

# Rates of Return by Asset Class

Year	US Small Value	US Small Growth	US Large Value	S&P 500	US Large Growth	Int'l Small	Int'l Large	Diversified Portfolio*
1970	-0.94	-12.08	10.04	4.03	-5.65	0.90	-11.66	-1.81
1971	15.89	19.91	19.40	14.32	23.94	68.25	29.59	24.74
1972	5.05	3.30	19.36	18.98	21.32	64.22	36.36	20.94
1973	-32.00	-36.52	-4.02	-14.67	-21.79	-13.68	-14.92	-20.30
1974	-20.20	-27.88	-17.08	-26.46	-29.24	-28.61	-23.18	-24.52
1975	66.92	63.78	47.61	37.21	34.44	49.86	35.38	48.52
1976	57.48	51.20	50.82	23.85	17.54	11.46	2.54	33.54
1977	21.63	18.59	-5.73	-7.18	-9.46	74.08	18.04	12.07
1978	22.21	18.08	3.48	6.57	7.00	65.53	32.63	18.99
1979	33.88	44.80	23.33	18.42	16.59	-0.78	4.76	22.32
1980	22.65	33.55	16.44	32.41	35.20	35.46	22.55	28.24
1981	16.64	4.45	16.53	-4.91	-7.13	-4.65	-2.27	3.40
1982	37.78	28.70	20.58	21.41	21.48	0.82	-1.85	20.69
1983	49.29	29.91	35.01	22.51	14.67	32.40	23.69	29.83
1984	3.72	-5.57	9.39	6.27	-0.72	10.08	7.39	3.84
1985	27.90	31.39	31.02	32.17	32.64	60.11	56.17	36.45
1986	5.10	7.12	20.27	18.47	14.38	50.10	69.43	22.41
1987	-4.86	-9.10	3.87	5.23	7.43	70.55	24.64	9.93
1988	30.80	23.86	24.05	16.81	12.53	26.01	28.30	22.72
1989	11.51	16.09	27.46	31.49	36.11	29.34	10.54	23.61
1990	-26.12	-20.21	-22.55	-3.17	1.06	-16.77	-23.44	-15.38
1991	42.96	48.83	34.76	30.55	43.33	7.05	15.94	34.37
1992	34.98	19.80	16.05	7.67	6.41	-18.37	-13.14	10.43
1993	26.48	13.66	18.86	9.99	2.38	33.49	25.85	17.35
1994	1.21	-1.34	-4.54	1.31	1.95	12.42	5.30	1.55
1995	29.29	30.18	38.36	37.43	37.16	0.48	13.05	28.94
1996	22.32	17.67	20.22	23.07	21.25	2.56	6.34	17.61
1997	30.75	24.23	28.13	33.37	31.61	-23.72	5.51	21.87
1998	-7.28	-5.54	11.98	28.58	34.64	8.20	18.21	12.62
1999	13.04	25.41	4.80	21.03	29.43	21.87	28.50	20.03
2000	9.01	2.45	10.21	-9.10	-13.63	-5.42	-14.00	-2.11
2001	22.63	12.68	3.85	-11.88	-15.59	-10.51	-20.83	-1.26
2002	-9.27	-19.12	-14.89	-22.11	-21.50	1.91	-14.60	-15.17
2003	59.39	51.50	34.43	28.69	26.29	58.79	36.70	41.60
2004	25.38	17.86	18.25	10.87	6.53	30.91	18.81	17.59

Annualized Returns %	16.12	12.45	14.41	11.28	10.07	16.52	10.36	13.66
Standard Deviation	23.08	23.30	17.16	17.23	19.28	30.05	22.07	17.23

Years Best	10	2	5	2	4	11	1	0
Years Worst	4	5	4	2	8	6	5	0

\*Diversified Portfolio = 16% in each U.S. Asset Class, 10% in each International Asset Class

Source: Returns Program, Dimensional Fund Advisors (Rogers Capital Management, Inc.)

LEGEND

Worst
Best
Port > S&P

Past Performance Is Not An Indicator Of Future Expected Returns

## Explanation of Rates of Return By Asset Class

Excerpt from How To Build, Protect, And Maintain Your 401(k) Plan

by Dale Rogers & Craig Rogers

There is no way to know from year-to-year which asset class will be best.

Below is a chart showing how simple asset classes have done over the last 35 years. The first five asset classes across the top are U.S.; the last two are international. Each column represents every stock in their respective categories.

The **red boxes** depict the worst performing asset class for that year. The **blue boxes** depict the best performing asset class for that year. The **green boxes** represent years when the diversified portfolio outperformed the S&P 500. Do you see any pattern in the chart? Does it appear that one asset class is superior all the time? No, if you really look, it's completely random.

