

# THE INDIVIDUAL INVESTOR'S GUIDE TO EXCHANGE-TRADED FUNDS

By Maria Crawford Scott and Jean Henrich

Our comprehensive listing covers 130 exchange-traded funds that track almost every index imaginable, including Dow Jones, S&P, Russell, Fortune, and Morgan Stanley Capital International indexes. They range from the broad-based to single sectors, REITs, domestic and international, and now even fixed income.

Exchange-traded funds (ETFs) have opened up a whole new investment world for individual investors. These passively managed portfolios of securities that track an index offer an alternative to traditional index mutual funds. Similar to traditional mutual funds, exchange-traded funds consist of a portfolio of securities. However, they are exchange-listed and trade just like an individual stock, offering a trading flexibility that does not exist with traditional index funds.

The concept is not entirely new. The first exchange-traded fund, the S&P 500-tracking SPDRs ("Spiders," ticker symbol SPY), was introduced in 1993 and was an immediate hit. Qubes (a name derived from the ticker QQQ), which track the Nasdaq 100 index, were introduced in 1999 and are by far the most actively traded of the funds today, with SPDRs coming in second.

Since the introduction of SPDRs, the number of ETFs has skyrocketed to over 100. Assets in exchange-traded funds (excluding HOLDRS) amounted to \$117 billion as of July 2003, although the bulk of assets and trading volume are concentrated in a handful of portfolios. All but three are listed on the American Stock Exchange.

Currently, ETFs cover almost every equity index imaginable, including Dow Jones, S&P, Russell, Fortune, and Morgan Stanley Capital International indexes. They range from the very broad-based to single sectors, both domestic and international. Last year, four fixed-income ETFs were introduced.

Exchange-traded funds are uniquely suited for individual investors, offering a low-cost and flexible way to ensure diversification in a portfolio. Because these funds are relatively new, AAIJ has put together a complete listing of all existing exchange-traded funds, along with a guide to how they work and where you can get more information on them.

The listing includes recent performance and trading statistics, expense ratios, how the ETF is structured, and which index it tracks. HOLDRS, which technically are not really "exchange-traded funds," are included in the listings under the appropriate sector.

The article that starts on the next page describes ETFs in more detail. There are differences in the way certain exchange-traded funds are structured, and it is important to understand these differences when comparing funds. It is also important to understand differences in the underlying indexes that are being tracked. And, because they are bought and sold like individual securities, an investor needs to understand how they trade.

The listing, which starts on page 14, categorizes each ETF by the type of index it tracks for easier comparison of similar alternatives. Fixed-income exchange-traded funds are listed and described on page 25. A full listing of on-line resources appears on page 26.

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# WHAT YOU NEED TO KNOW ABOUT STOCK-BASED EXCHANGE-TRADED FUNDS

Exchange-traded funds offer many of the advantages of a traditional index fund. Because they are composed of a basket of securities that track a particular index, ETFs provide diversification within the sector of the index that they track.

And because ETFs now cover almost every sector of the equity markets, they offer an easy and low-cost way to adjust the asset allocation of any portfolio.

ETFs also have several unique advantages compared to traditional index mutual funds:

## Lower costs at the fund level

Although index funds have low annual expense ratios, ETFs typically have even lower ratios.

Like their traditional index fund counterparts, they are passively managed and therefore do not have high management fees.

Unlike traditional index funds, ETF shares are traded on an exchange and, therefore, the fund does not have to buy and sell securities to accommodate shareholder purchases and redemptions. This also results in lower annual taxable distributions by the fund, as well as lower costs.

And although an investor must pay commissions to buy and sell shares, ETFs do not impose annual 12b-1 fees.

## Trading flexibility

Because they are exchange traded, ETFs have the same trading flexibility as an individual stock:

- They can be bought and sold at intraday market prices, unlike traditional mutual funds which are bought and sold at end-of-day prices;
- They can be purchased on margin;
- They can be sold short;
- They can be traded using stop orders and limit orders, which allow investors to specify the price

points at which they are willing to buy and sell shares.

## ETF RISKS

Exchange-traded funds carry many of the risks of traditional index mutual funds. In particular, they face market risk—the risk that the sector of the market that they are tracking may drop based on a variety of factors such as economic conditions and global events, investor sentiment and sector-specific factors.

ETFs also face other risks.

### Market pricing

The market share price of an exchange-traded fund is determined by the forces of supply and demand, not the net asset value of the underlying securities. Therefore, investors may purchase shares at a premium or discount to the fund's net asset value. However, for most exchange-traded funds, these differences are insignificant.

### Tracking error

Tracking error refers to the fact that an index fund's returns can sometimes fall short of (or exceed) the benchmark returns. Most index-based tradable funds track their benchmarks closely, as do low-cost traditional index funds.

Some portfolios may exhibit larger tracking errors than typical. Such discrepancies are not necessarily a drawback for investors, especially if limited alternatives exist for gaining exposure to a tiny stock market. Yet it's important to understand why these deviations exist.

Three primary factors account for tracking errors:

- **Sampling:** A fund may sample the universe tracked by the index rather than employ full replication.

- **SEC- and IRS-mandated diversification requirements:** Investment company regulations state that a single company may account for no more than 25% of a fund's total assets. Thus, if a company makes up more than 25% of a market's index, that stock would be underweighted by the fund. To optimize a portfolio, the manager may increase weightings of other portfolio components or even go outside the index.

- **Expenses:** Even if a fund identically weights all the stocks in its benchmark, performance will be reduced by the expense ratio (i.e., net return equals gross return of index less expenses).

One other factor that can result in tracking errors for some ETFs is dividend payments. An exchange-traded fund typically pays out dividends received from the underlying stocks on a quarterly basis, but the underlying stocks pay dividends throughout the quarter. Therefore, these funds may hold cash for various time periods throughout the quarter, even though the underlying benchmark index is not composed of cash. This is especially true with index ETFs that are organized as grantor trusts (i.e., HOLDERS), which cannot reinvest dividends and must hold them as cash.

## THE INDEXES

Most ETFs are designed to replicate the holdings and correspond to the performance and yield of an underlying index.

Benchmarks tracked by exchange-traded funds fall into four general categories:

- **Broad-based indexes:** A wide cross-section of equities from a broad range of industries is included in these benchmarks.

Examples are the S&P 500, Dow Jones U.S. Total Market, the Russell 3000, and Fortune 500 (which tracks the 500 largest U.S. companies ranked by revenue). Style-specific “growth” and “value” options exist on certain benchmarks—and you can choose between small, mid-sized, large, or giant companies.

- **Sector indexes:** A specific industry or stock group, such as real estate or telecommunications, is the focus. Some benchmarks are relatively broad, such as consumer services, while many others are highly defined, such as Internet companies.
- **International indexes:** Broad-based international stock indexes, regional indexes and country-specific equity indexes are included.
- **Bond indexes:** These are relative newcomers. Currently four indexes are tracked, including three of the Lehman Treasury bond indexes, and one that tracks corporate bonds.

If you are interested in an ETF, you should make sure that you understand the underlying index it tracks. For example, although DIAMONDS and iShares Dow Jones U.S. Total Market Index fund both cover broad-based large-cap stocks, the performance of the underlying indexes will differ—the Dow Jones industrial average (tracked by DIAMONDS) covers only 30 stocks, while the Dow Jones U.S. Total Market Index is broader-based.

