USING INDEX FUNDS AS A PART OF YOUR ASSET ALLOCATION STRATEGY

By Albert J. Fredman

Consistency of style, low costs, the assurance of beating most active managers, and tax efficiency are compelling reasons to give index funds a high priority in your asset allocation strategy.

Asset allocation deserves a high priority in any individual's investment program. The process of determining what asset classes to include in a portfolio and deciding what percentage to invest in each class accounts for 85% to 95% of a portfolio's long-term performance, according to a number of research studies. In other words, the particular securities held within each asset class (assuming reasonable diversification within each class) play relatively minor roles in determining a portfolio's risk and return.

Actively managed funds are popular portfolio building blocks because they have unique objectives and styles. Equity funds vary according to the average size of companies targeted and their emphasis on "growth," "value," or a blend of the two. Unfortunately, many managers don't always stick with a style, such as small-cap value. Some modify their approach with changing markets, drifting into what is currently in vogue. It can be difficult to remain with an out-of-favor style because a prolonged span of poor performance often results in large numbers of redemptions.

Index funds often are an excellent choice for style purists because they reliably follow a target benchmark, as well as any built-in growth or value orientation.

A surprisingly broad array of index fund choices exists.

GROWTH VERSUS VALUE

An intriguing area of indexing is the division of certain market benchmarks into growth and value components. Growth managers seek companies with accelerating increases in earnings and revenues. America Online, Cisco Systems, Dell Computer, Intel, and Microsoft are examples of growth stocks. Unlike cyclical issues, genuine growth stocks should be able to produce steadily improving profits regardless of fluctuations in the economy. The price-earnings ratios and other valuation yardsticks of favored firms often attain stratospheric levels.

Value investors, on the other hand, search for unloved firms that can be acquired cheaply because the market has overlooked them or beaten them down. These outfits may sell at low ratios of price-to-earnings or price-to-book-value, or they may have above average dividend yields. Value firms often cluster in certain sectors, such as energy (for example, oil), financial services (banks and insurers), and industrial cyclicals (autos, housing, and steel). Alcoa, Ford Motor, and Philip Morris are examples of value stocks.

Vanguard Growth Index and Vanguard Value Index replicate the S&P 500/Barra Growth and Value indexes, respectively. Using the level of a stock's price-to-book-value ratio, the Barra indexes divide the S&P 500 in half by market value weight into growth and value indexes. Thus, the Barra Large Growth index represents that half of the aggregate market value of the S&P 500 companies with the highest price-to-book ratios. Since growth companies

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TABLE 1. COMPARING GROWTH AND VALUE PORTFOLIOS

	Return (%)					
	1998	1997	1996	1995	1994	5-Year Avg
Large Cap:						
S&P 500 /Barra Growth	42.2	36.5	24.0	38.1	3.1	27.9
S&P 500/Barra Value	14.7	30.0	22.0	37.0	–0.6	19.9
Small Cap:						
S&P 600/Barra Growth	2.3	15.7	16.1	29.1	–5.5	10.9
S&P 600/Barra Value	–5.1	36.5	26.1	30.7	–4.5	15.3

Source: Frank Russell Company

tend to have higher market values than value companies, the Barra Large Growth index has fewer companies than its value counterpart. In fact, the former recently had only 120 companies versus 380 for the latter.

Vanguard Value Index yields more in dividends than the S&P 500; Vanguard Growth yields less. The returns of the two also typically diverge from the full index. Because the portfolios are reconstituted semiannually, their turnover rates exceed the minuscule 5% characteristic of the flagship Vanguard 500. In May 1998, Vanguard introduced its Small-Cap Growth and Small-Cap Value index funds. Vanguard Small-Cap Growth tracks the S&P SmallCap 600/Barra Growth index; its value counterpart benchmarks the S&P SmallCap 600/Barra Value index. The S&P 600/Barra indexes were introduced in December 1993. Vanguard's older Small-Cap Index Fund, which targets the Russell 2000, is a blend.

Table 1 shows that striking differences may exist between the performances of growth and value for both large and small companies in individual years, such as 1998. Large companies outperformed small ones for the five years ended December 1998, and large growth, with its 27.9% return, was the best performing style. However, small value beat small growth over the five years, with a 15.3% return, well above the 10.9% return produced by growth even though the latter had the upper hand in 1998, a poor year for small stocks.

