



## **EXCHANGE-TRADED FUNDS**

The Mind of an Index with the Heart of an Individual Security

Exchange-Traded Funds (ETFs) are passive quasi-index funds that allow an investor to trade a portfolio of securities in a single transaction BUT they trade with all the attributes of an individual security.

What exactly does this mean?

### **What is an INDEX FUND?**

Index funds are baskets of securities designed to passively replicate some aspect of the capital markets. For example, the *S&P500* is a collection of 500 securities selected to best represent the large-capitalization US equity market. These 500 stocks are held in the index fund to match the performance of the largest companies in the US. With this index fund, as with all index funds, there is no manager attempting to “beat the market”; that is, nobody is trying to do better than how that particular market segment, in general, is performing. If the large-cap market is up 10% in a year, the S&P500 Index, in theory, should be up 10%. This is the greatest attribute of index funds, as most research has shown active managers do not beat their benchmark on a consistent basis. Therefore, why pay extra for something that historically cannot be delivered?

The pricing of an index fund is the same as with any mutual fund. At the end of each day, the price of the index is the NAV, or Net Asset Value. If you wish to buy or sell your index fund, you will do so at the price set at the close of business, or even the next day’s closing NAV, if your buy/sell request is received after a pre-determined time of the day. Consequently, you place your order without really knowing the price at which that order will be executed.

Because index funds are relatively set baskets of holdings, without day-to-day discretionary active management involvement, the expense ratios of index funds are typically well below those of actively-managed mutual funds. The average S&P500 Index fund has an expense ratio of 0.70%, as opposed to 1.41% for an actively managed large-cap mutual fund. (Source: BGI)

Other well-known indexes are the *Dow Jones Industrial Average* (a basket of 30 blue-chip companies), the *Russell 2000* (a basket of about 2000 small-capitalization US companies), and the *MSCI EAFE Index Fund* (a basket of international companies across 20 developed countries).

## **How is an EXCHANGE-TRADED FUND (ETF) Different from an Index Fund?**

Exchange-traded funds are designed to match the performance of their underlying index, but they do so with lower costs, improved transparency, easier tradability, and better tax-efficiency than an index fund.

### Lower Costs:

The critical concept behind an ETF is that actual shares of stock are deposited with the fund instead of cash. This means only stock is being traded back and forth with no money trading hands. The end result is lower brokerage costs and therefore, lower fund expenses.

The typical large-cap ETF expense ratio is only 0.10%, as opposed to 0.70% for the average S&P500 Index and 1.41% for the average large-cap US equity mutual fund.

### Annual Expenses (%): ETFs, Index Funds & Actively Managed Mutual Funds

ASSET CLASS CATEGORY	TYPICAL EXPENSES:			Index Name	ETF Ticker
	Average Active Fund	Average Index Fund	ETF Total Expenses		
US Taxable Bond	1.14	0.48	0.20	Lehman Agg	AGG
Large Cap Equities	1.41	0.70	0.10	S&P 500	SPY
Small Cap Equities	1.66	0.90	0.20	Russell 2000	IWN
International Equity	1.79	1.01	0.35	MSCI EAFE	EFA

**Source: Morningstar, BGI**

### Improved Transparency:

Unlike index funds and actively-managed mutual funds, all ETF holdings are known at all times. Holdings in every ETF are published daily, as opposed to quarterly for most index and actively managed mutual funds.

By knowing the exact holdings of each ETF in your portfolio, you can reduce duplication in your overall portfolio.

### Better Tax-Efficiency:

ETFs protect you from many tax burdens.

One, portfolio turnover in most ETFs is very low. Portfolio transactions only occur when changes are made to the underlying index, or when a change is needed to maintain diversification requirements. With lower turnover, there is a lower probability of taxable gains.

Two, with an index fund or mutual fund, you buy into the fund's capital gains liability. If an index or mutual fund shareholder needs to redeem shares, the fund company itself must raise the cash to meet those demands. This may require selling underlying securities to generate the required

cash. If this happens, and a gain is realized on the sale of those securities, the tax liability is borne by all fund shareholders, not just the one requesting redemption.