The newly introduced Rydex ETF Trust covers the S&P 500 equal weight index, an index that gives equal emphasis to all 500 stocks. In contrast, the S&P 500 index is based on market capitalizations, which means the stock performances of larger companies have a greater impact on the index; ETFs tracking the S&P 500 index will perform differently than those following the S&P 500 equal weight index.

In other instances, the indexes are designed specifically for the fund.

For example, the Select Sector SPDR Fund indexes, which cover the various sectors of the S&P 500, were designed so that, taken in combination, all eight of the Select Sector funds make up the S&P 500. These indexes are not the same as the more familiar S&P sector indexes that are published by Standard & Poor's, although they would likely perform very similarly.

Merrill Lynch's HOLDRS, which are portfolios of securities designed to cover various market sectors, do not track an index. Instead, the stocks are selected at the time the HOLDRS is introduced, based on criteria such as company size and liquidity (discussed more fully later). The Amex has developed indexes to follow the value of the various HOLDRS, but the HOLDRS came first and do not track the index. (The performance of the Amex indexes can be viewed at the Amex Web site, [www.amex.com](http://www.amex.com), in the indexes section of “Other Products.”)

Information on the underlying indexes can be found in the ETF's prospectus, and in many instances at the fund sponsor's Web site. (See the box on page 26 for a listing of on-line resources.)

## STRUCTURE

There are three main structures for index ETFs:

- **Open-ended index mutual fund:** By far the most common structure, these are registered with the SEC as investment companies. Examples: iShares funds and Select Sector SPDRs.
- **Unit investment trust:** Also registered with the SEC as investment companies, but far less common. However, the first ETFs were structured this way, and thus, the most popular ETFs—Qubes, DIAMONDS and SPDRs, are structured as unit investment trusts.
- **Exchange-traded grantor trust:** The most similar to actually owning the underlying shares. These are

not registered as investment companies and are not considered “exchange-traded funds” under strict definitions of the term. Examples include the HOLDRs funds.

What's the advantage of one structure over another?

### Open-end and unit investment trusts

The differences between ETFs structured as open-end mutual funds and unit investment trusts are relatively minor.

ETFs structured as open-end mutual funds can reinvest the dividends they receive from their underlying holdings in the fund when they receive them, whereas unit investment trusts cannot. The latter accumulate the dividends and reinvest them quarterly, resulting in a so-called “dividend drag” during rising markets. The drag is not that significant with an S&P 500 index fund because the benchmark currently yields only about 1%. It would be more noticeable with higher-yielding portfolios.

The open-end structure also allows a fund to use stock index futures to equitize its dividend stream, enabling it to be more fully invested in the underlying index.

In addition, stock loans can be made by open-end funds but not by unit investment trusts. The interest generated by such loans theoretically results in lower expenses. Stock lending is most significant for a fund that owns a lot of hard-to-borrow stock.

### Grantor trusts—HOLDRS

Exchange-traded funds structured as grantor trusts—Merrill Lynch's HOLDRS—operate quite a bit differently than ETFs structured as investment companies. Many information providers do not define HOLDRS as “exchange-traded funds” but rather list them separately.

HOLDRS do provide diversified exposure to a particular industry, sector or group. However, HOLDRS

(continued on page 22)

TABLE 1. STOCK-BASED EXCHANGE-TRADED FUNDS

Name	Ticker Symbol	Inception Date	Risk RiskGrade 1Yr Avg	Market Return 1 Yr (%)	NAV Return 1 Yr (%)	Index Return 1 Yr (%)	Index - NAV Return Difference (%)
<i>Broad-Based/Large Cap</i>							
DIAMONDS Trust Series I	DIA	1/20/1998	126	-0.87	-0.83	-0.43	0.40
Fortune 500 Index Tracking Stock	FFF	10/10/2000	128	-0.84	-0.76	-0.50	0.26
iShares Dow Jones U.S. Total Market Index Fund	IYY	6/12/2000	128	1.59	0.96	1.13	0.17
iShares Russell 1000 Growth Index Fund	IWF	5/22/2000	134	3.03	2.75	2.94	0.19
iShares Russell 1000 Index Fund	IWB	5/15/2000	130	1.45	0.83	0.95	0.12
iShares Russell 1000 Value Index Fund	IWD	5/22/2000	128	-0.91	-1.22	-1.02	0.20
iShares Russell 3000 Growth Index Fund	IWZ	7/24/2000	140	2.62	2.57	2.79	0.22
iShares Russell 3000 Index Fund	IWV	5/22/2000	126	0.90	0.61	0.77	0.16
iShares Russell 3000 Value Index Fund	IWW	7/24/2000	123	-1.63	-1.46	-1.23	0.23
iShares S&P 100 Index Fund	OEF	10/23/2000	na	na	1.77	1.96	0.19
iShares S&P 500 Index Fund	IVV	5/15/2000	130	0.44	0.17	0.25	0.08
iShares S&P 500/BARRA Growth Index Fund	IVW	5/22/2000	127	1.28	2.14	2.32	0.18
iShares S&P 500/BARRA Value Index Fund	IVE	5/22/2000	140	-1.94	-2.00	-1.84	0.16
Nasdaq-100 Index Tracking Stock	QQQ	3/10/1999	184	14.88	14.23	14.26	0.03
PowerShares Dynamic Market Portfolio	XTF.M	5/1/2003	na	na	na	na	na
PowerShares Dynamic OTC Portfolio	XTF.Q	5/1/2003	na	na	na	na	na
Rydex ETF Trust	RSP	4/30/2003	na	na	na	na	na
SPDR Trust Series I	SPY	1/29/1993	129	0.28	0.12	0.25	0.13
streetTRACKS Dow Jones U.S. Large Cap Growth Index Fund	ELG	9/25/2000	155	0.42	0.38	0.55	0.17
streetTRACKS Dow Jones U.S. Large Cap Value Index Fund	ELV	9/25/2000	126	3.06	2.87	3.18	0.31
Vanguard Total Stock Market VIPERs	VTI	5/31/2001	126	1.18	1.16	1.27	0.11
<i>Broad-Based/Mid Cap</i>							
iShares Russell MidCap Growth Index Fund	IWP	7/17/2001	136	7.95	7.14	7.35	0.21
iShares Russell MidCap Index Fund	IWR	7/17/2001	120	2.86	2.59	2.63	0.04
iShares Russell MidCap Value Index Fund	IWS	7/17/2001	114	0.21	-0.70	-0.64	0.06
iShares S&P MidCap 400 Index Fund	IJH	5/22/2000	122	-0.92	-0.87	-0.71	0.16
iShares S&P MidCap 400/BARRA Growth Index Fund	IJK	7/24/2000	128	0.94	0.82	1.06	0.24
iShares S&P MidCap 400/BARRA Value Index Fund	IJJ	7/24/2000	119	-2.67	-2.70	-2.47	0.23
MidCap SPDR Trust Series I	MDY	5/4/1995	122	-1.08	-1.00	-0.73	0.27
Vanguard Extended Market VIPERs	VXF	1/4/2002	112	4.06	4.89	5.20	0.31

\*technically, represents interest in portfolio of stocks held in a Vanguard mutual fund.

