INVESTMENT GUIDE

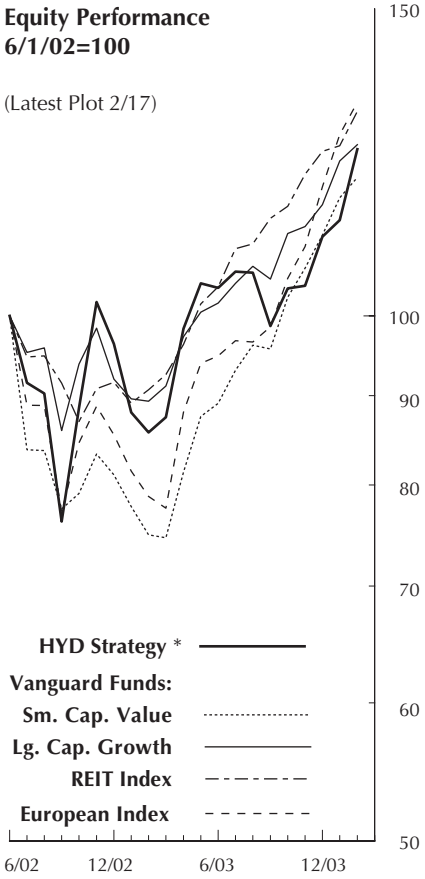
Published Monthly by

American Investment Services, Inc.

Vol. XXVI, No. 2 | Great Barrington, Massachusetts 01230 | February 27, 2004

Equity Performance
6/1/02=100

(Latest Plot 2/17)



*** HYD is a hypothetical model based on back-tested results. See p. 14 for a full explanation.**

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Lessons from 250,000 Years of Stock Returns

The following article was condensed from "Some Lessons from 250,000 Years of Stock Returns" by Truman A. Clark of Dimensional Fund Advisors.

"My stocks are down 30 percent. What are the chances they will come back soon?" "Man, I wish I had been out of stocks for the past three years. How often are stocks likely to beat cash over periods of three years or longer?"

Investment professionals often are asked such questions. These are questions about probabilities. At present, about 76 years of reliable returns data are available from the Center for Research in Security Prices (CRSP) database. Routine sampling with these data provides satisfactory estimates of probabilities for holding periods of three years or less. But for longer holding periods, 76 years of data examined in chronological order do not provide enough independent observations to obtain dependable estimates. Bootstrap simulations solve this problem.

What is Bootstrapping?

Bootstrapping is a Monte Carlo procedure for using limited data to create large samples of independent holding-period returns. In this study, the source data are the July 1926 through December 2002 monthly returns of seven stock indexes and one-month Treasury bills. To construct a simulated history, each of the 918 months is assigned an equal probability of selection. One month is chosen at random (e.g., June 1992), and the returns of the indexes and bills in that month are recorded. A second month (e.g., August 1947) is selected randomly, and the returns for that month are recorded. This process is repeated until a simulated holding period of the desired length (e.g., 12 months for a one-year holding period or 300 months for a 25-year holding period) is created. All drawings are done "with replacement" so that a given month can be selected more than once in any sample holding period.

This procedure was repeated to create 10,000 simulated histories of one-year through 25-year holding period returns. By construction, these returns are independent, and they yield reliable estimates of long-term probabilities.

Probabilities of Recovery from an Initial 30 Percent Loss

"What are the chances my stocks will recover from a 30 percent loss?" The answer to this question depends on the type of stocks and how long they will be held. Table 1 reports the estimated probabilities of recovery from an initial 30 percent loss for seven stock indexes over various time horizons. The probabilities of recovery in one year are not high. They are less than ten percent for large growth and the S&P 500. For large value, small growth, the CRSP 6-10[1], small value and the CRSP 9-10, the probabilities of recovery in one year are 14 percent or more. As the time horizon is extended, chances of full recovery become better and better. Over three years, the probabilities of recovery exceed 40 percent for all indexes. At 25 years, all probabilities exceed 90 percent.

(continued on page 12)

PORTFOLIO REBALANCING: KEEP YOUR HANDS ON THE WHEEL

Consider two hypothetical portfolios, A and B. Each was fully invested at the beginning of 1960, 50 percent in equities (S&P 500) and 50 percent intermediate term bonds (Ibbotson Intermediate Term U.S. Govt. Bond index). However, as stocks and bond returns changed over the years, portfolio A was never rebalanced, while portfolio B was rebalanced to the original 50-50 balance every 6 months if the allocation deviated by more than 5 percent from the original targets. By December 31, 2003, 43 years later, portfolio A would have been comprised of 97 percent equities and 3 percent bonds, while portfolio B would have still been weighted 50-50.

Is it better to have rebalanced or would an investor have been better off "letting it ride"? As depicted in Chart 1, portfolio A had earned annualized returns of 9.48 percent, a bit higher than 8.55 percent for portfolio B. *However, over 12-month rolling time periods, Portfolio A would have suffered returns of -5 percent or less 16 percent of the time, versus only 8 percent of the time for the rebalanced portfolio.* Moreover, Chart 2 demonstrates that the range of monthly returns for the rebalanced portfolio would have been superior. Even for the rare investor with a 43-year investment horizon, the peace of mind gained from fewer "down" periods along the way would be well worth the effort required of occasional rebalancing.

