Equity Performance
6/1/02=100

(Latest Plot 12/15)

HYD Strategy * ———————

Vanguard Funds:

Sm. Cap. Value   ···············

Lg. Cap. Growth   ———————

REIT Index   — · — · — · —

European Index   — — — — — —

6/02   12/02   6/03   12/03
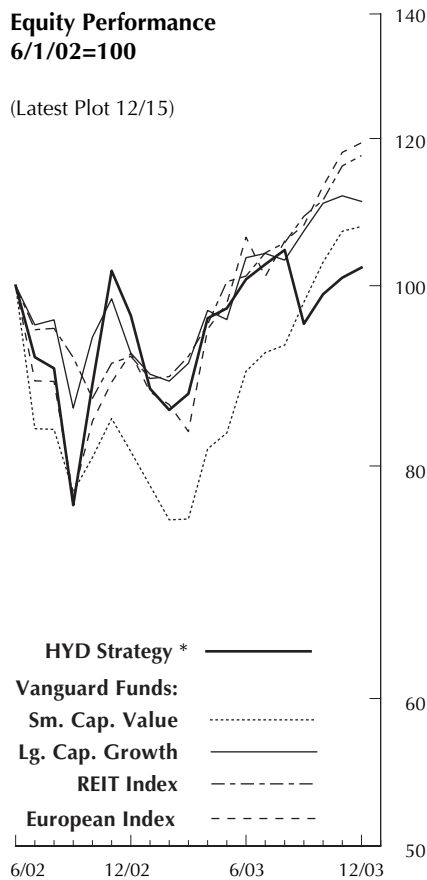
* HYD is a hypothetical model based on back-tested results. See p. 94 for a full explanation.

We offer two discretionary management services: Our Professional Asset Management (PAM) service covers all of our recommended assets and allows us to place trades in stocks, bonds, and mutual funds directly in our clients' accounts. (The accounts remain the property of our clients at all times—we are only authorized to trade on their behalf.) Our High-Yield Dow (HYD) service operates similarly, except it invests only in the highest-yielding Dow stocks, using the 4-for-18 model on a fully invested basis. Investors interested in these low-cost services should contact us at 413-528-1216 or Fax 413-528-0103.

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Investing and the Science of Economics

We have long implored investors to do their best to ignore the hodgepodge of investment advice that saturates the modern media, and instead consider the scientific approach to investing. Below we outline the history of this science, which is rapidly gaining favor with both institutional and individual investors. In particular we hope our readers will appreciate the logic and the consistency of this approach, as opposed to the "flavor of the day" prognostications and recommendations, supported by large marketing budgets, which emanate largely from those assessing high fees or commissions.

Many of the economists at the "cutting edge" of this research began their work at the University of Chicago. Some of those individuals subsequently went on to employ the results of their findings by founding Dimensional Fund Advisors (DFA). The firm has been quite successful in creating low-cost, passively managed mutual funds. To operate efficiently, DFA only offers these funds to individual investors through investment advisors. While clients in our Professional Asset Management program have access to these funds, individual investors managing their own portfolios do not. Nevertheless, investors who do not seek professional assistance, but who wish to follow this sound approach to portfolio management can do so by utilizing the funds we recommend on page 96.

Researchers and advisors in the field of finance have long wrestled with a question that is at the heart of long-term investment pursuits: Just what is it that determines the long-term returns on different sorts of financial assets? In the field of equity research, although the matter remains far from settled, there is a broad consensus that the insights provided by the Capital Asset Pricing Model (CAPM) are the best available foundation for answering that question. Originally developed in 1964, the model asserts that the long-term returns to holding a particular stock are determined exclusively by the riskiness of that stock, as measured by the correlation of its price with the price of the entire stock market.

Building on the foundation of the CAPM, researchers have developed variations that incorporate factors other than correlation with market returns. One particularly appealing variation on the theme is the three-factor model developed by economists associated with DFA. The three-factor model explains the long-term returns to equity holdings as a function of risk, market capitalization and the ratio of book value to market value. All of the investment offerings of DFA—equity and fixed income, domestic and international—are guided by the insights of the three-factor model. As a result, it's worth knowing about the history of the model's development, and how its insights have been applied in our recommendations and in Dimensional's investment products.

Challenging Conventional Wisdom

It took a while for academic research to redefine conventional wisdom in the field of investing. In a highly influential investment guide (*The Battle for Investment Survival*) published in 1935, for example, Gerald Loeb advised as follows:

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(Continued from previous page)

Once you attain competency, diversification is undesirable. One or two, or at most three or four, securities should be bought. Competent investors will never by satisfied beating the averages by a few small percentage points.

It took almost twenty years for a systematic challenge to this point of view to begin emerging from academic research. In 1952, Harry Markowitz distinguished between security-specific risk and portfolio risk, and demonstrated mathematically that diversification—holding assets whose returns are not perfectly correlated—reduces the risk of a securities portfolio relative to that of its constituent securities. He also showed that it was possible to construct an optimal portfolio, one that maximizes the expected return for any given level of risk.