By contrast, with an ETF there is a secondary market for the shares, where most investors trade through brokers. The redemption process is like that of selling an individual stock. The ETF holder simply executes a trade order, which may or may not result in a capital gains liability for that particular individual. There is typically no resulting liability for the other shareholders, as the Trust that holds the ETF simply does a transfer-in-kind of shares. This does not mean there is never any capital gains liability borne by the ETF shareholders in general, but that it is rarer for this liability to occur. (To date, no ETF has incurred capital gains that needed to be distributed to the shareholders, but the possibility does exist for this to happen in the future.)

Tradability

ETFs trade throughout the day, with real-time pricing, allowing an investor to make the market. By contrast, an index or mutual fund is priced only once daily, at the market's close. In addition, because ETF trading operates like stocks, stop / limit orders are allowed, one may short on a downtick, and margin trading is permitted.

**Key Differences Between ETFs and Index Funds**

<b>Category</b>	<b>Trading</b>	<b>Transparency</b>	<b>Tax Efficiency</b>	<b>Cost Effectiveness</b>
<b>ETF</b>	<ul style="list-style-type: none"> <li>• Real-time Pricing</li> <li>• Stop/Limit Orders</li> <li>• Short on Downtick</li> <li>• Margin Trading</li> </ul>	Daily Reporting	Unrealized gains are unlikely given in-kind redemptions	Best for Taxable Accounts and Smaller Investors
<b>Index Funds</b>	<ul style="list-style-type: none"> <li>• Place Order Before Mkt Close at Unknown Price</li> <li>• No Stop/Limit</li> <li>• No Shorting</li> <li>• No Margin Trading</li> </ul>	Quarterly Reporting	Embedded Unrealized Gains	Best for Tax-Exempt Accts and Large Investors

## **Investment Strategies Using Exchange-Traded Funds:**

All investors need a portfolio that reflects their personal financial goals and objectives, designed within their own tolerance for risk. In many cases, Exchange-Traded Funds, with their low-cost, transparency and flexibility, may be the more effective vehicle to use for building that unique portfolio.

Using ETFs you can:

- Build a customized and diversified portfolio that matches your specific financial objectives.  
For example, if you are approaching or in retirement, you need your retirement assets to work for you, generating an income stream to meet some or all of your living expenses. Your investment objective is to maximize your income yield, within a reasonable level of risk. By using the S&P 500 sector ETFs (called SPDRs) you can underweight the low-yielding sectors, such as technology and consumer discretionary, and overweight the higher income-paying sectors such as Utilities, Energy and Financials. In addition, you can add the Dow Jones Select Dividend ETF (DVY) with a dividend yield of about 3.0%.
- Manage risk through sector asset allocation.  
Asset allocation lies at the heart of any sound long-term investment program. However, there are embedded risks within all asset classes, that you may need to diversify away from. Using sector ETFs, to take into account specific sector risk, you can better manage your tolerance for risk within your portfolio's objectives. For example, you may be unable to tolerate much downside risk. By underweighting the more volatile sectors, such as technology and energy, you may be able to better protect your portfolio from major downswings.
- Rebalance your portfolio based on current sector weightings.  
Over time, your portfolio will drift as certain sectors out-perform and other sectors under-perform relative to each other. At certain points in time you may wish to rebalance your portfolio to bring it back in line with your financial objectives and risk tolerance. Again, utilizing ETFs as your realignment tool may be the best approach. For example, oftentimes the "hot" sector of one year, becomes the "dog" of the next. If your portfolio is comprised of sector ETFs, it becomes relatively easy to sell off or trim back the winner and add to the under-performer to bring your portfolio back in line with your original asset allocation objectives.
- Take advantage of attractive investment opportunities.  
Global events or trends may signal an opportune time to invest in certain areas. As the business cycle moves, certain sectors are more likely than others to outperform. For example, after Hurricane Katrina, fuel prices escalated, making energy companies very attractive. By purchasing an energy ETF (such as the Energy Select Sector SPDR – XLE), you could easily participate in this sector's out-performance.
- Hedge Concentrated Positions.  
If you work in an industry that uses stock options as a large part of your overall compensation, you may be overexposed to a particular economic sector. You may hold a large concentration of your company's stock, and may be limited as to how much you can sell off at any one time to lower your concentration risk. Again, sector ETFs may be ideally suited for you as a way to hedge your downside risk exposure. For example, if you hold an over-weighted amount of Cisco stock, relative to your overall portfolio, you could sell short the technology sector ETF (XLK), to reduce the impact any downturn in technology stocks would have on your portfolio.

