



*Step 6 ~ Style Drifters*

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# STEP 6

## Style Drifters



*“Style drift is a serious problem for [investors] because it distorts asset allocation and undermines performance when styles rotate. Value managers who have drifted over the past three years [1998-2000] toward more favored growth stocks are regretting those moves, but not as much as their [investors].”*

- Ron Surz, President, PPCA Inc., *Get the Drift*, 2001



*“If a fund is drifting to a style that is dramatically different, your potential returns, volatility, and risk are going to change.”*

- Rosanne Pane, Director, S&P Fund Services Group, “Spotting Style Creep, When a fund starts to wander, returns can suffer,” *BusinessWeek Online*



*“One thing is clear. Style drift happens to a sizable percentage of mutual funds...For [investors or] planners seeking to create portfolios tapping into consistently different equity styles, style drift presents a significant concern.”*

- Craig L. Israelsen, PhD, “Drift Happens,” *Financial Planning Interactive*



*“The SEC deems it a fraud if performance results are compared to an inappropriate index, without disclosing the material differences between the index and the accounts under management.”*

- Robert J. Zutz, *Compliance Review*, Schwab Institutional

*“But beyond asset allocation, style drift also may have an effect on a fund's returns. Recent studies, including a 2001 study by Keith Brown and W.V. Harlow, have found that funds that are consistent in their investment style produce better returns than those with style drift. Style-consistent funds also have lower portfolio turnover, which means lower costs.”*

- Stephen Schurr, Senior Editor, *TheStreet.com*, *The Case for Index Funds*, 4/10/2003

### 6.1 INTRODUCTION

**S**tep 6: Comprehend active management style drift.

Style drift happens when an active manager drifts from a specific style, asset class or index that is described as the investment purpose of a portfolio or mutual fund. For example, a manager may drift from small-cap value to small-cap growth. This is a substantial problem if you have carefully determined your risk capacity and matched it to a risk exposure.

Mutual fund managers are pushed to outperform other fund managers and their proper benchmarks. The temptation to dabble outside the scope of their fund's stated style in order to enhance the fund's performance sets all actively managed funds adrift.

To avoid style drift, it is best to implement your asset allocation with “pure style” index funds. Index funds are invested using clearly defined rules of ownership. Forty percent of the time, actively managed funds follow a manager's drift to a market the manager thinks will keep his shareholders happy and save his own

hide. Unfortunately, the shareholders suffer in the long run. As we have seen in previous steps, this predicting or chasing of returns has resulted in “below market” performance.

## 6.2 DEFINITIONS

### 6.2.1 Investment Style

Investment professionals and academics use many terms to define risk including markets, benchmarks, asset classes, styles, style boxes, investment objectives, risk factors, market dimensions, market segments, buckets of stocks, rules of ownership, slices of the market, industry classifications, and indexes such as Dow Jones Indexes, Standard & Poor’s Indexes, Russell Indexes, Wilshire Indexes, Morgan Stanley Capital Indexes, the Wired Index, and many more. Style, just one of many terms used, is simply a classification of an investment’s risk characteristics.

Stocks of a particular style generally share long-term risk, return, and correlation characteristics. This helps investors and financial planners decide how to allocate their assets. An equity fund’s style refers to the types of stocks the fund holds.

Active mutual fund managers define their own investment style, which guides them in picking individual stocks. For example, a fund manager may manage a growth fund that reflects a style preference of growth stocks.

The problem with investment style is that it is not consistently defined within the industry. Terms such as large, small, value, and growth have a wide range of definitions. This lack of specificity makes it difficult for investors to measure their risks and rewards, and easier for

active managers to claim market-beating returns over a nebulous benchmark.

A growth style includes stocks that are experiencing rapid growth in earnings, sales or return on equity. Growth stocks tend to carry low book-to-market ratios, high price earnings ratios, and usually offer no dividend yields. Growth stocks are priced much higher than their book values, indicating that a large portion of the purchase price goes to goodwill. Goodwill is basically the difference between the price and the book value. Growth is somewhat of a misnomer. The price paid for goodwill is often deflated by the news of lower than expected earnings growth of a company. Growth stocks are expected to under perform value stocks and the total market.

A value style includes stocks that tend to carry high book-to-market ratios, low price earnings ratios, high dividend yields, and is often described as being in distress. It is perceived by investors to be of higher risk. But, investors need to remember that higher risk equates to higher expected return. The shareholders of value stocks have a high cost of capital, which equates to a higher expected return for the capital provider. The capital provider is the investor or the capitalist. Value stocks have the potential to receive a lot of negative publicity and experience a downturn in their business.

The styles of large, small, and micro are based on a company’s share price multiplied by the total number of shares. Companies are ranked and grouped into categories that vary substantially within the investment industry. For example, as of March 2005, the Russell 2000 Index of small-cap stocks had a weighted average market cap of \$1.06 billion, while the Dimensional Fund Advisor’s (DFA’s) small-cap index had \$862 million, and the DFA Micro-cap index had \$426 million. Morningstar, Russell,

Lipper, Barra, Wilshire Associates, DFA, Morgan Stanley Capital Indexes, and Standard and Poor's are all considered reliable sources of style criteria. Each has its own set of rules for measuring value, growth, large, small, international or emerging markets. So it's no surprise that the active investor is dazed and confused.

### 6.2.2 Style Drift

Style drift refers to the tendency of active managers and actively managed mutual funds to deviate from their stated or expected investment style. This drift can occur gradually over time such as when "small-cap" managers buy larger and larger companies as the asset base of their funds grow. Style drift can also occur abruptly if an active manager perceives opportunities for higher returns from a different style. For example, a U.S. large company fund may purchase a high percentage of Mexican stocks, changing the fund's style.

## 6.3 PROBLEMS

### 6.3.1 Style Drift Alters Risk Exposure

Style drift creates numerous problems for active investors. For instance, it keeps them from maintaining reliable asset allocations for their portfolios. This results in inconsistent exposure to risk and the resulting variations in expected average returns.

The importance of style affecting the risk of mutual funds was crystallized when the highly respected members of the Financial Economists Round Table provided their "Statement on Risk Disclosure by Mutual Funds" in 1996. They stated, "To better communicate the sources of risk associated with mutual fund investments, fund managers should provide estimates of the principal risk fac-

tors that are likely to influence fund returns in the future. Specifically, fund managers should describe and quantify the expected relationship between their funds' future returns and relevant security market indexes as well as the likely extent of divergence (style drift) of their returns from such indexes and the probable sources of such divergence. In subsequent periods, actual fund returns should be compared with the portfolio of market indexes previously selected by a fund."

Experts widely agree that over time, asset allocation is on average the single most important determinant of variance in investment performance. The best way to design a portfolio's asset allocation is to use historical index data.

However, active investors design their portfolios by relying on style labels that are carried by active mutual funds such as "value," "growth," "large" or "small." An active fund usually does not relate to the risk and return potential of any single index. It is unclear how the reliance on labels that supposedly identify these indexes can help active investors design asset allocations for their portfolios. This task can prove even more difficult for an active investor who invests in a separate portfolio of individual stocks and bonds. It is essentially impossible to rationally design a portfolio's asset allocation when the building blocks of the investment strategy used to implement it are active mutual funds or individual stocks, bonds or both.

Style drift prevents an active investor from optimally reducing diversifiable risk because the manager of a typical active fund does not remain consistently invested in the same asset class. On the surface, this does not seem to be much of a problem, but investors who reduce diversifiable risk get a bonus. The bonus is increased return.

Style drift heightens the uncertainty felt by active investors who have little idea how their investments will perform and how their performance will relate to a discrete index. Unnecessary costs and taxes are generated in efforts to maintain consistency between a portfolio's asset allocation and the various investments used to implement it.

The considerable latitude given to managers by active mutual fund prospectuses often results in style drift. Style labels assigned to active mutual funds by fund rating services are not particularly helpful to active investors who rely on them to design asset allocations for their portfolios. For example, an active investor who wants to design an asset allocation that includes the asset class of U.S. large company stocks may find an entire list of labeled "U.S. large company" (active) mutual funds. The problem is that the investments held by an active fund can change over time. Investors in the Fidelity Magellan Fund found this out the hard way when money manager Jeffrey Vinik shifted 30% of the fund's assets from stocks to bonds and cash. This must have been an unwelcome surprise to investors who had chosen Magellan to earn the returns of stocks, not bonds or cash, and based their asset allocations on that expectation.

That is precisely the problem with style drift. It introduces a lot of needless uncertainty as to whether investors can implement their asset allocations, since it is likely that active funds will drift from their benchmarks. Even worse, there is no way to know which active mutual funds will survive in the future, much less which ones will be winners or losers.

### 6.3.2 Style Drifters

Money manager Jeffrey Vinik's notorious fall from grace after tinkering with the popular

Fidelity Magellan Fund in 1996 is one of the most publicized examples of style drift. Fidelity's Magellan was the world's largest mutual fund, and had been a popular equity investment. In February 1996, Magellan's asset allocation was only 70% equity. Vinik, the fund's manager at the time, had invested 20% of the fund in bonds and 10% in short-term marketable securities, betting they would outperform the equities market. Instead, the market soared to new heights, bonds fell in value, and Vinik left Fidelity. The key issue was not the outcome of Vinik's decision, but the investor's loss of control of the asset allocation process.

In March 1999, Fidelity was once again criticized for misrepresenting its funds. Steven Syre and Steve Bailey, columnists for *The Boston Globe*, took the company to task for including stocks of mammoth companies like Microsoft and MCI WorldCom in its Fidelity Emerging Growth Fund. The fund markets itself as one that invests in small and mid-sized companies. Thomas Edison, Fidelity's senior vice president and director of corporate affairs, conceded that Syre and Bailey had made a legitimate point.

Fidelity touted the fund's returns by comparing them to the performance of small and medium company stocks. In 1998, they performed dramatically worse than large company stocks. "It's not that uncommon for a fund to beat its competition by a few points if you're comparing apples to apples," Syre said in an interview with *Brill's Content*. "But this thing was blowing them away."

The SEC agreed with the journalists. Consequently, Fidelity changed the fund's name to the "Aggressive Growth Fund" and eliminated language in its prospectus that suggested a focus on smaller stocks. Since then style drift has been