In 1958, James Tobin published a variant of Markowitz's model, showing that portfolio risk could be adjusted by borrowing and lending. Tobin's work put an emphasis on portfolio structure, rather than stock selection, a theme that recurs in the finance literature to this day. Soon thereafter (1960), similar results were elaborated in a different context when Franco Modigliani and Merton Miller published their classic corporate finance theorems. They showed that a corporation's value is not affected by the amount of its debt, or by its dividend policy. Along the way, they also showed how homemade leverage—an investor's decisions on how to finance his portfolio—could be used to adjust the riskiness of portfolios.

It was in 1964 that the critical development in this line of research emerged: William Sharpe published research on the CAPM. (John Lintner published similar results in 1965.) Before Sharpe, several researchers had used the variability of a stock's returns as a measure of risk. Sharpe redefined the concept, measuring risk as the variability of a stock's returns *relative to the returns of the entire market*. From that basis, he went on to show that an investor's expected return from holding an individual stock is proportional to the stock's riskiness. Practitioners in the field of finance are quite familiar with this concept. The correlation of returns on an individual stock (or class of stocks) with those of the universe of stocks is known as the stock's (or the stock class's) beta.

More particularly, however, Sharpe went on to assert that the differences in expected returns across asset classes are entirely determined by beta. In other words, the original CAPM concludes that all of the differences in expected returns across different classes of assets can be explained by differences in their riskiness, as measured by the correlation of asset or asset-class returns with market-wide returns.

The Data and the Tests:

In 1960 work began on the database that would be the basic proving grounds for much of the theoretical work on asset class returns. At the urging of James Lorie, a professor of business administration at the University of Chicago, Merrill Lynch helped establish the Center for Research in Security Prices (CRSP). Lorie would be the Center's first director; its first project was to collect, refine, and complete the records of prices, dividends, and rates of return for all stocks listed on the New York Stock Exchange. The project was completed in 1964, with essentially complete data for all NYSE-listed stocks for the period since 1926. Subsequent projects led to comparable databases for the stocks listed on the American Stock Exchange and NASDAQ; for Treasury bills, notes and bonds; and for other financial instruments.

An early empirical test of the CAPM was reported by Black, Jensen and Scholes in 1972. Using the CRSP data for 1931 to 1965, they created a series of portfolios with a wide range of betas to examine the CAPM. The authors acknowledged that in their arrangement of the data, the CAPM suggested two specific statistical results:

Y_1 a statistical estimate of the market price of risk, should be equal to the average excess return of equities over Treasury bills (the risk-free asset). For the period under investigation, that excess return averaged 1.42 percent per month.

Y_0 a statistical estimate of the expected return on an asset with a beta of zero, should be equal to zero.

Black, Jensen, and Scholes obtained estimates of 0.52 (rather than 0.00) for Y_0, and 1.08 (rather than 1.42) for Y_1. They went on to develop arguments to show how their findings were in fact consistent with the capital-asset pricing model. But the difference between their results and the model's theoretical implications prompted others in the field to propose modifications to the basic CAPM. The riskiness of an asset (or asset class) could well be the main factor accounting for differences in expected returns. Other researchers sought out additional factors.

Size Matters; So Does Style

A 1981 study by Rolf Banz was among the first to demonstrate the importance of factors other than market risk in explaining the returns to financial assets. Using the CRSP data for 1936 to 1975, he found that there is a statistically significant relationship between firm size—as measured by market capitalization—and the returns on equity investments. Moreover, by constructing large-firm and small-firm portfolios with identical betas, Banz was able to demonstrate that rates of return on the small-firm portfolios regularly exceeded the returns on the corresponding large-firm portfolios.

Research done by Eugene Fama and Kenneth French presented another extension of CAPM. Using cross-sectional data for 1963 to 1990, they found that, in addition to the size effect, there is a statistically significant relationship between equity returns and the ratio of book value to market value. For lack of a better term, this third factor can be labeled style: Investors are generally familiar with the distinction between the growth and value

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Figure I: Single-Factor and Three-Factor Models

Single-Factor Model (CAPM)

| Average Expected Premium | = | Average Excess Return | + | Sensitivity to Market Factor | | | ***Explains 70% of the variability of returns**** |

Three-Factor Model (DFA)

| Average Expected Premium | = | Average Excess Return | + | Sensitivity to Market Factor | + | Sensitivity to Size Factor | + | Sensitivity to Price/ Book Factor | ***Explains 95% of the variability of returns**** |

*Average explanatory power (R^2) in the Fama-French equity benchmark universe.

Source: Dimensional Fund Advisors.