\*one-year market return through July 31, 2003.

\*\*market return is from inception to July 31, 2003.

\*\*\*one-year market return through August 31, 2003.

na = data is not available, data is not applicable, or ETF is too new.

All ETFs trade on the American Stock Stock Exchange, unless otherwise noted.

**Ticker Symbol:** The symbol for the stock price at which trading occurs.

**Inception Date:** The date when trading first occurred.

**RiskGrade 1 Yr Avg:** A risk measure that relates the volatility of a particular portfolio to a portfolio of all stocks world wide during normal market conditions. The base worldwide stock portfolio has a RiskGrade of 100; a portfolio with a RiskGrade of 77 implies that it has a risk 77% as high as the average risk of the worldwide stock portfolio.

**Market Return 1 Yr (%):** The one-year total return (dividends reinvested) based on a fund's market price, through June 30, 2003, net of expenses.

**NAV Return 1 Yr (%):** The one-year total return (dividends reinvested) based on a fund's net asset value, through June 30, 2003.

**Index Return 1 Yr (%):** The one-year total return (dividends reinvested) of the underlying index tracked by the fund, through June 30, 2003.

**Index - NAV Return Difference:** The difference between the underlying index return and the fund NAV return. A negative sign indicates the NAV return outperformed the index. This provides an indication of how closely the ETF portfolio tracked the index last year.

Price Close 8/25/2003 (\$)	Price 52-Wk High (\$)	Price 52-Wk Low (\$)	Volume	Expense Ratio (%)	ETF Structure	Index Tracked
93.60	95.24	72.03	7,862,900	0.17	unit investment trust	Dow Jones Industrial Average
71.51	73.05	56.50	14,600	0.21	open-end mutual fund	Fortune 500 Index
47.20	48.10	35.50	41,900	0.20	open-end mutual fund	Dow Jones U.S. Total Market Index
42.41	43.20	32.75	360,400	0.20	open-end mutual fund	Russell 1000 Growth Index
53.55	54.41	40.89	247,800	0.15	open-end mutual fund	Russell 1000 Index
51.51	52.81	39.00	313,300	0.20	open-end mutual fund	Russell 1000 Value Index
33.98	34.83	26.00	19,800	0.25	open-end mutual fund	Russell 3000 Growth Index
56.34	57.24	42.70	247,500	0.20	open-end mutual fund	Russell 3000 Index
66.91	68.1	50.41	11,000	0.25	open-end mutual fund	Russell 3000 Value Index
na	na	na	na	0.20	open-end mutual fund	S&P 100 Index
100.21	101.88	77.05	577,200	0.09	open-end mutual fund	S&P 500 Index
50.74	51.83	40.70	182,000	0.18	open-end mutual fund	S&P 500/BARRA Growth Index
49.23	50.18	35.91	186,000	0.18	open-end mutual fund	S&P 500/BARRA Value Index
32.54	33.37	19.76	73,974,700	0.20	unit investment trust	Nasdaq 100 Index
30.16	30.78	26.81	4,800	0.60	open-end mutual fund	Dynamic Market Intellidex Index
33.80	34.53	28.30	4,300	0.60	open-end mutual fund	Dynamic OTC Intellidex Index
118.57	120.62	100.67	17,800	0.40	open-end mutual fund	S&P Equal Weight Index
100.11	102.18	77.07	43,053,500	0.11	unit investment trust	S&P 500 Index
42.41	43.04	32.40	6,700	0.22	open-end mutual fund	Dow Jones U.S. Large Cap Growth Index
110.90	116.60	87.55	4,600	0.21	open-end mutual fund	Dow Jones U.S. Large Cap Value Index
95.52	97.10	72.00	201,400	0.15	open-end mutual fund†	Wilshire 5000 Total Market Index
65.09	66.88	44.17	35,700	0.25	open-end mutual fund	Russell MidCap Growth Index
58.72	59.94	41.46	56,700	0.20	open-end mutual fund	Russell MidCap Index
80.75	82.24	58.43	23,300	0.25	open-end mutual fund	Russell MidCap Value Index
101.64	103.82	73.94	115,000	0.20	open-end mutual fund	S&P MidCap 400 Index
108.23	111.02	80.21	47,500	0.25	open-end mutual fund	S&P MidCap 400/BARRA Growth Index
94.09	95.70	67.67	48,100	0.25	open-end mutual fund	S&P MidCap 400/BARRA Value Index
92.85	95.10	67.85	1,068,600	0.25	unit investment trust	S&P MidCap 400 Index
61.82	63.11	43.10	6,800	0.20	open-end mutual fund†	Wilshire 4500 Completion Index

[Continued on next page]

**Closing Price, 52-Week High and 52-Week Low:** The closing market price of the fund on August 25, 2003, and the high and low closing price over the last year through August 25, 2003.

**Volume:** The average volume of shares traded for the fund for the last 200-day period through August 25, 2003. Lower volume typically leads to higher spreads between the bid and ask prices.

**Expense Ratio:** The expense ratio for each fund.

**ETF Structure:** Whether the fund is structured as an open-end mutual fund, a unit investor trust or a grantor trust (HOLDRS).

**Index Tracked:** The underlying index that the fund is structured to track.

**Sources:** Market return, NAV return and index information on performance of the funds and indexes, expense ratios, fund structure and the index tracked are from American Stock Exchange, Barclays Global Investors, State Street Global Advisors and individual fund prospectuses. Closing price, 52-week high and low, and volume are from Investor's Business Daily. RiskGrades are from Riskgrades.com.



TABLE 1. STOCK-BASED EXCHANGE-TRADED FUNDS (CONTINUED)