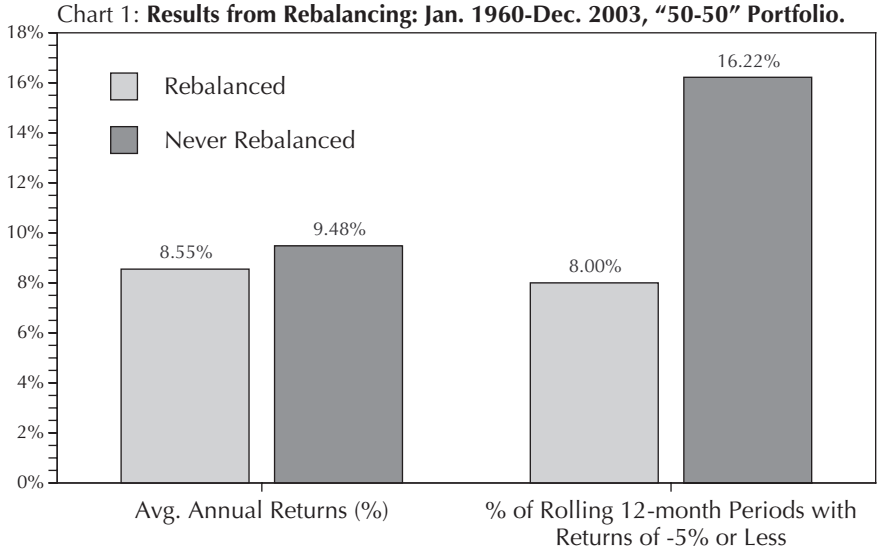
While this scenario provides only anecdotal evidence, numerous studies have demonstrated that rebalancing your portfolio in a disciplined manner is essential in order to minimize the volatility you will have to endure in pursuit of your financial objectives.

What Is It? Why Do It?

Portfolio rebalancing is the adjustment of investment holdings in order to attain the desired proportion of each asset class in one's portfolio. At the beginning of any long-term investment program, an informed investor decides what proportions of the portfolio should be in each of several asset classes. This initial decision on the target portfolio allocation reflects the investor's tolerance of risk, which is often defined as the variability of portfolio returns.

What determines portfolio risk? The variability of a portfolio's return is determined by the variability of returns to its component asset classes, the proportions in which those asset classes are held in the portfolio, and the correlations of returns among the different asset classes.

Chart 1: **Results from Rebalancing: Jan. 1960-Dec. 2003, "50-50" Portfolio.**



Differences among the changes in the market values of the assets held in a portfolio cause the actual portfolio weights to drift away from the target weights. This drift from target allocations is inevitable, especially when there are big differences in the riskiness of individual assets in the portfolio. After a period of large gains (or losses) in one asset, the actual allocation of the portfolio can differ substantially from its target allocation.

If it's gaining, why not let it run? It is always tempting to stick with a winner, but in this case the discipline of rebalancing requires the investor to reduce the proportion of the portfolio held in an asset that has experienced large gains and to increase the proportion held in an asset that has experienced losses. These transactions are necessary to re-establish the portfolio's risk profile.

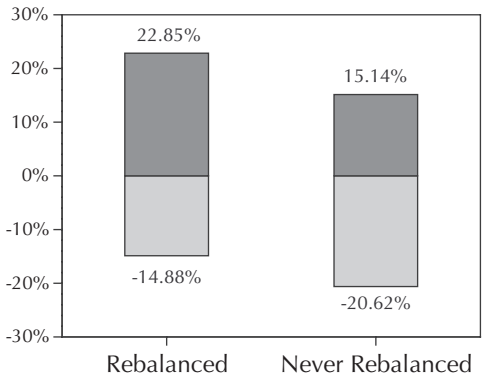
Take an extreme example—the numbers here are hypothetical but, unfortunately, not untypical of investors who became infatuated with tech stocks in the late 1990s. Suppose an investor started in 1995 with a portfolio allocated among tech stocks (20 percent) large-cap-value stocks (30 percent), and bonds (50 percent). The tech stocks might have subsequently skyrocketed in value, to comprise above 50 percent of the portfolio's value by the first quarter of 2000. If a conscious decision to allocate only 20 percent of the portfolio to tech stocks made sense in 1995, it should have made sense in 2000 as well. The riskiness of the portfolio with a 50 percent allocation to tech stocks was decidedly higher than it would have been with a 20 percent allocation. And in this particular example, 50 percent (instead of 20 percent) of the investor's portfolio was exposed to the sharp decline in tech stock prices that began in the first half of 2000. A more prudent approach would have used periodic rebalancing transactions to remain near the targeted portfolio allocation.

Understanding the Costs and Benefits

The example is a dramatic one, but it doesn't take a bubble in tech stocks to make rebalancing a worthwhile activity. To see why, it's helpful to understand the costs and benefits of rebalancing activity, even if you don't sit down in front of a spreadsheet to tally them up each time you look at your portfolio.

The cost side of the issue is straightforward. In addition to whatever time is spent in considering and carrying out any rebalancing transaction, the major costs of the activity are the standard transac-

Chart 2: **Range of Monthly Returns: Jan. 1960-Dec. 2003, "50-50" Portfolio.**



tions costs involved in buying and selling securities. Most of these costs are either relatively small fixed amounts, or fixed percentages of the size of the transaction.

The benefit of rebalancing is primarily your ability "to sleep better at night" knowing that the variability of the value of your assets will be kept within reasonable bounds. The composition of a targeted portfolio allocation is a clear expression of how much an investor is willing to pay to reduce risk. By rebalancing to those targets after a particular asset has done well, or very well, you are foregoing whatever additional returns you would otherwise earn from that particular asset. But not rebalancing allows the market to determine your portfolio allocation, and introduces the very risk you sought to avoid in your initial portfolio allocation decision.

Moreover, the costs of deviating from the target allocation—measured by the change in the risk profile of the entire portfolio—increase with the squared value of the deviation. In the portfolio of our hypothetical investor, the increase in risk associated with a 3 percent over-allocation to tech stocks is nine times as much as the increase in risk associated with a 1 percent over-allocation. It is the avoidance of this increase in risk that is the main benefit of rebalancing. (The calculations are the same for lower-than-target allocations. An allocation to tech stocks that is 3 percent below the target level reduces risk by nine times as much as an allocation only 1 percent below target.)