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approaches to investing. Growth stocks have relatively low ratios of book value to market value, while value stocks have high book-to-market ratios.
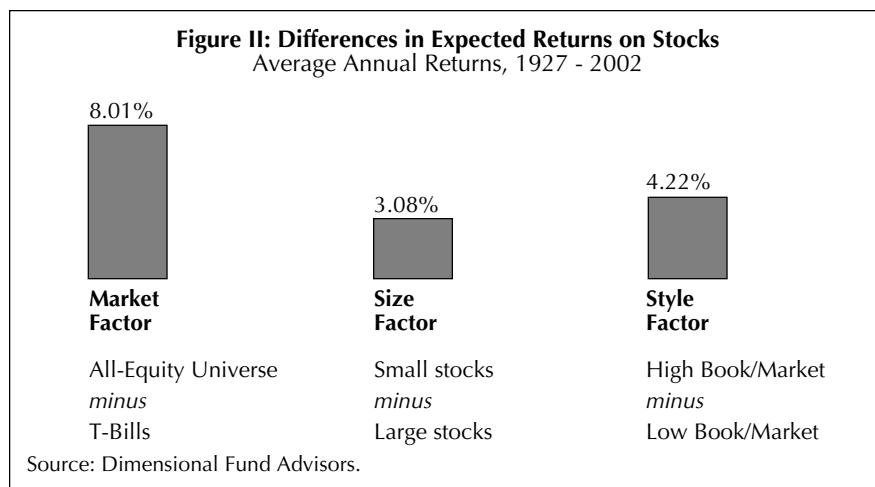
The Three-Factor Model:

In addition to their academic affiliations, Messrs. Fama (University of Chicago) and French (Dartmouth College) have long been associated with Dimensional Fund Advisors. It is their research work that has served as the intellectual basis for all of Dimensional's offerings. The relationship between the CAPM and the three-factor model is illustrated in Figure I. Figure II summarizes the Fama-French estimates of the relative importance of each of the three factors.

Quite apart from the extensive empirical testing that's been used in the development of the three-factor model, there's a logical appeal to its explanation of the returns to equity investing. Consider each of the terms in the equation shown in Figure I.

Market Factor: In agreement with the capital-asset pricing model, the three-factor model concludes that expected returns for any class of financial assets depend on the riskiness of the returns. In particular, the expected return on equity holdings—in excess of the returns available on a risk-free asset—reflects the variability of equity returns.

Size Factor: The three-factor model incorporates the size effect first reported by Banz. Other factors being equal, the expected returns on holding a company's stock *diminish* as the size of the company increases. Thomas Siebel, founder of Siebel Systems, has popularized this notion with his "Law of Large Numbers." The label is a misnomer, but it is widely understood to refer to the fact that—in percentage terms—prospects for a company's earnings growth diminish as the company grows in size. The size effect can also be appreciated from the corporate finance perspective. Recall that investors' expected returns from holding a firm's equity are, in fact, the firm's cost of capital. It's easy to understand that, other things equal, lenders will require a higher rate of return on funds provided to a small company than they would for a large company. What's true for lenders is true for investors; other things equal, a smaller company commands a lower share price per dollar of expected future earnings.

Style Factor: In addition, the three-factor model incorporates the style effect first reported in the research done by Fama

Figure II: Differences in Expected Returns on Stocks
Average Annual Returns, 1927 - 2002

8.01%

3.08%

4.22%

Market Factor

Size Factor

Style Factor

All-Equity Universe
minus
T-Bills

Small stocks
minus
Large stocks

High Book/Market
minus
Low Book/Market

Source: Dimensional Fund Advisors.

and French. To appreciate how the style factor contributes to differences in returns, compare the expected returns from any single stock under two scenarios: In the first, it is priced as a value stock, in the second, as a growth stock. *For any given combination of book value and expected earnings, a lower market price (e.g., pricing as a value stock) has to be associated with higher expected returns (returns expressed in percentage terms).* Stocks priced as growth stocks, conversely, have been assessed as relatively safe; the market is implicitly requiring a commensurately lower return.

These size and style factors are consistent with the notion that risk and return are directly related. Small stocks command higher expected returns because they are deemed by the market to be inherently riskier than large-cap stocks. With respect to style, Wall Street's terminology (value versus growth) is deceptive; so-called value stocks represent distressed companies that are in fact *not* highly valued by the market. Their high book price relative to their market price suggests that they have been deemed by the market to be relatively *risky* stocks, and the empirical evidence (see Figure II) is clear that they have higher expected returns compared to relatively safe growth stocks.

We can look at stocks within the 30 that comprise the Dow Jones Industrial Average to clarify the style distinction. Currently, AT&T would clearly be considered a value stock; it is priced low, with one of the highest book-to-price ratios (0.90) and the highest dividend yields (5.01%) in the index. Conversely Microsoft is priced high, with one of the lowest book-to-price ratios (0.23) and lowest yields (0.60%) in the index. Technology and the current regulatory environment have created great uncertainty in telecom-

munications, and the market consequently regards the future earnings of AT&T with great skepticism. Microsoft, on the other hand, is in a growing industry, which it dominates; it is valued dearly and is priced accordingly. We are therefore recommending AT&T because it has higher *expected* returns; they are not guaranteed, because there is a very real risk that AT&T will be marginalized as a competitor, depending on a host of factors. So for now investors are saying "I need a chance at exceptionally high returns to offset this risk, I will therefore not pay much for this stock." By owning several such stocks from different industries, one can diversify away much of the company- and industry-specific risk from one's portfolio, and be left with exposure to the risk associated with large-cap value asset, which has historically been systematically rewarded with higher returns.

