing flat-rate schedule.

The huge conflict created by Morgan Stanley Dean Witter's decisions and those of the industry as a whole is obvious. Choosing to offer an account that is a combination of discount and full-service is somewhat odd and might be difficult to sell to both investors and brokers. The brokers whose calling cards have been the name Morgan Stanley or Dean Witter now must truly share that prize with a discount arm and the investors who have used Discover Brokerage or are familiar with their past commission schedules might balk at paying double the commission.

The argument for choosing a firm like Morgan Stanley Dean Witter Online at higher commissions is the comfort in knowing that the expert advice is there if needed and that the doors to top-notch proprietary research and analyst reports are opened to the individual investor. Because it was included in the past as Discover Brokerage, Morgan Stanley

Dean Witter Online is still included in this year's product comparison.

Our comparison has traditionally been a review of services offered by on-line discount brokerage firms. That fact is still true with this year's article. Morgan Stanley Dean Witter Online is included because it is a unique situation where an on-line discount brokerage arm of a larger firm was transformed and repackaged. Other traditional full-service firms like Merrill Lynch and Paine Webber that currently offer discounted on-line trading accounts are not listed here because of their full-service nature—though their culture and way of doing business has changed quite dramatically. These firms are offering on-line trading at a discount from their full-services commission menus, however, they are not true discount firms.

Perhaps in the near future, the terms will fade and black and white will turn a shadowy grey as full-service firms and discounters become one and the same under the heading on-line trading brokerage firms.

These new endeavors of the full-service brokerage industry are still being tested and some account details are still being ironed out and modified. The real impact may not be felt for some time. Both the full-service firms and the discounters are perhaps waiting for the dust to settle on the industry to see how investors react to the changes instituted by the full-service brokerages.

As it stands now, based upon our research and the current numbers, the discount firms have yet to truly adjust their commissions and services accordingly. Perhaps the changes will take effect in the coming months or the new year—we will have to see where things stand at this time next year.

Some people do not like change. Yet sometimes change is good. Regardless of when these changes take effect, the hope is that they benefit the individual investor—whether in lower commissions, or better services or, ideally, both.

It will be most interesting to see what the veteran discounters like Charles Schwab do with regard to their commission price-point being attacked. Changes of some kind are indeed imminent—yet they might not only involve commissions. The discount brokers will be smart to not make the same mistake as their full-service counterparts and blindly ignore the changes in the industry.

The groundwork has been laid. The strategies have been implemented. The attack horn has been sounded. Let the games begin.

of “live” brokers adds flexibility to a brokerage firm’s trading system. On-line brokers maintain a staff of brokers who take orders over the phone. This service is different than a touch-tone function in that you are actually speaking with a real person on the other end of the line. In some cases, commissions are higher for these broker-assisted trades.

After-Hours Trading

Some of the on-line brokers in this year's comparison offer their clients access to the markets before the open or after the close via after-hours trading sessions.

After-hours trading utilizes computerized order matching systems known as electronic communications networks (ECNs). These sessions are completely independent of standard market hours trading—the trading interface is different and only special after-hours representatives can take your orders. After-hours sessions mostly occur after the market closes and in some cases early in the morning, before the markets open. After-hours sessions start at either 4:00 p.m. or 4:30 p.m. EST and the latest a session lasts is 8:00 p.m. EST.

A certain degree of liquidity must be present for a security to be traded during after-hours sessions—most Nasdaq 100 and heavily traded New York Stock Exchange stocks are eligible candidates. There are limitations on the types of orders that can be placed and the size of those orders. The specific guidelines and rules differ from broker to broker regarding after-hours trading. The key for the individual investor is whether or not you can get another investor to fill the other end of the trade, and at a favorable price.

After-hours trading is a relatively new service. At this time, only a small group of on-line brokers—18 total—allow their customers to trade after-hours. It is a new world for the markets in general and these capabilities and services will continue to evolve in the coming year.

Research

To provide more detailed and consistent information on the research that on-line brokers provide, we have changed this section from simply a list of sources to check marks for the type of data you can find at each broker’s Web site. Now you can easily compare the brokers by research offered such as fundamental data, analyst reports, screening, charts, and news.

Trading Demo

Most of our readers are familiar with how demo versions of software applications work. You as a potential user request a demo copy, which allows you to test out the features and functionality and gauge the ease-of-use of a program before making a commitment to buy it.

Many on-line discount brokers are taking the same approach with regard to the proprietary trading modules on their Web sites. Basically if a broker offers a trading demo, you have access to a sample of the site’s trading area where you can test drive the site and see how user-friendly the trading module is. Some demos allow you to enter information, click buttons and experience the order fill process, while other demos are simply slide shows that walk you through the process.

In any case, this is an invaluable feature that unfortunately is not offered by all the brokers in this comparison.

The column reporting those firms that offer a trading demo appears at the end and wraps up the comparison grid.

Support

If you are in the process of reviewing several on-line discount brokers as a possible trading service provider, the issues covered here will give you a good foundation on which to build—a starting point in your quest for selecting an on-line discount broker. One area that all potential customers should consider and that we were unable to quantify in our comparisons is the type and quality

of support you can expect to receive when you encounter a problem or have a question regarding your on-line brokerage account.

When test-driving any broker, focus on the firm’s phone support and E-mail responses. Be sure to call prospective brokers and ask the representative any and all questions, request literature detailing services and fees, E-mail the firm your same questions, and be sure to browse the Web site to see what kind of information you can glean from it. Compare the information you have received from each of these sources for consistency.

Also, consult friends and peers with experience in on-line trading or just those who have shopped on the Web before. Examine their opinions along with your findings. And finally, check out the on-line trading discussions in chat rooms and on message boards.

Voicing Your Opinions

Two years ago, the *Computerized Investing* and *AII Journal* staffs got together and created a joint questionnaire focusing on on-line discount brokers. This questionnaire, located on the AAI.com Web site, gave our readers a chance to share their trading experiences and observe what others were thinking. The questionnaire has been a huge success; we have been very pleased with the response over the last couple of years.

If you have worked with an on-line brokerage firm in this year’s comparison, please take a minute to log onto www.aai.com and answer the few questions and share your experiences. The questionnaire can be found within the Computerized Investing section attached to this article and also under Member Surveys. Again, as in years past, results will be posted and continually updated and all responses will remain anonymous.

Kenneth J. Michal is associate editor of Computerized Investing.