Name	Ticker Symbol	Inception Date	Risk RiskGrade 1Yr Avg	Market Return 1 Yr (%)	NAV Return 1 Yr (%)	Index Return 1 Yr (%)	Index - NAV Return Difference (%)
<i>Broad-Based/Small Cap</i>							
iShares Russell 2000 Growth Index Fund	IWO	7/24/2000	137	-0.41	0.59	0.69	0.10
iShares Russell 2000 Index Fund	IWM	5/22/2000	125	-0.71	-1.71	-1.64	0.07
iShares Russell 2000 Value Index Fund	IWN	7/24/2000	116	-3.73	-3.90	-3.80	0.10
iShares S&P SmallCap 600 Index Fund	IJR	5/22/2000	120	-3.53	-3.74	-3.58	0.16
iShares Small Cap 600/BARRA Growth Index Fund	IJT	7/24/2000	124	1.03	0.93	1.15	0.22
iShares Small Cap 600/BARRA Value Index Fund	IJS	7/24/2000	124	-8.47	-8.59	-8.38	0.21
streetTRACKS Dow Jones U.S. Small Cap Growth Index Fund	DSG	9/25/2000	157	-0.99	-1.02	-0.82	0.20
streetTRACKS Dow Jones U.S. Small Cap Value Index Fund	DSV	9/25/2000	102	4.17	3.57	4.02	0.45
<i>Sector/Basic Industries</i>							
Select Sector SPDR Fund - Basic Industries	XLB	12/22/1998	140	-8.46	-8.43	na	na
<i>Sector/Basic Materials</i>							
iShares Dow Jones U.S. Basic Materials Sector Index Fund	IYM	6/12/2000	151	-11.63	-11.90	-11.34	0.56
<i>Sector/Consumer</i>							
iShares Dow Jones U.S. Consumer Cyclical Sector Index Fund	IYC	6/12/2000	149	-1.91	-2.46	-1.90	0.56
iShares Dow Jones U.S. Consumer Non-Cyclical Sector Index Fund	IYK	6/12/2000	98	-2.28	-1.93	-1.30	0.63
Merrill Lynch Retail HOLDRS	RTH	5/2/2001	151	6.95*	na	na	na
Select Sector SPDR Fund - Consumer Discretionary	XLY	12/22/1998	150	-0.76	-0.98	na	na
Select Sector SPDR Fund - Consumer Staples	XLP	12/22/1998	98	-7.39	-7.80	na	na
<i>Sector/Energy</i>							
iShares Dow Jones U.S. Energy Sector Index Fund	IYE	6/12/2000	135	-4.66	-4.89	-5.17	-0.28
Merrill Lynch Market Oil Service HOLDRS	OIH	2/6/2001	196	5.80*	na	na	na
Select Sector SPDR Fund - Energy Select Sector	XLE	12/22/1998	134	-6.26	-6.36	na	na
<i>Sector/Financial</i>							
iShares Dow Jones U.S. Financial Sector Index Fund	IYF	5/22/2000	143	0.48	0.70	1.29	0.59
iShares Dow Jones U.S. Financial Services Sector Index Fund	IYG	6/12/2000	152	3.50	3.74	4.38	0.64
Merrill Lynch Regional Bank HOLDRS	RKH	6/26/2000	146	8.25*	na	na	na
Select Sector SPDR Fund - Financial	XLF	12/22/1998	154	-0.38	-0.13	na	na
<i>Sector/Healthcare &amp; Biotechnology</i>							
iShares Dow Jones U.S. Healthcare Sector Index Fund	IYH	6/12/2000	128	7.62	8.52	9.09	0.57
iShares NASDAQ Biotechnology Index Fund	IBB	2/5/2001	196	31.35	31.49	31.75	0.26
Merrill Lynch Biotech HOLDRS	BBH	11/23/1999	187	59.73*	na	na	na
Merrill Lynch Pharmaceutical HOLDRS	PPH	2/1/2000	140	6.70*	na	na	na
Select Sector SPDR Fund - Health Care	XLV	12/22/1998	124	7.26	7.98	na	na
<i>Sector/Industrial</i>							
iShares Dow Jones U.S. Industrial Sector Index Fund	IYJ	6/12/2000	141	-4.45	-4.27	-3.88	0.39
Select Sector SPDR Fund - Industrial	XLI	12/22/1998	133	-4.67	-4.91	na	na
<i>Sector/Natural Resources</i>							
iShares Goldman Sachs Natural Resources Index Fund	IGE	10/22/2001	124	-4.63	-5.58	-5.06	0.52

\*one-year market return through July 31, 2003.

\*\*market return is from inception to July 31, 2003.

\*\*\*one-year market return through August 31, 2003.

na = data is not available, data is not applicable, or ETF is too new.

All ETFs trade on the American Stock Stock Exchange, unless otherwise noted.

Price Close 8/25/2003 (\$)	Price 52-Wk High (\$)	Price 52-Wk Low (\$)	Volume	Expense Ratio (%)	ETF Structure	Index Tracked
52.50	54.25	33.50	393,100	0.25	open-end mutual fund	Russell 2000 Growth Index
97.20	99.79	64.60	1,672,400	0.20	open-end mutual fund	Russell 2000 Index
138.55	141.70	96.15	141,300	0.25	open-end mutual fund	Russell 2000 Value Index
118.99	121.80	84.00	191,800	0.20	open-end mutual fund	S&P SmallCap 600 Index
79.11	81.15	56.07	60,300	0.25	open-end mutual fund	Small Cap 600/BARRA Growth Index
88.49	90.48	62.50	78,100	0.25	open-end mutual fund	Small Cap 600/BARRA Value Index
58.12	59.84	36.94	6,200	0.30	open-end mutual fund	Dow Jones U.S. Small Cap Growth Index
140.50	144.70	103.10	4,300	0.28	open-end mutual fund	Dow Jones U.S. Small Cap Value Index
22.63	23.30	16.53	294,800	0.28	open-end mutual fund	Basic Industries Select Sector Index
38.65	39.74	28.90	054,500	0.60	open-end mutual fund	Dow Jones U.S. Basic Materials Sector Index
51.25	52.05	37.18	30,500	0.60	open-end mutual fund	Dow Jones U.S. Consumer Cyclical Sector Index
42.86	44.70	36.61	27,100	0.60	open-end mutual fund	Dow Jones U.S. Consumer Non-Cyclical Sector Index
88.44	89.37	63.21	459,600	0.08	grantor trust	no independent index
28.49	28.98	20.65	212,300	0.27	open-end mutual fund	Consumer Discretionary Select Sector Index
20.32	21.99	17.82	204,300	0.28	open-end mutual fund	Consumer Staples Select Sector Index
43.18	46.10	36.26	31,600	0.60	open-end mutual fund	Dow Jones U.S. Energy Sector Index
59.11	67.50	45.79	1,331,200	0.08	grantor trust	no independent index
24.15	25.80	20.19	420,300	0.28	open-end mutual fund	Energy Select Sector Index
78.31	81.75	57.95	33,000	0.60	open-end mutual fund	Dow Jones U.S. Financial Sector Index
91.25	96.00	64.85	17,800	0.60	open-end mutual fund	Dow Jones U.S. Financial Services Sector Index
114.04	118.00	87.32	91,100	0.08	grantor trust	no independent index
25.19	26.28	18.52	1,867,100	0.27	open-end mutual fund	Financial Select Sector Index
52.50	57.68	45.00	75,600	0.60	open-end mutual fund	Dow Jones U.S. Healthcare Sector Index
70.99	77.51	42.88	426,500	0.50	open-end mutual fund	NASDAQ Biotechnology Index
129.61	137.00	72.75	1,015,100	0.08	grantor trust	no independent index
73.35	85.99	68.07	463,700	0.08	grantor trust	no independent index
27.70	31.11	24.66	119,200	0.28	open-end mutual fund	Health Care Select Sector Index
43.68	44.65	31.74	31,300	0.60	open-end mutual fund	Dow Jones U.S. Industrial Sector Index
23.87	24.40	17.75	288,100	0.28	open-end mutual fund	Industrial Select Sector Index
90.64	93.96	71.10	7,300	0.50	open-end mutual fund	Goldman Sachs Natural Resources Index

[Continued on page 20]

TABLE 1. STOCK-BASED EXCHANGE-TRADED FUNDS (CONTINUED)