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Figure 6-1

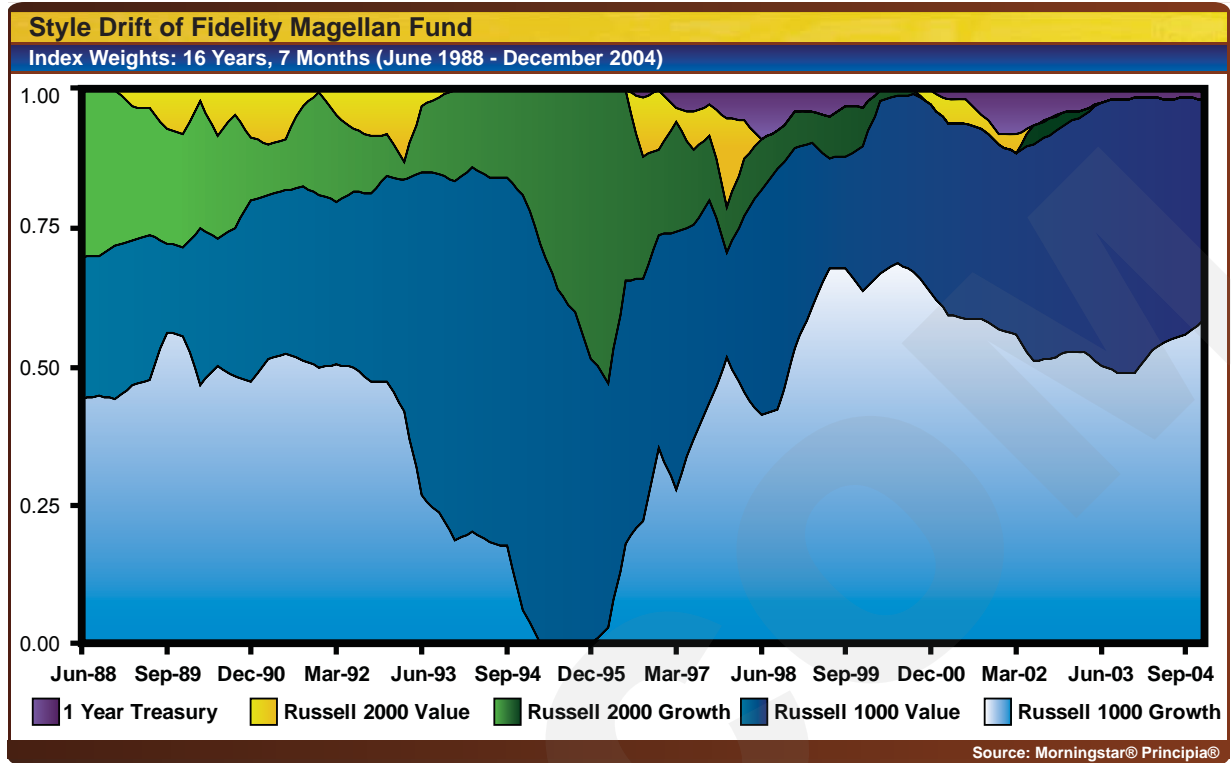


Figure 6-2

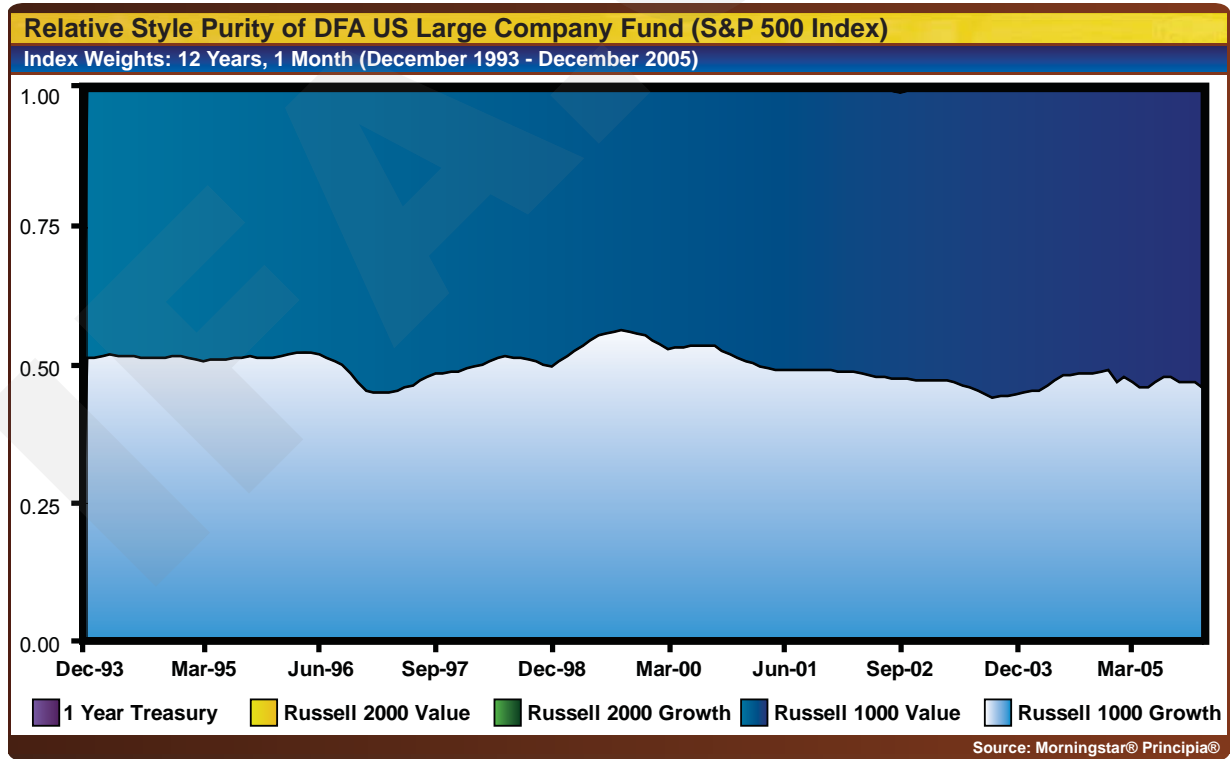


Figure 6-3

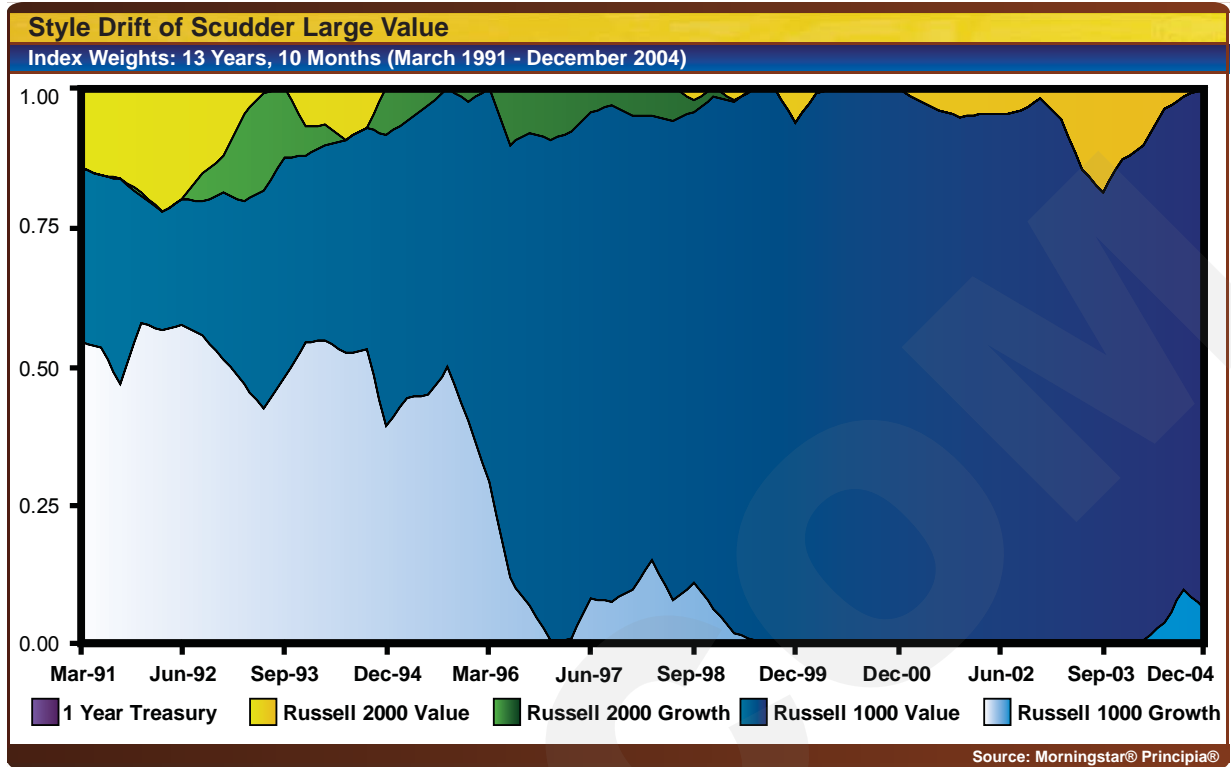


Figure 6-4

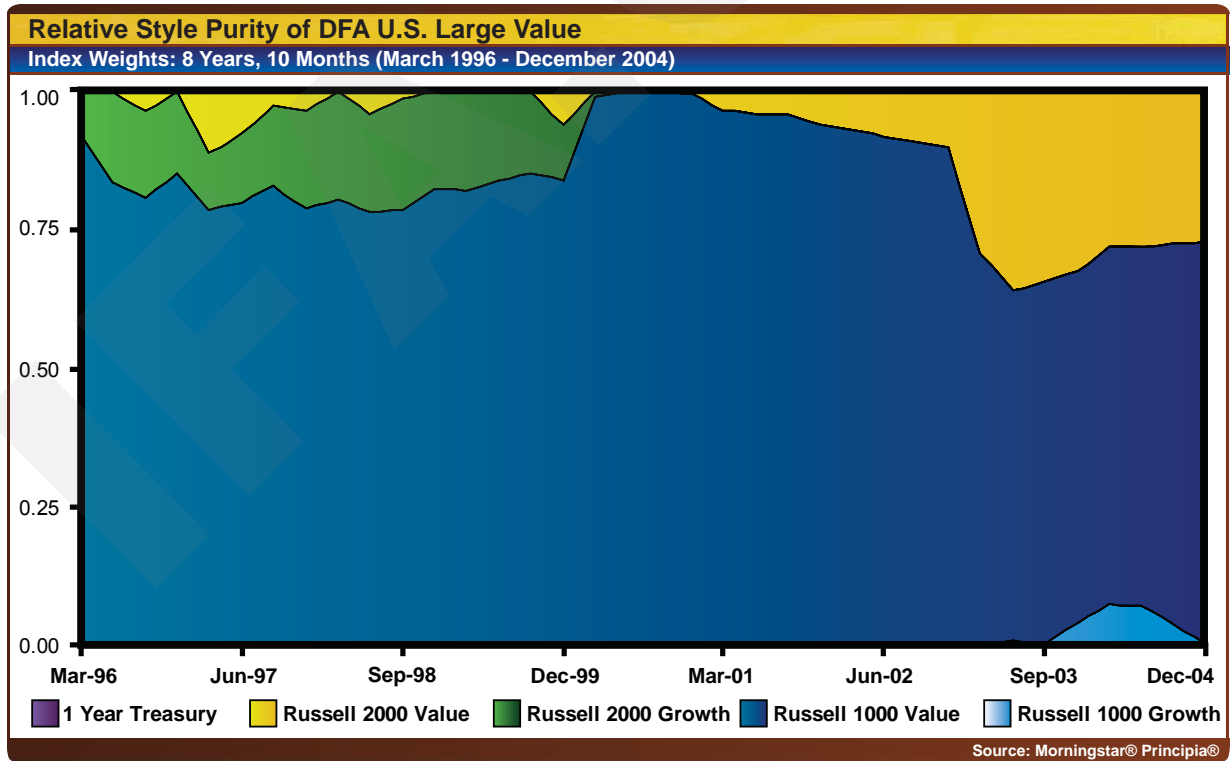


Figure 6-5

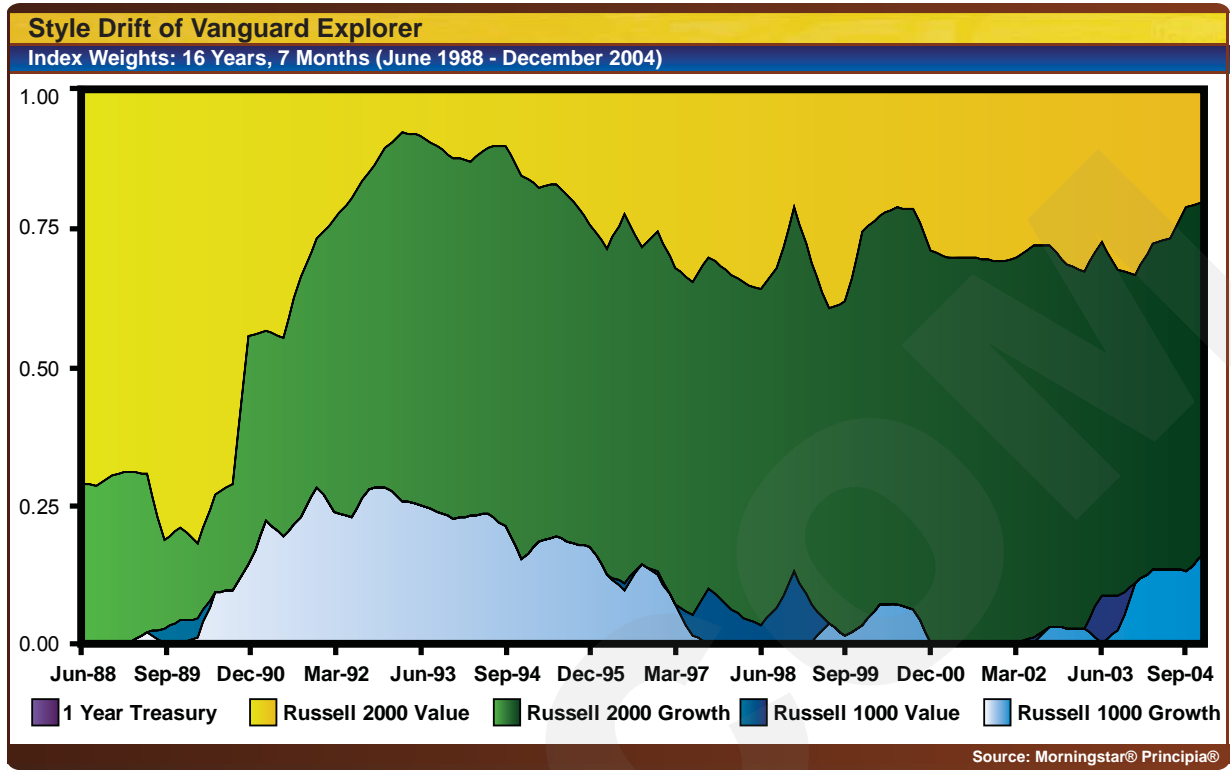


Figure 6-6

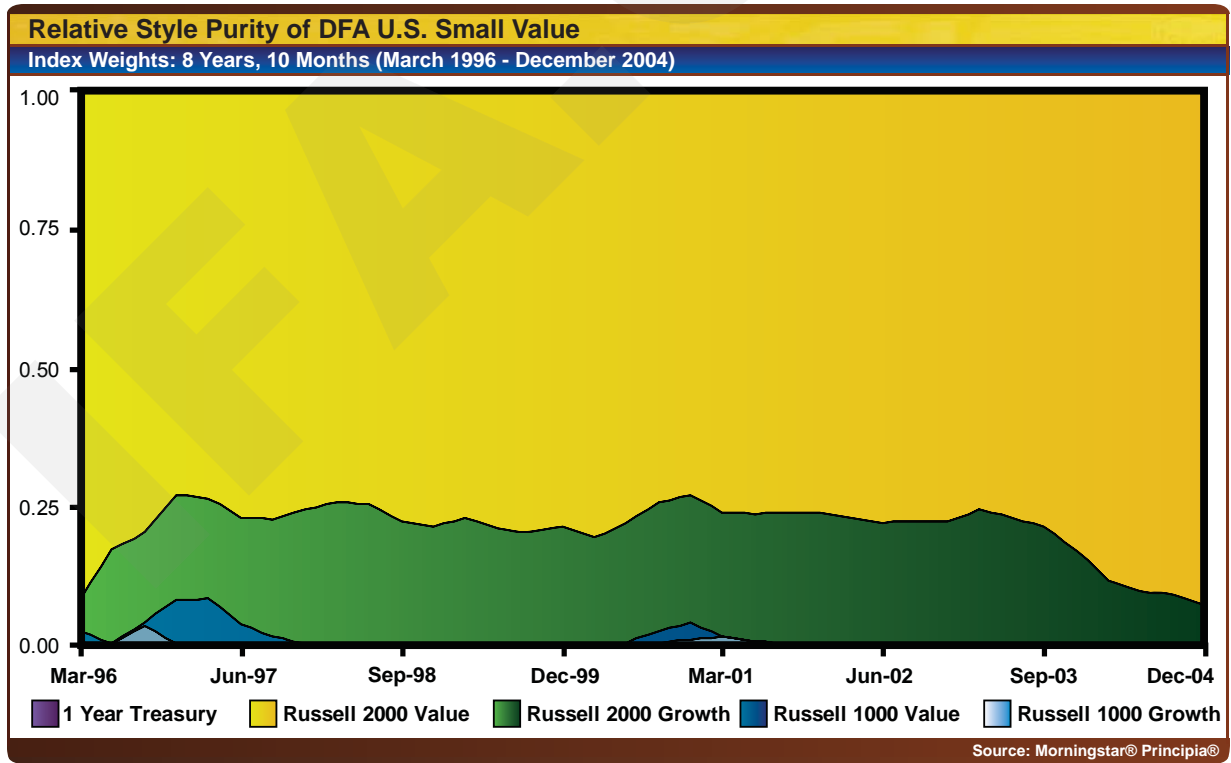
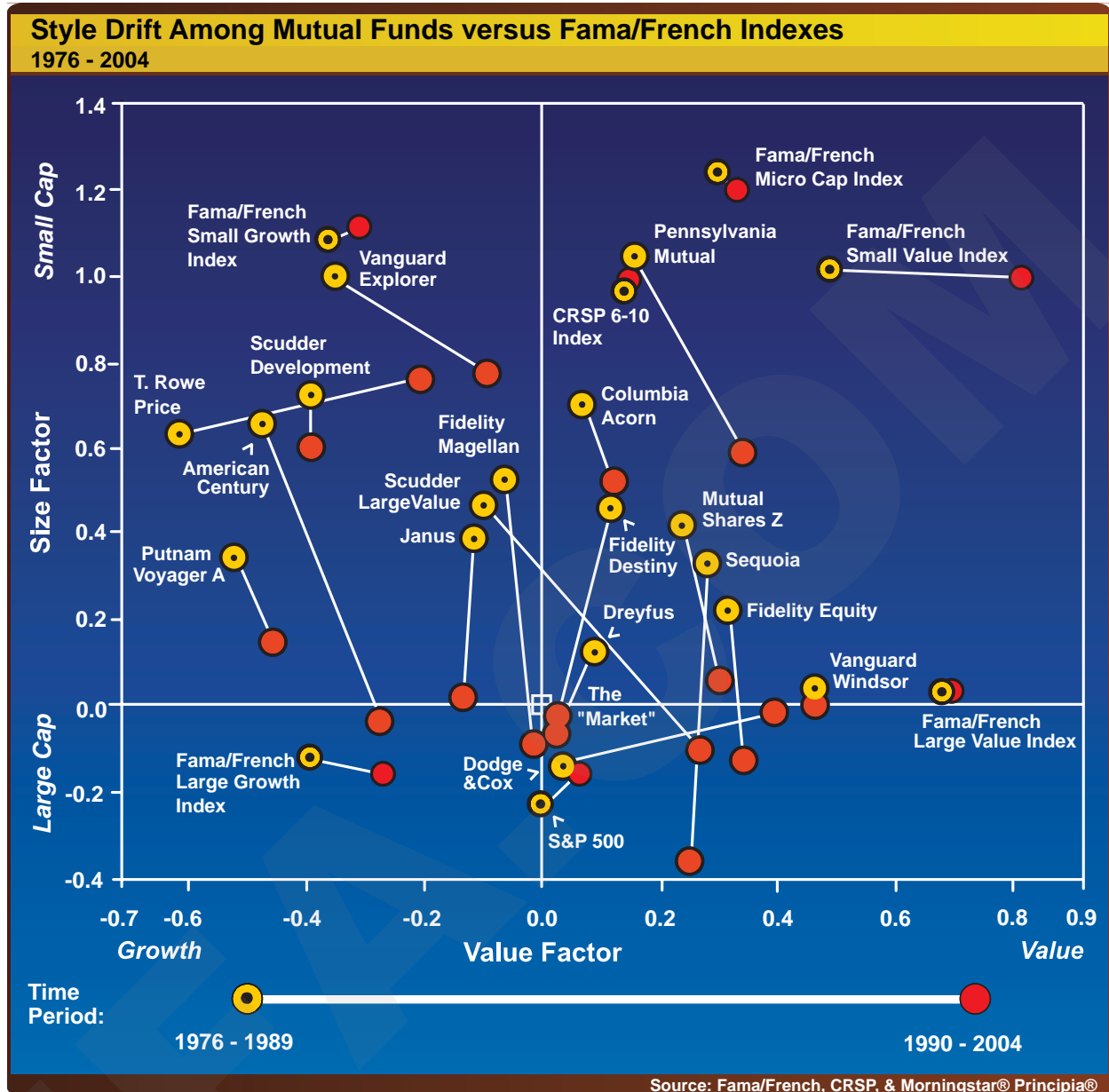


Figure 6-7



a practice the SEC has been focusing its examinations on.

A study by the Association for Investment Management found that approximately 40% of actively managed funds are classified inaccurately based on the stated goals versus actual investments. Fund managers are drifting along, chas-

ing the latest hot trend. All actively managed funds drift from their benchmark to varying degrees. On the other hand, index funds adhere to the same rules of ownership, regardless of market conditions.

One way to analyze style drift is to measure the exposure to different indexes at sequential

times. Figure 6-1 illustrates the drifting styles of the Fidelity Magellan Fund from June 1988 to December 2004. The scale on the left designates the relative exposure to different styles. Note that the dark blue zone is a large value index and the light blue is a large growth index. In June of 1995, it would have been better to classify the fund as a large value fund, while in February 2000 it would have been a large growth fund. Style drifters, like the managers of the Magellan Fund, are altering their styles in their quest for the next winner. Over the last 15 years, Magellan's style drifting has resulted in returns below that of the steady hand of the S&P 500 Index Fund. As a contrast, see Figure 6-2, which illustrates the style purity of a S&P 500 Index Fund. In looking at the chart you can see a contrast equal to the exposure between the large growth and large value as represented by the Russell 1000 Value and Russell 1000 Growth.

Figure 6-3 compares the styles of the Scudder Large Value Fund over time to a DFA Large Value passively managed index fund in Figure 6-4. Finally, Figure 6-5 compares the Vanguard Explorer Fund, which is described by Morningstar as a small growth fund. As a comparison, see the DFA Small Value Index Fund in Figure 6-6. Because of the undesirable characteristics of small growth, DFA does not offer a small growth index fund. In each comparison the bottom index fund provides more consistent and style pure risk exposure.