Why pick a growth or value index fund as opposed to a plain vanilla blended fund? It might seem like splitting hairs, but significant long-term performance differences between growth and value may exist. Those who endorse value can cite academic research indicating that value stocks have delivered higher long-run returns than growth, often with less volatility. For instance, Table 2 shows how the S&P 500/Barra Growth and Value indexes fared over the 24 years ended December 31, 1998. Barra Value delivered a higher return with a lower standard deviation (volatility). Their higher dividends help make value stocks more stable, providing some price support in weak markets.

Value firms produce higher returns because of their greater financial risk, according to efficient market advocates. However, pricey growth firms face a danger of multiple contraction should investor sentiment sour, whereas value firms already are depressed. It may make sense to hold the value portfolio if you are a conservative long-term investor, or you may choose to blend the styles to suit your philosophy. If you opt for straight value, recognize that it can have long dry spells, just as growth can.

A niche growth portfolio, Rydex Series Trust OTC, tracks the Nasdaq 100, which benchmarks the 100 largest companies in that market, excluding financial and utility stocks. A handful of technology stocks dominate the Nasdaq 100; in fact, Microsoft and Intel together make up about 25% of this capitalization-weighted index. The Rydex OTC owns about 85 of the largest companies in the Nasdaq 100, with the percentage in each the same as in the index. This large-cap fund has an average weighted market capitalization of about $88 billion and its price-earnings ratio is well above that of the S&P 500. Mirroring the performance of the technology giants, the fund returned 86.4% in 1998. Rydex OTC has an extremely high turnover rate (971% in 1998) because shareholders are allowed unlimited exchanges. Many of these individuals essentially are day traders, although that strategy is not recommended.

An alternative way to track the Nasdaq 100 is with the Nasdaq-100 Shares (Ticker:QQQ) launched in March. Nasdaq-100 Shares are structured like Spiders (or SPDRs) and Diamonds, which benchmark the S&P 500 and the Dow 30, respectively. All of these low-cost, tax-efficient vehicles act like index funds but trade like stocks on the floor of the American Stock Exchange. For further information, go to the Nasdaq-Amex Web site (www.nasdaq-amex.com) and click on "Index-Based Investments." At this time, no index funds track the broad Nasdaq Composite index of more than 5,000 stocks.

TABLE 2. S&P 500 GROWTH VS. VALUE: 1975-1998

	Annual Returns (%)	Standard Deviation (%)
S&P 500/Barra Growth	16.31	16.10
S&P 500/Barra Value	17.51	12.99

Source: Frank Russell Company

In addition to Diamonds, the no-load Waterhouse Dow 30 is a plain-vanilla portfolio that enables you to make the Dow industrials a visible part of your asset class mix. The Dow's 30 companies are among the largest of the 500 stocks in the S&P. But by itself, a Dow 30 fund, like a Nasdaq 100 fund, is too narrow to serve as a portfolio core.

SIZE CONSIDERATIONS

Size is another dimension of investment style to consider. Small companies can grow faster than large firms can because their expansion takes place on a smaller base of assets and revenues. Of course, they face plenty of risks, and many fledgling enterprises bite the dust. Index funds hold company risk to a minimum with their extensive diversification.

However, small companies as a group can underperform or outperform their mega-cap cousins for years. Small caps are most suitable for individuals with time horizons of at least a decade. Because small companies have underperformed the corporate Goliaths since 1994, they appear to offer better value today than the latter.

Some argue that investors should use index funds only for their big blue chip allocation and stick with actively managed funds for the less efficiently priced smaller companies. However, the small-stock market has become much more efficient over the past 10 to 15 years because many more analysts track these companies. So an individual manager has to be far more skilled to beat the averages. Thus, the arguments for indexing small stocks are more compelling today, particularly in view of the higher transaction costs associated with an actively managed small-cap fund.

In addition to the small-cap index funds, several mid-cap choices are available, based on the S&P MidCap 400 benchmark. That index has a $3.1 billion median market value, which is well above the $800 million median market cap that both the Russell 2000 and S&P SmallCap 600 currently have. A mid-cap index fund may be suitable for investors who want some exposure to companies that are smaller than those of the S&P 500—with its $66.4 billion median market capitalization—but hesitate to venture into the small-cap arena.