Name	Ticker Symbol	Inception Date	Risk RiskGrade 1Yr Avg	Market Return 1 Yr (%)	NAV Return 1 Yr (%)	Index Return 1 Yr (%)	Index - NAV Return Difference (%)
<i>Sector/Real Estate</i>							
iShares Cohen & Steers Realty Majors Index Fund	ICF	1/29/2001	79	3.65	3.37	3.75	0.38
iShares Dow Jones U.S. Real Estate Index Fund	IYR	6/12/2000	78	3.15	3.16	3.84	0.68
streetTRACKS Wilshire REIT Index Fund	RWR	4/23/2001	80	3.38	3.41	3.73	0.32
<i>Sector/Technology</i>							
Fortune e-50 Index Tracking Stock	FEF	10/10/2000	218	22.57	22.73	23.07	0.34
Merrill Lynch B2B Internet HOLDRS	BHH	2/24/2000	293	43.68*	na	na	na
Merrill Lynch Broadband HOLDRS	BDH	4/6/2000	253	33.84*	na	na	na
Merrill Lynch Internet Architecture HOLDRS	IAH	2/25/2000	188	33.56*	na	na	na
Merrill Lynch Internet HOLDRS	HHH	9/24/1999	199	95.39*	na	na	na
Merrill Lynch Internet Infrastructure HOLDRS	IIH	2/25/2000	318	124.32*	na	na	na
Merrill Lynch Semiconductor HOLDRS	SMH	5/26/2000	279	21.27*	na	na	na
Merrill Lynch Software HOLDRS	SWH	9/27/2000	211	33.52*	na	na	na
iShares Dow Jones U.S. Technology Sector Index Fund	IYW	5/15/2000	207	7.10	7.25	7.85	0.60
iShares Goldman Sachs Network Index Fund	IGN	7/10/2001	258	30.07	32.34	33.23	0.89
iShares Goldman Sachs Semiconductor Index Fund	IGW	7/10/2001	284	-9.73	-8.88	-8.49	0.39
iShares Goldman Sachs Software Index Fund	IGV	7/10/2001	218	13.30	13.04	11.29	-1.75
iShares Goldman Sachs Technology Index Fund	IGM	3/13/2001	200	8.57	7.98	8.61	0.63
Select Sector SPDR Fund - Technology	XLK	12/22/1998	194	8.21	7.57	na	na
streetTRACKS Morgan Stanley Internet Index Fund	MII	9/25/2000	271	43.22	41.43	44.08	2.65
streetTRACKS Morgan Stanley Technology Index Fund	MTK	9/25/2000	204	10.19	10.14	10.79	0.65
<i>Sector/Telecommunications</i>							
iShares Dow Jones U.S. Telecommunications Sector Index Fund	IYZ	5/22/2000	193	12.73	10.63	4.79	-5.84
Merrill Lynch Telecom HOLDRS	TTH	2/2/2000	200	3.41*	na	na	na
Merrill Lynch Wireless HOLDRS	WMH	11/1/2000	197	27.38*	na	na	na
<i>Sector/Utilities</i>							
iShares Dow Jones U.S. Utilities Sector Index Fund	IDU	6/12/2000	145	-4.38	-4.04	-3.43	0.61
Merrill Lynch Utilities HOLDRS	UTH	6/26/2000	155	2.76*	na	na	na
Select Sector SPDR Fund - Utilities	XLU	12/22/1998	155	-4.75	-4.82	na	na
<i>Foreign/Broad-Based</i>							
BLDRS Developed Markets 100 ADR Index Fund	ADRD	11/8/2002	314	9.98**	na	na	na
iShares MSCI - EAFE	EFA	8/14/2001	122	-6.92	-6.59	-6.46	0.13
iShares S&P Global 100 Index Fund†	IOO	12/5/2000	142	9.28***	-1.76	-1.64	0.12
Merrill Lynch Market 2000+ HOLDRS	MKH	8/30/2000	137	9.53*	na	na	na
streetTRACKS Dow Jones Global Titans Index Fund	DGT	9/25/2000	136	-1.30	-1.21	-0.65	0.56
<i>Foreign/Regional</i>							
BLDRS Asia 50 ADR Index Fund	ADRA	11/8/2002	147	10.38**	na	na	na
BLDRS Emerging Markets 50 ADR Index Fund	ADRE	11/8/2002	166	33.62**	na	na	na
BLDRS Europe 100 ADR Index Fund	ADRU	11/8/2002	195	10.03**	na	na	na
Fresco DJ EURO STOXX 50†	FEZ	10/21/2002	166	na	na	na	na
Fresco DJ STOXX 50†	FEU	10/21/2002	135	na	na	na	na
Merrill Lynch Europe 2001 HOLDRS	EKH	1/18/2001	155	10.58*	na	na	na
iShares MSCI - EMU Index Fund	EZU	7/25/2000	170	-5.98	-7.05	-6.68	0.37

†trades on New York Stock Exchange.

\*one-year market return through July 31, 2003.

\*\*market return is from inception to July 31, 2003.

\*\*\*one-year market return through August 31, 2003.



Price Close 8/25/2003 (\$)	Price 52-Wk High (\$)	Price 52-Wk Low (\$)	Volume	Expense Ratio (%)	ETF Structure	Index Tracked
95.15	96.25	73.85	60,100	0.35	open-end mutual fund	Cohen & Steers Realty Majors Index
88.75	89.98	69.45	41,400	0.60	open-end mutual fund	Dow Jones U.S. Real Estate Index
133.73	135.39	104.00	11,500	0.32	open-end mutual fund	Wilshire REIT Index
27.60	28.56	15.77	3,400	0.22	open-end mutual fund	Fortune e-50 Index
2.60	3.65	1.27	92,100	0.08	grantor trust	no independent index
10.65	10.79	5.53	260,800	0.08	grantor trust	no independent index
31.57	33.62	18.85	66,400	0.08	grantor trust	no independent index
41.95	42.91	18.12	161,900	0.08	grantor trust	no independent index
3.43	3.67	1.13	125,000	0.08	grantor trust	no independent index
36.03	37.86	17.32	6,873,300	0.08	grantor trust	no independent index
32.99	33.95	20.08	389,300	0.08	grantor trust	no independent index
42.50	43.75	24.75	108,700	0.60	open-end mutual fund	Dow Jones U.S. Technology Sector Index
22.28	23.00	8.71	96,100	0.50	open-end mutual fund	Goldman Sachs Network Index
53.75	56.16	25.85	110,200	0.50	open-end mutual fund	Goldman Sachs Semiconductor Index
33.14	33.92	19.15	92,200	0.50	open-end mutual fund	Goldman Sachs Software Index
40.17	41.18	22.71	38,900	0.50	open-end mutual fund	Goldman Sachs Technology Index
18.15	18.64	11.40	959,300	0.28	open-end mutual fund	Technology Select Sector Index
11.27	11.74	5.08	15,100	0.53	open-end mutual fund	Morgan Stanley Internet Index
40.45	41.65	22.40	10,000	0.51	open-end mutual fund	Morgan Stanley Technology Index
19.52	21.70	13.80	112,000	0.60	open-end mutual fund	Dow Jones U.S. Telecommunications Sector Index
25.54	30.51	19.81	156,500	0.08	grantor trust	no independent index
39.63	42.70	27.51	31,200	0.08	grantor trust	no independent index
51.51	55.71	38.57	106,800	0.60	open-end mutual fund	Dow Jones U.S. Utilities Sector Index
70.24	76.55	49.90	206,300	0.08	grantor trust	no independent index
20.88	22.95	14.90	586,000	0.29	open-end mutual fund	Utilities Select Sector Index
55.00	57.00	36.51	1,100	0.30	unit investment trust	Bank of NY Developed Markets 100 ADR Index
112.59	114.69	85.63	416,200	0.35	open-end mutual fund	MSCI EAFE Index
49.66	51.29	39.00	20,800	0.40	open-end mutual fund	S&P Global 100 Index
48.23	51.09	38.76	7,200	0.08	grantor trust	no independent index
53.91	57.20	44.45	4,600	0.52	open-end mutual fund	Dow Jones Global Titans Index
55.82	69.78	42.25	900	0.30	unit investment trust	Bank of NY Asia 50 ADR Index
62.74	65.00	43.98	1,900	0.30	unit investment trust	Bank of NY Emerging Markets 50 ADR Index
54.99	54.99	36.25	1,600	0.30	unit investment trust	BNY Europe 100 ADR Index
28.01	30.24	20.25	101,900	na	open-end mutual fund	Dow Jones EURO STOXX 50
27.26	29.58	21.15	7,200	na	open-end mutual fund	Dow Jones STOXX 50
49.80	50.85	35.96	3,200	0.08	grantor trust	no independent index
49.74	52.37	35.96	41,000	0.84	open-end mutual fund	MSCI EMU Index (European Monetary Union)