**The first column: Small value stocks** - Smallest 8 percent of market universe\*. From that range a value screen is given in which all issues' BtM (Book to Market Value) is calculated. The upper 25<sup>th</sup> percentile is categorized as small value. (>1900 companies in deciles 6-10)

[Book to Market is a ratio comparing the book value of a share of common stock with its market price. High BtM companies are companies in distress (and investors demand to be compensated for the perceived higher risk). Low-book-to-market companies (like Microsoft) on average will do well and, because they are so popular, investors are not compensated as well.]

**The second column: Small growth stocks** - Smallest 8 percent of the market universe using the lowest Book to Market.

**The third column: Large value stocks** - from the largest 90 percent of market universe\*, those w/ the lowest BtM ratios are chosen.

**The fourth column: S&P 500** - An index of stocks composed of the 500 largest companies in the U.S. The index is market weighted, which means the larger the company, the larger the weight in the index. The index is widely used as a stock benchmark for account performance measurement. This index includes 400 industrial stocks, 20 transportation stocks, 40 financial stocks, and 40 public utilities.

**The fifth column: Large growth stocks** - Largest 90 percent of market universe\*. From that range a value screen is employed to calculate and compare BtM ratios. Those with BtMs in the top 10<sup>th</sup> percentile are chosen.

**The sixth column: International small stocks** - The smallest 8 percent of companies in the following regions: Japan, UK, Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, the Netherlands, Norway, Spain, Sweden, Switzerland, Australia, Hong Kong, New Zealand, and Singapore.

**The seventh column: International large stocks** - The largest 60 - 75 percent by market cap ranking in Australia, Austria, Belgium, Denmark, Sweden, Finland, France, Germany, Greece, Hong Kong, Ireland, Italy, Japan, the Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Switzerland, and the UK.

**The eighth column: - A diversified portfolio** made up of all asset classes. We wanted this diversified portfolio to be structured without bias so it is a ratio of 80 percent U.S. stocks and 20 percent international. We divided 80 by five, which gave us 16 percent in each of the five U.S. asset classes. We put 10 percent in each of the international asset classes for a total of 100 percent. This portfolio is for the person who says, "Since I don't know what to do, I'll just divide my money equally among the asset classes."

The down years of '73 and '74 are intentionally included in the chart. Look at the best asset classes during those years. If we'd started the chart in '75, returns would have been a lot higher.

Now cover up the top row with the names of the asset classes. Look at the data near the bottom of the chart, showing the annualized return, standard deviation and the number of years that the asset class was best or worst. If you had only this information and you could invest in just two asset classes, which would you pick? You would be likely to choose small value, and international small because of its annualized returns of around 16 percent.

Look at 1998. You'll see that small value returned a negative 7.28 percent, while large growth for that year was up over 34 percent. That's a 41 percent difference. If someone had advised you to be in the "best" asset class of small value, you would have underperformed by 40 percent. And you probably would have sold out after it did so poorly, especially because the financial media was telling people that value would never be good again. How about '96, '97, and '98, would you have wanted to own just the international small when it was the worst performer during those years? Large Growth outperformed international small by about 117%, however, when the long term rates are applied, international small does, in fact, outperform large growth by about 600 basis points!

You wouldn't want all of your money in one or two asset classes. The sea of red and blue boxes in this chart tells you why. What this tells you is that all asset classes behave differently. This is why all of them are necessary to build a successful portfolio.

### **The sun does not shine on the same dog's tail every day.**

In 2001, the chart shows that small value was up 22.6 and large growth did a minus 15 percent, a 37 percent difference.

Let's compare small growth and small value over the 35-year period on this chart (and from 1926 to the present). Small value outperforms small growth. During that same period, large value outperformed large growth. Why did value outperform growth? Value companies are the poorest companies. Value outperforms growth because value is riskier. The cost of capital is greater. It's the same principle that the person who can least afford the car pays the highest interest rates. During the years '95 to '98 there were hundreds of articles proclaiming that value was dead. But look at 1995 on the chart—large value was up 37 percent.

On the other hand, growth companies such as GE or Microsoft are highly successful companies, but look at their returns. If asset classes paid the same rate of return, we would all buy large growth because it's the safest. Small outperforms large because large is safer.

Academic studies have shown that international investing is no different when it comes to the risk factors—international value beats international growth; international small value beats international small growth. In other words, small beats large.

Think of the market as a big bank. You're going to charge the riskier companies more money than you are the successful companies. Not because the riskier companies are undervalued, but because they are valued exactly right. Investors demand returns for the risks they are willing to take. In order to attract people to these riskier companies, their market value has to be very low compared to their liquidation value, whereas, a large growth company's market value may be 50 times higher than its liquidation value. (Microsoft is 100 times higher.) Because investors are willing to pay a higher price for future earnings, the return on growth companies is not as good, but it's not, at least theoretically, as risky.

Over 2,057 stocks make up the small value asset class. You could buy any one of the small value stocks and it might or might not perform like the asset class, but if you bought them all, you would get the return indicated. There is safety in numbers.

\* Market Universe is defined as all stocks in the NYSE, AMEX, and Nasdaq  
Source: Dimensional Fund Advisors Firm Profile & Returns Program