A blended package of sizes, the Wilshire 5000 tracks more than 7,200 companies, representing the entire U.S. equity market. Large firms dominate the Wilshire, with its $34.8 billion median market cap. Fidelity, T. Rowe Price, Schwab, Vanguard, and Wilshire Associates offer funds that track the index with a representative sample of its stocks. A Wilshire 5000 portfolio can be even more tax efficient than an S&P 500 fund. Since its 1992 inception, the turnover rate of Vanguard Total Stock Market has averaged well below 3%—about half that of the Vanguard 500.

SPECIALIZED INDEX FUNDS

An assortment of specialized or sector index funds also exist. For instance, American Gas Index benchmarks an index prepared by the American Gas Association containing all the U.S. publicly traded companies that are gas company members of the association. These are companies that are essentially distributors or pipelines, but they may have other activities like Pacific Gas & Electric and Duke Energy Corp. The fund holds all 97 companies in its benchmark. Galaxy II Utility Index tracks the S&P Utility index. S&P's 40-stock utility index is included in the S&P 500.

Vanguard REIT Index fund replicates the Morgan Stanley REIT index, composed of more than 100 publicly traded equity real estate investment trusts. Medium- and small-sized companies comprise this index, which has a $1.5 billion median market cap. Retail store and residential REITs receive the highest weightings. Health-care REITs are excluded.

Select Sector SPDRs began trading on the Amex in December 1998. These nine individual funds unbundle the S&P 500, giving investors exposure to the following sectors: basic industries, consumer services, consumer staples, cyclical/transportation, energy, financial, industrial, technology, and utilities. (For more information, see the Nasdaq-Amex Web site referred to earlier.)

INDEXING INTERNATIONALLY

Foreign equity markets offer another form of asset-class diversification. The Morgan Stanley Capital International Europe, Australasia, and Far East index (or EAFE) represents more than 1,000 companies in 20 developed stock markets. As the most widely followed overseas benchmark, the EAFE basically tracks markets outside the Americas. Japan and the U.K. have the biggest EAFE weightings, which together account for more than 40% of that benchmark's value.

Fidelity, Schwab, and Vanguard are among the firms with international index funds. Fidelity Spartan International Index tracks the EAFE. Schwab International Index tracks the performance of 350 dominant foreign corporations in countries with developed stock markets. Vanguard's European Stock Index and Pacific Stock Index funds replicate Morgan Stanley Capital International's Europe and Pacific indexes, respectively. Because of Japan's large market weighting, the Pacific portfolio recently had about 76% of its assets there. You could approximate the EAFE index by allocating roughly 27% of your foreign investments to the Pacific portfolio and 73% to the European portfolio.

A passive EAFE portfolio locks an investor into that benchmark's country weightings. Investors may want to underweight or avoid troubled markets or regions, while overweighting the more promising ones. Many investors select an actively managed international fund and leave these decisions to the manager.

Alternatively, more sophisticated investors who want to fine-tune their international exposure can use WEBS, or World Equity Benchmark Shares. Traded on the Amex, WEBS cover 17 markets, most of which are developed. A Morgan Stanley product, WEBS replicate 15 of the 20 countries within the EAFE index plus indexes for Canada and Mexico. As passive index funds, WEBS normally remain fully invested and do not time the market or hedge. All told, WEBS have attracted about $1.4 billion. Expense ratios, which average about 1.25%, vary by portfolio. For more information on WEBS, go to their Web site at www.websontheweb.com.

Launched in September 1998, WorldWide Index funds offer investors an alternative route to indexing countries. The portfolios track the main local benchmarks of eight European and three Pacific Rim nations. The funds replicate the largest-cap indexes in each country, such as the Nikkei 225 of Japan. In addition to the single-country funds, there are two funds of funds: a European fund (composed of the eight European portfolios) and an International fund (containing 11 countries). The funds of funds weight countries equally as opposed to traditional market weights for indexes such as the EAFE. Expense ratios of all portfolios are capped at 1% for retail investors but fall to 0.74% for investments of more than $100,000. These caps will be maintained through December 2001. Thus far, assets of the portfolios aggregate about $25 million. Unlike the unhedged WEBS, each WorldWide Index fund is fully hedged against currency fluctuations. Visit the site www.worldwideindexfunds.com for further information.