Note, this approach to stock selection does not rely on stock picking in the conventional sense. The process we have described is therefore considered a passive as opposed to an active approach to portfolio construction. No attention is paid to company news releases, "expert" analysts' opinions, macroeconomic data, or similar data. It is assumed that all such information has been instantly and widely disseminated and reflected in current prices. In the previous example, the "bad news" regarding AT&T is out there, and the shares are priced accordingly. The only tool necessary to select appropriate stocks is an empirically proven measure of relative risk, such as book-to-market price, price-to-earnings, or dividend yield. All of these measures provide similar results when applied to the broad market.

Dimensional Fund Advisors seeks to capture the systematic premiums on equity returns that arise from the factors iden-

tified in the Fama-French model. In each of their portfolios, they seek to acquire eligible stocks that have relatively low market capitalizations (small-cap stocks) and relatively high ratios of book value to market value (value stocks). We have selected the funds on page 94, and the stocks in our high-yield Dow portfolio (page 96) based on the same precepts.

IDENTITY THEFT: A GROWING THREAT

Your identity is what makes you, you. To friends, family members, and business associates your personality, appearance, intellect, habits, and relationships define who you are. To the outside world, the things that separate you from the rest of the crowd—a social security or credit card number, ATM access code, or computer password—are far more concrete, and far easier to steal.

Identity theft is a lot more common than most people think, and the problem is growing rapidly. According to the recently released Federal Trade Commission's Identity Theft Survey Report, almost 10 million Americans discovered that they were the victims of ID theft within the past year, and over 27 million have been victimized in the last five years. In 2002 alone, identity theft cost businesses and consumers a total of $53 billion. Recognizing the growing threat of identity theft, Congress just passed the Fair and Accurate Credit Transactions Act of 2003 to help consumers and businesses address this growing problem. (For more information on the Act, see the box on page 93).

Identity theft can take many forms. It can be as simple as someone lifting a credit card from a stolen wallet, forging the owner's name, and using it to pay for a night on the town. Or, it can be a complex scheme involving phony ATM machines that capture account information thieves can use to empty bank accounts. Thieves can use personal information to open credit-card accounts, establish phone service, or create counterfeit checks or debit cards. They can even give your name in an arrest.

Regardless of the form it takes or its consequences, the threat of identity theft looms larger than ever. The number of ID-theft victims who reported discovering misuse of their personal information between one and two years ago was almost double the number of victims who reported such activity two to three years ago, says the FTC.

Perhaps at some point in your life, identity theft has even happened to you. While it can be a frightening experience, early detection and reporting to appropriate authorities can help keep financial losses to a minimum. In fact, most victims of identity theft lose little or no money thanks to Federal and state laws that shift much of the monetary burden to financial institutions rather than consumers. In most cases, the Truth in Lending Act limits liability for unauthorized credit card use to $50.

Even if out-of-pocket financial losses are minimal, the damage to one's credit history and the amount of time expended repairing it can be enormous. On average, it takes anywhere from 15 to 60 hours, and costs from $500 to $1,200, to repair damaged credit, resolve disputes with collection agencies, and perform other time-consuming tasks necessary to untangle the mess identity thieves leave behind. In some cases, it can take several years and several thousand dollars to undo the damage.

In one consumer complaint posted on the FTC's website, the victim reports that the thieves used his identity to "write checks, use a debit card, open a bank account with a line of credit, open credit accounts with several stores, obtain cell phones and run up huge bills, print fraudulent checks on a personal computer bearing my name, and more. I'v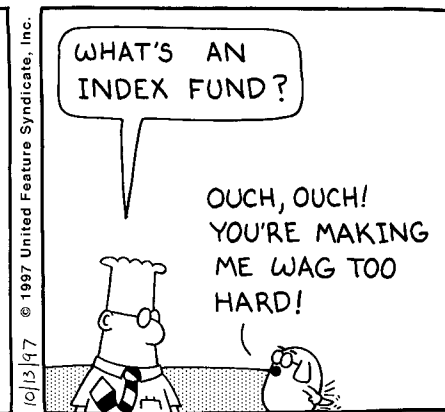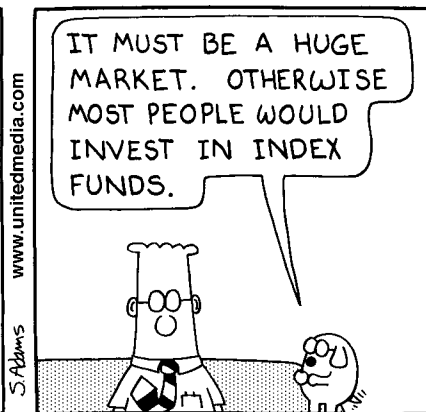e spent the last two years trying to repair my credit report (a very frustrating process) and have suffered the ill effects of having a marked credit history." In the most serious cases, such as having new accounts opened in one's name, the average consumer loses $10,200.

Tips for Preventing Identity Theft

Although identity theft is becoming more commonplace, there are ways to avoid becoming a victim.

Watch for pigeon English e-mail. In one of the latest and most widespread e-mail fraud schemes called "phishing," scammers send out messages that appear to be from legitimate companies saying they are working to enhance security and prevent fraud, or to update your account information. To help them, they ask that you re-confirm your identity by entering personal information such as your Social Security number or credit card number. One way to check the legitimacy of these "fraud alerts" is to call the company before you respond to any such request. Check for misspellings, grammatical errors, or obvious factual errors. Legitimate companies usually employ copywriters and proofreaders. Scammers don't.