### 6.3.3 Style Drift and the Fama/French Risk Factors

Style drift is caused by competition within the mutual fund industry. If active mutual fund managers think they cannot get sufficient performance from the stocks in which they are supposed to be investing, they buy other types of instruments, such as bonds, if they believe bonds will

outperform stocks over the short run. When small company stocks are in a slump, the manager of an active small company stock fund may start buying large company stocks in hopes of enhancing performance. This has been a widespread practice among active money managers over the last decade as U.S. large company, blue chip stocks have outperformed small company stocks.

Fama and French identified risk factors in 1992 that highly correlate with long-term historical returns, namely company size and value orientation. Style drift among these two factors for two periods of approximately 14 years each can be seen in Figure 6-7. On the horizontal axis, value is a high book-to-market ratio (BtM) and growth is a low BtM. On the vertical axis, small and large cap are companies with small and large market capitalization, respectively. The numbers on the axes are measures of market exposure to each of these risk factors. The 0,0 point (the crossing of the axes) represents the total stock market. It reflects all of the stocks in the Center for Research in Security Prices (CRSP) database and is the reference for the other measurements. The CRSP 1-10 refers to the 10 deciles of stocks classified by market capitalization.

The yellow points reflect the average exposure of the funds during the period between 1976 and 1989. The red points reflect average exposure during the period between 1990 and 2004. Note how far some funds moved from their starting point. This movement reflects style drift and is often an unannounced change in investment objectives. Other funds barely moved. It should be noted that the data fails to reveal the many additional shifts in positions that these funds made within each of the years depicted. These additional shifts drive up trading costs, generate higher taxes, alter risk, and lower returns.

### Style Picking

Before discussing the next set of tables, please refer to Figure 6-8, which provides a legend for the portfolio and index buttons on Tables 6-1, 6-2, 6-3 and 6-4. For further information about these buttons see Appendices A and B.

