AIS INVESTMENT GUIDE

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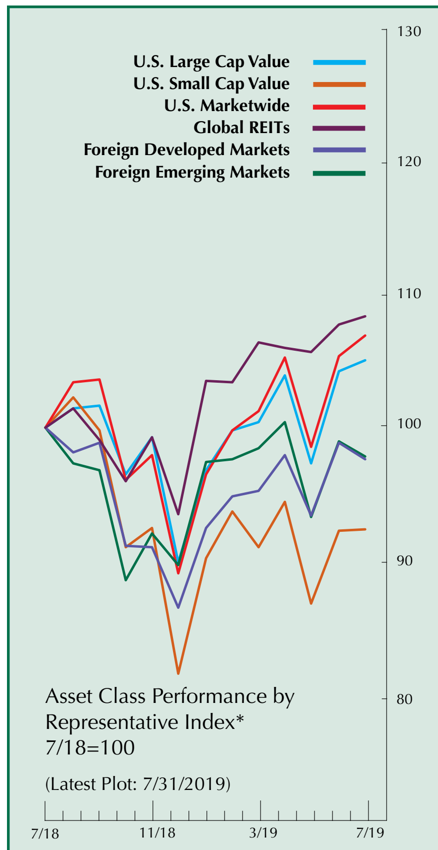


See box, page 62, for representative indexes.

Rates of Interest

As of August 27, 2019

Government Obligations[1]	
Fed Funds Rate	2.12%
3-Month Treas. Bill	1.93%
10-Yr. Treas. Note	1.52%
30-Yr. Treas. Bond	2.02%
10-Yr. TIPS	-0.02%
Muni Bonds - Nat'l 10-Yr.	1.20%
Mortgage Rates[2]	
15-Yr Fixed	3.03%
30-Yr Fixed	3.55%
Banking[3]	
Savings	0.09%
Money Market	0.19%
12-month CD	0.55%

[1] Federal Reserve, fmsbonds.com. Annualized Rates. Notes, bonds, TIPS reflect yield to maturity.
[2] Freddie Mac. Average (National average mortgages with 0.5 points).
[3] FDIC. Average national rates, non-jumbo deposits (<$100k).

A Reader Inquires: Technical Trading

In response to last month's article (Investment Fallacies, Part 1), a long-time reader asked about some claims he had heard from a well-known TV personality who bought and sold individual stocks. The TV pundit claims that he had the ability to consistently generate positive returns with his approach.

The strategy used by this particular personality uses momentum and technical indicators to make short-term trades in stocks. Traders who use technical indicators and momentum look at historical charts of stock prices and try to determine which direction a stock is headed in the future. This differs from fundamental analysts who look at the underlying data regarding sales, earnings or other firm-specific data and make longer-term predictions about whether a company is overvalued or undervalued. Technical traders often hold positions for only a few days, or even a few hours.

We used the opportunity to review the specific stock selections of this individual during 2017, which he published on his website. Not surprisingly, we found that returns were not consistently positive, and underperformed a simple passive index of U.S. stocks during the year we reviewed.

Moreover, traders attempting to follow these short-term trading strategies will undoubtedly incur significant trading costs. And any capital gains on trades will be subject to short-term capital gains taxes, which are unfavorably taxed as ordinary income.

Our approach does not require investors to guess what stock is going to do great this week or next. It does not incur large transaction costs, and it almost never results in short-term capital gains, since positions are meant to be held for the long-term (investments held greater than one year receive a more favorable tax treatment). This allows investors who follow the AIS approach to do those things they enjoy more than day-trading stocks. Ours is a better means of helping investors meet their financial objectives.

INVESTMENT FALLACIES PART 2

Last month we described several common investment fallacies that can lead to bad decisions. We continue this month by considering fallacies that can lead investors to refrain from selling financial assets when it may nevertheless be prudent to do so.

"Never Spend from Capital"

The story is told of a female member of a proper Bostonian family who was picked up by the police for streetwalking. At the urgent family conference that followed, the head of the family asked:

> "Emily, how could you do such a thing?"
> "I needed the money," she calmly replied.
> "But your father took care of you in his will, why didn't you use that money?"
> "Why, that would be spending out of capital!"

Old investment dictums die hard. Many investors cling to the notion that spending from capital (proceeds from the sale of stocks, bonds, mutual funds, etc.) runs contrary to the notion of building wealth. We occasionally encounter investors who insist on spending only from interest and dividends earned within their portfolios.

The rule was born during an era of sound money, when an investor could assume that when he recovered the face value of a bond at maturity he could be relatively certain that the purchasing power of the proceeds would not be diminished from when he first purchased the bond. The bond's periodic payments of interest would be similarly protected from price inflation. Indeed, during this era of stable prices an investor could spend from interest without the need to "dip into capital."

However, with the advent of fiat currencies, wise investors have since shifted to common stocks, gold, and other assets as a means of keeping pace with price inflation. So it would be irrational to refrain from selling common stocks or other assets in order to avoid spending from capital -- since they were purchased for the purpose of being sold.

In the current environment, with interest rates low and price inflation mild, investors should resist the temptation to "reach for yield" by purchasing fixed income assets with long maturities or lower credit ratings. Should price inflation accelerate, with a commensurate increase in interest rates, they will see the value of these securities drop rapidly. Everyone's circumstances are unique, but it is often better to spend from capital, even if it means liquidating assets at a modest but certain loss, than to assume the risk of a substantial loss in the near future.

"I Don't Want to Pay Capital Gains Taxes"

Not many people enjoy paying taxes, but sometimes tax-avoidance can entail greater risk and reduce overall returns. Investors sometimes lose sight of their objective—to maximize their risk-adjusted returns *after taxes*—and instead become fixated on avoiding taxes altogether, especially those levied on realized capital gains.