## The Largest Exchange-Traded Funds

ETF Name	Ticker	Expense Ratio	Net Assets (\$B)	TOTAL RETURNS (%)					Std Dev	P/E	Sharpe Ratio*
				YTD*	2004	2003	2002	2001			
SPDR Trust	<b>SPY</b>	0.1	<b>\$49.527</b>	2.10	10.75	28.39	-22.12	-11.86	15.05	22.30	0.27
Nasdaq 100 Trust	<b>QQQQ</b>	0.2	<b>\$19.957</b>	-3.73	10.51	49.18	-39.37	-30.89	24.81	37.70	0.21
<b>iShares</b> MSCI EAFE	<b>EFA</b>	0.35	<b>\$15.492</b>	-0.50	19.75	38.45	-15.61	-	15.38	20.60	0.87
iShares S&P500	IVV	0.09	\$12.456	2.19	10.77	28.53	-22.15	-11.96	15.07	22.30	0.27
MidCap SPDR Trust	MDY	0.25	\$7.529	7.41	15.84	35.20	-15.77	0.37	15.26	23.60	0.64
iShares Jpan Index	EWJ	0.59	\$6.914	-6.87	14.78	35.54	-10.47	-29.90	17.94	23.10	0.70
DIAMONDS Trust	DIA	0.18	\$6.680	-0.79	5.12	28.00	-15.10	-5.52	15.31	19.30	0.25
iShares DJ Select Dividend	DVY	0.4	\$5.933	4.90	17.90	-	-	-	-	15.80	-
iShares R2000 Index	IWM	0.2	\$5.488	3.28	18.15	46.94	-20.51	1.97	19.26	25.60	0.60
iShares R1000 Index	IWD	0.2	\$4.936	4.32	16.28	29.70	-15.68	-5.73	15.04	19.10	0.56
iShares MSCI Emerging Mkts	EEM	0.76	\$4.534	11.07	25.53	-	-	-	-	21.30	-
Vanguard TSM <b>Vipers</b>	VTI	0.07	\$4.238	2.99	12.56	31.43	-20.94	-	14.91	23.70	0.39
iShares S&P Small 600	IJR	0.2	\$3.555	6.16	22.45	38.59	-14.73	6.34	17.28	24.90	0.75
iShares R1000 Growth	IWF	0.2	\$3.075	1.28	6.10	29.46	-27.99	-20.64	15.56	26.00	0.04
iShares s&P500 BA VI	IVE	0.18	\$2.958	2.55	15.51	31.51	-20.98	-11.85	16.60	19.40	0.42
iShares R2000 Value	IWN	0.25	\$2.765	5.07	22.02	45.60	-11.52	13.42	17.95	23.20	0.78
iShares Lehman 1-3 Yr Treas	SHY	0.15	\$2.729	0.61	0.80	1.78	-	-	-	-	-
iShares GS\$ InvesTop	LQD	0.15	\$2.555	1.40	5.91	7.43	-	-	-	-	-
iShares S&P MidCap400	IJH	0.2	\$2.405	7.90	16.29	35.36	-14.70	-0.68	15.29	24.10	0.65
iShares S&P BA Gr	IVW	0.18	\$2.267	1.50	5.91	25.42	-23.71	-12.87	14.24	25.10	0.07
<b>StreetTRACKS</b> Gold Shares	GLD	-	\$2.209	-3.31	-	-	-	-	-	-	-
iShares R2000 Growth	IWO	0.25	\$2.103	1.27	14.13	48.19	-30.29	-9.82	21.32	28.60	0.41

\* Data as of 07/13/2005 (Source: Bloomberg)

Std Dev and Sharpe calculated over last 3 years

Source: Journal Of Indexes May/June 2005

Barclays (iShares), Vanguard (Vipers) & StateStreet (streetTRACKS) are the key ETF players

SPY, QQQQ, EFA are largest ETFs in terms of \$AUM

## ETF Industry Growth