One of the reasons it is so dangerous to style drift is because future style winners are as unpredictable as stocks, times or managers. Table 6-1 shows the annual returns of the S&P 500 and 20 index portfolios of different style over the last 80 years. Some investment managers use a strategy referred to as tactical asset allocation. This is a form of style picking where a manager alters the allocation of styles based on their prediction of the future style winners. To illustrate how difficult it is to predict the next winning asset allocation of styles, refer to Table 6-2, which is ranked each year with the highest return for that year on the left and the lowest return on the right. The random rotation of styles from left to right illustrate the difficulty style drifters have in picking the next winning style.

Table 6-3 provides the annual returns of the 15 IFA Indexes and the total market index from CRSP for the last 80 years. In Table 6-4, the returns are sorted so that the highest is on the left. Note the random rotation of individual indexes

or styles from year to year is virtually impossible for managers to predict. It is no wonder that both professional and amateur investors are whip-sawed into investing in different styles. But, investors who hold onto diversified portfolios obtain the returns and losses of all top performing asset classes over time. This method has been shown to substantially improve your returns.

## 6.4 SOLUTIONS

Asset allocation with pure index funds can be implemented to avoid style drift. Index funds are invested using clearly defined rules of ownership. Investors cannot control the style drift that so often negatively impacts the performance of the actively managed mutual funds they have chosen.

The simple solution to style drift is to relinquish active investing and invest in index funds. An indexing investment strategy is the most reliable way to implement a portfolio's asset allocation. The manager of an index fund keeps it constantly invested solely in all (or a representative sample) of the investments that comprise a discrete asset class. For example, the manager of the DFA Tax-Managed Small-Cap Value Fund has established specific criteria for the stocks that the

Figure 6-8

Color Button Legend Box				
<b>20 Index Portfolios</b>				
<b>15 IFA Indexes, S&amp;P 500, NSDQ, Total Market, Large Growth, and Small Growth Indexes</b>				

# Step 6: Style Drifters

Table 6-1

Annual Returns of 20 Index Portfolios and S&P 500 80 years (1927 - 2006)																					
Year	SP	100	95	90	85	80	75	70	65	60	55	50	45	40	35	30	25	20	15	10	5
1927	37.3	31.1	31.3	31.4	30.0	28.6	27.2	25.8	24.3	22.9	21.5	20.1	18.6	17.2	15.8	14.4	13.0	11.5	10.1	8.7	7.3
1928	43.4	37.2	36.3	35.5	33.7	32.0	30.2	28.5	26.7	25.0	23.2	21.4	19.7	17.9	16.2	14.4	12.7	10.9	9.1	7.4	5.6
1929	-8.5	-33.7	-30.0	-26.3	-24.8	-23.2	-21.7	-20.1	-18.6	-17.1	-15.5	-14.0	-12.4	-10.9	-9.4	-7.8	-6.3	-4.7	-3.2	-1.7	-0.1
1930	-25.0	-43.6	-42.7	-41.8	-39.5	-37.2	-34.9	-32.5	-30.2	-27.9	-25.6	-23.3	-21.0	-18.7	-16.4	-14.0	-11.7	-9.4	-7.1	-4.8	-2.5
1931	-43.4	-53.0	-53.2	-53.4	-50.8	-48.3	-45.8	-43.2	-40.7	-38.1	-35.6	-33.1	-30.5	-28.0	-25.4	-22.9	-20.4	-17.8	-15.3	-12.7	-10.2
1932	-8.3	-1.7	-2.6	-3.6	-3.1	-2.7	-2.2	-1.7	-1.3	-0.8	-0.4	0.1	0.6	1.0	1.5	2.0	2.4	2.9	3.3	3.8	4.3
1933	53.8	130.4	122.2	114.0	108.3	102.6	96.9	91.2	85.5	79.9	74.2	68.5	62.8	57.1	51.5	45.8	40.1	34.4	28.7	23.0	17.4
1934	-1.6	4.9	2.1	-0.7	-0.4	0.0	0.3	0.6	0.9	1.2	1.5	1.8	2.2	2.5	2.8	3.1	3.4	3.7	4.0	4.3	4.7
1935	47.5	53.9	52.4	50.9	48.6	46.2	43.9	41.6	39.2	36.9	34.5	32.2	29.9	27.5	25.2	22.8	20.5	18.1	15.8	13.5	11.1
1936	33.8	65.3	62.0	58.6	55.7	52.9	50.0	47.1	44.3	41.4	38.5	35.6	32.8	29.9	27.0	24.2	21.3	18.4	15.5	12.7	9.8
1937	-35.1	-48.2	-46.7	-45.1	-42.9	-40.6	-38.3	-36.1	-33.8	-31.5	-29.3	-27.0	-24.8	-22.5	-20.2	-18.0	-15.7	-13.5	-11.2	-8.9	-6.7
1938	31.0	29.0	29.1	29.1	27.9	26.6	25.3	24.0	22.7	21.4	20.2	18.9	17.6	16.3	15.0	13.7	12.5	11.2	9.9	8.6	7.3
1939	-0.5	-6.4	-6.9	-7.4	-6.9	-6.5	-6.0	-5.5	-5.0	-4.5	-4.1	-3.6	-3.1	-2.6	-2.1	-1.6	-1.2	-0.7	-0.2	0.3	0.8
1940	-9.9	-10.9	-10.7	-10.4	-9.8	-9.2	-8.7	-8.1	-7.5	-6.9	-6.4	-5.8	-5.2	-4.7	-4.1	-3.5	-2.9	-2.4	-1.8	-1.2	-0.7
1941	-11.7	-8.5	-8.1	-7.7	-7.4	-7.0	-6.7	-6.3	-6.0	-5.6	-5.3	-4.9	-4.6	-4.2	-3.9	-3.5	-3.2	-2.8	-2.5	-2.2	-1.8
1942	20.2	37.0	35.8	34.5	32.8	31.1	29.4	27.6	25.9	24.2	22.5	20.8	19.1	17.4	15.7	14.0	12.3	10.6	8.9	7.2	5.5
1943	25.8	73.6	67.5	61.5	58.5	55.5	52.4	49.4	46.4	43.4	40.3	37.3	34.3	31.3	28.2	25.2	22.2	19.2	16.2	13.1	10.1
1944	19.6	46.4	44.2	42.0	39.9	37.9	35.8	33.7	31.6	29.5	27.4	25.3	23.3	21.2	19.1	17.0	14.9	12.8	10.7	8.6	6.6