Given the structure of the costs and benefits of portfolio rebalancing, it should not be surprising that it doesn't always make sense to eliminate any discrepancies between the actual portfolio allocation and target allocation. Depending mainly on the structure of transactions costs, there is usually a small range of differences between actual and target allocations for which the costs of rebalancing exceed the benefits. Moreover, depending on the riskiness of the individual assets in the portfolio, it can sometimes be optimal to eliminate only a portion of the discrepancy between actual and target allocations.

When, How, and Tax Considerations

There is a good amount of discretion involved in deciding on when and how to conduct rebalancing transactions. There are two main approaches to deciding when rebalancing is appropriate, the threshold basis and the calendar basis. The threshold approach dictates rebalancing whenever the difference between actual and target allocations reaches a certain value. The calendar approach dictates reviewing the portfolio for possible rebalancing at regular time intervals.

The threshold approach relies almost exclusively on comparisons of the costs and benefits of rebalancing, as discussed in the previous section. Then, depending mainly on the structure of transactions costs, the threshold approach produces a rule, such as "Eliminate two-thirds of the discrepancy between actual and target allocation whenever the difference exceeds 6 percent." (For a different set of transactions costs, the rule might dictate eliminating all of the discrepancy whenever it exceeds 4 percent).

While the threshold approach relies on the comparison of costs and benefits, rules for the calendar approach are typically obtained by comparing portfolio performance "results" for different rebalancing intervals. There are several studies available describing such comparisons. In general, they conclude that rebalancing at quarterly (or shorter) intervals makes sense only for the most volatile market conditions. Many studies conclude that the optimal review interval is somewhere between six months and two years.

How rebalancing is done depends mainly on the nature of the investment account, the size of regular additions to it, and distributions (dividends, coupon payments) from the account. In some circumstances, for example, it will be possible to rebalance a portfolio by redirecting regular (monthly or quarterly) additions to the investment account, and/or redirecting distributions from the account. In other cases, however, it will be necessary to sell assets whose actual weights in the portfolio exceed their target levels to fund purchases of under-weighted portfolio assets.

Tax considerations always have a big impact on the cost-benefit comparisons for portfolio rebalancing. In general, it is preferable to carry out rebalancing transactions in tax-exempt accounts, where the absence of tax implications doesn't affect the cost-benefit calculation for adjusting the portfolio. Rebalancing transactions in taxable accounts must clear a higher benefit hurdle to match the increased costs imposed by taxes.

When both taxable and tax-deferred accounts are held, the tax-deferred account(s) should be used for holding those asset classes that bear the greatest tax incidence, such as bonds. This means that you should not simply apply your desired allocations to each account individually, but to your portfolio as a whole. This can complicate your rebalancing efforts; if stocks have a tremendous run, for example, while bonds have a tough year, and if your tax deferred account was small in proportion to your taxable account, you may find that you'll have to purchase bonds in the taxable account in order to meet your target allocations. Conversely, if bonds have a great run while stocks do poorly, you might have to buy stocks and sell bonds in the tax-deferred account. In the final analysis it is well worth the effort to make the changes necessary to maximize your overall, after-tax, risk-adjusted returns.

Unfortunately, because of myriad investor-unique considerations, there are no hard-and-fast rules that delineate exactly how and when one should rebalance. What is most important is to develop a reasonable approach and to have the discipline to stick with it. Most importantly, do not fall into the trap of delaying or otherwise altering your rebalancing plan by attempting to anticipate what the market might do.

PRE-1965 U.S. 90% SILVER COINS

The rise in the price of spot silver to a recent recovery high of $6.30 per ounce has renewed interest in silver-related investments. Pre-1965 U.S. dimes, quarters, and half-dollar coins sold in bags of $1,000 face value of the underlying coins are a common means of holding silver. For many years AIS recommended that investors own one bag of such coins for "personal financial security and protection."

Many of our long-time readers still own silver bags, and each month we list recent silver bag prices (p. 16). Values vary depending on whether the coins are proof, uncirculated, or circulated. The price we list is for a bag of circulated coins, having a net weight of 715 ounces of silver, primarily dimes and quarters. A typical bag of uncirculated coins might contain 720-722 ounces of silver.

LESSONS FROM 250,000 YEARS OF STOCK RETURNS (CONT.)

(continued from first page)

Comparing probabilities across indexes at each holding period, the CRSP 9-10 has the highest probability of recovery in one year, and small value has the highest probability at each horizon exceeding one year.[2] Beyond three years, small growth has the lowest probability at each horizon.

Probabilities of Positive Excess Rates of Return

"What are the chances that stocks will beat Treasury bills over periods of one year or longer?" Table 2 provides answers. With the exception of small growth, the estimated probabilities of positive excess returns over one year are at least 60 percent. Again, the probabilities increase with the time horizon. At 25 years, the probabilities of positive excess returns range from 82 percent for small growth to 96 percent for small value.

Estimating Probabilities with Overlapping Data: A Flawed Method

Many researchers restrict their estimation of probabilities to historical data examined in chronological order. This is fine as long as independent samples of adequate size are investigated. But when estimates of long-period probabilities are sought, data limitations become serious problems. With 76 years of annual returns, only three independent 25-year holding periods can be constructed. Likewise, 76 years of annual returns yield only three independent 20-year samples, five independent 15-year samples, seven independent 10-year samples and fifteen independent 5-year samples. These are not large samples, and the observed frequencies may not provide reliable estimates of the probabilities of long-term investment results.

