



* See page 70 for representative indexes.

The *Investment Guide* is intended to provide useful information to investors who manage their own financial assets. **We also provide low cost discretionary asset management services** for individuals and institutions seeking professional advice and assistance in implementing an investment strategy.

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Negative Real Returns¹

Nominal interest rates are currently below zero in many countries, including Germany, Denmark, Switzerland, Sweden, and Japan. These levels have turned the common belief that zero is the lower bound for such rates on its head. While negative nominal rates are a relatively new phenomenon, periods of widespread negative real returns across countries have been quite common.

Why Care About Real Rates of Return?

In 1970, a loaf of bread cost 25 cents. A gallon of gas cost 36 cents. Today, an average loaf of bread and a gallon of gas each cost around two dollars.² When the prices of goods and services increase, consumers can buy fewer of them with every dollar they have saved. This is called inflation, and it eats into investors' returns.

Real rates of return are adjusted for inflation, so they account for changes in the purchasing power of a dollar over the life of an investment. Because inflation affects the cost of living, investors must consider the inflation-adjusted—or real—return of their investments. When inflation outpaces the nominal returns on an investment, investors experience negative real returns and actually lose purchasing power.

Brief History: Treasury Bill Returns

Exhibit 1 (following page) shows the annual real returns on one-month US Treasury bills. From 2009 to 2015, the annual real return was negative. This circumstance is not unprecedented. Since 1900, the US has had negative real returns in over a third of those years. And negative real returns on government bills are not exclusive to the US. All countries listed in Exhibit 2 have had negative real returns on their respective government bills in at least one out of every five years from 1900 to 2015.

Bond Investors May Get More than the Bill Return

In the current low-yield environment, rolling over short-term bills may not seem appealing to investors keen on protecting their purchasing power. Exhibit 3 shows that the return of one-month US Treasury bills has not kept pace with inflation³ over the past 10 years.

(continued next page)

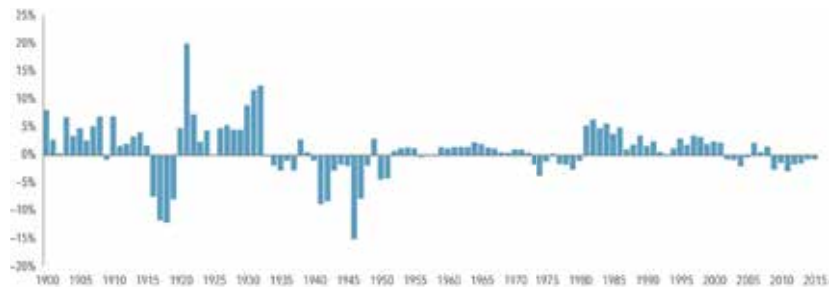
But even when the real return on bills is negative, a relatively common occurrence, bond investors may still achieve positive expected real returns by broadening their investment universe. The bond market is composed of thousands of global bonds with different characteristics. Many of those bonds allow investors to target global term and credit premiums, which in turn may provide positive real returns even in low interest rate environments. Exhibit 3 also shows that the Barclays Global Aggregate Bond Index has outpaced inflation while maintaining low real return volatility of 3.4% annualized over the past 10 years.

Global diversification is often thought of as a tool for reducing risk. However, when it comes to fixed income, global portfolios can also play an important role in the pursuit of increased expected returns. Even if the expected real returns of bonds in one country are negative, another yield curve may provide positive expected real returns. The flexibility to pursue higher expected returns from bonds around the world can be an important defense against low, and even negative, yields.