na = data is not available, data is not applicable, or ETF is too new.  
All ETFs trade on the American Stock Stock Exchange, unless otherwise noted.

[Continued on next page]

TABLE 1. STOCK-BASED EXCHANGE-TRADED FUNDS (CONTINUED)

Name	Ticker Symbol	Inception Date	Risk RiskGrade 1Yr Avg	Market Return 1 Yr (%)	NAV Return 1 Yr (%)	Index Return 1 Yr (%)	Index - NAV Return Difference (%)
<i>Foreign/Regional (continued)</i>							
iShares MSCI Pacific Ex-Japan Index Fund	EPP	10/25/2001	86	5.81	6.79	6.58	-0.21
iShares S&P Europe 350	IEV	7/25/2000	157	-4.53	-5.40	-4.84	0.56
iShares S&P Latin America 40 Index Fund	ILF	10/25/2001	147	10.00	9.88	11.47	1.59
<i>Foreign/Single Country</i>							
iShares MSCI - Australia	EWA	3/12/1996	113	14.21	14.55	14.21	-0.34
iShares MSCI - Austria	EWO	3/12/1996	114	18.94	20.32	18.53	-1.79
iShares MSCI - Belgium	EWK	3/12/1996	181	-6.21	-5.45	-9.65	-4.20
iShares MSCI - Brazil	EWZ	7/10/2000	237	11.44	9.81	13.62	3.81
iShares MSCI - Canada	EWZ	3/12/1996	121	11.44	10.36	11.03	0.67
iShares MSCI - France	EWQ	3/12/1996	176	-8.79	-8.28	-8.15	0.13
iShares MSCI - Germany	EWG	3/12/1996	194	-15.13	-14.97	-14.89	0.08
iShares MSCI - Hong Kong	EWH	3/12/1996	142	-12.52	-12.56	-10.77	1.79
iShares MSCI - Italy	EWI	3/12/1996	145	8.15	6.59	6.08	-0.51
iShares MSCI - Japan	EWJ	3/12/1996	120	-13.76	-14.56	-14.63	0.07
iShares MSCI - Malaysia (Free)	EWM	3/12/1996	95	-1.18	-1.52	-0.36	1.16
iShares MSCI - Mexico (Free)	EWV	3/12/1996	142	3.10	5.97	5.00	-0.97
iShares MSCI - Netherlands	EWN	3/12/1996	187	-22.72	-22.49	-20.75	1.74
iShares MSCI - Singapore (Free)	EWS	3/12/1996	155	-6.91	-4.54	-4.57	-0.03
iShares MSCI - South Africa	EZA	2/7/2003	82	na	na	na	na
iShares MSCI - South Korea	EWY	5/9/2000	202	-8.68	-8.79	-6.65	2.14
iShares MSCI - Spain	EWP	3/12/1996	152	15.77	15.94	18.47	2.53
iShares MSCI - Sweden	EWD	3/12/1996	210	0.27	1.18	1.28	0.10
iShares MSCI - Switzerland	EWL	3/12/1996	165	-12.83	-12.79	-8.99	3.80
iShares MSCI - Taiwan	EWT	6/20/2000	229	-13.79	-10.65	-9.59	1.06
iShares MSCI - United Kingdom	EWU	3/12/1996	145	-3.36	-3.77	-2.90	0.87
iShares S&P TOPIX 150 Index Fund	ITF	10/23/2001	112	-11.83	-15.33	-15.00	0.33
<i>Foreign/Sector</i>							
iShares S&P Global Energy Index Fund	IXC	11/12/2001	133	-4.44	-5.34	-6.28	-0.94
iShares S&P Global Financial Index Fund	IXG	11/12/2001	161	-2.46	-3.05	-2.55	0.50
iShares S&P Global Healthcare Index Fund	IXJ	11/13/2001	122	1.61	3.54	3.92	0.38
iShares S&P Global Info Technology Index Fund	IXN	11/12/2001	165	4.92	3.77	4.18	0.41
iShares S&P Global Telecommunications Index Fund	IXP	11/12/2001	162	15.87	14.19	15.21	1.02
*one-year market return through July 31, 2003.				na = data is not available, data is not applicable, or ETF is too new.			
**market return is from inception to July 31, 2003.				All ETFs trade on the American Stock Stock Exchange, unless otherwise noted.			
***one-year market return through August 31, 2003.							

(continued from page 13)

allow you to keep ownership benefits related to the underlying stocks: the right to vote shares, to receive dividends and to sell the stock when you want to.

HOLDERS also do not track an independent index. When a new HOLDER is developed, an industry, sector or group of securities is identified and the underlying stocks

to be included in the HOLDER are then selected for inclusion on the basis of objective criteria—such as market capitalization, liquidity, price-earnings ratio or other measures. The selected stocks may be weighted equally or on a modified market-cap basis. However, once determined, stock composition does not change unless due to a corporate event such as a merger or spinoff.

Because the relative weightings of the stocks are a function of market prices, the relative weightings within the HOLDERS will change substantially over time.