Perhaps you're looking for exposure to a cross-section of the world's developing stock markets. Vanguard Emerging Markets Stock Index fund tracks stocks in 16 developing countries ranging from Argentina and Brazil to Thailand and Turkey. More than 500 stocks are held in this $795 million portfolio.

INDEXING BONDS

Most index funds focus on equities, but a distinct minority target high-grade taxable bonds. It's even more crucial to cut costs to the bone in the bond market because bond returns are lower than stock returns, on average. In addition, there's less opportunity for fund managers to add value, since high-grade bonds are more homogenous than stocks.

But passive fixed-income portfolios work differently than their equity relatives. They have higher turnover rates than you might expect because an index will change as bonds mature or are dropped and new ones included in their place. In addition, a bond-index portfolio doesn't replicate the weightings of the securities in the benchmark. It's simply too difficult to do that because many bonds in a typical benchmark are not easily marketable. For this reason, fund managers use their best judgment in selecting a meaningful sample of securities.

Schwab and Vanguard both offer bond index funds. Vanguard has short-, intermediate-, and long-term portfolios in addition to its $8.6 billion Total Bond Market fund. Total Bond Market seeks to replicate the Lehman Brothers Aggregate bond index of roughly 7,200 bonds with a sampling of 700 to 800 issues. This medium-term fund recently had an average portfolio duration of 4.4 years.

Table 3 compares the benefits of indexing bonds with those of indexing stocks. The average annual returns of actively managed bond and stock funds are compared with the returns from the Vanguard Total Bond Market Index and the Vanguard 500 Index over three-, five-, and 10-year periods. The return differentials are expressed as percentages of the index fund returns. The results indicate a significant advantage for bond index funds, but a stronger case could have been made for indexing big-cap stocks. However, this was a highly unusual period, with unprecedented returns for the S&P 500.

Does indexing make as much sense with bonds as it does with stocks? Probably, if your investments are

TABLE 3. THE ADVANTAGES OF INDEXING—BONDS VS. STOCKS*

	Return (%)			Difference as Percent of
	Index Funds	Managed Funds	Difference (%)	Return (%)
Bond funds:				
3-year	7.17	6.25	0.92	14.72
5-year	7.21	6.21	1.00	16.10
10-year	9.00	8.26	0.74	8.96
Stock funds:				
3-year	28.16	22.81	5.35	23.45
5-year	23.96	19.28	4.68	24.27
10-year	19.04	16.34	2.70	16.52

**Actively managed intermediate-term bond funds are compared with Vanguard Total Bond Market Index; actively managed large-cap blend funds are compared with Vanguard 500 Index. All periods end December 31, 1998.*

Source: Morningstar, Inc.

held in a tax-deferred retirement account or you are in a low tax bracket. Because there are no relevant municipal bond benchmarks as there are for taxable bonds, the bond index funds currently available target only federally taxable issues. A low cost municipal bond fund may be a better choice for a taxable account.

SAMPLE INDEXING STRATEGIES

Here are seven indexing strategies to consider when designing a portfolio.

Strategy #1: A single index fund targeting the Wilshire 5000 can serve as your domestic equity core.

Using a Wilshire 5000 fund as a base, you can selectively add a few actively managed funds. An S&P 500 fund could also serve this purpose, but I prefer the greater breadth of the Wilshire. Your actively managed holdings should be funds you feel could beat the market, or those that target investment areas where there are no index choices. Some investors may choose to pair up a Wilshire 5000 fund with one or two focused funds that concentrate on a manager's favorite stocks. (See the Mutual Funds column in the January 1999 issue of the *AAII Journal*). Of course, there is nothing wrong with using a Wilshire 5000 fund for your entire domestic equity exposure.

Strategy #2: Pairing up a large-cap index fund with an extended market portfolio gives you additional control over your domestic core.