Keep your ATM information secure. Tom Harper, ATMmarketplace.com, publisher, recommends that individuals use ATMs they are familiar with so any changes will be more apparent. A false attachment on the front of a machine will jut out a couple of inches, or a screen message you've never seen may tip you off that a fraudster has altered the machine. Harper also recommends that you be suspicious if the machine "eats" your card and someone approaches you to say the same thing happened to him, and then

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S.Adams

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10/13/97

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advises you to enter your PIN again.

Guard your Social Security number. Social Security numbers are the key to your credit report, bank accounts, and other sensitive information. Employers and financial institutions may need it for wage and tax reporting, while others, such as landlords or utility companies, may ask for it to conduct a credit check. Beyond that, giving out your Social Security number is often unnecessary. Ask why someone needs it, and what it will be used for, before you make a decision to divulge this sensitive piece of information.

Never give out personal information over the phone unless you have initiated the contact. To be sure you are dealing with a legitimate source, call the company's customer service number or check its website for any scam alerts. If you do not wish to be solicited by telephone, contact the National Do Not Call Registry at 1-888-382-1222.

Only give personal information to sites with a secure server. Secure servers encrypt information as it is being transmitted so that outside interceptors cannot read it. A site with a secure server will show a locked padlock at the bottom of the browser page, while an insecure site will show an unlocked padlock.

Give your checks a check-up. According to the Office of the Comptroller of the Currency, 1.2 million fraudulent checks are written every day. To avoid having one of them be yours, keep checks, check re-order forms, cancelled checks, and signature stamps in a locked, secure location. If you are paying bills by check, drop them off at the post office rather than in an unsecured mailbox, or set up an electronic bill paying system.

Use an original password, and change it periodically. Avoid using easily available information, such as digits from your Social Security number, your birth date, or your phone number. Instead, think of an original, yet memorable password that only you could know. For example, I was married in June 1984 could result in the password IWMJ684. Use different passwords for different things so that if someone finds out a password for one thing, he can't use it to open the door to your entire private life. Try to change your passwords at least once a year.

Congress Passes Landmark Identity Theft Legislation

Congress has just passed the Fair and Accurate Credit Transactions Act of 2003. Scheduled to become effective on January 1, 2004, the legislation offers these protections to consumers:

A free credit report every year from each of the three national credit bureaus from a single, centralized source. Prior to the law, consumers had to pay to check their credit reports unless they had been denied credit recently.

The ability to block information from being given to a credit bureau, and from being reported by a credit bureau, if such information results from identity theft.

The ability to opt-out of information being shared between affiliated companies for marketing purposes.

Notification when merchants are going to report negative information to the credit bureaus.

The bill also imposes new obligations on financial institutions to prevent identity theft, including prohibiting merchants from printing more than the last five digits of a payment card on an electronic receipt, and requiring banks to develop policies and procedures to identify potential instances of identity theft.

Use a firewall program, especially if you have a high-speed Internet connection that connected to the Internet 24 hours a day. The firewall program stops hackers from accessing your computer and the personal information you store on it.

Check your credit history once a year. Many people do not find out about identity theft until they are denied loans because of actions taken by identity thieves. Checking your credit history periodically can help avoid prolonged misuse of your personal information. Currently, consumers can check their credit histories for a small fee by contacting each of three national credit bureaus: Equifax (1-800-255-0056; equifax.com), Experian (1-888-397-3742; experian.com), TransUnion (1-800-888-4213; transunion.com). Under new legislation scheduled to take effect next year, they will be able to get the information for free.

Pay attention to billing cycles and check your account statements. A missing credit card bill could mean an identity thief has taken over your account and changed the billing address to throw you off.

Tear up pre-screened credit-card offers so no one else can fill them out in your name. Better yet, call 1-888-5-OPTOUT (1-888-567-8688), a number maintained by the three credit bureaus for consumers who do not wish to receive such offers.

What To Do If You're A Victim

Act quickly. Discovering and reporting identity theft promptly can mean the difference between a substantial loss of time and money and a relatively painless experience. For example, if you report your ATM card lost or stolen within two business days of discovering a loss or theft, your losses are limited to $50. If you wait between three and 60 days, you can be held liable for up to $500. And if you wait more than 60 days, you could lose all the money that was taken from your account from the end of the 60 days you reported your card missing. (VISA and MasterCard have voluntarily agreed to limit consumer liability for unauthorized use to $50 per card, no matter how much time has elapsed since the discovery of a loss or theft.) Even the extensive protections offered to credit-card holders under the Truth in Lending Act may be jeopardized if you fail to take action within 60 days of when the bill with the fraudulent charges was mailed to you.

Follow up any phone calls to financial institutions with a certified letter, return receipt requested, to establish that you provided proper notification. Keep copies of any dispute letters.

Place a "fraud alert" on your credit report by calling any one of the three major credit bureaus. This will prevent the thief from opening additional accounts in your name. Because the credit bureaus share this information, you only need to call one.

Close any accounts that have been tampered with or opened fraudulently.

File a report with your local police or with the police in the jurisdiction where the theft took place.