Summary

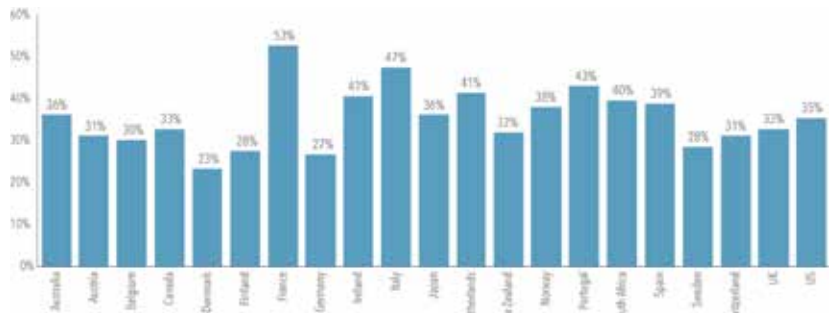
The goal of many investors is to grow some (or all) of their savings in real terms. Even in a low interest rate environment, there may be bond investments that can still achieve this goal. In particular, investors who target global term and credit premiums should be better positioned to pursue higher expected returns.

Exhibit 1. Annual Real Returns of One-Month US Treasury Bills



Source: Dimson, Marsh, and Staunton (DMS); Morningstar.

Exhibit 2. Percent of Years with Negative Real Returns on Government Bills, 1900–2015



Source: Dimson, Marsh, and Staunton (DMS); Morningstar.

Exhibit 3. Trailing Annualized Returns



1. Source: Dimensional Fund Advisors LP. Past performance may not be indicative of future results. Therefore, no current or prospective investor should assume that the future performance of any specific investment, investment strategy (including the investments and/or investment strategies recommended by AIS), or product made reference to directly or indirectly, will be profitable or equal to past performance levels. Indexes are not available for direct investment. Historical performance results for investment indexes and/or categories generally 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. The results portrayed in this portfolio reflect the reinvestment of dividends and capital gains. Returns depicted are hypothetical and do not reflect historical recommendations of AIS.
2. Source: Bureau of Labor Statistics.
3. Measured as changes in the Consumer Price Index (CPI), which is defined by the US Department of Labor, Bureau of Labor and Statistics.

IS THIS THE WORST MUTUAL FUND IN THE WORLD?

We recommend index-type mutual funds because they are better diversified and more cost-effective than “actively managed” funds, which try to anticipate market trends or identify mispriced securities. Logic dictates, and evidence corroborates, that active managers must on average underperform market-wide index fund managers because of the higher fees they assess. While some managers have, for a period of time,

outperformed the market on a risk-adjusted basis, decades of data suggest that identifying them in advance is futile.

Index funds are particularly attractive because of their low fees (with notable exceptions, as we will see). These funds need only match the holdings that comprise a commercial index, such as the S&P 500. This simple structure avoids the research outlays and higher transaction costs incurred by

active funds, which can be substantial.

Price competition among index funds, moreover, is fierce. Index fund managers have a mandate to track a specified index as closely as possible, so two funds tracking the same index will have portfolios with virtually identical holdings. Such funds can be differentiated only by the fees they assess. In order to remain competitive managers must therefore focus

relentlessly on reducing costs and passing those savings on to investors.

For example, the Vanguard 500 Index Fund, which tracks the S&P 500 index, entails an annual net expense ratio between 0.05-0.16 percent depending on the share class. Since 2003 annual expenses for the Admiral share class (VFIAX) have fallen from 0.12 percent to 0.05 percent. A competing fund, the Fidelity S&P 500 Index fund, recently advertised a 0.045 percent expense ratio. Exchange-traded funds have made the field even more price competitive.

VFIAX has performed as expected. Over the last five years, the fund's S&P 500 index benchmark returned a hypothetical 12.55 percent, while the VFIAX returned 12.51 percent per year – almost exactly the benchmark return minus expenses.