1945	36.3	62.5	59.1	55.7	53.0	50.2	47.5	44.7	42.0	39.2	36.4	33.7	30.9	28.2	25.4	22.7	19.9	17.1	14.4	11.6	8.9
1946	-8.2	-12.0	-11.5	-11.1	-10.6	-10.0	-9.5	-8.9	-8.4	-7.9	-7.3	-6.8	-6.2	-5.7	-5.2	-4.6	-4.1	-3.5	-3.0	-2.5	-1.9
1947	5.6	2.4	2.9	3.4	3.2	3.0	2.9	2.7	2.5	2.3	2.1	1.9	1.7	1.5	1.4	1.2	1.0	0.8	0.6	0.4	0.2
1948	5.4	-4.2	-3.1	-2.0	-1.8	-1.7	-1.6	-1.5	-1.4	-1.2	-1.1	-1.0	-0.9	-0.8	-0.6	-0.5	-0.4	-0.3	-0.2	0.0	0.1
1949	18.7	17.7	17.3	16.9	16.1	15.3	14.5	13.7	12.9	12.1	11.3	10.5	9.7	8.9	8.1	7.3	6.5	5.7	4.9	4.1	3.3
1950	31.6	47.2	47.1	46.9	44.6	42.2	39.9	37.5	35.1	32.8	30.4	28.0	25.7	23.3	21.0	18.6	16.2	13.9	11.5	9.1	6.8
1951	23.9	11.3	12.1	12.8	12.2	11.5	10.8	10.2	9.5	8.8	8.2	7.5	6.8	6.2	5.5	4.8	4.2	3.5	2.8	2.2	1.5
1952	18.2	9.2	10.4	11.6	11.0	10.5	9.9	9.4	8.8	8.3	7.7	7.2	6.6	6.1	5.5	5.0	4.5	3.9	3.4	2.8	2.3
1953	-1.1	-7.3	-7.1	-6.8	-6.4	-6.0	-5.5	-5.1	-4.7	-4.3	-3.9	-3.5	-3.1	-2.6	-2.2	-1.8	-1.4	-1.0	-0.6	-0.2	0.3
1954	52.5	63.7	64.0	64.3	61.1	58.0	54.8	51.6	48.5	45.3	42.2	39.0	35.8	32.7	29.5	26.3	23.2	20.0	16.9	13.7	10.5
1955	31.4	21.7	21.7	21.7	20.5	19.4	18.3	17.1	16.0	14.9	13.7	12.6	11.5	10.3	9.2	8.1	6.9	5.8	4.6	3.5	2.4
1956	6.4	2.7	2.5	2.3	2.1	2.0	1.9	1.8	1.6	1.5	1.4	1.3	1.2	1.0	0.9	0.8	0.7	0.5	0.4	0.3	0.2
1957	-10.9	-16.9	-16.5	-16.2	-15.2	-14.1	-13.1	-12.1	-11.0	-10.0	-8.9	-7.9	-6.9	-5.8	-4.8	-3.8	-2.7	-1.7	-0.6	0.4	1.4
1958	43.2	64.3	62.7	61.1	58.0	54.9	51.8	48.7	45.5	42.4	39.3	36.2	33.1	30.0	26.9	23.8	20.6	17.5	14.4	11.3	8.2
1959	11.8	16.8	17.4	18.0	17.1	16.2	15.3	14.5	13.6	12.7	11.8	10.9	10.0	9.2	8.3	7.4	6.5	5.6	4.8	3.9	3.0
1960	0.3	-6.6	-6.5	-6.3	-5.6	-5.0	-4.3	-3.6	-3.0	-2.3	-1.6	-0.9	-0.3	0.4	1.1	1.7	2.4	3.1	3.8	4.4	5.1
1961	26.7	26.9	26.1	25.4	24.1	22.9	21.7	20.5	19.3	18.1	16.9	15.6	14.4	13.2	12.0	10.8	9.6	8.4	7.1	5.9	4.7
1962	-8.8	-11.1	-10.3	-9.5	-8.8	-8.2	-7.6	-7.0	-6.3	-5.7	-5.1	-4.4	-3.8	-3.2	-2.6	-1.9	-1.3	-0.7	0.0	0.6	1.2
1963	22.6	20.4	20.8	21.2	20.2	19.2	18.2	17.2	16.3	15.3	14.3	13.3	12.3	11.3	10.3	9.3	8.3	7.3	6.3	5.3	4.3
1964	16.4	17.8	17.1	16.5	15.8	15.1	14.4	13.8	13.1	12.4	11.7	11.0	10.4	9.7	9.0	8.3	7.6	7.0	6.3	5.6	4.9
1965	12.3	31.1	28.8	26.5	25.2	24.0	22.7	21.5	20.2	18.9	17.7	16.4	15.2	13.9	12.6	11.4	10.1	8.8	7.6	6.3	5.1
1966	-10.2	-9.8	-9.9	-10.1	-9.4	-8.7	-8.0	-7.3	-6.6	-5.8	-5.1	-4.4	-3.7	-3.0	-2.3	-1.6	-0.9	-0.2	0.5	1.2	1.9
1967	23.8	64.6	58.7	52.9	50.3	47.8	45.2	42.6	40.1	37.5	34.9	32.4	29.8	27.2	24.7	22.1	19.5	17.0	14.4	11.8	9.3
1968	11.0	39.1	36.5	33.9	32.4	30.9	29.4	27.9	26.4	24.9	23.4	21.9	20.4	19.0	17.5	16.0	14.5	13.0	11.5	10.0	8.5
1969	-8.6	-24.9	-22.9	-20.8	-19.7	-18.5	-17.4	-16.2	-15.1	-13.9	-12.8	-11.7	-10.5	-9.4	-8.2	-7.1	-5.9	-4.8	-3.6	-2.5	-1.4
1970	3.9	-4.8	-3.7	-2.6	-1.9	-1.1	-0.3	0.4	1.2	2.0	2.7	3.5	4.2	5.0	5.7	6.5	7.3	8.0	8.8	9.5	10.3
1971	14.2	26.4	25.7	25.0	24.1	23.1	22.2	21.2	20.3	19.4	18.4	17.5	16.5	15.6	14.6	13.7	12.7	11.8	10.8	9.9	8.9
1972	18.8	20.4	21.1	21.9	21.0	20.1	19.1	18.2	17.3	16.4	15.5	14.5	13.6	12.7	11.8	10.9	9.9	9.0	8.1	7.2	6.3
1973	-14.8	-24.0	-21.9	-19.9	-18.7	-17.5	-16.3	-15.1	-13.8	-12.6	-11.4	-10.2	-9.0	-7.8	-6.6	-5.4	-4.1	-2.9	-1.7	-0.5	0.7
1974	-26.6	-25.5	-25.1	-24.8	-23.2	-21.6	-20.0	-18.4	-16.8	-15.2	-13.6	-12.0	-10.4	-8.8	-7.2	-5.6	-4.0	-2.4	-0.8	0.8	2.4
1975	37.1	51.3	48.4	45.6	43.6	41.7	39.7	37.8	35.9	33.9	32.0	30.0	28.1	26.2	24.2	22.3	20.3	18.4	16.5	14.5	12.6
1976	23.7	34.0	32.3	30.6	29.4	28.3	27.2	26.0	24.9	23.8	22.6	21.5	20.4	19.2	18.1	16.9	15.8	14.7	13.5	12.4	11.3
1977	-7.3	23.7	20.6	17.5	16.8	16.1	15.3	14.6	13.9	13.1	12.4	11.6	10.9	10.2	9.4	8.7	8.0	7.2	6.5	5.8	5.0
1978	6.5	26.2	24.1	22.0	21.0	20.1	19.2	18.3	17.4	16.4	15.5	14.6	13.7	12.8	11.9	10.9	10.0	9.1	8.2	7.3	6.3
1979	18.3	21.2	20.0	18.7	18.2	17.6	17.1	16.5	16.0	15.4	14.9	14.3	13.7	13.2	12.6	12.1	11.5	11.0	10.4	9.9	9.3
1980	32.3	26.0	25.5	25.0	24.2	23.4	22.6	21.8	21.0	20.2	19.4	18.6	17.8	17.0	16.2	15.4	14.6	13.9	13.1	12.3	11.5
1981	-5.0	6.4	5.9	5.5	5.9	6.3	6.7	7.1	7.5	7.9	8.3	8.7	9.1	9.5	9.9	10.3	10.7	11.1	11.5	11.9	12.3
1982	21.3	17.9	16.9	16.0	16.2	16.3	16.5	16.7	16.9	17.0	17.2	17.4	17.6	17.7	17.9	18.1	18.3	18.4	18.6	18.8	18.9
1983	22.4	34.9	33.2	31.6	30.4	29.2	28.0	26.8	25.5	24.3	23.1	21.9	20.7	19.5	18.3	17.1	15.9	14.7	13.4	12.2	11.0
1984	6.1	4.3	5.6	6.8	7.0	7.3	7.5	7.8	8.0	8.2	8.5	8.7	9.0	9.2	9.5	9.7	10.0	10.2	10.5	10.7	10.9
1985	32.0	36.7	36.4	36.1	34.9	33.8	32.6	31.4	30.3	29.1	27.9	26.8	25.6	24.5	23.3	22.1	21.0	19.8	18.6	17.5	16.3
1986	18.3	25.8	27.1	28.5	27.5	26.6	25.7	24.8	23.9	23.0	22.1	21.2	20.2	19.3	18.4	17.5	16.6	15.7	14.8	13.9	12.9
1987	5.1	9.2	9.8	10.4	10.1	9.8	9.6	9.3	9.0	8.7	8.4	8.1	7.8	7.5	7.3	7.0	6.7	6.4	6.1	5.8	5.5
1988	16.7	25.7	24.9	24.1	23.2	22.3	21.4	20.5	19.6	18.7	17.8	16.9	16.0								