In some situations a single stock can account for a large portion of the investor's portfolio value—25 percent or more. Sometimes these shares are held in a taxable account and carry a very low cost basis. It is clear that the investor should diversify to avoid the risks inherent in a single company and industry. But the investor becomes hung up on the fact that he will incur a certain cost (a federal levy as high as 20 percent on the realized gain), while ignoring an uncertain but potentially enormous cost should the stock collapse.

The optimal solution to this dilemma is not always cut and dried. Much depends on the particular situation. For our clients we consider whether there is opportunity to offset all or part of any taxable gain by realize offsetting tax losses at year-end. Another approach is to sell off shares over several tax years if we decide, after consulting with the client, that the benefit of delaying the tax outweighs the risk of being less than optimally diversified.

Another possible solution is a charitable remainder unitrust (CRUT). This allows an investor to donate the full market value of his stock to a charity, which will be sold without incurring an immediately taxable capital gain, and reinvested in assets that can provide the donor's named beneficiary with an income stream for life. At the death of the last named beneficiary the assets become the property of the charity. The donor also gains an immediate tax deduction for the present value of his eventual donation.

THE LATEST CYBER THREAT: SMiShing

SMiShing attacks are on the increase and becoming a victim to one could cost you dearly.

SMiShing scams are launched via text or SMS (cellular phone text) messaging that appears to come from a legitimate trusted source such as a credit card company, a bank or a custodian. The goal is to lure the account holder into logging on to what appears to be their online account utilizing a link embedded in the message. The victim is then directed to a bogus website that looks legitimate, where they are prompted to enter their account credentials. Once that information is entered the cyber thieves quickly access the actual account and drain it.

Why SMiShing works

People fall victim largely due to ever-increasing accessibility - people tend to carry their mobile devices everywhere they go, and it may be possible to catch them in a busy or distracted moment. The very nature of texting has a high degree of immediacy; users are likely to respond instantly to text messages, particularly those with a high degree of urgency. To make matters worse, texting has become a preferred method of legitimate communication by many financial institutions.

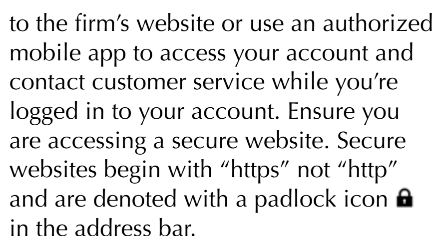
Avoid the Trap

If you received a text you know to be fraudulent, and have *not* interacted with it, simply delete it immediately.

If the text appears to come from your financial institution, *do not* click on

links embedded in the text message, and *do not* provide any personal information in response to the text message. You have several options other than responding via text.

Contact your bank or credit card company using a number you know is legitimate (e.g., the number on the back of your card). You can also navigate directly to the firm's website or use an authorized mobile app to access your account and contact customer service while you're logged in to your account. Ensure you are accessing a secure website. Secure websites begin with "https" not "http" and are denoted with a padlock icon in the address bar.



If you have clicked on the embedded link and supplied any credentials, you should immediately notify the financial provider or account vendor, (although it may already be too late as cyber thieves typically act instantaneously) and change your login and passwords for your financial provider and email accounts.

A RISK-ASSESSMENT FRAMEWORK

We all face financial risks. Financial planning is largely the process of evaluating those potential risks and developing strategies to manage them. In this article, we explain four general ways to address risk, and describe the framework that emerges for assessing financial solutions to the risks we confront.

Risk and the Rational Investor

In general, there are four basic ways for investors to respond to financial risks. We will demonstrate each by considering a risk many of us assume – that the automobile we own could be "totaled", that is, completely destroyed in an accident. Each of these four alternatives involves trade-offs; there is "no free lunch" in terms of a perfect solution. But for every individual there is an *optimal* approach that depends a great deal on personal preference. Individuals often take a combined approach.

Risk avoidance – You might choose to avoid risk altogether. For example, you can choose not to drive, or even to own a car in the first place. For many this would be an inconvenience too great to bear, but plenty of people make this choice. When it comes to financial risk, many people choose to avoid the uncertainty of the stock market by stashing their money in a risk-free bank account (or a mattress). Avoidance is not possible with all financial risks. Death (mortality risk) is the most obvious example.

Risk retention – You can retain risk simply by deciding to live with it. In this case it means that you take no action other than to acknowledge that if and when the car is destroyed you will have to live without it or come up with a way of replacing it. This is perhaps the most common way we deal with small, everyday risks. It can even be rational in our example; if you have a teenager who drives a car worth only $1,000, you may choose to retain the collision risk rather than pay for insurance.

Risk reduction (or "hedging") – You can also reduce (or hedge), risk. Instead of purchasing collision insurance, you could put the amount you would have paid in premiums in a savings account. This could be earmarked specifically to help finance another car, even if it falls short of full replacement value, in the event the car is destroyed.

Risk transference – You can transfer the risk to another party. This is typically accomplished through a policy with an insurance company that manages a risk pool. In exchange for recurring premiums, your risk is shared with others who also choose this strategy. In our example the car owner would purchase collision insurance.

Risk Management Framework

When working with new investors we determine the particular risks that most concern them, and evaluate any risk management methods (above) that they are employing currently. We proceed methodically by seeking answers to five overarching questions:

1. Of the multitude of risks life presents, which concern you most? This entails a discussion that can be lengthy or brief, depending on the investor's circumstances.