Table 1: **Estimated Probabilities of Recovery from Initial 30% Lossesover Various Holding Periods**

Years	*Large Growth*	*S&P 500*	*Large Value*	*Small Growth*	*CRSP 6-10*	*Small Value*	*CRSP 9-10*
1	7.6%	8.5%	14.3%	14.5%	15.7%	18.3%	19.1%
3	40.7%	42.8%	47.9%	42.5%	46.9%	53.4%	48.1%
5	59.8%	63.0%	64.1%	55.6%	61.7%	68.9%	61.2%
10	82.1%	84.6%	83.6%	73.2%	80.4%	87.4%	78.6%
15	91.0%	92.8%	91.6%	82.6%	89.1%	93.9%	87.4%
20	95.5%	96.7%	95.2%	87.1%	93.0%	96.7%	91.7%
25	97.5%	98.2%	97.3%	91.4%	96.2%	98.4%	95.1%

Table 2: **Estimated Probabilities of Positive Excess Rates of Return over Various Holding Periods**

Years	*Large Growth*	*S&P 500*	*Large Value*	*Small Growth*	*CRSP 6-10*	*Small Value*	*CRSP 9-10*
1	63.1%	64.2%	63.2%	58.6%	61.4%	64.8%	60.0%
3	69.8%	71.7%	70.7%	63.3%	68.5%	73.3%	66.8%
5	73.9%	76.2%	74.8%	66.6%	72.3%	78.3%	70.7%
10	81.5%	84.1%	82.9%	72.8%	79.9%	86.9%	78.1%
15	86.4%	89.0%	87.8%	77.1%	85.2%	91.2%	83.3%
20	89.2%	91.5%	90.8%	79.8%	87.9%	93.6%	86.4%
25	92.0%	94.1%	93.1%	82.4%	91.0%	96.2%	89.8%

To illustrate, suppose annual returns for the 76-year period 1927 through 2002 are used to create 52 overlapping 25-year sample holding periods. The first sample (1927-51) and the second sample (1928-52) have 23 years in common. Likewise, each successive 25-year holding period has 23 annual returns in common with both its predecessor and its successor. Like a long moving average, each 25-year holding period contains much the same information as other samples in its proximity.

If the examination of overlapping samples were a valid way to estimate frequencies with limited amounts of data, why not use monthly data to create hundreds of overlapping 25-year samples? The first sample would run from January 1927 through December 1951, the second would run from February 1927 through January 1952, etc. Successive samples would differ only by the returns of two months. With daily data, thousands of overlapping 25-year holding periods could be created. But, at this point, most people who did not see something fishy with overlapping annual returns would grasp the fallacy of successive 25-year samples differing only by the returns of two days.

The Pros and Cons of Bootstrapping

Bootstrapping has a number of desirable properties: it can create large numbers of independent samples from limited amounts of data, it preserves the risk and return characteristics of assets as well as the correlations among the returns of assets, it does not require restrictive assumptions about the process generating returns and it removes any spurious trends or reversals occurring during July 1926 through December 2002 that exist in the actual history of returns. However, no simulation technique is perfect. Bootstrapping removes any regularity (e.g., momentum or mean reversion) that is a true property of returns. Of the two, only mean reversion presents possible estimation error, but if one is willing to assume knowledge of the mean-reversion process, bootstrapping can be modified to incorporate this feature.

As with all investigations of historical data, the results of bootstrapping may be time-period specific. Although the July 1926-December 2002 period provides many observations of monthly returns, these returns may not accurately reflect the true properties of the distributions of returns. For example, 1926 through 2002 may have been an unusually "good" period overall with average

[1] The CRSP 6-10 represents the funds that comprise the smallest 4 deciles, in market capitalization, in the CRSP database.

[2] The probability of recovery from a 30 percent loss depends on the skewness of a returns distribution. Positive skewness indicates a distribution with a long tail to the right of its mean (or, equivalently, a number of large, positive outliers). All else equal, greater skewness increases the probability of recovery. For the simulated annual returns, the skewness of the CRSP 9-10 (40.5) is considerably greater than that of small value (35.5). As a consequence of its greater skewness, the CRSP 9-10 has a higher probability of recovery over one year than small value. Beyond one year, the skewness gap between the CRSP 9-10 and small value closes, and the higher expected return of small value results in higher probabilities of recovery.

returns exceeding true expected rates of return. Bootstrapping cannot eliminate such an upward bias. Only more data will reveal whether 1926-2002 investment results were unusual in any particular way.

Size and Style Effects

Size and book-to-market (or "style") effects often are documented by comparing average rates of return. They also appear in estimated probabilities obtained from the samples created by bootstrapping. Tables 3 through 5 report the estimated probabilities that certain equity indexes will beat others over various holding periods.

Controlling for size, the probabilities that large value (Table 3) will beat large growth increase from 55 percent at one year to 76 percent at twenty-five years. The probabilities that small value (Table 4) will beat small growth rise from about 65 percent at one year to 96 percent at twenty-five years. These patterns in the probabilities of value stocks relative to growth stocks are manifestations of the style effect.

The effect of size can be seen when small-capitalization indexes are compared to large-cap indexes. The probabilities that the CRSP 9-10 (Table 5) will beat the S&P 500 increase from just over 50 percent at one year to more than 64 percent at twenty-five years. Controlling for style, the probabilities that small value (Table 4) will beat large value grow from 57 percent at one year to over 84 percent at twenty-five years.

Small value (Table 4) is the star in terms of its probabilities of beating the other indexes. At one year, all probabilities exceed 57 percent. At twenty-five years, all probabilities exceed 84 percent. These estimated probabilities suggest that small value will be the most consistent "winner" among the indexes examined.

The author would like to thank Jim Davis, Kenneth French, and Weston Wellington for their helpful comments and suggestions.

Large Growth, Large Value, Small Growth, and Small Value courtesy of Fama/French. S&P data courtesy of © Stocks, Bonds, Bills and Inflation Yearbook™, Ibbotson Associates, Chicago (annually updated works by Roger C. Ibbotson and Rex A. Sinquefield). CRSP data courtesy of the Center for Research in Security Prices, University of Chicago.