The other unique feature with HOLDERS is that you can take delivery of the underlying securities if you choose, by canceling your HOLDER. To cancel, you simply instruct your broker to deliver your

Price Close 8/25/2003 (\$)	Price 52-Wk High (\$)	Price 52-Wk Low (\$)	Volume	Expense Ratio (%)	ETF Structure	Index Tracked
61.62	63.33	48.36	28,800	0.50	open-end mutual fund	MSCI Pacific Ex-Japan Index
53.58	55.94	39.52	85,600	0.60	open-end mutual fund	S&P Europe 350
46.75	47.47	30.61	5,700	0.50	open-end mutual fund	S&P Latin America 40 Index
11.15	11.47	8.53	64,600	0.84	open-end mutual fund	MSCI Australia Index
10.73	11.19	7.04	18,800	0.84	open-end mutual fund	MSCI Austria Index
11.39	11.72	7.36	33,700	0.84	open-end mutual fund	MSCI Belgium Index
11.78	11.82	5.35	172,200	0.99	open-end mutual fund	MSCI Brazil Index
12.06	12.19	8.00	303,900	0.84	open-end mutual fund	MSCI Canada Index
16.61	17.69	12.01	22,700	0.84	open-end mutual fund	MSCI France Index
12.44	12.85	8.07	109,400	0.84	open-end mutual fund	MSCI Germany Index
8.98	8.99	6.55	314,000	0.84	open-end mutual fund	MSCI Hong Kong Index
16.59	18.24	12.44	18,000	0.84	open-end mutual fund	MSCI Italy Index
8.30	8.93	6.19	2,675,900	0.84	open-end mutual fund	MSCI Japan Index
6.08	6.15	4.82	99,300	0.84	open-end mutual fund	MSCI Malaysia Index
14.92	15.25	11.08	111,800	0.84	open-end mutual fund	MSCI Mexico Index
14.09	15.53	9.55	26,600	0.84	open-end mutual fund	MSCI Netherlands Index
5.44	5.64	3.89	85,400	0.84	open-end mutual fund	MSCI Singapore Index
46.19	46.74	35.93	12,300.00	0.99	open-end mutual fund	MSCI South Africa Index
23.27	23.99	14.70	135,900	0.99	open-end mutual fund	MSCI South Korea Index
22.48	23.60	14.71	29,000	0.84	open-end mutual fund	MSCI Spain Index
12.45	13.03	7.42	23,700	0.84	open-end mutual fund	MSCI Sweden Index
12.30	12.60	9.11	15,500	0.84	open-end mutual fund	MSCI Switzerland Index
10.75	11.40	6.61	230,400	0.99	open-end mutual fund	MSCI Taiwan Index
13.15	13.95	10.16	291,700	0.84	open-end mutual fund	MSCI United Kingdom Index
72.90	73.99	54.26	1,900	0.50	open-end mutual fund	S&P/Tokyo Stock Price 150 Index
49.95	52.84	41.81	4,000	0.65	open-end mutual fund	S&P Global Energy Sector Index
50.25	51.84	36.51	3,100	0.65	open-end mutual fund	S&P Global Financials Sector Index
42.41	47.06	36.93	4,100	0.65	open-end mutual fund	S&P Global Healthcare Sector Index
44.00	45.55	26.75	2,800	0.65	open-end mutual fund	S&P Global Info Technology Sector Index
39.80	41.70	29.01	3,600	0.65	open-end mutual fund	S&P Global Telecommunications Sector Index

HOLDERS to the HOLDERS trustee and pay a cancellation fee. The trustee will transmit ownership of the underlying shares to your account. Canceling a HOLDER is not a taxable event.

## TRADING ETFs

Because ETFs trade like stocks, you need to know their trading

characteristics.

### Pricing considerations

Exchange-traded funds have pricing symbols for three different variables:

- A stock price—the price at which trading occurs.
- An official closing net asset value—with a few exceptions, this quantity is computed as of 4:00 p.m. Eastern time each

business day.

- An estimated intraday net asset value—this number is updated every 15 seconds based on real-time prices of each of a fund's underlying holdings. It is called "intraday value" for the domestic funds and "indicative optimized portfolio value" for the non-U.S. portfolios. The latter number also reflects changes in foreign-ex-

change rates. Thus, the value can fluctuate on the basis of currency movements if the home market is closed when an iShares MSCI fund trades in New York.

Ticker symbols for these funds, along with considerable other trading, performance and structural details, can be found in the individual fund “tear sheets” at the American Stock Exchange Web site ([www.amex.com](http://www.amex.com)).

#### Premiums and discounts

While premiums and discounts are generally not a major issue, they may be larger in special instances.

End-of-day discounts and premiums are readily available at [www.eftconnect.com](http://www.eftconnect.com). In addition, Barclays Global Investors’ Web site ([www.ishares.com](http://www.ishares.com)) provides this information daily for all iShares. Finally, Morningstar ([www.morningstar.com](http://www.morningstar.com)) provides historical discount/premium charts as a part of its Morningstar Quicktake Report.

#### Liquidity and trading

Liquidity is the ease with which an investment can be bought or sold for a price at or very close to the recent quote.

Some of the newer funds are based on highly specialized indexes and thus may not appeal to enough investors to gain adequate liquidity. It’s very difficult for market makers to trade shares of illiquid funds. Low volume and wide spreads often plague such funds. The spread is the difference between a fund’s bid and asked prices.

You can try to minimize or avoid the spread with a tradable fund. A price-conscious way to buy and sell shares is by placing a limit order to buy at or slightly below the bid and to sell at or slightly above the asked price. Prices fluctuate throughout the day and—as with any stock or closed-end fund—it’s very difficult to time your trade so as to buy at the day’s low or sell at the day’s high. The limit order provides control.

## WHAT THE LISTINGS SHOW

Our guide to exchange-traded funds lists all ETFs according to their category, allowing you to easily compare similar funds. The categories include:

- U.S. Broad-Based Large Cap
- U.S. Broad-Based Mid Cap
- U.S. Broad-Based Small Cap
- U.S. Sector
- Foreign—Broad-Based
- Foreign—Regional
- Foreign—Single Country
- Foreign—Sector

Fixed-income ETFs are listed and discussed on page 25.

Here’s what our listing includes:

#### Ticker symbol

**Symbol:** The symbol for the stock price at which trading occurs. This is the symbol you would use when buying or selling shares.

#### Risk

**RiskGrade:** A risk measure that relates the volatility of a particular portfolio to a portfolio of all stocks worldwide during normal market conditions. The base worldwide stock portfolio has a RiskGrade of 100; a portfolio with a RiskGrade of 77 implies that it has a risk 77% as high as the average risk of the worldwide stock portfolio. (The RiskGrade Web site at [www.riskgrades.com](http://www.riskgrades.com) provides the mathematical details of the approach.)

#### Performance information

**Market Return:** The one-year return net of expenses for each fund based on its market price, through June 30, 2003. This is the actual return you would have received if you had invested in the fund over that one-year time period. Keep in mind, however, that it does not include brokerage commissions or spread costs you would incur when buying or selling the shares.

**NAV Return:** The one-year return for each fund based on its net asset value, through June 30, 2003. This

provides an indication of how the underlying portfolio of stocks performed over the time period. Funds in which the market return is closer to the NAV return trade with lower discounts and premiums.

**Index Return:** The one-year return through June 30, 2003, of the underlying index tracked by the fund. Index returns are not included for HOLDRS because they do not track an index.

**Index – NAV Return Difference:** The difference between the index return and the fund’s NAV return, an indication of how closely the ETF tracked its underlying index over the time period. Most funds tend to underperform the index, primarily due to expenses. Other factors may also lead to tracking differences. Note that a negative sign indicates a fund outperformed the index.

#### Trading information

**Closing Price, 52-Week High and 52-Week Low:** The closing market price of the fund on August 25, 2003, and the high and low closing price over the last year through August 25, 2003.

