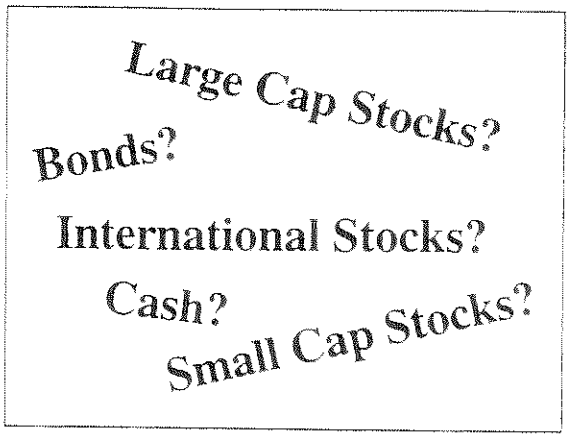
What is Asset Allocation?

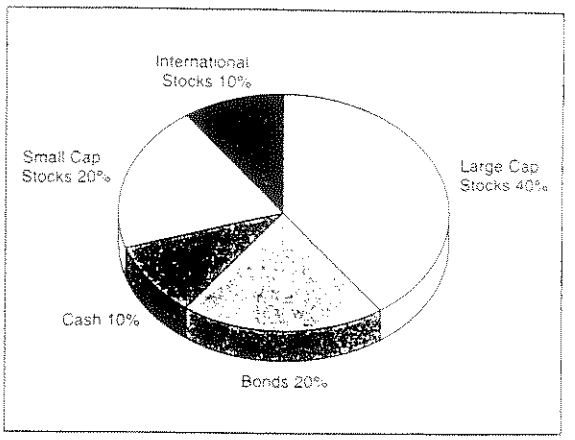
Asset Allocation - a fundamental concept in personal financial planning and investment management - is the process of diversifying your investments among different types of assets.

There are two main objectives of the **Asset Allocation** process:

1. Determining which asset classes to include in your investment portfolio.



2. Determining what percentage of your investment portfolio should be allocated to each of those asset classes.

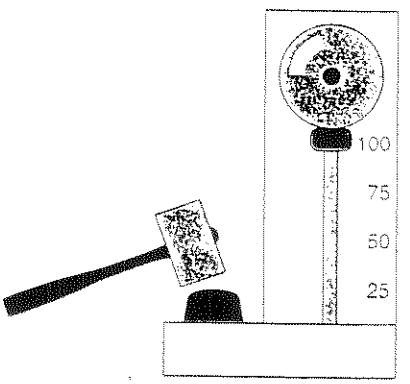


The Importance of Asset Allocation

Over time, your investment policy decisions regarding **Asset Allocation** will have a much more significant impact on your portfolio's future investment performance than either individual security selection or market timing.

A study* of 82 large U.S. pension plans over the period 1977-1987 documented that asset allocation policy is the primary determinant of investment performance, with security selection and market timing both having a minor effect.

Primary Determinants of Investment Performance



Asset Allocation Policy	91.5%
Security Selection	4.6%
Market Timing	1.8%
Other Factors	2.1%
Total	100.0%

Why, then, is so much attention focused on security selection and market timing?

* Gary P. Brinson, L. Randolph Hood, and Gilbert L. Beebower, "Determinants of Portfolio Performance," *Financial Analysts Journal*, July–August 1986; and Gary P. Brinson, Brian D. Singer, and Gilbert L. Beebower, "Determinants of Portfolio Performance," *Financial Analysts Journal*, May–June, 1991

Security Selection and Market Timing Considerations

Traditionally, investment management has been synonymous with security selection and market timing.

However, it has been shown that:

- Over time, on average, most money managers under-perform the market, and
- Those who do out-perform the market in one time period are just as likely to under-perform the market in the next time period.