2. What are the explicit costs within your current risk management plan? Costs can come in the form of expense ratios, investment advisory fees, mortality and expense charges assessed on an annuity, premiums paid for an insurance policy, and so on. These costs are often directly proportional to the level of risk they claim to alleviate, and are not always easy to see.

3. What is the opportunity cost? Risk is not always bad. Compensated risk is, after all, the source of investment return. The opportunity cost of avoiding the stock market can be high. In our experience opportunity costs are often overlooked or underestimated.

4. How much of that risk is reduced or transferred? Solutions that eliminate or completely transfer risk generally come with higher expenses and greater opportunity costs compared with solutions that only reduce or retain some risk.

5. Does the product or approach create new risks? A financial product or approach may eliminate one risk only to give rise to another. For example, a 65-year old retiree who holds bonds and cash in hopes of avoiding a stock market decline faces increased risk that such savings may not grow adequately to keep pace with price inflation over time.

Our approach to financial planning and investment management is to understand, evaluate, and reduce the risks clients face. As economists we acknowledge that trade-offs are inevitable so we seek *optimal strategies* rather than perfect answers.

While our clients do not emerge with a plan intended to eliminate risk, we often help them reduce needless explicit costs and opportunity costs. This approach stands in contrast to advisors who speak of eliminating risks but downplay fees and the possibility that their "solutions" only create new perils.

The following article applies this framework to the risks encountered in retirement planning.

ASSESSING RISK IN RETIREMENT

With knowledge of the four methods of handling risk, and armed with a framework through which to review potential solutions, we can now assess the risks faced by investors who have retired or who are approaching retirement. We then can assess strategies and products available to address those risks.

Four Big Retirement Risks

An objective shared by most retirees is the ability to maintain their lifestyle without running out of money. To some this means to avoid literally going broke. For others it means trying to avoid spending from their heirs' potential inheritance. In either case, there are four primary risks that give rise to outliving income in retirement.

Market risk: The risk that investments in financial assets, particularly stocks, suffer a prolonged downturn.

- Market risk can be *retained*, which has a large potential payoff. But stocks are vulnerable to large losses or periods of prolonged underperformance. When it comes to investing, younger investors should be more willing to retain market risk with the expectation of higher growth over time, albeit with significant volatility.
- Market risk can be *reduced* by investing a broadly diversified portfolio that targets moderate or conservative risk. This is AIS' typical approach for clients nearing (or who are in) retirement.
- Market risk can be *avoided* at the cost of potentially generating little growth, which could be problematic for long-lived retirees.
- Market risk can be *transferred* with structured products such as fixed-income annuities. But these often come with high explicit and opportunity costs.

Price Inflation Risk: The risk that consumer prices rise relative to one's savings over time, requiring retirees on a fixed income to spend an ever-increasing share of their savings.

- Inflation risk is *retained* by keeping money in cash or through fixed-income annuities or pensions. When inflation risk is retained, it often means market risk is lower.
- Expected inflation risk can be *reduced* by investing in bonds with greater credit or term risk, or by assuming equity risk. These assets are priced to reflect the market's estimate of future inflation, but they entail greater market risk.
- Inflation risk cannot usually be *avoided*; all consumers are subject to this risk. However, the "flip side" is that inflation can be turned to one's advantage. For example a homeowner with a fixed-rate mortgage can "lock in" a monthly payment that will remain fixed during periods of rising inflation, in which case the borrower would be paying off his mortgage with depreciating dollars.
- Unexpected inflation risk can be *eliminated or transferred* by investing in Treasury Inflation Protected Securities (TIPS) or inflation-linked annuities, which provide an income stream that will increase directly in proportion to changes in the Consumer Price Index (CPI). However, these vehicles sacrifice potential for long-term growth and may entail high explicit costs.

Longevity/Mortality Risk: Longevity risk is the risk of living longer than anticipated, which increases the chance of outliving one's income. It is becoming increasingly common for retirees to live well past age 90. On the flip side, mortality risk (dying earlier than expected), is often a concern for married couples when one spouse can be expected to provide the major share of income during working years or retirement.

- Longevity risk is often *retained* by using traditional investment approaches. A diversified portfolio with exposure to stocks is meant to provide long-term growth that helps mitigate the concern that living a long time will deplete assets.
- Longevity risk can be *reduced* by purchasing immediate or deferred annuities that provide income as long as you survive. Most annuities do not come with a cost-of-living adjustment and are therefore vulnerable to inflation risk.
- Longevity risk and mortality risk can be *transferred* to an insurance company (through the use of annuities, with or without an inflation adjustment). Mortality risk can be transferred through life insurance.

Emergency Spending Risk (e.g., long-term care): The risk that unexpected expenses (e.g.,health care costs) trigger a large withdrawal from investments and rapidly deplete a portfolio.

- Emergency risk is most often *retained* by retirees who simply hope they don't face such circumstances.
- Emergency risk can be *reduced* by setting aside a portion of one's portfolio designated specifically for the purpose of covering emergency needs. We refer to this strategy as "self-insuring."
- Certain kinds of emergency risk can be *transferred* to an insurance company through products such as long-term care insurance.
- Emergency risk is difficult to *eliminate* entirely, at any cost.

Alterative Strategies

There are specific products and strategies available to address these four risks in retirement. These vary with regard cost, to the particular risks they address, and general usefulness.

Single premium immediate annuity (SPIA) – A SPIA is the most basic annuity available. Investors pay a lump sum to an insurance company that promises to pay a certain amount every year for as long as you live, beginning immediately.

Costs: These most basic annuities are generally available at a low explicit cost, but come with high opportunity cost. They do not provide for growth over the long-term, and if the insured dies earlier than expected, he or she has given up a potential bequest for heirs. These SPIAs can come with a slew of additional riders (period certain, joint-and-survivor, etc.) that will increase explicit costs.