# Step 6: Style Drifters

Table 6-2

Annual Returns of 20 Index Portfolios and S&P 500 Over 80 Years (1927 - 2006)																					
Legend*: SP 100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5																					
Year	Sorted in Order of Returns for Each Year																				
	Highest Return															Lowest Return					
1927	37.3	31.4	31.3	31.1	30.0	28.6	27.2	25.8	24.3	22.9	21.5	20.1	18.6	17.2	15.8	14.4	13.0	11.5	10.1	8.7	7.3
1928	43.4	37.2	36.3	35.5	33.7	32.0	30.2	28.5	26.7	25.0	23.2	21.4	19.7	17.9	16.2	14.4	12.7	10.9	9.1	7.4	5.6
1929	-0.1	-1.7	-3.2	-4.7	-6.3	-7.8	-8.5	-9.4	-10.9	-12.4	-14.0	-15.5	-17.1	-18.6	-20.1	-21.7	-23.2	-24.8	-26.3	-30.0	-33.7
1930	-2.5	-4.8	-7.1	-9.4	-11.7	-14.0	-16.4	-18.7	-21.0	-23.3	-25.0	-25.6	-27.9	-30.2	-32.5	-34.9	-37.2	-39.5	-41.8	-42.7	-43.6
1931	-10.2	-12.7	-15.3	-17.8	-20.4	-22.9	-25.4	-28.0	-30.5	-33.1	-35.6	-38.1	-40.7	-43.2	-43.4	-45.8	-48.3	-50.8	-53.0	-53.2	-53.4
1932	4.3	3.8	3.3	2.9	2.4	2.0	1.5	1.0	0.6	0.1	-0.4	-0.8	-1.3	-1.7	-2.2	-2.6	-2.7	-3.1	-3.6	-8.3	
1933	130.4	122.2	114.0	108.3	102.6	96.9	91.2	85.5	79.9	74.2	68.5	62.8	57.1	53.8	51.5	45.8	40.1	34.4	28.7	23.0	17.4
1934	4.9	4.7	4.3	4.0	3.7	3.4	3.1	2.8	2.5	2.2	2.1	1.8	1.5	1.2	0.9	0.6	0.3	0.0	-0.4	-0.7	-1.6
1935	53.9	52.4	50.9	48.6	47.5	46.2	43.9	41.6	39.2	36.9	34.5	32.2	29.9	27.5	25.2	22.8	20.5	18.1	15.8	13.5	11.1
1936	65.3	62.0	58.6	55.7	52.9	50.0	47.1	44.3	41.4	38.5	35.6	33.8	32.8	29.9	27.0	24.2	21.3	18.4	15.5	12.7	9.8
1937	-6.7	-8.9	-11.2	-13.5	-15.7	-18.0	-20.2	-22.5	-24.8	-27.0	-29.3	-31.5	-33.8	-35.1	-36.1	-38.3	-40.6	-42.9	-45.1	-46.7	-48.2
1938	31.0	29.1	29.1	29.0	27.9	26.6	25.3	24.0	22.7	21.4	20.2	18.9	17.6	16.3	15.0	13.7	12.5	11.2	9.9	8.6	7.3
1939	0.8	0.3	0.2	-0.2	-0.5	-0.7	-1.2	-1.6	-2.1	-2.6	-3.1	-3.6	-4.1	-4.5	-5.0	-5.5	-6.0	-6.4	-6.5	-6.9	-7.4
1940	-0.7	-1.2	-1.8	-2.4	-2.9	-3.5	-4.1	-4.7	-5.2	-5.8	-6.4	-6.9	-7.5	-8.1	-8.7	-9.2	-9.8	-9.9	-10.4	-10.7	-10.9
1941	-1.8	-2.2	-2.5	-2.8	-3.2	-3.5	-3.9	-4.2	-4.6	-4.9	-5.3	-5.6	-6.0	-6.3	-6.7	-7.0	-7.4	-7.7	-8.1	-8.5	-11.7
1942	37.0	35.8	34.5	32.8	31.1	29.4	27.6	25.9	24.2	22.5	20.8	20.2	19.1	17.4	15.7	14.0	12.3	10.6	8.9	7.2	5.5
1943	73.6	67.5	61.5	55.5	55.5	52.4	49.4	46.4	43.4	40.3	37.3	34.3	31.3	28.2	25.8	25.2	22.2	19.2	16.2	13.1	10.1
1944	46.4	44.2	42.0	39.9	37.9	35.8	33.7	31.6	29.5	27.4	25.3	23.3	21.2	19.6	19.1	17.0	14.9	12.8	10.7	8.6	6.6
1945	62.5	59.1	55.7	53.0	50.2	47.5	44.7	42.0	39.2	36.4	33.6	33.7	30.9	28.2	25.4	22.7	19.9	17.1	14.4	11.6	8.9
1946	-1.9	-2.5	-3.0	-3.5	-4.1	-4.6	-5.2	-5.7	-6.2	-6.8	-7.3	-7.9	-8.2	-8.4	-8.9	-9.5	-10.0	-10.6	-11.1	-11.4	-12.0
1947	5.6	3.4	3.2	3.0	2.9	2.9	2.7	2.5	2.4	2.3	2.1	1.9	1.7	1.5	1.4	1.2	1.0	0.8	0.6	0.4	0.2
1948	5.4	0.1	0.0	-0.2	-0.3	-0.4	-0.5	-0.6	-0.8	-0.9	-1.0	-1.1	-1.2	-1.4	-1.5	-1.6	-1.7	-1.8	-2.0	-3.1	-4.2
1949	18.7	17.7	17.3	16.9	16.1	15.3	14.5	13.7	12.9	12.1	11.3	10.5	9.7	8.9	8.1	7.3	6.5	5.7	4.9	4.1	3.3
1950	47.2	47.1	46.9	44.6	42.2	39.9	37.5	35.1	32.8	31.6	30.4	28.0	25.7	23.3	21.0	18.6	16.2	13.9	11.5	9.1	6.8
1951	23.9	12.8	12.2	12.1	11.5	11.3	10.8	10.2	9.5	8.8	8.2	7.5	6.8	6.2	5.5	4.8	4.2	3.5	2.8	2.2	1.5
1952	18.2	11.6	11.0	10.5	10.4	9.9	9.4	9.2	8.8	8.3	7.7	7.2	6.6	6.1	5.5	5.0	4.5	3.9	3.4	2.8	2.3
1953	0.3	-0.2	-0.6	-1.0	-1.1	-1.4	-1.8	-2.2	-2.6	-3.1	-3.5	-3.9	-4.3	-4.7	-5.1	-5.5	-6.0	-6.4	-6.8	-7.1	-7.3
1954	64.3	64.0	63.7	61.1	58.0	54.8	52.5	51.6	48.5	45.3	42.2	39.0	35.8	32.7	29.5	26.3	23.2	20.0	16.9	13.7	10.5
1955	31.4	21.7	21.7	21.7	20.5	19.4	18.3	17.1	16.0	14.9	13.7	12.6	11.5	10.3	9.2	8.1	6.9	5.8	4.6	3.5	2.4
1956	6.4	2.7	2.5	2.3	2.1	2.0	1.9	1.8	1.6	1.5	1.4	1.3	1.2	1.0	0.9	0.8	0.7	0.5	0.4	0.3	0.2
1957	1.4	0.4	0.4	-0.6	-1.7	-2.7	-3.8	-4.8	-5.8	-6.9	-7.9	-8.9	-10.0	-10.9	-11.0	-12.1	-13.1	-14.1	-15.2	-16.2	-16.9
1958	64.3	62.7	61.1	58.0	54.9	51.8	48.7	45.5	43.2	42.4	39.3	36.2	33.1	30.0	26.9	23.8	20.6	17.5	14.4	11.3	8.2
1959	18.0	17.4	17.1	16.8	16.2	15.3	14.5	13.6	12.7	11.8	11.8	10.9	10.0	9.2	8.3	7.4	6.5	5.6	4.8	3.9	3.0
1960	5.1	4.4	3.8	3.1	2.4	1.7	1.1	0.4	0.3	-0.3	-0.9	-1.6	-2.3	-3.0	-3.6	-4.3	-5.0	-5.6	-6.3	-6.5	-6.6
1961	26.9	26.7	26.1	25.4	24.1	22.9	21.7	20.5	19.3	18.1	16.9	15.6	14.4	13.2	12.0	10.8	9.6	8.4	7.1	5.9	4.7
1962	1.2	0.6	0.0	-0.7	-1.3	-1.9	-2.6	-3.2	-3.8	-4.4	-5.1	-5.7	-6.3	-7.0	-7.6	-8.2	-8.8	-8.8	-9.5	-10.3	-11.1
1963	22.6	21.2	20.8	20.4	20.2	19.2	18.2	17.2	16.3	15.3	14.3	13.3	12.3	11.3	10.3	9.3	8.3	7.3	6.3	5.3	4.3
1964	17.8	17.1	16.5	16.4	15.8	15.1	14.4	13.8	13.1	12.4	11.7	11.0	10.4	9.7	9.0	8.3	7.6	7.0	6.3	5.6	4.9
1965	31.1	28.8	26.5	25.2	24.0	22.7	21.5	20.2	18.9	17.7	16.4	15.2	13.9	12.6	12.3	11.4	10.1	8.8	7.6	6.3	5.1
1966	1.9	1.2	0.5	-0.2	-0.9	-1.6	-2.3	-3.0	-3.7	-4.4	-5.1	-5.8	-6.6	-7.3	-8.0	-8.7	-9.4	-9.8	-9.9	-10.1	-10.2
1967	64.6	58.7	52.9	50.3	47.8	45.2	42.6	40.1	37.5	34.9	32.4	29.8	27.2	24.7	23.8	22.1	19.5	17.0	14.4	11.8	9.3
1968	39.1	36.5	33.9	32.4	30.9	29.4	27.9	26.4	24.9	23.4	21.9	20.4	19.0	17.5	16.0	14.5	13.0	11.5	11.0	10.0	8.5
1969	-1.4	-2.5	-3.6	-4.8	-5.9	-7.1	-8.2	-8.6	-9.4	-10.5	-11.7	-12.8	-13.9	-15.1	-16.2	-17.4	-18.5	-19.7	-20.8	-22.9	-24.9
1970	10.3	9.5	8.8	8.0	7.3	6.5	5.7	5.0	4.2	3.9	3.5	2.7	2.0	1.2	0.4	-0.3	-1.1	-1.9	-2.6	-3.7	-4.8
1971	26.4	25.7	25.0	24.1	23.1	22.2	21.2	20.3	19.4	18.4	17.5	16.5	15.6	14.6	14.2	13.7	12.7	11.8	10.8	9.9	8.9
1972	21.9	21.1	21.0	20.4	20.1	19.1	18.8	18.2	17.3	16.4	15.5	14.5	13.6	12.7	11.8	10.9	9.9	9.0	8.1	7.2	6.3
1973	0.7	-0.5	-1.7	-2.9	-4.1	-5.4	-6.6	-7.8	-9.0	-10.2	-11.4	-12.6	-13.8	-14.8	-15.1	-16.3	-17.5	-18.7	-19.9	-21.9	-24.0
1974	2.4	0.8	-0.8	-2.4	-4.0	-5.6	-7.2	-8.8	-10.4	-12.0	-13.6	-15.2	-16.8	-18.4	-20.0	-21.6	-23.2	-24.8	-26.5	-25.5	-26.6
1975	51.3	48.4	45.6	43.6	41.7	39.7	37.8	37.1	35.9	33.9	32.0	30.0	28.1	26.2	24.2	22.3	20.3	18.4	16.5	14.5	12.6
1976	34.0	32.3	30.6	29.4	28.3	27.2	26.0	24.9	23.8	23.7	22.6	21.5	20.4	19.2	18.1	16.9	15.8	14.7	13.5	12.4	11.3
1977	23.7	20.6	17.5	16.8	16.1	15.3	14.6	13.9	13.1	12.4	11.6	10.9	10.2	9.4	8.7	8.0	7.2	6.5	5.8	5.0	-7.3
1978	26.2	24.1	22.0	21.0	20.1	19.2	18.3	17.4	16.4	15.5	14.6	13.7	12.8	11.9	10.9	10.0	9.1	8.2	7.3	6.5	6.3
1979	21.2	20.0	18.7	18.3	18.2	17.6	17.1	16.5	16.0	15.4	14.9	14.3	13.7	13.2	12.6	12.1	11.5	11.0	10.4	9.9	9.3
1980	32.3	26.0	25.5	25.0	24.2	23.4	22.6	21.8	21.0	20.2	19.4	18.6	17.8	17.0	16.2	15.4	14.6	13.9	13.1	12.3	11.5
1981	12.3	11.9	11.5	11.1	10.7	10.3	9.9	9.5	9.1	8.7	8.3	7.9	7.5	7.1	6.7	6.4	6.3	5.9	5.9	5.5	-5.0
1982	21.3	18.9	18.8	18.6	18.4	18.3	18.1	17.9	17.9	17.7	17.6	17.4	17.2	17.0	16.9	16.9	16.7	16.5	16.3	16.2	16.0
1983	34.9	33.2	31.6	30.4	29.2	28.0	26.8	25.5	24.3	23.1	22.4	21.9	20.7	19.5	18.3	17.1	15.9	14.7	13.4	12.2	11.0
1984	10.9	10.7	10.5	10.2	10.0	9.7	9.5	9.2	9.0	8.7	8.5	8.2	8.0	7.8	7.5	7.3	7.0	6.8	6.1	5.6	4.3
1985	36.7	36.4	36.1	34.9	33.8	32.6	32.0	31.4	30.3	29.1	27.9	26.8	25.6	24.5	23.3	22.1	21.0	19.8	18.6	17.5	16.3
1986	28.5	27.5	27.1	26.6	25.8	25.7	24.8	23.9	23.0	22.1	21.2	20.2	19.3	18.4	18.3	17.5	16.6	15.7	14.8	13.9	12.9
1987	10.4	10.1	9.8	9.6	9.6	9.3	9.2	9.0	8.7	8.4	8.1	7.8	7.5	7.3	7.0	6.7	6.4	6.1	5.8	5.5	5.1
1988	25.7	24.9	24.1	23.2	22.3	21.4	20.5	19.6	18.7	17.8	16.9	16.7	16.0	15.1	14.2	13.3	1				