For more information on what to do if you have been a victim of identity theft, contact the FTC's Identity Theft Hotline at 1-877-IDTHEFT, or visit the FTC website at www.ftc.gov.

Note: The article entitled "Medicare Bill—Dollars to Donuts" that appeared in the November 28th, 2003 Investment Guide contained information drawn from the following sources without attribution. *The Boston Globe,* "Merits of Medicare bill in dispute," by Alice Dembner; *The Washington Times*, "Bush pushes pact on Medicare," by Amy Fagan and Audrey Hudson; *The Chicago Tribune*, "AARP endorese GOP Medicare drug bill," by Jill Zuckman. AIS is committed to the highest standards of journalistic integrity and regrets this editorial oversight.

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 (for-merly 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 Merck** were not eligible for purchase 18 months earlier (in June 2002). Investors following the model should find that the indicated purchases of **AT&T, SBC,** and **Merck** and sales of **Caterpillar, Eastman Kodak** and **Dupont** are sufficiently large to warrant trading. In larger accounts, rebalancing positions in **JP Morgan Chase** may be warranted as the model calls for adding to positions that have lagged the entire portfolio. 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

As of December 15, 2003

	Rank	Yield	Price	Status	——Percent of Portfolio*—— Value	No. Shares[1]
Altria Group	1	5.10%	53.36	*		
AT&T	2	5.01%	18.98	Buying	15.58	22.73
SBC Comm.	2	4.54%	24.87	Buying	24.41	27.18
General Motors	4	4.09%	48.93	*		
JP Morgan Chase	5	3.86%	35.26	Holding**	30.15	23.67
Merck	6	3.39%	43.70	Buying	1.52	0.97
DuPont	7	3.18%	44.06	Selling	11.03	6.93
CitiGroup	8	2.93%	47.78			
Exxon Mobil	9	2.65%	37.80			
General Electric	10	2.51%	30.33			
Eastman Kodak	13	2.13%	23.45	Selling	15.00	17.71
Caterpillar	15	1.88%	78.52	Selling	2.28	0.80
					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	1.28%	8.16%	4.92%	12.09%	15.01%	15.42%	19.36
Dow	2.74%	21.57%	4.37%	12.39%	13.35%	10.55%	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.

such adjustments 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—AT&T, SBC Communications, J.P. Morgan Chase and Merck—account for roughly 71 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 Symbol	Market Prices 12/15/03	11/14/03	12/13/02	12-Month High	Low	Latest Dividend Amount	Record Date	Paid	Indicated Annual Dividend	Yield† (%)
Altria Group	MO	**$53.36**	50.35	40.98	54.16 *H*	27.70	0.680	9/15/03	10/09/03	2.720	5.10
★ AT&T (r)	T	**$18.98**	19.27	27.56	27.89	13.45	0.238	9/30/03	11/03/03	0.950	5.01
★ SBC Comm.	SBC	**$24.87**	23.61	25.75	31.65	18.85	0.283	10/10/03	11/03/03	1.130	4.54
General Motors	GM	**$48.93**	42.27	36.52	50.63 *H*	29.75	0.500	11/13/03	12/10/03	2.000	4.09
★ J. P. Morgan Chase	JPM	**$35.26**	35.46	23.62	38.26	20.13	0.340	10/06/03	10/31/03	1.360	3.86
★ Merck	MRK	**$43.70**	46.58	57.34	63.50	40.57 *L*	0.370	12/05/03	1/02/04	1.480	3.39
☆ DuPont	DD	**$44.06**	40.19	42.56	45.55	34.71	0.350	11/15/03	12/14/03	1.400	3.18
Citigroup	C	**$47.78**	46.43	36.00	49.15	30.25	0.350	11/03/03	11/26/03	1.400	2.93
Exxon Mobil	XOM	**$37.80**	36.00	35.04	38.93	31.58	0.250	11/12/03	12/10/03	1.000	2.65
General Electric	GE	**$30.33**	27.88	25.50	32.42	21.30	0.190	9/29/03	10/27/03	0.800	2.51
International Paper	IP	**$40.78**	37.34	34.23	42.04 *H*	33.09	0.250	11/21/03	12/15/03	1.000	2.45
Honeywell Intl.	HON	**$30.83**	29.74	23.71	31.58 *H*	20.20	0.188	11/20/03	12/10/03	0.750	2.43
☆ Eastman Kodak	EK	**$23.45**	24.64	36.81	41.08	20.39	0.250	11/03/03	12/12/03	0.500	2.13
Johnson & Johnson	JNJ	**$49.46**	52.12	54.91	59.08	48.05	0.240	11/18/03	12/09/03	0.960	1.94
☆ Caterpillar	CAT	**$78.52**	72.61	44.60	79.67 *H*	41.24	0.370	10/20/03	11/20/03	1.480	1.88
Procter & Gamble	PG	**$97.82**	95.71	87.41	98.59	79.57	0.455	10/24/03	11/14/03	1.820	1.86
Coca-Cola	KO	**$49.79**	46.69	45.85	49.86 *H*	37.01	0.220	12/01/03	12/15/03	0.880	1.77
Boeing	BA	**$39.20**	39.25	31.40	40.15	24.73	0.170	11/14/03	12/05/03	0.680	1.73
Alcoa	AA	**$34.94**	32.37	23.03	35.88 *H*	18.45	0.150	11/07/03	11/25/03	0.600	1.72
3M Company (s)	MMM	**$82.00**	78.53	121.77	83.44 *H*	59.73	0.330	11/21/03	12/12/03	1.320	1.61
McDonald's	MCD	**$25.42**	25.68	17.34	27.01 *H*	12.12	0.400	11/14/03	12/01/03	0.400	1.57
United Tech.	UTX	**$91.55**	85.90	60.10	92.99 *H*	53.51	0.350	11/14/03	12/10/03	1.400	1.53
Hewlett-Packard	HPQ	**$22.01**	22.09	18.58	23.90	14.18	0.080	12/17/03	1/07/04	0.320	1.45
Walt Disney	DIS	**$22.83**	23.07	16.52	23.80	14.84	0.210	12/12/03	1/06/04	0.210	0.92
American Express	AXP	**$45.31**	45.33	35.94	49.11	30.90	0.100	1/02/04	2/10/04	0.400	0.88
Home Depot, Inc.	HD	**$34.35**	36.19	26.39	37.89	20.10	0.070	12/04/03	12/18/03	0.280	0.82
Wal-Mart Stores	WMT	**$50.74**	55.00	50.54	60.20	46.25	0.090	10/06/03	10/14/03	0.360	0.71
IBM	IBM	**$92.11**	90.25	80.00	94.54	73.17	0.160	11/10/03	12/10/03	0.640	0.69
Microsoft Corp. (s)	MSFT	**$26.74**	25.50	52.50	30.00	22.55	0.160	10/17/03	11/07/03	0.160	0.60
Intel Corp.	INTC	**$30.24**	32.80	17.58	34.51	14.88	0.020	11/07/03	12/01/03	0.080	0.26