Risks Mitigated: Longevity, Market, and Behavioral. A SPIA does an excellent job of reducing or even eliminating longevity risk, since they will last through your lifetime. They are not subject to market fluctuations.

Risks Increased: Inflation, Emergency, Insurer, and Liquidity. SPIAs are not typically adjusted for inflation, so they are still subject to inflation risk. Also, they provide only a fixed amount per year, so large one-time expenses will need to be funded by another source.

*Are they useful? Y*es, SPIAs can be helpful for someone who is concerned about living a long time and wants to ensure that their basic needs are covered without a lot of volatility. They are especially useful in conjunction with a traditional investment portfolio for investors with limited Social Security and pension income.

Inflation-linked annuity – An inflation-linked annuity is like an SPIA except payments increase with price inflation.

Costs: Because these annuities entirely eliminate an additional risk, they tend to be expensive (high explicit costs in the form of fees). They are also subject to significant opportunity costs like traditional SPIAs.

Risks Mitigated: Longevity, Market, Inflation, and Behavioral. Inflation-linked annuities are often extolled by economists because they essentially eliminate the primary risks associated with retirement.

Risks Increased: Emergency, Insurer, and Liquidity. If an emergency arises, the annuity payments may be inadequate to cover resulting costs.

Are they useful? Yes, inflation-linked annuities can be useful for people who are especially concerned with retirement risks and have ample money available to minimize those risks. However, they come at such a high cost that few people use them in practice. Few insurers even offer these products because there is such little demand.

Delaying Social Security – One approach that we often recommend for retirees is to delay Social Security benefits, which increase with inflation, in order to maximize guaranteed income. For each year past the full retirement age that a worker delays, the benefit increases by 8 percent.

Costs: There is no explicit cost associated with delaying benefits, but retirees may need to spend from investment portfolios in order to cover spending needs prior to claiming benefits. This can come at the opportunity cost of not allowing investments to continue to grow.

Risks Mitigated: Longevity, Market, Inflation, and Behavioral. Delaying benefits provides a triple-hedge against the primary retirement risks. Benefits are indexed to inflation, are not subject to market fluctuations, and will continue to be paid until death.

Risks Increased: Emergency, Social Security, and Liquidity. When forced to spend from an investment portfolio in order to delay benefits, the amount available for emergencies is diminished.

Is this a useful approach? Yes, financial experts overwhelmingly recommend delaying benefits for those who can afford to do so, especially for healthy couples. Delaying benefits is like buying an inflation-linked annuity, but comes at a much lower cost.

Moderate diversified portfolio – Our preferred approach to investment management is to structure a portfolio that suits a client's financial needs and risk tolerance. We prefer a broadly diversified portfolio that minimizes exposure to any single company or asset class.

Costs: There is a range of potential costs associated with a traditional investment portfolio. One is to self-manage your investment portfolio using only low-cost mutual funds and ETFs; this would be a very cost-effective approach. Another option is to hire an investment advisor, who may choose to use costly mutual funds and/or assess a high management fee, which would increase explicit costs. (We recommend low-cost mutual funds and ETFs for our clients and strive to maintain a highly competitive fee relative to the industry).

The opportunity costs of a diversified portfolio depend on how much risk is assumed within the portfolio. More conservative investors will have higher opportunity costs by overweighting asset classes with lower expected returns (bonds), while more aggressive investors will have fewer opportunity costs by maximizing expected returns.

Risks Reduced: Inflation, Longevity, Emergency, Market, and Asset Class. A moderate portfolio can reduce, but not eliminate, all of the primary retirement risks.

Inflation risk is reduced by investing in assets that are expected to grow at a rate faster than inflation. Longevity risk is reduced by structuring a portfolio for long-term growth. Emergency risk is reduced because the investment portfolio is readily available for emergency spending (although the risk is not transferred to an insurer). Market risk is reduced by investing in a variety of asset classes; more conservative portfolios will reduce market risk more than aggressive portfolios.

Risks Increased: Behavioral. The biggest risk with an investment portfolio is that you retain significant exposure so markets, over which no individual has control. Staying invested can be difficult behaviorally. Hiring an advisor can help, but comes with increased cost.

Is it useful? A moderate, diversified portfolio is our preferred method of handling most risks. The strategies we employ for our clients are tailored, and may entail annuities or insurance products, but almost all include a diversified investment portfolios.

Long-term care insurance – Long-term care insurance is coverage provided through an insurer for long-term care needs such as in-home health care or nursing home expenses.

Costs: Long-term care insurance tends to be very expensive. Direct costs can be high and remove assets from a portfolio that could otherwise be positioned for long-term growth.

Risks Mitigated: Emergency. Long-term care insurance transfers a very large potential expense to an insurer.

Risks Increased: Insurer and Inflation. If prices rise over time, long-term health care will be assured, but your remaining portfolio may dwindle because of the very high premiums assessed.

Is it useful? Yes. We recommend long-term care insurance for certain people approaching retirement. However, self-insuring is a much less expensive way to reduce this risk for investors with the assets available to do so.

Conclusion

We seek solutions that address the most relevant risks to investors while incurring low explicit and opportunity costs. Certain investors and retirees will inevitably deem certain risks more important than others, and they can seek strategies and products that target those risks.

We perform comprehensive risk assessments and portfolio reviews. To learn more contact us at 413-637-3327.