Consider the following:

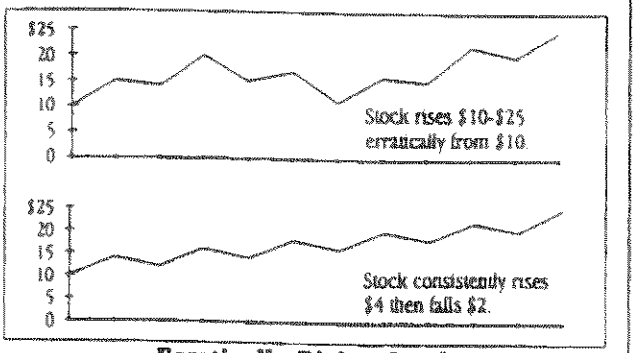
- Although the marketplace is populated by highly trained professionals who have instantaneous access to all public information affecting the value of securities traded and have sophisticated tools to analyze that information, the simple fact remains that the majority cannot out-perform the average.
- With the management fees and transaction costs incurred in an attempt to do so, it is reasonable to expect that most money managers will continue to under-perform the market as a whole and those that do out-perform the market will not do so by a wide margin.

The real opportunity to achieve superior investment results lies not in scrambling to out-perform the market, but in establishing appropriate long-term strategies that will allow you to achieve your objectives with the least amount of risk.

Common sense facts about timing vs. holding

If the stock market rose consistently, there would be no need for market timing. But it doesn't. It weaves and bobs in erratic patterns that resemble the Alaskan coastline more than an efficient pricing mechanism. These undulations — the short-term reversals of trend — are the source of the market-timing school of investing. The fact that these undulations can create big profits is the reason so many people attempt to time a market or stock.

Look at the chart to the right and you'll see why. We've picked two hypothetical stocks that rise from $10 to $25. One rises erratically, the other consistently rises $4 then falls back $2. On paper, someone who bought either stock at $10 and held it to $25 picked up $15 in gains, for a return of 150%.



Erratically Rising Stock

Strategy	Trades	Commissions	Gain	After-Tax Return
Buy and hold - 100 shares	**2**	**$24.75**	**$1,008**	**102%**
Exactly times tops, bottoms	12	155.99	2,780	281
Missed tops, bottoms by 5%	12	117.41	1,529	154
Missed tops, bottoms by 7.5%	12	102.52	1,075	109

Consistently Rising Stock

Strategy	Trades	Commissions	Gain	After-Tax Return
Exactly timed tops, bottoms	2	$125.41	$1,782	180%
Missed tops, bottoms by 2.5%	12	109.42	1,282	130
Missed tops, bottoms by 5%	12	95.88	877	89

Winning Points

But because the stocks fluctuated, they created the potential for much better gains. In fact, the more a stock fluctuates, the more opportunities exist to beat its end-to-end return. We call these opportunities "**winning points**" and define them as the maximum possible gains for a stock based on its volatility. In the example, though the stocks rose a total of 15 points from beginning to end, the bottom chart created 25 potentially "winning points" of gains for someone who timed buy and sell decisions exactly at the peaks. Winning points are simply the sum of all the rallies (in this case, five, $4-point rallies and a final $5-point rally). The top stock created 31 winning points. If these two stocks had fluctuated more than shown, there would likely have been even more winning points possible.

Timing Peaks

Market timers make careers from these opportunities. They also make huge mistakes if they can't take full advantage of those opportunities. The tables under the chart show what happens to someone who tried to trade at the peaks and troughs but couldn't exactly time those extremes. As you can see, you don't have to err too much to cut into your returns and take away all the advantages of timing. In the first example, the person who bought 100 shares and timed the stock exactly had a net gain of $2,780, or 281%, easily beating the buy-and-hold investor (assuming 1% commissions on purchases and sales).

But look what happens if that trader mistimes the stock. The gains are reduced by nearly one-half when he misses the extremes by 5%. When he misses by 7.5%, his gains are less than a buy-and-hold investor attained. With a small-cap stock, you can miss the peaks and troughs that much just by accepting the bid-ask spreads.