Perhaps a Wilshire 5000 portfolio has too much of a big-cap flavor to suit your objectives. You could turn to a fund that tracks the so-called extended market. Fidelity, T. Rowe Price, and Vanguard offer portfolios that essentially take the Wilshire 5000 and remove the S&P 500 companies. In a single package, a Wilshire 4500 portfolio provides heavy exposure to medium- and small-sized companies, along with a relatively small proportion of large caps. The Wilshire 4500's $2.1 billion median market cap reflects its distinct smaller company flavor. By pairing an extended market fund with an S&P 500 or Dow 30 fund, you can fine-tune the ratio of smaller to larger companies to meet your objectives.

Strategy #3: Targeted domestic equity exposure may appeal to more sophisticated investors.

Index funds targeting large, medium, and small companies can be held in whatever proportions make sense to you. For added refinement, you may want to own a large-cap growth or value S&P 500 fund, or mix the two. The same can be done with small-cap growth and value funds. However, making major shifts between growth and value and small and large companies based on a forecast can defeat the original purpose of passive investing.

Perhaps you want smaller companies than those tracked by the traditional small-cap benchmarks. Micro-caps have market capitalizations ranging from about $10 million to $300 million. Select a good actively managed micro-cap fund because there is no widely disseminated index of micro-cap companies. Skilled managers have an opportunity to add value in this relatively inefficient market. (See the Mutual Funds column in the July 1997 issue of the *AAII Journal*).

Finally, sector index funds can provide increased exposure to certain areas such as real estate or financial companies.

Strategy #4: One or two broad-based international stock index funds can provide non-U.S. exposure. This strategy can be paired with any of the above.

A broad-based international index fund targeting the EAFE could serve as your only international holding or simply as an international core. Some investors may prefer a European index fund as a relatively conservative way to gain international exposure. Indexing makes especially good sense in European markets because they are the most efficient of the foreign markets.

Strategy #5: A totally indexed global portfolio allows you to sidestep actively managed funds with their higher costs and management risk.

Those seeking simplicity can build a complete indexed global portfolio by investing in just two index funds: a Wilshire 5000 fund and a broad-based international fund, such as the Vanguard Total International (which invests in the company's European, Pacific, and Emerging Markets index funds), Schwab International (which benchmarks the 350 largest foreign companies) or the 11-country WorldWide International fund.

Strategy #6: Targeted non-U.S. equity exposure may appeal to more sophisticated investors with large portfolios.

World Equity Benchmark Shares (WEBS) and WorldWide Index funds offer knowledgeable investors an opportunity to tailor their own international portfolio. To control risk, exposure to any one country should normally not exceed 5% of your total equity allocation. However, true indexers would probably stick with an EAFE index fund and not try and predict how different markets will perform.

Strategy #7: A bond index fund can provide low-cost bond exposure in an IRA. For a taxable account, use a low-cost managed muni bond fund.

Because they are income-oriented and invest in taxable IOUs, bond index funds work best in tax-deferred accounts. Choose a low-cost municipal bond fund for your taxable account; for double tax-free income, check out a muni fund that holds the bonds of issuers in your state.

AN INDEXING CHECKLIST

Consistency of style, low costs, the assurance of beating most active managers, and tax efficiency are compelling reasons to give index funds a high priority. A totally indexed portfolio may suit some individuals. For the majority, however, an index fund core amounting to anywhere from 25% to 50% of a portfolio can be highly beneficial.

Table 4 lists low-load index funds, the indexes they track, and their expense ratios.

Here is a short checklist of points to keep in mind as you build your portfolio.

- *There's more to indexing than the S&P 500.* A stake in large blue chips always makes sense, yet it's also important to use index funds to diversify away from the S&P 500. The outsized returns of the world-class titans will eventually regress to the mean. Smaller companies and foreign companies can provide meaningful diversification.
- *Trying to time the market defeats the goal of passive investing.* Truly passive investors set their asset allocation and stick with it. Making large bets on individual groups of stocks by moving in and out of markets or investment styles is not advisable.
- *Avoid "closet indexing."* If you use actively managed funds, try not to own so many that you essentially get complete index-like diversification along with the higher expenses of actively managed funds.
- *Beware of enhanced products.* If you see a portfolio that calls itself an index fund but lacks the basic features, it's not true blue. High expenses and high portfolio turnover are red flags. Enhanced index funds commonly fail in their attempts to beat a particular index by trying to predict the best performers. ✦