THE HIGH-YIELD DOW INVESTMENT STRATEGY

Recommended HYD Portfolio

As of August 15, 2019					*—-Percent of Portfolio—-*	
	Rank	*Yield (%)*	*Price ($)*	*Status*	*Value (%)*	*No. Shares (%)*[1]
Dow, Inc.	1	6.45	43.38	Buying	6.76	11.13
Exxon Mobil	2	5.17	67.25	Holding**	22.68	24.12
IBM	3	4.91	131.92	Holding**	24.85	13.48
Verizon	4	4.28	56.30	Holding**	27.00	34.31
Pfizer	5	4.18	34.48	Holding	3.77	7.83
Chevron	6	4.07	116.95	Selling	12.78	7.82
Proctor & Gamble	18	2.54	117.39	Holding	2.16	1.32
Cash (6-mo. T-Bill)	N/A	N/A			0.01	N/A
Totals					100.00	100.00

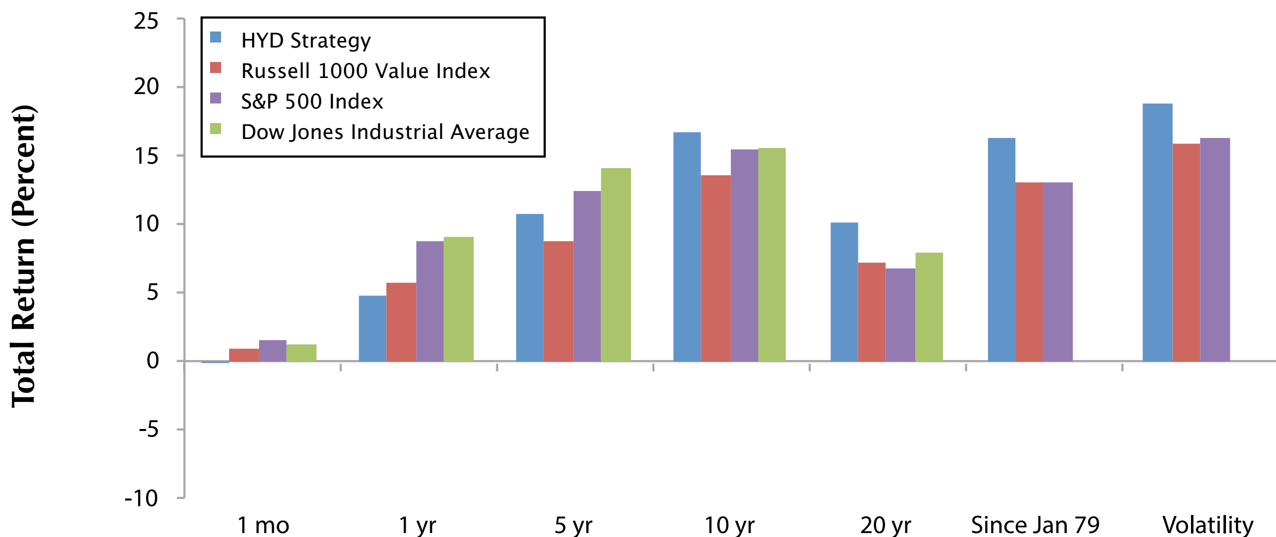
**Currently indicated purchases approximately equal to indicated purchases 18 months ago. [1]Because the percentage of each issue in the portfolio by value reflects the prices shown in the table (closing prices on the date indicated), we are also showing the number of shares of each stock as a percentage of the total number of shares in the entire portfolio.

Subscribers can find a full description of the strategy and methodology in the "Subscribers Only" (Log in required) section of our website: www.americaninvestment.com.

Comparative Hypothetical Total Returns (%) and Volatility

The data presented in the table and chart below represent total returns generated by a hypothetical HYD portfolio and by benchmark indexes for periods ending July 31, 2019*. Returns for the 5-,10- and 20-year periods are annualized, as is the volatility (standard deviation) of returns.

	1 mo.	1 yr.	5 yrs.	10 yrs.	20 yrs.	since Jan 79	*Volatility* since 1979
HYD Strategy	-0.14	4.38	9.82	15.22	9.20	14.86	17.10
Russell 1000 Value Index	0.83	5.20	8.01	12.40	6.52	11.93	14.43
S&P 500 Index	1.44	7.99	11.34	14.03	6.15	11.85	14.82
Dow Jones Industrial Average	1.12	8.22	12.87	14.19	7.24	N/A	N/A



*Data assume all purchases and sales at mid-month prices (+/–$0.125 per share commissions), reinvestment of all dividends and interest, and no taxes. Model HYD calculations are based on hypothetical trades following a very exacting stock-selection strategy. They do not reflect returns on actual investments or previous recommendations of AIS. Past performance may differ from future results. Historical performance results for the Russell 1000 Value Index, the Dow Jones Industrial Average and the S&P 500 Index do not reflect the deduction of transaction and/or custodial charges, or the deduction of an investment-management fee, the incurrence of which would have the effect of decreasing historical performance results. HYD Strategy results reflect the deduction of 0.725% management fee, the annual rate assessed to a $500,000 account managed through our Professional Asset Management service.