## Step 6: Style Drifters

Table 6-3

Annual Returns of 15 Indexes 80 years (1927 - 2006)															
	LC	LV	MC	SV	RE	IV	IS	ISV	EM	EV	ES	1F	2F	5G	5F
1927	37.3	31.3	30.8	33.2	32.1	31.3	26.1	33.2	31.2	33.2	30.8	2.9	4.3	4.3	4.3
1928	43.4	25.2	44.2	39.0	41.8	25.2	40.0	39.0	34.9	39.0	44.2	3.0	0.7	0.7	0.7
1929	-8.5	-6.7	-51.4	-41.8	-46.7	-6.7	-30.9	-41.8	-32.1	-41.8	-51.4	4.5	5.8	5.8	5.8
1930	-25.0	-45.2	-46.1	-47.7	-46.8	-45.2	-32.3	-47.7	-45.2	-47.7	-46.1	2.2	6.5	6.5	6.5
1931	-43.4	-60.8	-50.3	-53.8	-52.0	-60.8	-48.5	-53.8	-55.4	-53.8	-50.3	0.8	-2.6	-2.6	-2.6
1932	-8.3	-6.4	8.9	-2.0	3.7	-6.4	-8.7	-2.0	3.2	-2.0	8.9	0.7	8.6	8.6	8.6
1933	53.8	90.8	185.3	141.2	162.9	90.8	120.4	141.2	137.8	141.2	185.3	0.1	1.6	1.6	1.6
1934	-1.6	-21.8	23.4	7.4	15.3	-21.8	19.5	7.4	-1.0	7.4	23.4	-0.1	8.7	8.7	8.7
1935	47.5	42.6	69.6	49.2	59.2	42.6	75.3	49.2	56.6	49.2	69.6	-0.1	6.7	6.7	6.7
1936	33.8	50.8	83.7	76.7	80.4	50.8	48.0	76.7	67.8	76.7	83.7	-0.1	2.8	2.8	2.8
1937	-35.1	-38.2	-53.1	-53.0	-53.0	-38.2	-49.0	-53.0	-45.9	-53.0	-53.1	0.1	1.3	1.3	1.3
1938	31.0	29.7	23.8	33.5	28.6	29.7	42.9	33.5	27.4	33.5	23.8	-0.3	6.0	6.0	6.0
1939	-0.5	-15.0	-0.2	-7.7	-3.8	-15.0	0.6	-7.7	-7.3	-7.7	-0.2	-0.2	4.3	4.3	4.3
1940	-9.9	-7.4	-12.5	-11.2	-11.8	-7.4	-2.4	-11.2	-9.7	-11.2	-12.5	-0.3	2.7	2.7	2.7
1941	-11.7	-0.5	-14.0	-4.0	-9.1	-0.5	-11.5	-4.0	-7.2	-4.0	-14.0	-0.2	0.3	0.3	0.3
1942	20.2	36.0	50.2	37.5	43.8	36.0	27.0	37.5	43.3	37.5	50.2	0.0	1.7	1.7	1.7
1943	25.8	39.0	97.8	98.9	98.5	39.0	54.0	98.9	66.8	98.9	97.8	0.1	2.6	2.6	2.6
1944	19.6	41.7	59.4	52.6	56.0	41.7	39.5	52.6	50.5	52.6	59.4	0.1	1.6	1.6	1.6
1945	36.3	43.8	80.9	72.0	76.4	43.8	59.2	72.0	61.5	72.0	80.9	0.1	2.0	2.0	2.0
1946	-8.2	-8.2	-13.5	-12.2	-12.8	-8.2	-10.1	-12.2	-10.7	-12.2	-13.5	0.1	0.8	0.8	0.8
1947	5.6	7.7	-3.5	7.3	1.8	7.7	-2.7	7.3	2.1	7.3	-3.5	0.3	0.7	0.7	0.7
1948	5.4	3.8	-7.0	-6.6	-6.8	3.8	-7.6	-6.6	-1.7	-6.6	-7.0	0.6	1.6	1.6	1.6
1949	18.7	13.9	20.6	19.5	20.1	13.9	22.1	19.5	17.3	19.5	20.6	0.9	2.1	2.1	2.1
1950	31.6	58.7	44.9	55.0	49.9	58.7	31.6	55.0	51.8	55.0	44.9	1.0	0.5	0.5	0.5
1951	23.9	13.3	8.6	10.4	9.5	13.3	14.3	10.4	11.0	10.4	8.6	1.3	0.1	0.1	0.1
1952	18.2	18.3	5.7	6.6	6.2	18.3	9.5	6.6	11.9	6.6	5.7	1.4	1.9	1.4	1.4
1953	-1.1	-7.1	-6.4	-9.1	-7.8	-7.1	-1.8	-9.1	-6.7	-9.1	-6.4	1.6	2.1	3.0	3.0
1954	52.5	77.1	64.1	64.2	64.2	77.1	60.4	64.2	70.7	64.2	64.1	0.6	2.3	2.5	2.5
1955	31.4	20.3	21.4	25.0	23.2	9.8	19.8	25.0	20.9	25.0	21.4	1.3	-0.1	-0.9	-0.9
1956	6.4	1.7	2.9	5.3	4.1	-6.5	7.1	5.3	2.4	5.3	2.9	2.2	1.9	-0.7	-0.7
1957	-10.9	-23.0	-15.7	-18.2	-16.9	-1.4	-15.7	-18.2	-19.4	-18.2	-15.7	2.9	3.9	7.6	7.6
1958	43.2	71.6	69.4	73.8	71.7	44.0	56.6	73.8	70.6	73.8	69.4	1.3	0.8	-1.5	-1.5
1959	11.8	14.7	17.6	14.1	15.9	56.7	19.1	14.1	16.2	14.1	17.6	2.7	3.6	-0.6	-0.6
1960	0.3	-9.1	-5.6	-7.4	-6.5	-6.3	-1.5	-7.4	-7.3	-7.4	-5.6	2.4	6.8	11.5	11.5
1961	26.7	27.2	30.0	31.1	30.6	4.7	30.2	31.1	28.7	31.1	30.0	1.9	2.8	1.6	1.6
1962	-8.8	-1.7	-16.6	-9.5	-13.1	-1.3	-15.8	-9.5	-9.3	-9.5	-16.6	2.5	3.0	5.3	5.3
1963	22.6	29.5	11.3	28.8	19.8	17.3	15.8	28.8	20.2	28.8	11.3	3.1	3.2	1.4	1.4
1964	16.4	21.6	17.7	24.3	21.0	-4.9	17.2	24.3	19.7	24.3	17.7	3.8	3.9	3.8	3.8
1965	12.3	22.5	37.2	43.2	40.2	11.5	32.5	43.2	29.8	43.2	37.2	3.7	3.5	0.8	0.8
1966	-10.2	-12.5	-8.8	-8.4	-8.6	-5.0	-6.4	-8.4	-10.4	-8.4	-8.8	6.2	4.9	4.4	4.4
1967	23.8	32.3	102.1	72.0	86.6	16.2	70.8	72.0	64.0	72.0	102.1	4.7	3.7	0.8	0.8
1968	11.0	21.4	49.4	50.1	49.9	46.2	39.4	50.1	35.2	50.1	49.4	5.5	5.8	4.3	4.3
1969	-8.6	-17.6	-32.8	-30.0	-31.4	2.3	-23.7	-30.0	-25.4	-30.0	-32.8	6.9	7.1	-1.0	-1.0
1970	3.9	9.7	-17.2	-1.5	-9.6	-10.9	0.3	0.3	-5.4	-5.4	-17.2	10.2	11.0	16.6	16.6
1971	14.2	19.0	17.4	15.2	16.4	30.6	67.3	67.3	48.1	48.1	17.4	5.4	5.9	8.5	8.5
1972	18.8	18.9	-1.6	4.4	1.4	37.0	63.3	63.3	49.7	49.7	18.9	3.9	3.9	4.9	4.9
1973	-14.8	-4.4	-41.1	-32.4	-36.8	-14.6	-14.2	-14.2	-14.3	-14.3	-41.1	6.7	6.1	3.1	3.1
1974	-26.6	-17.4	-29.7	-20.7	-25.3	-22.5	-29.1	-29.1	-25.8	-25.8	-26.6	8.5	9.1	6.8	6.8
1975	37.1	47.1	68.9	66.0	34.2	38.3	49.0	49.0	43.7	43.7	47.1	7.2	7.9	8.1	7.8
1976	23.7	50.3	53.6	56.6	38.7	2.8	10.8	10.8	6.8	6.8	50.3	6.1	8.9	11.5	8.8
1977	-7.3	-6.1	21.4	20.9	17.6	29.4	73.1	73.1	50.1	50.1	21.4	4.7	3.7	2.8	3.7
1978	6.5	3.1	21.1	21.5	9.0	42.0	64.6	64.6	53.1	53.1	6.5	6.1	5.5	2.0	4.5
1979	18.3	22.9	43.4	33.1	32.8	5.5	-1.4	-1.4	2.1	2.1	2.9	9.1	10.4	6.3	8.6
1980	32.3	16.0	33.9	21.9	29.2	18.2	34.7	34.7	26.3	26.3	32.3	9.7	14.1	6.4	10.1
1981	-5.0	16.1	7.1	16.0	5.8	8.5	-0.5	1.8	4.1	4.1	7.1	14.3	18.9	10.5	14.5
1982	21.3	20.2	28.8	37.0	27.8	-2.7	-0.6	-3.1	-1.6	-1.6	21.3	17.0	19.5	25.1	20.5
1983	22.4	34.5	39.7	48.4	29.1	28.8	35.3	36.1	32.1	32.1	34.5	8.5	8.6	8.0	8.4
1984	6.1	9.0	-6.7	3.1	21.4	8.5	11.0	10.9	9.8	9.8	9.0	11.2	12.8	14.0	12.7
1985	32.0	30.6	24.7	27.2	11.5	54.4	66.6	72.5	60.4	60.4	32.0	10.5	13.2	17.7	13.8
1986	18.3	19.8	6.9	4.5	24.4	64.6	58.6	55.7	62.2	62.2	18.3	8.9	11.9	12.8	11.2
1987	5.1	3.5	-9.3	-5.4	-6.4	34.4	39.8	52.8	37.2	37.2	5.1	6.4	6.0	3.5	6.6
1988	16.7	23.6	22.9	30.0	14.1	38.0	25.2	33.6	37.4	37.4	16.7	7.4	5.9	6.3	8.7
1989	31.3	27.0	10.2	10.9	6.3	17.6	30.0	37.2	116.1	53.2	82.6	9.6	8.7	9.5	6.8
1990	-3.2	-22.8	-21.6	-26.6	-16.3	-22.0	-18.5	-17.7	-8.4	-1.1	1.5	9.1	8.9	10.8	3.5
1991	30.1	34.3	44.6	42.1	39.8	9.2	5.2	4.5	69.0	39.8	24.3	9.8	10.7	14.6	12.7
1992	7.3	15.6	23.4	34.2	27.9	-10.3	-21.1	-21.9	2.9	-5.4	9.3	5.2	5.7	7.3	6.5
1993	9.6	17.0	21.0	26.3	15.5	44.7	33.6	44.6	89.2	105.8	89.5	4.4	5.1	8.3	11.6
1994	1.3	-4.5	3.1	1.2	-8.4	8.8	15.2	21.1	-10.6	13.8	2.5	2.5	0.5	-3.2	-4.3
1995	37.1	38.4	34.5	29.3	12.1	11.5	2.1	1.2	2.2	-8.3	-10.1	8.0	8.1	9.6	16.1
1996	22.6	20.2	17.6	22.3	33.8	7.8	3.4	0.9	11.4	11.5	4.8	5.8	7.2	6.6	10.8
1997	33.1	28.1	22.8	30.8	19.4	-3.1	-23.7	-22.7	-18.9	-15.7	-22.6	6.0	5.9	6.4	8.3
1998	28.7	12.0	-7.3	-7.3	-15.4	14.9	8.2	5.3	-9.4	-5.7	-3.8	5.7	6.5	5.4	8.4
1999	20.8	4.8	29.8	13.0	-2.0	16.3	21.9	19.0	71.7	84.3	85.3	4.6	4.6	3.8	3.7
2000	-9.3	10.2	-3.6	9.0	28.4	-0.2	-5.4	-3.1	-29.2	-34.2	-31.8	6.7	6.5	6.8	6.7
2001	-12.1	3.9	22.8	22.6	13.2	-15.3	-10.5	-4.6	-6.8	-1.0	-2.6	5.8	6.1	7.1	5.9
2002	-22.2	-14.9	-13.3	-9.3	4.2	-8.5	1.9	5.8	-9.4	-1.7	-0.2	3.9	5.3	11.8	10.4
2003	28.5	34.4	60.7	59.4	35.6	49.9	58.8	66.5	60.2	76.2	72.8	1.6	1.9	2.7	3.0
2004	10.7	18.3	18.4	25.4	32.1	28.8	30.9	34.8	29.9	39.5	28.9	0.9	0.7	2.8	2.9
2005	4.9	10.2	5.7	7.8	13.2	15.3	22.0	23.2	29.9	30.8	25.7	2.3	1.9	0.8	1.7
2006	15.7	20.2	16.2	21.5	35.3	34.1	24.9	28.4	29.2	37.9	37.3	4.8	4.5	4.5	3.9
Annualized Return (%)	10.27	11.53	12.83	13.92	12.44	11.35	13.97	15.05	15.22	15.99	15.90	4.06	5.10	4.95	5.10
Standard Deviation (%)	19.23	25.74	32.98	29.63	30.02	25.86	24.35	28.96	28.73	29.80	32.08	1.55	2.13	3.66	3.25
Growth of \$1	\$2,483	\$6,182	\$15,621	\$33,621	\$11,816	\$5,419	\$35,007	\$74,335	\$83,846	\$142,461	\$133,843	\$24,22	\$53.38	\$48.73	\$53.40