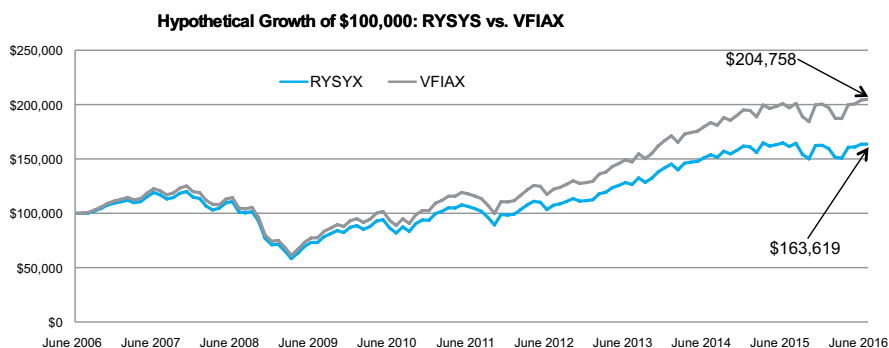
Danger: Index Abusers Lurk

When it comes to fees, it turns out that not all index funds are created equal. In fact, some are markedly inferior. Allow us to introduce what might be the worst mutual fund in the world, the Rydex S&P 500 Fund – Class C (RYSYX).

The Rydex fund tracks the S&P 500, just like many other index funds. But it charges a net expense ratio of 2.31 percent according to the last prospectus -- for the seemingly simple task of matching a list of stocks that changes essentially once per year.

This fund, like its Vanguard counterpart, has performed about as we would expect relative to its bogey: it has earned roughly the benchmark return minus expenses. The 5-year return for the Rydex fund has been 9.88 percent, about 2.67 percent below the benchmark.

Clearly “earning the benchmark minus expenses” makes a big difference when comparing these funds. The benchmark for the two funds is the same, so it all comes down to expenses. The chart nearby depicts the impact of fees over time. *An initial investment of \$100,000 in the Rydex fund in June 2006 would have grown to about \$163,619 at the end of June 2016, while an equivalent investment in the Vanguard fund would have grown to \$204,758. The difference, \$41,139, constitutes an*



Source: Morningstar advisor tools. Past performance may not be indicative of future results. Therefore, no current or prospective investor should assume that the future performance of any specific investment, investment strategy or product made reference to directly or indirectly, will be profitable or equal to past performance levels. Indexes are not available for direct investment. Historical performance results for investment indexes and/or categories generally 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. The results portrayed in this portfolio reflect the reinvestment of dividends and capital gains. Returns depicted are hypothetical and do not constitute recommendations.

opportunity cost, and therefore a loss, for Rydex investors.¹

A further breakdown of the charges on this Class C fund reveals a 0.75 percent management fee, a 1.00 percent 12b-1 fee (the marketing or distribution fee which compensates advisors for selling the fund), and a deferred sales load of 1.00 percent (this is sales charge which is assessed based on how long the fund is held).

“Buying RYSYX when VFIAX is available is analogous to buying gasoline for \$99 per gallon when there is a gas station a block away offering it for \$2.14 per gallon.”

According to Morningstar, the Rydex fund has about \$228 million in assets under management. This would suggest that, with a net expense of 2.31 percent, people affiliated with selling and managing this fund collect more than \$5 million per year. This fund is not the only one of its kind. According to one source², there is more than \$23 billion invested in S&P 500 Index funds with expense ratios of 0.50 percent or more.

The Economist Ponders...

It is a bit of a riddle to economists as to why a rational investor would buy the Rydex fund when other funds are available from Vanguard, Fidelity or others, which seek to match the same index, but are up to 46 times less expensive. Buying RYSYX when VFIAX is

available is analogous to buying gasoline for \$99 per gallon when there is a gas station a block away offering it for \$2.14 per gallon.

There is no obvious reason that accounts for the existence of these high-cost funds. One possible explanation is that they could be held in 401(k) plans that offer only high-cost index funds; the higher fees assessed by these funds might cover necessary plan administration or record keeping costs. It is also plausible that funds held in taxable accounts could include positions with large unrealized capital gains that, if redeemed, would generate a capital gain tax greater than the cost of enduring continued high annual fees. This might explain why investors do not redeem their shares, but it fails to explain why an investor would have purchased the fund to begin with.

An alternative explanation asserts that many money managers do not serve as fiduciaries and therefore are not legally bound to act in the best interest of their clients. Brokers for example often have little incentive to consider the entire universe of investment vehicles available. Many derive sales commissions or revenue trails for selling certain funds but receive no such compensation for recommending lower cost funds from Vanguard or others.