Unless otherwise specified returns and data cited within this publication are derived from the following sources: U.S. stock benchmarks: U.S. Marketwide - Russell 3000 Index; U.S. Large Cap Stocks - Russell 1000 Index; U.S. Large Cap Value - Russell 1000 Value Index; U.S. Large Cap Growth - Russell 1000 Growth Index; U.S. Midcap Stocks - Russell Midcap Index; U.S. Small Cap Stocks - Russell 2000 Index; U.S. Small Cap Value - Russell 2000 Value Index; U.S. Small Cap Growth - Russell 2000 Growth Index; U.S. Microcaps - Russell Microcap Index. Fixed income benchmarks: Cash & Equivalents - ICE BofAML US 3-Month Treasury Bill Index; U.S. Short-Term Investment Grade - Bloomberg Barclays US Government/Credit Bonds Index 1-5 Years; U.S. Bonds - Bloomberg Barclays US Aggregate Bond Index; U.S. Government Bonds - Bloomberg Barclays US Government Bond Index; TIPS - Bloomberg Barclays US TIPS Index; Municipal Bonds - Bloomberg Barclays Municipal Bond Index 5 Years; Foreign Bonds (hedged) - FTSE Non-USD World Government Bond Index 1-5 Years (hedged to USD). Foreign stock benchmarks: All returns in U.S. dollars. Developed Markets - MSCI World ex USA Index (net div.); Developed Markets Value - MSCI World ex USA Value Index (net div.); Developed Markets Growth - MSCI World ex USA Growth Index (net div.); Developed Markets Small Cap - MSCI World ex USA Small Cap Index (net div.); Developed Markets Small Cap Value - MSCI World ex USA Small Value Index (net div.); Developed Markets Small Cap Growth - MSCI World ex USA Small Growth Index (net div.); Emerging Markets - MSCI Emerging Markets Index (net div.); Emerging Markets Value - MSCI Emerging Markets Value Index (net div.). Real estate benchmarks: Global REITs - S&P Global REIT Index (net div.); U.S. REITs - S&P United States REIT Index (gross div.); International REITs - S&P Global ex US REIT Index (net div.). Gold benchmark: Gold London PM Fix Price. All data from DFA Returns 2.0 program, except Gold data from World Gold Council and Currency data from St. Louis Federal Reserve. Country performance provided by Dimensional Fund Advisors, based on respective indexes in the MSCI All Country World ex USA IMI Index (for developed markets) and MSCI Emerging Markets IMI Index. Sector returns represented by S&P 500 sectors.

RECENT MARKET STATISTICS

Precious Metals & Commodity Prices ($)

	8/15/19	*Mo. Earlier*	*Yr. Earlier*	*Prem. (%)*
Gold, London p.m. fixing	**1,515.65**	1,412.40	1,182.00	
Silver, London Spot Price	**17.29**	15.32	14.83	
Crude Oil, W. Texas Int. Spot	**54.51**	59.30	65.07	
Coin Prices ($)[1]				
American Eagle (1.00)	**1,531**	1,427	1,207	0.99
Austrian 100-Corona (0.9802)	**1,480**	1,378	1,152	-0.40
British Sovereign (0.2354)	**357**	332	278	0.00
Canadian Maple Leaf (1.00)	**1,526**	1,422	1,192	0.66
Mexican 50-Peso (1.2057)	**1,819**	1,695	1,417	-0.44
Mexican Ounce (1.00)	**1,534**	1,430	1,200	1.19
S. African Krugerrand (1.00)	**1,523**	1,419	1,189	0.46
U.S. Double Eagle-$20 (0.9675)				
St. Gaudens (MS-60)	**1,389**	1,282	1,250	-5.28
Liberty (Type II-AU50)	**1,402**	1,292	1,325	-4.39
Liberty (Type III-AU50)	**1,382**	1,272	1,230	-5.76
U.S. Silver Coins ($1,000 face value, circulated)				
90% Silver Circ. (715 oz.)	**11,446**	11,446	11,844	-7.41
40% Silver Circ. (295 oz.)	**4,686**	4,686	4,821	-8.13

[1]Premium reflects percentage difference between coin price and value of metal in a coin. The weight in troy ounces of the precious metal in coins is indicated in parentheses.

Recent Market Returns

Data through July 31, 2019

	U.S. Stocks (Mktwd)	Foreign Dev. Stocks	Foreign Emerg. Stocks	Global REITs	U.S. Bonds	Foreign Bonds (hedged)	Gold
1-month	1.49% ↑	-1.21% ↓	-1.22% ↓	0.62% ↑	0.22% ↑	0.48% ↑	1.32% ↑
3-month	1.59% ↑	-0.29% ↓	-2.67% ↓	2.33% ↑	3.28% ↑	1.48% ↑	11.33% ↑
1 year	7.05% ↑	-2.33% ↓	-2.18% ↓	8.57% ↑	8.08% ↑	4.38% ↑	16.92% ↑
5 year (annualized)	10.96% ↑	2.16% ↑	1.84% ↑	5.41% ↑	3.05% ↑	2.14% ↑	2.22% ↑
15 year (annualized)	9.27% ↑	5.57% ↑	8.74% ↑	6.88% ↑	4.22% ↑	2.91% ↑	9.04% ↑
Best and worst one-year returns, Jan. 2001 - July 2019							
Best	**56.0%**	**57.2%**	**91.6%**	**85.7%**	**13.8%**	**7.1%**	**57.6%**
During:	03/2009-02/2010	04/2003-03/2004	03/2009-02/2010	04/2009-03/2010	11/2008-10/2009	07/2008-06/2009	06/2005-05/2006
Worst	**-43.5%**	**-50.3%**	**-56.6%**	**-59.5%**	**-2.5%**	**0.1%**	**-27.4%**
During:	03/2008-02/2009	03/2008-02/2009	12/2007-11/2008	03/2008-02/2009	09/2012-08/2013	04/2010-03/2011	12/2012-11/2013