Notice, too, that to earn the $2,780 profit, the trader had to reinvest all the proceeds from the previous sale. Thus, he constantly buys in at higher and higher prices, which raises his break-even point, increases his downside risk, and may even give him fewer shares at the end. That's an important point to remember. *Taking partial profits in the market or reinvesting only a portion of your past proceeds will lower your overall dollar gains and make it less likely that you can beat a buy-and-hold position.*

A Real Life Example

Assume for a moment that you bought the Dow Industrials Index on January 1, 1988, and held it through the middle of August of this year. You would have bought the index at 1938.83 and held it up to 4640.84, for a before-tax price gain of 139.4%. After-tax-gains would have been 94.5%.

Could you have beaten those returns by timing the market? Theoretically, yes, because the Dow experienced deep-enough price reversals to create sufficient winning points. Looking at just the intermediate-term trends of the market — and not daily fluctuations — the DJIA created 4,830 winning points over that 7-year period, about 78% more than the market's absolute rise (pg. 3 chart). The reversals created 2,128 losing points. If you could have exactly timed the tops and bottoms, you could have had after-tax gains (commissions included) of 186%, versus 94.5% for a buy-and-hold investor.

Sounds great. But if you mistimed your buy and sell decisions by 5% (that is, bought 5% off the bottom and sold 5% off the top) your gains would have been just 93% — in other words, a buy-and-hold investor would have beaten you. Looking back, it would have been easy to miss a peak or trough by 5%. In most cases, you would have bought or sold *just a week or so* before or after an extreme was hit.

Why did the gains erode so much when you missed the market by just a few days? Psychology and momentum. *The market's fastest percentage advances have tended to occur just before major reversals or just off major bottoms.* In other words, at the very beginning and at the very end (see chart below).

A great example was the 96-point sell-off of February 4, 1994, the day the Federal Reserve announced its first interest-rate increase. The 2.5% drop blindsided timers who did not get out fast enough. That's typical. Rallies get their fuel from quick spurts and die when momentum builds too fast. These are the types of occasions that market timers miss because they cannot consistently trade at exact tops and bottoms.

Let's get back to theory. As said earlier, it was possible to generate 4,830 winning points for yourself by perfectly timing the market between 1988 and mid-August. But how would you have known when to trade? Which indicator(s) would you have used? We tested 25 commonly used price or volume indicators and found that none exactly called the peaks and troughs of that seven-year period. Some weren't even close and would have had to be used in conjunction with other indicators to improve returns. Among the mistakes made:

➤ Many of the methods tested would have recommended "sells" earlier this year, at index levels averaging around 4,350. Thus, you would have missed the last 10% of gains.

➤ Most indicators recommended excessive trading in 1990 and again in 1992, a period of low volatility when the market gave off several false buy and sell signals.

➤ Anyone who traded based on dividend yields (sell when the yield on S&P 500 stocks dropped below 3%) **missed the last three years** of rallying and gains of 50%.

➤ Value investors who stuck to rigid trading criteria (low price/book, price/earnings, and dividend/price ratios) would likely have missed the strong rallies of 1993 and 1995.

■

The Seven Commandments of Timing

1. **The expected volatility of the market over your holding period must be pronounced enough to give you a chance at beating a buy-and-hold strategy.** The worse you are at timing, the deeper and more frequent the price reversals have to be to beat buy-and-hold returns.

2. **The more volatile the market, the more "winning points" created (the coastline effect).** Thus, the more chances exist to make a profit and beat the buy-and-hold returns. When volatility is low, the opportunities to successfully time the market dry up. In these environments, it's best to keep your money invested.

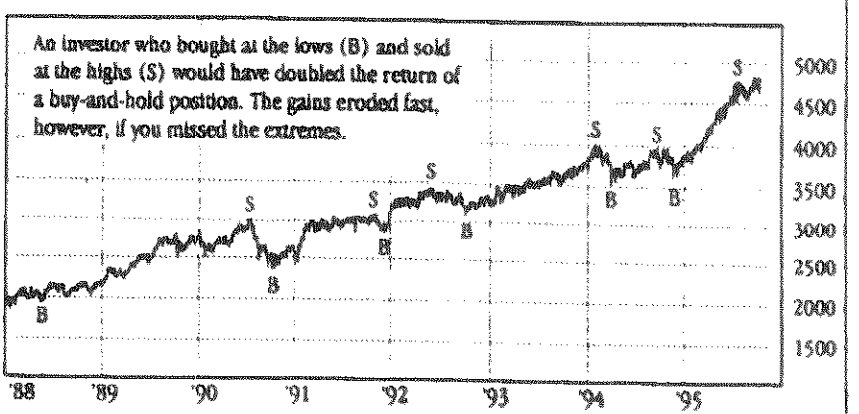
3. **The less volatile the market or stock, the more losing trades you will have.** Your timing model will generate too many buy and sell signals that are close together. Commissions will likely eat up most of your returns.