★ Buy. ☆ Hold. † Based on indicated dividends and market price as of 12/15/03. *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

	12/15/03	Mo. Earlier	Yr. Earlier
Gold, London p.m. fixing	**407.50**	396.70	332.20
Silver, London Spot Price	**5.56**	5.30	4.74
Copper, COMEX Spot Price	**1.00**	0.95	0.72
Crude Oil, W. Texas Int. Spot	**33.18**	32.37	28.44
Dow Jones Spot Index	**173.64**	168.20	143.56
Dow Jones-AIG Futures Index	**136.33**	130.85	109.30
CRB-Bridge Futures Index	**260.84**	257.29	234.78

Interest Rates (%)

		12/15/03	Mo. Earlier	Yr. Earlier
U.S. Treasury bills -	91 day	**0.89**	0.93	1.20
	182 day	**0.99**	1.02	1.26
	52 week	**1.25**	1.28	1.39
U.S. Treasury bonds -	15 year	**4.82**	4.79	4.73
Corporates:				
High Quality -	10+ year	**5.77**	5.73	6.08
Medium Quality -	10+ year	**6.15**	6.16	6.97
Federal Reserve Discount Rate		**2.00**	2.00	0.75
New York Prime Rate		**4.00**	4.00	4.25
Euro Rates	3 month	**2.16**	2.15	2.99
Government bonds -	10 year	**4.38**	4.26	4.48
Swiss Rates -	3 month	**0.28**	0.24	0.74
Government bonds -	10 year	**2.79**	2.70	2.45

Exchange Rates

	12/15/03	Mo. Earlier	Yr. Earlier
British Pound	**$1.746900**	1.689000	1.589900
Canadian Dollar	**$0.758300**	0.766400	0.640400
Euro	**$1.233600**	1.180500	1.020800
Japanese Yen	**$0.009297**	0.009181	0.008267
South African Rand	**$0.158500**	0.148100	0.114300
Swiss Franc	**$0.794600**	0.757100	0.692100

Securities Markets

	12/15/03	Mo. Earlier	Yr. Earlier
S & P 500 Stock Composite	**1,068.04**	1,050.35	889.48
Dow Jones Industrial Average	**10,022.82**	9,768.68	8,433.71
Dow Jones Transportation Average	**2,950.77**	2,927.64	2,318.47
Dow Jones Utilities Average	**254.34**	248.66	209.10
Dow Jones Bond Average	**173.91**	173.41	155.30
Nasdaq Composite	**1,918.26**	1,930.26	1,362.42
Financial Times Gold Mines Index	**1,772.90**	1,711.91	1,278.44
FT African Gold Mines	**2,648.78**	2,564.70	2,372.18
FT Australasian Gold Mines	**3,316.54**	3,608.58	1,697.05
FT North American Gold Mines	**1,437.29**	1,372.72	973.39