THE DOW JONES INDUSTRIALS RANKED BY YIELD*

	Ticker Symbol	*Market Prices ($) 8/15/19*	*7/15/19*	*8/15/18*	*12-Month ($) High*	*Low*	*Latest Dividend Amount ($)*	*Record Date*	*Payable Date*	*Indicated Annual Dividend ($)*	*Yield† (%)*
Dow Chemical	DOW	43.38	50.93	n/a	60.52	40.44	0.700	8/30/19	9/13/19	2.800	6.45
Exxon Mobil	XOM	67.25	77.08	76.94	87.36	64.65	0.870	8/13/19	9/10/19	3.480	5.17
IBM	IBM	131.92	143.32	143.91	154.36	105.94	1.620	8/9/19	9/10/19	6.480	4.91
Verizon	VZ	56.30	57.58	53.24	61.58	52.28	0.603	7/10/19	8/1/19	2.410	4.28
Pfizer	PFE	34.48	42.75	41.16	46.47	33.97	0.360	8/2/19	9/3/19	1.440	4.18
Chevron	CVX	116.95	125.72	117.94	127.60	100.22	1.190	8/19/19	9/10/19	4.760	4.07
Walgreen's	WBA	49.29	55.89	68.73	86.31	49.12	0.458	8/20/19	9/12/19	1.830	3.71
3M Company	MMM	156.84	172.84	201.39	219.75	155.08	1.440	8/16/19	9/12/19	5.760	3.67
Caterpillar	CAT	115.25	139.64	132.02	159.37	112.06	1.030	7/22/19	8/20/19	4.120	3.57
J P Morgan	JPM	105.20	113.90	113.70	119.24	91.11	0.900	10/4/19	10/31/19	3.600	3.42
Cisco	CSCO	46.25	58.05	43.86	58.26	40.25	0.350	7/5/19	7/24/19	1.400	3.03
Coca-Cola	KO	53.87	52.13	46.08	54.82	44.25	0.400	9/16/19	10/1/19	1.600	2.97
Johnson & Johnson	JNJ	130.54	134.71	130.43	148.99	121.00	0.950	8/27/19	9/10/19	3.800	2.91
Intel Corp	INTC	45.70	50.12	47.46	59.59	42.36	0.315	8/7/19	9/1/19	1.260	2.76
Home Depot, Inc.	HD	201.79	218.70	193.99	222.66	158.09	1.360	9/5/19	9/19/19	5.440	2.70
Merck	MRK	83.46	80.96	67.37	87.25	66.10	0.550	9/16/19	10/7/19	2.200	2.64
Goldman Sachs	GS	196.18	211.58	229.25	245.08	151.70	1.250	8/30/19	9/27/19	5.000	2.55
Procter and Gamble	PG	117.39	115.48	82.30	121.76	78.49	0.746	7/19/19	8/15/19	2.984	2.54
Boeing	BA	328.00	361.61	331.76	446.01	292.47	2.055	8/9/19	9/6/19	8.220	2.51
United Tech.	UTX	123.74	133.23	131.75	144.40	100.48	0.735	8/16/19	9/10/19	2.940	2.38
Travelers	TRV	145.59	154.83	128.77	155.09	111.08	0.820	9/10/19	9/30/19	3.280	2.25
McDonald's	MCD	218.27	214.21	159.88	221.93	156.56	1.160	9/3/19	9/17/19	4.640	2.13
Wal-Mart Stores	WMT	112.69	114.98	90.22	115.49	85.78	0.530	12/6/19	1/2/20	2.120	1.88
Unitedhealth Group	UNH	244.25	265.96	260.61	287.94	208.07	1.080	9/16/19	9/24/19	4.320	1.77
Apple	AAPL	201.74	205.21	210.24	233.47	142.00	0.770	8/12/19	8/15/19	3.080	1.53
Microsoft Corp.	MSFT	133.68	138.90	107.66	141.68	93.96	0.460	8/15/19	9/12/19	1.840	1.38
Walt Disney	DIS	133.41	145.06	112.85	147.15	100.35	0.880	7/8/19	7/25/19	1.760	1.32
American Express	AXP	122.38	128.57	101.51	129.34	89.05	0.390	7/5/19	8/9/19	1.560	1.27
Nike	NKE	79.51	89.48	79.57	90.00	66.53	0.220	9/3/19	9/30/19	0.880	1.11
Visa Inc.	V	176.27	180.57	139.92	184.07	121.60	0.250	8/16/19	9/3/19	1.000	0.57

† Based on indicated dividends and market price as of 8/15/19. Extra dividends are not included in annual yields.
All data adjusted for splits and spin-offs. 12-month data begins 8/15/18.