4. **In order to trade a stock successfully, it has to be able to generate many more "winning points" than buy-and-hold points.** A ratio of at least two to one is preferred. But if the long-term trend of the stock is up, it is usually better to hold.

5. **Your chances of beating a buy-and-hold position will depend mainly on how close to the peaks and troughs you trade.** Mistiming market extremes by just a few percentage points can wipe out most of the advantages (gains) from timing.

6. **No technical indicator has ever been devised to predict the exact peaks and troughs of a stock or market.** And none ever will, believe me. The factors that cause the market to gyrate are forever changing and are too numerous to quantify completely. Most individual investors lack access to enough information to design a successful model.

7. **When timing the market, you generally have to reinvest the entire proceeds from your previous sale to beat buy-and-hold returns.**



Timing The Market Jan. 1988 - Aug. 1995

($1,000 invested in the DJIA; assumes 1% commissions & 31% tax rate)

Strategy	*Trades*	*After-Tax Gains*	*After-Tax Return*
Buy and Hold	2	$944.90	94.49%
Exactly timed tops, bottoms	12	1,861.30	186.13
Missed tops, bottoms by 2.5%	12	1,347.10	134.71
Missed tops, bottoms by 5%	12	929.70	92.70

The past as barometer

It's hard to dispute how time has helped buy-and-holders

The stock market is like baseball. In the same way that you can regurgitate batting statistics to make any player look good ("he's batting .198, but he's a great two-strike hitter on natural grass"), you can color a stock or the entire market anyway you wish with the right twist of the data.

Statistics are meant to clarify, but they can obscure just as easily and throw investors into a thicker muck of confusion. That's because crunchers of numbers always seem to have an agenda behind their views — to get money flowing through their doors. If the market looks weak, they can publish statistics that make it sound rosy. Conversely, if investors are holding onto their stocks, someone will conjure a statistical reason to sell — perhaps just to generate a commission.

But here are some of numbers that should make an impression.

If you had invested $5,000 a year in the S&P 500 index starting in 1974 and picked the *worst day* of the year to invest (the yearly high), your money would still have grown to $465,397 by the end of 1994. That's roughly 12.1% a year. Not bad for someone who made terrible investing decisions and splurged before the 1987 and 1990 sell-offs. *How many market timers have duplicated those results?*

Open the financial pages on any day and you'll see someone quoted as saying it's time to cash out of the market. The reasons they cite include low yields, high price-to-book value ratios, insufficient cash reserves at mutual funds, rising inflation, or too much short selling. It's funny that financial pages were saying similar things in 1982, 1980, 1965, and 1946, to name just a few dates.

A more convincing argument has been made by Chicago-based Ibbotson Associates, one of the leading compilers of market information. Their data show that since 1926, there have been only seven five-year periods in which the stock market failed to provide positive returns. If you had held stocks for just five years ending in either 1931, 1932, 1933, 1934, 1941, 1974, or 1977, you would have likely lost money. In all other five-year holding periods, you scored positive, sometimes tremendous gains. Someone who held stocks for five years and cashed out in the late-1950s or late-1980s, for example, saw gains averaging 20% a year.

Ibbotson's figures provide the raw justification for holding stocks, but later research has made the point more clear and dampened the market-timing argument. In 1991, professors P.R. Chandy and William Reichenstein examined monthly returns of the stock market since 1926 and made an important discovery: Most of the market's absolute gains over that time occurred in rather quick fashion. Take away the *best* 50 months of the S&P 500, and the market shows no gain whatsoever between 1926 and 1987. An investor who missed the best 26 months ended up with returns comparable to holding T-bills.