Coin Prices

	12/15/03	Mo. Earlier	Yr. Earlier	Premium
American Eagle (1.00)	**$416.45**	386.35	334.15	2.20
Austrian 100-Corona (0.9803)	**$396.63**	367.93	318.33	-0.71
British Sovereign (0.2354)	**$99.35**	92.35	80.25	3.57
Canadian Maple Leaf (1.00)	**$416.70**	386.60	334.40	2.26
Mexican 50-Peso (1.2057)	**$489.30**	453.90	392.80	-0.41
Mexican Ounce (1.00)	**$405.70**	376.40	325.70	-0.44
S. African Krugerrand (1.00)	**$411.85**	382.25	331.05	1.07
U.S. Double Eagle-$20 (0.9675)				
St. Gaudens (MS-60)	**$485.00**	430.00	395.00	23.02
Liberty (Type I-AU)	**$675.00**	675.00	675.00	71.21
Liberty (Type II-AU)	**$482.50**	440.00	385.00	22.38
Liberty (Type III-AU)	**$450.00**	435.00	362.50	14.14
U.S. Silver Coins ($1,000 face value, circulated; historical prices uncirculated)				
90% Silver (715 oz.)	**$3,920.00**	4,400.00	4,550.00	-1.39
40% Silver (292 oz.)	**$1,582.50**	1,587.50	1,587.50	-2.53
Silver Dollars	**$6,400.00**	6,300.00	6,075.00	48.80

Note: Premium reflects percentage difference between coin price and value of metal in a coin, with gold at $407.50 per ounce and silver at $5.56 per ounce. The weight in troy ounces of the precious metal in coins is indicated in parentheses.

Recommended Mutual Funds

	Ticker Symbol	12/15/03	Month Earlier	Year Earlier	— 52-Week — High	— 52-Week — Low	Distributions Latest 12 Months Income	Distributions Latest 12 Months Capital Gains	Yield (%)
Short-Term Bond Funds									
★ iShares Lehman 1-3 Yr Treasury	SHY	**$82.37**	82.31	81.90	83.04	81.82	1.3373	0.0000	1.62
★ USAA Short Term Bond	USSBX	**$9.09**	9.09	8.98	9.23	8.97	0.3543	0.0000	3.90
★ Vanguard Short-term Corporate	VFSTX	**$10.80**	10.79	10.73	10.96	10.72	0.4465	0.0000	4.13
Income Equity Funds									
★ DNP Select Income[1,2]	DNP	**$10.80**	10.36	9.87	11.20	9.61	0.9600	0.0000	8.89
★ Vanguard REIT Index	VGSIX	**$15.28**	14.93	11.98	15.28	11.28	0.7900	0.0000	5.17
Large Cap. Value Equity Funds									
★ iShares S&P 500 Value Index[3]	IVE	**$53.05**	51.88	43.20	53.83	37.44	0.8565	0.1472	1.61
★ Vanguard Value Index	VIVAX	**$18.33**	17.64	14.77	18.33	13.09	0.3350	0.0000	1.83
Small Cap. Value Equity Funds									
★ iShares Sm. Cap. 600 Value Index[3]	IJS	**$96.42**	95.93	73.50	100.05	45.57	0.7530	0.3430	0.78
★ Vanguard Sm. Cap Value Index	VISVX	**$11.42**	10.94	8.72	11.42	7.39	0.0900	0.0000	0.79
Growth Equity Funds									
★ iShares S&P 500 Growth Index[3]	IVW	**$53.78**	53.32	45.75	54.51	41.25	0.5551	0.1124	1.03
★ Vanguard Growth Index	VIGRX	**$24.27**	24.11	20.38	24.52	18.59	0.2070	0.0000	0.85
Foreign Equity Funds									
★ iShares S&P Europe 350 Index[3]	IEV	**$62.55**	59.88	47.46	63.10	39.52	1.9044	0.0000	3.04
T Rowe Price European Stock	PRESX	**$16.82**	16.12	12.86	16.82	10.81	0.1400	0.0000	0.83
★ Vanguard European Stock Index	VEURX	**$20.94**	20.57	15.97	21.37	13.64	0.8600	0.0000	4.11

Recommended Gold-Mining Companies

	Ticker Symbol	12/15/03	Month Earlier	Year Earlier	— 52-Week — High	— 52-Week — Low	Distributions Latest 12 Months	Distributions Frequency	Yield (%)
Anglo American PLC, ADR	AAUK	**$20.56**	21.68	13.94	22.43	13.45	0.480	Semiannual	2.33
★ Anglogold Ltd., ADR	AU	**$47.29**	44.50	33.99	49.95	27.10	1.329	Semiannual	2.81
ASA Ltd.[1]	ASA	**$45.18**	44.81	39.30	48.00	31.76	0.600	Quarterly	1.33
★ Barrick Gold Corp.†	ABX	**$22.15**	21.22	16.00	22.82	14.10	0.220	Semiannual	0.99
★ Gold Fields Ltd.	GFI	**$13.72**	13.64	14.68	15.52	9.52	0.318	Semiannual	2.32
★ Newmont Mining	NEM	**$47.22**	44.24	29.00	50.28	24.08	0.200	Quarterly	0.42
★ Placer Dome†	PDG	**$16.90**	16.71	11.36	18.71	8.71	0.100	Semiannual	0.59
★ Rio Tinto PLC‡	RTP	**$103.00**	98.45	77.60	105.95	71.70	3.156	Semiannual	3.06

★ Buy. ☆ Hold. (s) All data adjusted for splits. † Dividend shown is after 15% Canadian tax withholding. ‡ Dividend shown is after 15% U.K. tax withholding on a portion of the total. 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.

December 31, 2003