\* See Appendix B for Index Portfolio Button Definitions

Sources, Updates, and Disclosures: ifa.com/btp

# Step 6: Style Drifters

Table 6-4

Annual Returns of 15 Indexes Over 80 Years (1927 - 2006)															
Legend*: LC LV MC SV RE IV IS ISV EM EV ES 1F 2F 5G 5F															
Year	Sorted in Order of Returns for Each Year														
	Highest Return														Lowest Return
1927	37.3	33.2	33.2	33.2	32.1	31.3	31.3	31.2	30.8	30.8	26.1	4.3	4.3	4.3	2.9
1928	44.2	44.2	43.4	41.8	40.0	39.0	39.0	39.0	34.9	25.2	25.2	3.0	0.7	0.7	0.7
1929	5.8	5.8	5.8	4.5	-6.7	-6.7	-8.5	-30.9	-32.1	-41.8	-41.8	-41.8	-46.7	-51.4	-51.4
1930	6.5	6.5	6.5	2.2	-25.0	-32.3	-45.2	-45.2	-45.2	-46.1	-46.1	-46.8	-47.7	-47.7	-47.7
1931	0.8	-2.6	-2.6	-2.6	-43.4	-48.5	-50.3	-50.3	-52.0	-53.8	-53.8	-53.8	-55.4	-60.8	-60.8
1932	8.9	8.9	8.6	8.6	8.6	3.7	3.2	0.7	-2.0	-2.0	-2.0	-6.4	-6.4	-8.3	-8.7
1933	185.3	185.3	162.9	141.2	141.2	141.2	137.8	120.4	90.8	90.8	53.8	1.6	1.6	1.6	0.1
1934	23.4	23.4	19.5	15.3	8.7	8.7	8.7	7.4	7.4	7.4	-0.1	-1.0	-1.6	-21.8	-21.8
1935	75.3	69.6	69.6	59.2	56.6	49.2	49.2	49.2	47.5	42.6	42.6	6.7	6.7	6.7	-0.1
1936	83.7	83.7	80.4	76.7	76.7	76.7	67.8	50.8	50.8	48.0	33.8	2.8	2.8	2.8	-0.1
1937	1.3	1.3	1.3	0.1	-35.1	-38.2	-38.2	-45.9	-49.0	-53.0	-53.0	-53.0	-53.0	-53.1	-53.1
1938	42.9	33.5	33.5	33.5	31.0	29.7	29.7	28.6	27.4	23.8	23.8	6.0	6.0	6.0	-0.3
1939	4.3	4.3	4.3	0.6	-0.2	-0.2	-0.2	-0.5	-3.8	-7.3	-7.7	-7.7	-7.7	-15.0	-15.0
1940	2.7	2.7	2.7	-0.3	-2.4	-7.4	-7.4	-9.7	-9.9	-11.2	-11.2	-11.2	-11.8	-12.5	-12.5
1941	0.3	0.3	0.3	-0.2	-0.5	-0.5	-4.0	-4.0	-7.2	-9.1	-11.5	-11.5	-11.7	-14.0	-14.0
1942	50.2	50.2	43.8	43.3	37.5	37.5	37.5	36.0	36.0	27.0	20.2	1.7	1.7	1.7	0.0
1943	98.9	98.9	98.9	98.5	97.8	97.8	66.8	54.0	39.0	39.0	25.8	2.6	2.6	2.6	0.1
1944	59.4	59.4	56.0	52.6	52.6	50.5	41.7	41.7	39.5	19.6	1.6	1.6	1.6	1.6	0.1
1945	80.9	80.9	76.4	72.0	72.0	72.0	61.5	59.2	43.8	43.8	36.3	2.0	2.0	2.0	0.1
1946	0.8	0.8	0.8	0.1	-8.2	-8.2	-8.2	-10.1	-10.7	-12.2	-12.2	-12.2	-12.8	-13.5	-13.5
1947	7.7	7.7	7.3	7.3	5.6	2.1	1.8	0.7	0.7	0.7	0.7	0.3	-2.7	-3.5	-3.5
1948	5.4	3.8	3.8	1.6	1.6	1.6	0.6	-1.7	-6.6	-6.6	-6.6	-6.8	-7.0	-7.0	-7.6
1949	22.1	20.6	20.6	20.1	19.5	19.5	19.5	18.7	17.3	13.9	13.9	2.1	2.1	2.1	0.9
1950	58.7	58.7	55.0	55.0	55.0	51.8	49.9	44.9	44.9	31.6	31.6	1.0	0.5	0.5	0.5
1951	23.9	14.3	13.3	13.3	11.0	10.4	10.4	10.4	9.5	8.6	8.6	1.3	0.1	0.1	0.1
1952	18.3	18.3	18.2	11.9	9.5	6.6	6.6	6.6	6.2	5.7	5.7	1.9	1.4	1.4	1.4
1953	3.0	3.0	2.1	1.6	-1.1	-1.8	-6.4	-6.4	-6.7	-7.1	-7.1	-7.8	-9.1	-9.1	-9.1
1954	77.1	77.1	70.7	64.2	64.2	64.2	64.2	64.1	60.4	52.5	2.5	2.5	2.3	0.6	0.6
1955	31.4	25.0	25.0	25.0	23.2	21.4	21.4	20.9	20.3	19.8	9.8	1.3	-0.1	-0.9	-0.9
1956	7.1	6.4	5.3	5.3	5.3	4.1	2.9	2.9	2.4	2.2	1.9	1.7	-0.7	-0.7	-6.5
1957	7.6	7.6	3.9	2.9	-1.4	-10.9	-15.7	-15.7	-15.7	-16.9	-18.2	-18.2	-18.2	-19.4	-23.0
1958	73.8	73.8	73.8	71.7	71.6	70.6	69.4	69.4	56.6	44.0	43.2	1.3	0.8	-1.5	-1.5
1959	56.7	19.1	17.6	17.6	16.2	15.9	14.7	14.1	14.1	11.8	3.6	2.7	-0.6	-0.6	-0.6
1960	11.5	11.5	6.8	2.4	0.3	-1.5	-5.6	-5.6	-6.3	-6.5	-7.3	-7.4	-7.4	-9.1	-9.1
1961	31.1	31.1	31.1	30.6	30.2	30.0	30.0	28.7	27.2	26.7	4.7	2.8	1.9	1.6	1.6
1962	5.3	5.3	3.0	2.5	-1.3	-1.7	-8.8	-9.3	-9.5	-9.5	-13.1	-15.8	-16.6	-16.6	-16.6
1963	29.5	28.8	28.8	28.8	22.6	20.2	19.8	17.3	15.8	11.3	11.3	3.2	3.1	1.4	1.4
1964	24.3	24.3	24.3	21.6	21.0	19.7	17.7	17.2	16.4	3.9	3.8	3.8	3.8	3.8	-4.9
1965	43.2	43.2	43.2	40.2	37.2	37.2	32.5	29.8	22.5	12.3	11.5	3.7	3.5	0.8	0.8
1966	6.2	4.9	4.4	4.4	-5.0	-6.4	-8.4	-8.4	-8.4	-8.6	-8.8	-8.8	-10.2	-10.4	-12.5
1967	102.1	102.1	86.6	72.0	72.0	72.0	70.8	64.0	32.3	23.8	16.2	4.7	3.7	0.8	0.8
1968	50.1	50.1	50.1	49.9	49.4	49.4	46.2	39.4	35.2	21.4	11.0	5.8	5.5	4.3	4.3
1969	7.1	6.9	2.3	-1.0	-1.0	-8.6	-17.6	-23.7	-25.4	-30.0	-30.0	-30.0	-31.4	-32.8	-32.8
1970	16.6	16.6	11.0	10.2	9.7	3.9	0.3	0.3	-1.5	-5.4	-5.4	-5.4	-9.6	-10.9	-17.2
1971	67.3	67.3	48.1	48.1	48.1	30.6	19.0	17.4	16.4	15.2	14.2	8.5	8.5	5.9	5.4
1972	63.3	63.3	49.7	49.7	49.7	37.0	18.9	18.8	4.9	4.9	4.4	3.9	3.9	1.4	-1.6
1973	6.7	6.1	5.3	3.1	-4.4	-14.2	-14.2	-14.3	-14.3	-14.3	-14.6	-14.8	-32.4	-36.8	-41.1
1974	9.1	8.5	8.1	6.8	-17.4	-20.7	-22.5	-25.3	-25.8	-25.8	-26.6	-29.1	-29.1	-29.7	-29.7
1975	68.9	66.0	49.0	49.0	47.1	43.7	43.7	38.3	37.1	34.2	8.1	7.9	7.8	7.2	7.2
1976	56.6	53.6	50.3	38.7	23.7	11.5	10.8	10.8	8.9	8.8	6.8	6.8	6.8	6.1	2.8
1977	73.1	73.1	50.1	50.1	29.4	21.4	20.9	17.6	4.7	3.7	3.7	3.7	2.8	-6.1	-7.3
1978	64.6	64.6	53.1	53.1	53.1	42.0	21.5	21.1	9.0	6.5	6.1	5.5	4.5	3.1	2.0
1979	43.4	33.1	32.8	22.9	18.3	10.4	9.1	8.6	6.3	5.5	2.1	2.1	2.1	-1.4	-1.4
1980	34.7	34.7	33.9	32.3	29.2	26.3	26.3	21.9	18.2	16.0	14.1	10.1	9.7	6.4	6.4
1981	18.9	16.1	16.0	14.5	14.3	10.5	8.5	7.1	5.8	4.1	4.1	1.8	-0.5	-5.0	-5.0
1982	37.0	28.8	27.8	25.1	21.3	20.5	20.2	19.5	17.0	-0.6	-1.6	-1.6	-1.6	-2.7	-3.1
1983	48.4	39.7	36.1	35.3	34.5	32.1	32.1	29.1	28.8	22.4	8.6	8.5	8.4	8.0	8.0
1984	21.4	14.0	12.8	12.7	11.2	11.0	10.9	9.8	9.8	9.8	9.0	8.5	6.1	3.1	-6.7
1985	72.5	66.6	60.4	60.4	60.4	54.4	32.0	30.6	27.2	24.7	17.7	13.8	13.2	11.5	10.5
1986	64.6	62.2	62.2	62.2	58.6	55.7	24.4	19.8	18.3	12.8	11.9	11.2	8.9	6.9	4.5
1987	52.8	39.8	37.2	37.2	37.2	34.4	6.6	6.4	6.0	5.1	3.5	3.5	-5.4	-6.4	-9.3
1988	38.0	37.4	37.4	37.4	33.6	30.0	25.2	23.6	22.9	16.7	14.1	8.7	7.4	6.3	5.9
1989	116.1	82.6	53.2	37.2	31.3	30.0	27.0	17.6	10.9	10.2	9.6	9.5	8.7	6.8	6.3
1990	10.8	9.1	8.9	3.5	1.5	1.1	-3.2	-8.4	-16.3	-17.7	-18.5	-21.6	-22.0	-22.8	-26.6
1991	69.0	44.6	42.1	39.8	39.8	34.3	30.1	24.3	14.6	12.7	10.7	9.8	9.2	5.2	4.5
1992	34.2	27.9	23.4	15.6	9.3	7.3	7.3	6.5	5.7	5.2	2.9	-5.4	-10.3	-21.1	-21.9
1993	105.8	89.5	89.2	44.7	44.6	33.6	26.3	21.0	17.0	15.5	11.6	9.6	8.3	5.1	4.4
1994	21.1	15.2	13.8	8.8	3.1	2.5	2.5	1.3	1.2	0.5	-3.2	-4.3	-4.5	-8.4	-10.6
1995	38.4	37.1	34.5	29.3	16.1	12.1	11.5	9.6	8.1	8.0	2.2	2.1	1.2	-8.3	-10.1
1996	33.8	22.6	22.3	20.2	17.6	11.5	11.4	10.8	7.8	7.2	6.6	5.8	4.8	3.4	0.9
1997	33.1	30.8	28.1	22.8	19.4	8.3	6.4	6.0	5.9	-3.1	-15.7	-18.9	-22.6	-22.7	-23.7
1998	28.7	14.9	12.0	8.4	8.2	6.5	5.7	5.4	5.3	-3.8	-5.7	-7.3	-7.3	-9.4	-15.4
1999	85.3	84.3	71.7	29.8	21.9	20.8	19.0	16.3	13.0	4.8	4.6	4.6	3.8	3.7	-2.0
2000	28.4	10.2	9.0	6.8	6.7	6.7	6.5	-0.2	-3.1	-3.6	-5.4	-9.3	-29.2	-31.8	-34.2
2001	22.8	22.6	13.2	7.1	6.1	5.9	5.8	3.9	-1.0	-2.6	-4.6	-6.8	-10.5	-12.1	-15.3
2002	11.8	10.4	5.8	5.3	4.2	3.9	1.9	-0.2	-1.7	-8.5	-9.3	-9.4	-13.3	-14.9	-22.2
2003	76.2	72.8	66.5	60.7	60.2	59.4	58.8	49.9	35.6	34.4	28.5	3.0	2.7	1.9	1.6
2004	39.5	34.8	32.1	30.9	29.9	28.9	28.8	25.4	18.4	18.3	10.7	2.9	2.8	0.9	0.7
2005	30.8	29.9	25.7	23.2	22.0	15.3	13.2	10.2	7.8	5.7	4.9	2.3	1.9	1.7	0.8
2006	37.9	37.1	35.3	34.1	29.2	28.4	24.9	21.5	20.2	16.2	15.7	4.8	4.5	4.5	3.9
Annualized Return (%)	36.51	33.00	29.87	26.44	21.55	18.17	14.37	11.77	8.65	5.56	2.59	-4.13	-5.84	-7.83	-9.53
Standard Deviation (%)	33.28	32.28	29.09	26.40	29.52	29.77	28.34	27.01	24.12	23.57	20.52	13.73	14.59	15.09	14.94
Growth of \$1	\$65B	\$8.1B	\$1.2B	\$141M	\$6M	\$632K	\$46,331	\$7,358	\$764	\$75.74	\$8.00	\$0.03	\$0.00	\$0.00	\$0.00

\* See Appendix B for Index Portfolio Button Definitions

Sources, Updates, and Disclosures: ifa.com/btp

fund will hold. This fund virtually duplicates the investment performance of the asset class in a very cost and tax-efficient way.

Indexers avoid style drift and its problems. An index fund remains invested in a discrete asset class. Indexers understand the volatility of their investments, thus are more patient and less likely to sell their funds. Actively managed mutual funds eventually experience unwanted volatility or under perform their benchmarks. This encourages active investors to sell the fund, causing the fund to either go out of business or merge into other active funds. Another tombstone is then added to the mutual fund graveyard.

### 6.5 SUMMARY

An active investment strategy complicates a portfolio's asset class allocation with style drift. Indexing is the only solution to the problems caused by style drift in active investing because asset class allocation is always on target.

### 6.6 REVIEW QUESTIONS

1. What percent of actively managed mutual funds engage in some degree of style drift?
  - a. 5%
  - b. 30%
  - c. 40%
  - d. 50%
  - e. 100%
  
2. Style drift is best described as:
  - a. money managers who stop wearing pin-striped suits
  - b. ETFs
  - c. index mutual funds
  - d. change in investment objective

- e. casual Friday on Wall Street
  
3. Actively managed funds tend to “drift” from their defined investment style because:
  - a. fund managers go on vacation
  - b. fund managers retire
  - c. fund managers chase the hot asset class
  - d. fund managers stick to their described objectives
  - e. fund investors force fund managers to drift
  
4. Jeffrey Vinik is important in the history of style drift because he:
  - a. discovered it
  - b. developed the style system
  - c. was the most publicized style drifter
  - d. cured style drift
  - e. wrote a book about style drift
  
5. Index fund managers avoid problems with style drift by:
  - a. purchasing stocks outside their investment criteria
  - b. selling stocks that meet their investment criteria
  - c. selling stocks that no longer meet their funds objectives
  - d. purchasing stocks that fit their investment criteria
  - e. both c and d