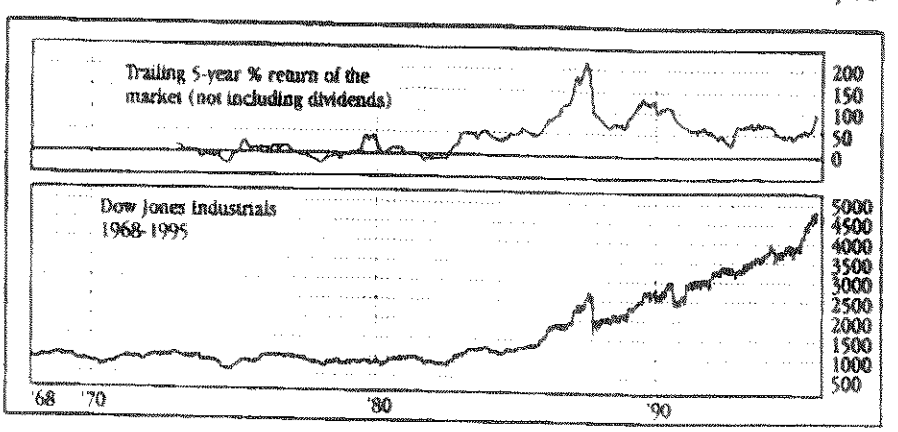
The bottom line: the biggest risk of investing comes from missing rallies, and not from being invested during declines!

The worst timer who bought at the market high every year from 1974-94 would still have earned 12.1% a year by holding his stocks.

A late-1994 University of Michigan study took that finding one step further and pretty much beat the timing argument into the ground. Back-testing the market over a 30-year period ending 1993, professor Nejat Seyhun found that 95% of the market's gains over that time occurred on just 90 separate days. That is, if you happened to be on the sidelines during those critical 90 days (out of 7,802 studied), your total 30-year gain would have been 5%. That's a compounded 0.16% a year. *The cumulative rise in the market over those remaining 7,712 days, then, was minimal. All those up and down days canceled out.*

Your interpretation of this work will undoubtedly depend on which side of the fence you stand. Market timers might see this as proof that if you can predict the peaks and troughs, you don't need to be in the market every day to score extraordinary gains. After all, if the market's best days are indeed condensed, aren't investors wasting a lot of time and money being in a market that is, by and large, mostly flat?

True. But timers miss the bigger implications of the Michigan study. It means that if you tried to time the market correctly, but didn't, you could have missed many of those 90

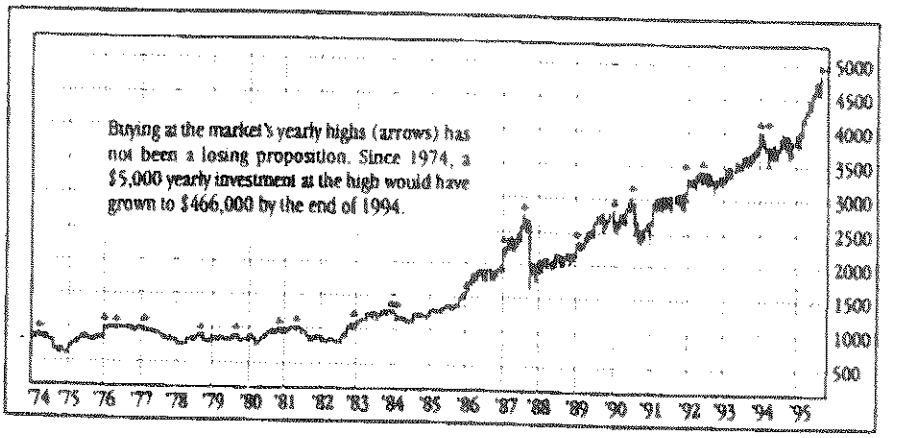


days and really reduced your profit. And we now know that those great 90 days were the types of rallies that timers likely missed. Timing, remember, is essentially a risk-reduction strategy. Timing models tend to give off sell signals below market tops (when the downward trend is either predicted or confirmed) and buy signals above the bottom. Look back in history, though, and you'll see that the best rallies occurred just around those extremes.