Table 3: **Estimated Probabilities that Large Value Beats Other Asset Classesover Various Holding Periods**

Years	*Large Growth*	*S&P 500*	*Small Growth*	*CRSP 6-10*	*Small Value*	*CRSP 9-10*
1	55.0%	53.9%	56.0%	51.1%	42.4%	50.4%
3	59.0%	57.2%	60.7%	52.9%	36.8%	49.8%
5	62.8%	60.5%	62.8%	53.2%	32.8%	49.2%
10	67.6%	65.0%	68.1%	53.6%	26.5%	48.2%
15	71.1%	67.7%	70.9%	53.8%	22.3%	47.4%
20	73.7%	70.3%	73.6%	55.0%	18.1%	46.6%
25	76.2%	72.4%	76.4%	55.7%	15.3%	46.4%

Table 4: **Estimated Probabilities that Small Value Beats Other Asset Classesover Various Holding Periods**

Years	*Large Growth*	*S&P 500*	*Large Value*	*Small Growth*	*CRSP 6-10*	*CRSP 9-10*
1	58.6%	58.0%	57.6%	64.9%	65.7%	61.5%
3	65.7%	64.6%	63.2%	73.6%	75.0%	67.2%
5	71.1%	69.6%	67.2%	79.3%	81.0%	70.4%
10	79.0%	77.3%	73.6%	88.1%	89.6%	78.0%
15	83.8%	82.2%	77.7%	91.8%	93.3%	81.9%
20	87.0%	85.4%	81.9%	94.4%	95.7%	84.8%
25	90.3%	88.7%	84.7%	96.2%	97.1%	87.8%

Table 5: **Estimated Probabilities that the CRSP 9-10 Beats Other Asset Classesover Various Holding Periods**

Years	*Large Growth*	*S&P 500*	*Large Value*	*Small Growth*	*CRSP 6-10*	*Small Value*
1	52.0%	51.0%	49.6%	56.9%	49.7%	38.5%
3	55.9%	54.0%	50.2%	63.8%	53.3%	32.8%
5	59.0%	56.6%	50.8%	67.6%	55.6%	29.6%
10	63.6%	60.0%	51.9%	75.0%	59.9%	22.0%
15	67.1%	62.9%	52.6%	79.6%	62.0%	18.1%
20	69.6%	64.5%	53.4%	83.0%	64.0%	15.2%
25	71.9%	66.8%	53.6%	86.2%	66.0%	12.3%

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THE HIGH-YIELD DOW INVESTMENT STRATEGY

We are convinced that long-term, common-stock investors will receive superior returns on the "large-capitalization-value stock" component of their holdings when they consistently hold the highest-yielding Dow stocks. The fact that a given company's stock is included in the Dow Jones Industrial Average is evidence that the company is a mature and well-established going concern. When a Dow stock comes on the list of the highest-yielding issues in the Average, it will be because the company is out of favor with the investing public for one reason or another (disappointing earnings, unfavorable news developments, etc.) and its stock price is depressed. A High-Yield Dow (HYD) strategy derives much of its effectiveness because it forces the investor to purchase sound companies when they are out of favor and to sell them when they return to relative popularity.

Selecting from the list will not be cut and dried if the timing of purchases and sales reflects individual prejudices or other *ad hoc* considerations. These usually come down to "I'm not going to buy *that*" or "goody, this fine company has finally come on the list and I'm going to load up." Our experience with investing in the highest-yielding Dow stocks has shown that attempts to "pick and choose" usually do not work as well as a disciplined approach.

Our parent has exhaustively researched many possible High-Yield Dow approaches, backtesting various possible selections from the DJIA ranked by yield for various holding periods. For the 35 years ended in December 1998, they found that the best combination of total return and low risk (volatility) was obtained by purchasing the four highest-yielding issues and holding them for 18 months. (For a thorough discussion of the strategy for investing in the highest-yielding stocks in the DJIA, please read AIER's booklet, "How to Invest Wisely", $12.)

The model portfolio of HYD holdings set forth in the accompanying table reflects the systematic and gradual accumulation of the four highest-yielding Dow issues, excluding General Motors and Altria (formerly Philip Morris). We exclude GM because its erratic dividend history has usually rendered its relative yield ineffective as a means of signaling timely purchases, especially when it has ranked no. 4 or higher on the list. We exclude Altria because, in present circumstances, it seems unlikely that there will be sufficient "good news" for it to be sold out of the portfolio. For more than eight years, Altria has never ranked lower than fourth on the list, whatever its ups and downs, and, given the circumstances, using Altria in the strategy amounts to a buy-and-hold approach. The HYD strategy, to repeat, derives much of its superior performance from buying cheap and selling dear.

In the construction of the model, shares purchased 18 months earlier that are no longer eligible for purchase are sold. The hypothetical trades used to compute the composition of the model (as well as the returns on the model and on the full list of 30 Dow stocks) are based on mid-month closing prices, plus or minus $0.125 per share. Of the four stocks eligible for purchase this month, only **AT&T** and **Citigroup** were not eligible for purchase 18 months earlier (in August 2002). Investors following the model should find that the indicated purchases of **AT&T** and **Citigroup** and sales of **Dupont** and **Eastman Kodak** are sufficiently large to warrant trading. In larger accounts, rebalancing positions in **JP Morgan Chase** and **SBC** may be warranted as the model calls for adding to positions that have lagged the entire portfolio and selling positions that have done better. Investors with sizable holdings may be able to track the exact percentages month to month, but smaller accounts should trade less often to avoid excessive transactions costs, only adjusting their holdings toward the percentages in the table if prospective commissions will be less than, say, one percent of the value of a trade. By making such adjust-

As of February 13, 2004

					——*Percent of Portfolio**——	
	Rank	*Yield*	*Price*	*Status*	*Value*	*No. Shares*[1]
SBC Comm.	1	4.99%	25.05	Holding**	23.01	27.41
Altria Group	2	4.98%	54.66	*		
AT&T	3	4.75%	20.00	Buying	17.60	26.21
General Motors	4	4.09%	48.88	*		
JP Morgan Chase	5	3.39%	40.16	Holding**	30.57	22.71
CitiGroup	6	3.23%	49.49	Buying	1.52	0.92
DuPont	7	3.15%	44.46	Selling	7.65	5.13
Merck	8	3.03%	48.88	Holding	3.12	1.91
Caterpillar	13	1.91%	77.42	Holding	2.01	0.77
Eastman Kodak	16	1.72%	29.03	Selling	14.49	14.98
					100.0	100.0