ASSET CLASS INVESTMENT VEHICLES

Data as of July 31, 2019		Security Symbol(s) (1)		Avg. Market Cap / Avg. Maturity	Number of Holdings	Expense Ratio (%)	Turnover (%)	Price-to-Book Ratio	Trailing 12-Mo. Yield (%)	Annualized Returns (%)			Tax Cost Ratio - 3 Years (%) (3)
		Mutual Fund	ETF							1-Year	3-Year	5-Year	
Fixed Income													
Short-Term Bonds	Vanguard Short-Term Bond Adm	VBIRX	BSV	2.90 yrs	2426	0.07	48		2.19	5.25	1.61	1.77	0.77
Short-Term Bonds	SPDR Portfolio Short Term Corp Bd ETF		SPSB	1.94 yrs	1173	0.07	56		2.75	4.66	2.09	1.91	0.89
Short-Term Bonds	iShares 1-3 Year Treasury Bond ETF		SHY	1.95 yrs	82	0.15	62		2.09	3.83	1.15	1.09	0.57
Interm-Term	Vanguard Total Bond Market Adm	VBTLX	BND	8.20 yrs	17338	0.05	54		2.78	8.06	2.08	2.99	1.10
Interm-Term	iShares Core US Aggregate Bond ETF		AGG	7.78 yrs	7497	0.05	146		2.71	7.94	2.06	2.98	1.05
Tax-Exempt	Vanguard Ltd-Term Tax-Exempt Inv	VMLTX		2.80 yrs	5222	0.17	28		1.89	4.09	1.65	1.67	0.00
Tax-Exempt	SPDR Nuveen Blmbg Barclays ST MunBd ETF		SHM	3.12 yrs	1043	0.20	27		1.33	3.77	1.18	1.25	0.00
Tax-Exempt	Vanguard Interm-Term Tx-Ex Inv	VWITX		5.30 yrs	8426	0.17	15		2.68	6.94	2.52	3.29	0.00
Inflation-Protected	iShares TIPS Bond ETF		TIP	7.99 yrs	40	0.19	21		2.32	5.51	1.81	1.70	0.94
Inflation-Protected	Vanguard Inflation-Protected Securities Inv	VIPSX		8.20 yrs	42	0.20	27		2.39	5.39	1.66	1.63	1.08
International	Vanguard Total International Bond Adm	VTABX	BNDX	9.70 yrs	5883	0.11	22		2.85	9.37	3.56	4.48	0.97
Real Estate (REITs)													
U.S. REITs	Vanguard REIT Adm	VGSLX	VNQ	14.84 B	191	0.11	24	2.49	3.98	13.17	3.16	8.02	1.50
U.S. REITs	SPDR Dow Jones REIT		RWR	13.49 B	96	0.25	6	2.27	3.64	10.75	2.56	7.64	1.51
Int'l REITs	Vanguard Global ex-US Real Estate Adm (2)	VGRLX	VNQI	6.44 B	616	0.12	7	0.94	3.49	2.42	5.43	3.92	1.64
Int'l REITs	iShares International Developed Property		WPS	6.60 B	359	0.48	9	0.92	4.64	1.40	4.16	3.47	1.73
Global (incl. U.S.)	SPDR Dow Jones Global Real Estate ETF		RWO	10.35 B	228	0.50	11	1.48	3.34	7.03	2.05	4.94	1.41
U.S. Stocks													
Large Cap (blend)	Vanguard S&P 500 Adm	VFIAX	VOO	108.43 B	514	0.04	4	3.05	1.94	7.95	13.32	11.30	0.58
Large Cap (blend)	iShares Core S&P 500		IVV	108.96 B	509	0.04	5	3.07	1.99	7.91	13.33	11.29	0.51
Large Cap (blend)	iShares Russell 1000 ETF		IWB	82.85 B	1005	0.15	6	2.97	1.84	7.82	13.17	11.01	0.48
Large Cap Value	Vanguard Value Adm	VVIAX	VTV	83.53 B	356	0.05	8	2.10	2.56	5.77	11.39	9.70	0.75
Large Cap Value	iShares Russell 1000 Value		IWD	56.63 B	763	0.20	17	1.86	2.32	5.03	9.27	7.83	0.61
Small Cap (blend)	iShares Core S&P Small-Cap ETF		IJR	1.65 B	606	0.07	14	1.73	1.41	-6.72	10.56	9.89	0.38
Small Cap (blend)	Schwab US Small-Cap ETF		SCHA	2.85 B	1740	0.04	9	1.89	1.39	-1.73	9.93	8.41	0.43
Small Cap Value	Vanguard Small Cap Value Adm	VSIAX	VBR	3.55 B	876	0.07	18	1.54	2.23	-3.23	8.31	7.81	0.67
Small Cap Value	iShares Russell 2000 Value		IWN	1.53 B	1398	0.24	26	1.22	1.81	-7.83	7.83	6.66	0.56
Small Cap Value	iShares Micro-Cap		IWC	0.43 B	1399	0.60	25	1.35	0.97	-11.61	8.75	6.69	0.31
Marketwide	Vanguard Total Stock Market Adm	VTSAX	VTI	62.84 B	3640	0.04	3	2.82	1.80	6.97	13.10	10.93	0.65
Marketwide	Fidelity Total Market Index	FSKAX		63.02 B	3454	0.02	8	2.82	1.70	6.91	13.09	10.93	0.90
Foreign Stocks													
Developed Markets	Vanguard FTSE Developed Markets Adm	VTMGX	VEA	23.13 B	3931	0.07	3	1.36	2.84	-4.33	6.55	n/a	0.79
Developed Markets	iShares Core MSCI EAFE ETF		IEFA	24.03 B	2484	0.07	2	1.41	3.20	-3.86	6.88	2.80	0.84
Emerging Markets	Vanguard Emerging Markets Stock Adm	VEMAX	VWO	20.52 B	4158	0.14	11	1.47	2.57	-1.11	7.20	1.73	0.84
Emerging Markets	Schwab Emerging Markets Equity ETF		SCHE	30.89 B	1221	0.13	18	1.55	3.05	-1.17	7.63	2.16	0.81
Gold-Related Funds													
Gold ETFs	SPDR Gold Minishares		GLDM			0.18			0.00	15.09	n/a	n/a	0.00
Gold ETFs	GraniteShares Gold Trust		BAR			0.17			0.00	15.13	n/a	n/a	0.00

Data provided by the funds and Morningstar. (1) Some funds are available as mutual funds and ETFs, in which case both symbols are shown. In these cases, data represent the mutual fund. The ETF may offer a lower expense ratio and returns may deviate. For Vanguard funds, Adm indicates the Admiral share class is shown; Inv indicates the Investor share class is shown. (2) VGRLX includes a 0.25% fee on purchases and redemptions, which are paid directly to the fund. (3) This represents the percentage-point reduction in an annualized return that results from income taxes. The calculation assumes investors pay the maximum federal rate on capital gains and ordinary income. The calculation comes directly from Morningstar.

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