We don't mean to browbeat the market-timing school. There is significant merit in its underlying goal: to reduce losses in a declining market. The problem with the market-timing argument is that it has one glaring shortcoming: **It fails in a market that spends more time going up than down.** It recommends high cash positions as rallies get more extended and, thus, underperforms bull markets. Market timing has its advantages in the short-term, when the market may be out of kilter. But when the long-term trend of the economy is upward, wealth is being created, and corporate profits are improving, a rising stock market will result.

The last 15 years, then, have not been self-effacing times for market timers. Since the last major bottom in mid-1982, both the Dow and S&P 500 indexes have quintupled in value, and most timers have not kept pace. A study by the Hulbert Financial Digest, which tracks the performance of newsletters, found that only 2 of 65 market-timing letters beat the Wilshire 5,000 stock index during the 1980s. Various reasons can be cited for the poor performance, chiefly, the editors' growing lack of confidence in the market's ability to sustain a rally.

Intuitively, we can think of other reasons as well. Too many market watchers internalized their strategies and got tripped up by the past. They have awaited, some with an irrepressible passion, a surge in gold prices, double-digit inflation, monetary crises, or a full-blown recession such as in 1973-74. Anytime an indicator flashed bearish signals, they were quick to make comparisons to 1966, 1969-70, 1987, or even 1929-30, as if the events leading to those famous bear markets were about to appear again and influence stocks in the same way.



Don't Rely on Numbers Alone

But don't let the numbers alone convince you. In fact, before drawing broad conclusions, we should identify the five major weaknesses of these historical studies:

➤ They are historical! What happened over the past 10, 50, or 175 years can't predict what could happen over the next three or five. *Stocks can behave contrary to expectations in the short-term.* At best, the market's rich history simply provides clues as to the range of scenarios that could develop.

➤ The results of a lot of these studies change dramatically — sometimes for the worst — if you shift the beginning and ending dates of the research. If professor Seyhun had selected 30 years of market performance ending in 1962 or 1974, rather than 1993, he would have derived absolutely terrible results. In other words...

➤ The studies don't take into account an individual's holding period. Buy-and-hold investing has proven to be the best way to increase returns. But every long-term investor must eventually time the market, usually when selling. A steep sell-off right before you are ready to cash out can wipe away years of gains.

➤ Buy-and-hold returns have looked good because the market has kept going up. Thus, even the poor timer who bought every year at the high made tremendous gains because the market kept moving to new highs.

➤ The data suffers from survivorship bias. It's easy to say now that Microsoft is an excellent investment, but that wasn't so clear to people back in 1985. Then, it was one of dozens of fledgling software companies. Only a few have given investors positive returns — or survived.

Stocks as inflation hedges

But one point that should not be lost in this mud of statistics is the basic reason people invest: *to increase wealth at a rate that beats inflation.* Stocks have been extraordinarily sound investments when looked at this way. Since 1802, in fact, the annual returns of stocks have averaged about six percentage points above the prevailing inflation rate. That 600-basis-point spread has been remarkably constant over long time periods, notes finance professor Jeremy Siegel in his book, "*Stocks for the Long Run*" (Irwin Professional Publishing).

As long as this spread persists, it is better to stay invested in the stock market. Looking outward, we don't see much change from historical trends. Stock prices move in tandem with corporate earnings over the long haul. Corporations have historically paid out about 50% of earnings in dividends (a figure that recently dropped to 42%) and reinvested the rest. The average rate of return on equity for S&P 500 companies has averaged 9.3% since 1990.

Conservatively assuming that return on equity averages 9.3% going forward — it recently exceeded 15% — then long-term earnings growth of 5.4% is expected (9.3% times 58% reinvestment rate). Assuming dividend yields remain at 2.6%, total annual stock returns would average 8%. Even this conservative estimate beats expected inflation by five percentage points.