Change in Portfolio Value[2]

	1 mo.	*1 yr.*	*5 yrs.*	*10 yrs.*	*15 yrs.*	*From 12/63*	*Std. Dev.*
HYD Strategy	0.17%	33.01%	6.42%	12.51%	15.34%	15.62%	19.41
Dow	0.96%	37.37%	4.65%	12.43%	13.21%	10.68%	16.97

* The strategy excludes Altria and General Motors. ** Currently indicated purchases approximately equal to indicated purchases 18 months ago. [1] Because the percentage of each issue in the portfolio by value reflects the prices shown in the table, we are also showing the number of *shares* of each stock as a percentage of the total number of shares in the entire portfolio. [2] Assuming all purchases and sales at mid-month prices (+/–$0.125 per share commissions), reinvestment of all dividends and interest, and no taxes. The 5-, 10- and 15-year total returns are annualized as are the total returns and the standard deviations of those returns since December 1963.

Note: These calculations are based on hypothetical trades following a very exacting stock-selection strategy, and are gross of any management fees. They do not reflect returns on actual investments or previous recommendations of AIS. Past performance may differ from future results.

ments from time to time, investors should achieve results roughly equal to the future performance of the model.

The process of *starting* to use the strategy is not as straightforward. The two most extreme approaches are: 1) buy all the indicated positions at once or 2) spread purchases out over 18 months. Either choice could be said to represent an attempt at market timing, i.e., buying all at once could be construed as a prediction that (and will look good in retrospect only if) the prices of the shares go up after the purchases are made. On the other hand, if purchases are stretched out and stock prices increase, the value of the investor's holdings will lag behind the strategy's performance. We believe that most attempts to time the market are futile, and the best course lies somewhere in between the extremes.

Some portion of the shares now held in the strategy will be sold within a few months. The shares most likely to be sold are those whose indicated yields are too low to make them currently eligible for purchase. This usually means that their prices have risen (and their yields have fallen), in relative if not absolute terms, since they were purchased. If such stocks are purchased now and are sold within a few months, the investor will receive only a portion of the profit, or sustain a greater loss, than the strategy. On the other hand, if the stocks not currently eligible for purchase are bought and the strategy does not call for selling them soon, it will usually be because their prices have decreased so that their indicated yields render them again eligible for purchase. In other words, buying a stock that is not currently among the top four means that it will very likely be sold during the months ahead (perhaps at a gain, perhaps not, but with payment of two commissions either way). Alternatively, if the price decreases so that the issue again becomes eligible for purchase, then the investor's initial purchase would be likely to be held in the portfolio at a loss for some period of time. In the latter situation, the investor would have been better off waiting.

Accordingly, for new HYD clients, we usually purchase the complement of the currently eligible stocks without delay. (This month, the four eligible issues— SBC Communications, AT&T, J.P. Morgan Chase and Citigroup— account for roughly 73 percent of the total portfolio value). Any remaining cash will be held in a money-market fund pending subsequent purchases, which will be made whenever the client's holdings of each month's eligible stocks are below the percentages indicated by the strategy by an amount sufficient to warrant a trade.

Our **HYD Investment Management Program** provides professional and disciplined application of this strategy for individual accounts. For accounts of $100,000 or more, the fees and expenses of AIS's discretionary portfolio management programs are comparable to those of many index mutual funds. Contact us for information on this and our other discretionary investment management services.