TABLE 4. LOW-LOAD INDEX FUNDS

Fund (Ticker)	Index Followed	Expense Ratio (%)
Stock Funds		
American Century:Global Gold/Inv (BGEIX)	FTSE Gold Mines	0.69
Aon Funds:REIT Index (AREYX)	Morgan Stanley REIT	0.51
Vanguard REIT Index (VGSIX)	Morgan Stanley REIT	0.24
Rydex Srs Tr:OTC Fund/Inv (RYOCX)	Nasdaq 100	1.13
Vanguard Small-Cap Index (NAESX)	Russell 2000	0.23
Aon Funds:S&P 500 Index (ASPYX)	S&P 500	0.37
Dreyfus Index Fds:S&P 500 Index (PEOPX)	S&P 500	0.50
Fidelity Spartan Market Index (FSMKX)	S&P 500	0.19
Galaxy Funds II:Large Company Index (ILCIX)	S&P 500	0.40
Northern Stock Index (NOSIX)	S&P 500	0.55
S&P 500 Index, CCM Partners (SPFIX)	S&P 500	0.20
Schwab S&P 500/Inv (SWPIX)	S&P 500	0.35
Scudder S&P 500 Index (SCPIX)	S&P 500	0.40
SSgA:S&P 500 Index (SVSPX)	S&P 500	0.17
Strong Index 500 (SINEX)	S&P 500	0.45
T. Rowe Price Equity Index 500 (PREIX)	S&P 500	0.40
USAA S&P 500 Index (USSPX)	S&P 500	0.08
Vanguard 500 Index (VFINX)	S&P 500	0.19
Vanguard Growth Index (VIGRX)	S&P 500/BARRA Growth	0.20
Vanguard Value Index (VIVAX)	S&P 500/BARRA Value	0.20
Dreyfus Index Fds:Midcap Index (PESPX)	S&P MidCap 400	0.50
S&P Midcap Index, CCM Partners (SPMIX)	S&P Midcap 400	0.40
Galaxy Funds II:Small Company Index (ISCIX)	S&P SmallCap 600	0.40
Galaxy Funds II:Utility Index (IUTLX)	S&P Utilities	0.40
Schwab 1000 Fund/Investor (SNXFX)	Schwab 1000	0.46
Schwab Small Cap Index Fd/Inv (SWSMX)	Schwab Small Cap 1000	0.52
Vanguard Extended Market Index (VEXMX)	Wilshire 4500	0.23
Fidelity Spartan Total Market Index (FSTMX)	Wilshire 5000	0.26
Vanguard Total Stock Market Index (VTSMX)	Wilshire 5000	0.20
Vanguard Balanced Index (VBINX)	Wilshire 5000 (60%)/Lehman Aggreg Bd (40%)	0.20
Bond Funds		
Galaxy Funds II:US Treasury Index/Ret A (IUTIX)	Galaxy U.S. Treasury	0.40
Schwab Total Bond Mkt Index (SWLBX)	Lehman Aggregate Bond	0.31
Vanguard Total Bond Mkt Index (VBMFX)	Lehman Aggregate Bond	0.20
Vanguard Intermediate-Term Bond Index (VBIIX)	Lehman Fund Intermd (5-10) Gov't/Corp	0.20
Vanguard Long-Term Bond Index (VBLTX)	Lehman Fund Long (10+) Gov't/Corp	0.20
Schwab Short-Term Bond Mkt Index (SWBDX)	Lehman Fund Short (1-5) Gov't/Corp	0.46
Vanguard Short-Term Bond Index (VBISX)	Lehman Fund Short (1-5) Gov't/Corp	0.20
International Funds		
Vanguard Total International (VGTSX)	MSCI EAFA + MSCI Emerging Mkts Free	0.00
Vanguard Emerging Mkts Stock Index (VEIEX)	MSCI Emerging Markets Free	0.57
Vanguard European Stock Index (VEURX)	MSCI Europe	0.31
Vanguard Pacific Stock Index (VPACX)	MSCI Pacific	0.35
Schwab International Index/Investor (SWINX)	Schwab International	0.61

Source: AAII's Quarterly Low-Load Mutual Fund Update/Standard & Poor's Micropal. Data as of March 31, 1999.