**Volume:** The average volume of shares traded for the fund for the last 200-day period through August 25, 2003, providing an indication of the liquidity of the fund. Lower volume tends to lead to wider spreads between the buy and sell prices of the fund.

#### Expenses

**Expense Ratio:** The expense ratio for each fund. Keep in mind that these expenses are at the fund level. To purchase or sell shares, you will incur brokerage commissions.

#### ETF structure

Whether the fund is structured as an open-end mutual fund, a unit investor trust or a grantor trust (HOLDRS).

#### Index Tracked

The underlying index that the fund is structured to track. ♦

# WHAT YOU NEED TO KNOW ABOUT FIXED-INCOME EXCHANGE-TRADED FUNDS

Until last year, exchange-traded funds were exclusively equity-based. With the equity indexes saturated, ETFs now have started to broaden their horizon to cover the fixed-income markets.

Currently, there are four ETFs that track bond indexes, all of them iShare funds.

Bond ETFs work like their stock counterparts. Like equity ETFs, bond ETF share prices may deviate from their net asset values, producing tiny premiums or discounts throughout the trading day. Each fund has both a trading symbol and an IOPV (indicative optimized portfolio value) ticker.

The IOPV approximates the fund's net asset value and is updated every 15 seconds throughout the trading day. By comparing the IOPV and real-time stock quote for a bond ETF, you can approximate any discounts or premiums that might occur.

You can also determine a bond ETF's end-of-day discount or premium based upon its net asset value (computed daily at the market close) and last traded price. This informa-

tion can be found most readily at the Web site for iShares ([www.ishares.com](http://www.ishares.com)). Keep in mind, however, that bond quote and price reporting is less well-developed than stock quote and price reporting, making the IOPV and net asset value less reliable for bond ETFs. Fortunately, bond quotes and price data are improving.

As with bonds themselves, the prices of bond ETFs vary inversely with the level of interest rates—i.e., rising rates lead to falling fixed-income security prices and vice versa. Like most bond funds, fixed-income ETFs do not pay a fixed rate of return and do not guarantee that your investment will be recouped when you cash out. Bond ETFs pay monthly dividends in cash. Individuals interested in reinvesting their dividends should contact their brokers for further information, including any fees.

Bond ETFs offer benefits similar to those of stock ETFs, such as low cost, diversification, the ability to trade shares throughout the day, and the ability to short a portfolio. All four bond ETFs feature rock-bottom

0.15% expense ratios—a major plus for fixed-income portfolios, particularly during times of low returns. Tax efficiency, an advantage for stock ETFs, would not be a relevant consideration with bond ETFs because of their income orientation. Like Treasury securities themselves, Treasury bond ETFs generate income that is subject to federal income tax but should be exempt from state and local income taxes if the fund sponsor and the shareholder meet the state's administrative requirements.

The iShares GS Corporate replicates its underlying target index, but the other bond ETFs use optimized sampling techniques. Because bonds have a given life span before they mature, a bond ETF portfolio needs to be reconstituted frequently, reflecting changes in its target index. This process could lead to some capital gains distributions. You could generally expect a bond ETF to have a higher portfolio turnover rate than the broad-based equity ETFs tracking benchmarks like the S&P 500, Dow Jones industrial average, and the Wilshire 5000. ♦

## FIXED-INCOME EXCHANGE-TRADED FUNDS

Name	Ticker Symbol	Inception Date	(8/31/03) Weighted Avg Mat		30-Day SEC Yield (as of 9/16/03)	Exp Ratio	Index Tracked
			Fund (Yrs)	Index (Yrs)			
iShares Lehman 1-3 Year Treasury Bond Fund	SHY	7/22/2002	1.70	1.68	1.56	0.15	Lehman 1-3 Year Treasury Index
iShares Lehman 7-10 Year Treasury Bond Fund	IEF	7/22/2002	7.69	8.62	3.93	0.15	Lehman 7-10 Year Treasury Index
iShares Lehman 20+ Year Treasury Bond Fund	TLT	7/22/2002	23.34	24.06	5.32	0.15	Lehman 20+ Year Treasury Index
iShares GS \$ InvesTop Corporate Bond Fund	LQD	7/22/2002	10.56	10.78	4.84	0.15	Goldman Sachs InvesTop Index

*Ticker Symbol:* The symbol for the stock price at which trading occurs.

*Inception Date:* The date when trading first occurred.

*Weighted Average Maturity:* Average maturity of the bonds based on their percentage holding in the fund or index.

*30-Day SEC Yield:* Yield net of expenses for the most recent 30-day period.

*Expense Ratio:* The expense ratio for each fund.

*Index Tracked:* The underlying index that the fund is structured to track.

*Source:* Barclays Global Investors.



## On-Line Resources for Exchange-Traded Funds

Plenty of user-friendly information on exchange-traded funds is now available on-line.

### COMPREHENSIVE

American Stock Exchange

[www.amex.com](http://www.amex.com)

Comprehensive information on all exchange-traded funds listed on the Amex, which is virtually all of them. Click "Exchange-Traded Funds" and you can get updated share price and other trading information. The individual fund "tear sheets" contain a variety of useful data including a fund description, performance information (based on market price and NAV), holdings, historical premiums and discounts, and a distribution history.

ETFConnect

[www.etfconnect.com](http://www.etfconnect.com)

One of the best places to start. ETFconnect.com offers some of the most comprehensive information on almost all of the existing exchange-traded funds, including basic fund facts, performance data, historical premiums and discounts.

Nasdaq

[www.nasdaq.com](http://www.nasdaq.com)

Similar to the Amex Web site, the Nasdaq site is a comprehensive resource. The Nasdaq site also allows you to compare the price performances of all exchange-traded funds over a time period you select.

Morningstar

[www.morningstar.com](http://www.morningstar.com)

Morningstar Quicktake Reports on individual tradable funds are available at Morningstar.com. Morningstar.com also provides exchange-traded fund news, articles, a discussion board, and links to other sites.

IndexFunds.com

[www.indexfunds.com](http://www.indexfunds.com)

IndexFunds.com coverage includes articles and basic data on exchange-traded funds, as well as traditional index funds to assist you in your comparison shopping.

### FUND SPONSOR SITES

These sites offer extensive information concerning the specific funds they sponsor or market. Prospectuses and other fund reports can be downloaded. Typically, information on the underlying indexes is also included.

Barclays Global Investors

iShares family: [www.ishares.com](http://www.ishares.com)

Nasdaq Financial and Bank of New York

BLDRS family: [www.bldrsfunds.com](http://www.bldrsfunds.com)

Merrill Lynch

HOLDRS family: [www.holdrs.com](http://www.holdrs.com)

PowerShares Capital

PowerShares Family: [www.powershares.com](http://www.powershares.com)

Rydex

Rydex Funds: [www.rydexfunds.com](http://www.rydexfunds.com)

State Street/Amex

Select Sector SPDRs: [www.spdrindex.com](http://www.spdrindex.com)

State Street Global Advisors

StreetTRACKS family: [www.streettracks.com](http://www.streettracks.com)

UBS Global

Fresco Shares Family: [www.frescoshares.com](http://www.frescoshares.com)