THE DOW JONES INDUSTRIALS RANKED BY YIELD

	Ticker	Market Prices			12-Month		Latest Dividend			Indicated	
	Symbol	2/13/04	1/15/04	2/14/03	High	Low	Amount	Record Date	Paid	Annual Dividend	Yield† (%)
★ SBC Comm.	SBC	**$25.05**	26.74	23.35	27.73	18.85	0.313	1/10/04	2/02/04	1.250	4.99
Altria Group	MO	**$54.66**	54.25	38.14	56.10 *H*	27.70	0.680	12/22/03	1/09/04	2.720	4.98
★ AT&T (r)	T	**$20.00**	21.16	17.87	23.18	13.45	0.238	12/31/03	2/02/04	0.950	4.75
General Motors	GM	**$48.88**	54.00	33.10	55.55	29.75	0.500	2/13/04	3/10/04	2.000	4.09
★ J. P. Morgan Chase	JPM	**$40.16**	38.92	21.85	40.65 *H*	20.13	0.340	1/06/04	1/31/04	1.360	3.39
★ Citigroup	C	**$49.49**	49.50	32.54	51.11 *H*	30.25	0.400	2/02/04	2/27/04	1.600	3.23
☆ DuPont	DD	**$44.46**	44.47	37.09	46.17	34.71	0.350	2/13/04	3/13/04	1.400	3.15
☆ Merck	MRK	**$48.88**	45.93	53.91	63.50	40.57	0.370	12/05/03	1/02/04	1.480	3.03
General Electric	GE	**$32.72**	32.00	22.48	34.57 *H*	22.54	0.200	12/31/03	1/26/04	0.800	2.44
Exxon Mobil	XOM	**$41.91**	40.28	33.44	42.15 *H*	33.23	0.250	2/11/04	3/10/04	1.000	2.39
International Paper	IP	**$43.40**	43.86	35.52	45.01	33.09	0.250	2/20/04	3/15/04	1.000	2.30
Honeywell Intl.	HON	**$36.41**	36.48	23.20	37.65 *H*	20.20	0.188	2/20/04	3/10/04	0.750	2.06
☆ Caterpillar	CAT	**$77.42**	83.38	43.25	85.70 *H*	43.35	0.370	10/20/03	11/20/03	1.480	1.91
3M Company (s)	MMM	**$79.68**	84.30	62.55	86.20 *H*	59.73	0.330	2/20/04	3/12/04	1.440	1.81
Procter & Gamble	PG	**$102.05**	99.51	83.70	103.67 *H*	79.57	0.455	1/23/04	2/17/04	1.820	1.78
Johnson & Johnson	JNJ	**$54.23**	51.84	51.75	59.08	48.05	0.240	2/17/04	3/09/04	0.960	1.77
☆ Eastman Kodak	EK	**$29.03**	26.07	30.60	32.46	20.39	0.250	11/03/03	12/12/03	0.500	1.72
Coca-Cola	KO	**$51.14**	49.73	40.80	52.78 *H*	37.01	0.220	12/01/03	12/15/03	0.880	1.72
Alcoa	AA	**$37.01**	35.47	20.05	39.44	18.45	0.150	2/06/04	2/25/04	0.600	1.62
Boeing	BA	**$44.45**	43.04	30.15	45.02 *H*	24.73	0.170	2/13/04	3/05/04	0.680	1.53
McDonald's	MCD	**$26.63**	25.15	13.62	27.27 *H*	12.12	0.400	11/14/03	12/01/03	0.400	1.50
United Tech.	UTX	**$94.63**	95.40	61.95	97.55 *H*	53.51	0.350	2/20/04	3/10/04	1.400	1.48
Hewlett-Packard	HPQ	**$23.01**	25.30	17.79	26.28 *H*	14.18	0.080	3/17/04	4/07/04	0.320	1.39
Walt Disney	DIS	**$26.92**	24.82	16.73	28.41 *H*	14.84	0.210	12/12/03	1/06/04	0.210	0.78
Home Depot, Inc.	HD	**$36.17**	35.43	21.35	37.89	21.45	0.070	12/04/03	12/18/03	0.280	0.77
American Express	AXP	**$53.65**	49.68	33.15	53.98 *H*	30.90	0.100	1/02/04	2/10/04	0.400	0.75
IBM	IBM	**$99.71**	94.02	77.45	100.43 *H*	73.17	0.160	2/10/04	3/10/04	0.640	0.64
Wal-Mart Stores	WMT	**$56.32**	53.49	49.15	60.20	46.50	0.090	12/19/03	1/05/04	0.360	0.64
Microsoft Corp. (s)	MSFT	**$26.59**	27.54	24.15	30.00	22.55	0.160	10/17/03	11/07/03	0.160	0.60
Intel Corp.	INTC	**$30.14**	33.06	16.15	34.60	15.59	0.040	2/07/04	3/01/04	0.160	0.53

† Based on indicated dividends and market price as of 2/13/04. *H* New 52-week high. *L* New 52-week low. (s) All data adjusted for splits. (r) All data adjusted for reverse splits. * SBC paid an extra dividend of .10 on 11/3/03 that is not included in the annual yield.

Note: The issues indicated for purchase (★) are the 4 highest-yielding issues (other than Altria Group and General Motors) qualifying for purchase in the top 4-for-18 months model portfolio. The issues indicated for retention (☆) have similarly qualified for purchase during one or more of the preceding 17 months, but do not qualify for purchase this month.

RECENT MARKET STATISTICS

Precious Metals & Commodity Prices

	2/13/04	*Mo. Earlier*	*Yr. Earlier*
Gold, London p.m. fixing	**416.00**	412.50	354.25
Silver, London Spot Price	**6.54**	6.32	4.53
Copper, COMEX Spot Price	**1.24**	1.08	0.76
Crude Oil, W. Texas Int. Spot	**34.56**	33.65	36.80
Dow Jones Spot Index	**179.37**	175.59	155.27
Dow Jones-AIG Futures Index	**140.50**	137.41	120.57
CRB-Bridge Futures Index	**264.85**	264.41	247.62

Interest Rates (%)

U.S. Treasury bills -	91 day	**0.90**	0.86	1.17
	182 day	**0.97**	0.95	1.17
	52 week	**1.12**	1.15	1.18
U.S. Treasury bonds -	15 year	**4.60**	4.55	4.56
Corporates:				
High Quality -	10+ year	**5.55**	5.47	5.70
Medium Quality -	10+ year	**5.91**	5.80	6.65
Federal Reserve Discount Rate		**2.00**	2.00	2.25
New York Prime Rate		**4.00**	4.00	4.25
Euro Rates	3 month	**2.09**	2.10	2.80
Government bonds -	10 year	**4.14**	4.19	3.97
Swiss Rates -	3 month	**0.24**	0.26	0.60
Government bonds -	10 year	**2.52**	2.62	2.27

Exchange Rates

British Pound	**$1.905600**	1.813900	1.592900
Canadian Dollar	**$0.762400**	0.771500	0.656400
Euro	**$1.285800**	1.248500	1.071200
Japanese Yen	**$0.009475**	0.009429	0.008415
South African Rand	**$0.150300**	0.135400	0.119200
Swiss Franc	**$0.816500**	0.797200	0.727800

Securities Markets

	2/13/04	*Mo. Earlier*	*Yr. Earlier*
S & P 500 Stock Composite	**1,145.81**	1,132.05	834.89
Dow Jones Industrial Average	**10,627.85**	10,553.85	7,908.80
Dow Jones Transportation Average	**2,916.56**	3,018.48	2,102.60
Dow Jones Utilities Average	**270.68**	266.17	196.17
Dow Jones Bond Average	**178.50**	178.68	160.67
Nasdaq Composite	**2,053.56**	2,109.08	1,310.17
Financial Times Gold Mines Index	**1,705.28**	1,641.30	1,201.83
FT African Gold Mines	**2,566.97**	2,532.40	2,166.37
FT Australasian Gold Mines	**3,566.79**	3,474.68	1,639.53
FT North American Gold Mines	**1,365.64**	1,300.78	925.44

Coin Prices

	2/13/04	*Mo. Earlier*	*Yr. Earlier*	*Premium*
American Eagle (1.00)	**$416.65**	434.65	372.75	0.16
Austrian 100-Corona (0.9803)	**$396.83**	413.83	355.03	-2.69
British Sovereign (0.2354)	**$99.45**	103.55	89.25	1.56
Canadian Maple Leaf (1.00)	**$416.90**	434.90	373.00	0.22
Mexican 50-Peso (1.2057)	**$489.50**	510.50	438.10	-2.41
Mexican Ounce (1.00)	**$405.90**	423.30	363.20	-2.43
S. African Krugerrand (1.00)	**$412.05**	429.65	368.95	-0.95
U.S. Double Eagle-$20 (0.9675)				
St. Gaudens (MS-60)	**$492.50**	512.50	475.00	22.37
Liberty (Type I-AU)	**$675.00**	675.00	675.00	67.71
Liberty (Type II-AU)	**$505.00**	482.50	440.00	25.47
Liberty (Type III-AU)	**$450.00**	455.00	422.50	11.81
U.S. Silver Coins ($1,000 face value, Circulated)				
90% Silver (715 oz.)	**$4,492.50**	4,345.00	4,550.00	-3.93
40% Silver (292 oz.)	**$1,780.00**	1,747.50	1,587.50	-6.79
Silver Dollars	**$6,550.00**	6,575.00	6,112.50	29.46

Note: Premium reflects percentage difference between coin price and value of metal in a coin, with gold at $416.00 per ounce and silver at $6.54 per ounce. The weight in troy ounces of the precious metal in coins is indicated in parentheses.

Recommended Mutual Funds

	Ticker		*Month*	*Year*	*— 52-Week —*		*Distributions Latest 12 Months*		*Yield*
Short-Term Bond Funds	*Symbol*	*2/13/04*	*Earlier*	*Earlier*	*High*	*Low*	*Income*	*Capital Gains*	*(%)*
★ iShares Lehman 1-3 Yr Treasury	SHY	**$82.78**	82.71	82.29	83.04	81.82	1.3116	0.0000	1.58
★ USAA Short Term Bond	USSBX	**$9.11**	9.12	9.06	9.23	9.00	0.3320	0.0000	3.64
★ Vanguard Short-term Corporate	VFSTX	**$10.84**	10.83	10.79	10.96	10.72	0.4276	0.0000	3.94
Income Equity Funds									
★ DNP Select Income[1, 2]	DNP	**$11.23**	11.20	9.84	11.32	9.69	0.7800	0.0000	6.95
★ Vanguard REIT Index	VGSIX	**$15.96**	15.20	11.33	16.25	11.33	0.7800	0.0000	4.89
Large Cap. Value Equity Funds									
★ iShares S&P 500 Value Index[3]	IVE	**$57.51**	56.66	40.12	58.07	37.44	0.8873	0.1472	1.54
★ Vanguard Value Index	VIVAX	**$19.55**	19.05	13.76	19.70	13.09	0.3720	0.0000	1.90
Small Cap. Value Equity Funds									
★ iShares Sm. Cap. 600 Value Index[3]	IJS	**$104.25**	103.88	67.10	106.30	45.57	0.7612	0.3430	0.73
★ Vanguard Sm. Cap Value Index	VISVX	**$12.00**	11.65	7.85	12.16	7.39	0.1980	0.0000	1.65
Growth Equity Funds									
★ iShares S&P 500 Growth Index[3]	IVW	**$57.23**	56.74	43.25	57.97	41.25	0.6069	0.1124	1.06
★ Vanguard Growth Index	VIGRX	**$25.79**	25.29	19.19	26.09	18.59	0.1760	0.0000	0.68
Foreign Equity Funds									
★ iShares S&P Europe 350 Index[3]	IEV	**$67.58**	66.00	44.61	68.48	39.52	2.5127	0.0000	3.72
T Rowe Price European Stock	PRESX	**$18.28**	17.96	11.99	18.54	10.81	0.2200	0.0200	1.20
★ Vanguard European Stock Index	VEURX	**$23.19**	22.74	15.20	23.30	13.64	0.4600	0.0000	1.98

Recommended Gold-Mining Companies

	Ticker		*Month*	*Year*	*— 52-Week —*		*Distributions*		*Yield*
	Symbol	*2/13/04*	*Earlier*	*Earlier*	*High*	*Low*	*Latest 12 Months*	*Frequency*	*(%)*
Anglo American PLC, ADR	AAUK	**$24.38**	21.69	14.26	24.79	13.45	0.480	Semiannual	1.97
★ Anglogold Ltd., ADR	AU	**$43.20**	41.15	32.32	49.95	27.10	0.982	Semiannual	2.27
ASA Ltd.[1]	ASA	**$43.88**	42.45	38.10	48.00	31.76	0.600	Quarterly	1.37
★ Barrick Gold Corp.†	ABX	**$20.98**	20.56	15.84	23.70	14.10	0.187	Semiannual	0.89
★ Gold Fields Ltd.	GFI	**$13.06**	13.45	12.30	15.52	9.52	0.318	Semiannual	2.43
★ Newmont Mining	NEM	**$44.26**	42.59	27.24	50.28	24.08	0.170	Quarterly	0.38
★ Placer Dome†	PDG	**$17.09**	16.03	10.57	19.23	8.71	0.085	Semiannual	0.50
★ Rio Tinto PLC‡	RTP	**$111.20**	107.15	76.80	116.33	72.30	3.020	Semiannual	2.72

★ Buy. ☆ Hold. (s) All data adjusted for splits. † Dividend shown is after 15% Canadian tax withholding. ‡ Not subject to U.K. withholding tax. na Not applicable.
[1] Closed-end fund, traded on the NYSE. [2] Dividends paid monthly. [3] Exchange traded fund, traded on ASE.

The information herein is derived from generally reliable sources, but cannot be guaranteed. American Investment Services, the American Institute for Economic Research, and the officers, employees, or other persons affiliated with either organization may from time to time have positions in the investments referred to herein.