None of these answers are fully satisfactory. In any event, our job is to help you make rational choices, and to that end we recommend that you consider only the investment vehicles listed on page 72, or funds provided by Dimensional Fund Advisors, which are available through our advisory services. For more information, contact Seth Hoffman at (413) 528-1216 ext. 3138.

1. For simplicity we ignore taxes, assume no investor additions or withdrawals and that all fund distributions are reinvested. Source: Morningstar Advisor Tools.
2. The S&P 500 Index Fund Hall of Shame. Ariadne Wealth Advisors. <http://ariadnewa.tumblr.com/post/134345958713/the-sp-500-index-fund-hall-of-shame>

TOWARD AN OPTIMAL REBALANCING STRATEGY

Our recommend portfolios include asset classes with returns that have not been strongly correlated to one another over time. This means that when a particular asset class is providing low returns relative to other asset classes held, an investor can be confident that another asset class (or classes), is delivering relatively high returns.

The desired effect of this diversification is to smooth an investor's overall portfolio returns over time. The total return of a diversified portfolio might have lower expected returns compared with a more concentrated portfolio, such as one investing 100 percent in U.S. stocks. But the "smoother" pattern of returns of the diversified portfolio can be invaluable because it helps investors to maintain their long-term focus and not fixate on short-term fluctuations. Empirical evidence suggests that investors who are able to maintain their positions for the long term, through peaks and troughs, outperform those that are inclined to trade in and out of positions.

Investors should focus on finding the proper balance of assets such that the expected return is maximized for a tolerable level of volatility, or risk. Once this allocation plan has been determined, future changes in asset allocation should be driven by changes in the investor's circumstances, and not by guessing at changes in the market. This reduces trading relative to a strategy based on speculation, and has the added bonus of minimizing transaction costs.

However, over long periods of time, certain asset classes will inevitably outperform others, resulting in portfolios that deviate from the original strategy. That is, the portfolio's actual percentage allocations to various asset classes will drift from the targeted allocations. To avoid this, investors must regularly "rebalance" their portfolios to match the targets.

Consider, for example, an investor who bought a simple portfolio consisting of 60 percent stocks and 40 percent bonds in January 2009. If that investor did not add or withdraw funds and never rebalanced his portfolio, at the end of 2014 common stocks would have comprised about 77 percent of his holdings. This is the result of the high returns of stocks relative to bonds during this period. While we expect short term

spans when bond returns will dominate, we expect a "stock heavy" portfolio to emerge over the long term since stocks generally have higher expected returns compared to bonds.

This result may not be bad from a total return perspective, but it could lead to risk that is outside of the investor's comfort zone. The volatility¹ of a 77/23 portfolio since 1926 has been about 3 percentage points higher than the volatility of a 60/40 portfolio – a meaningful difference. If an investor is comfortable with the ups and downs of a 60/40 portfolio, the higher turbulence of the 77/23 portfolio might prove to be intolerable. Higher volatility over market cycles can lead to unwarranted exuberance or panic that all too often triggers poor investment decisions. For example, when investors are exposed to more risk than they're comfortable with, they may act on an urge to sell after the market has dropped sharply.

Rebalance for Returns?

Intuitively, it might seem that rebalancing can actually increase returns; after all it entails "selling high and buying low" by selling holdings of an asset class that has performed relatively well in order to purchase holdings of an asset class that has underperformed.

It is tricky to measure whether rebalancing can improve returns² because the answer is heavily dependent on the dataset used for analysis; the outcome depends on the historical period in question and the asset classes being considered. One can certainly identify periods when rebalancing would have increased returns. For instance, coming out of the financial crisis, rebalanced portfolios outperformed because they tended to sell bonds in order to buy more stocks, which subsequently soared from the lows reached in March 2009.

However, research using long-term data suggests that rebalancing should not be expected to boost returns, and may even lead to lower returns.³ This outcome is consistent with economic theory. If we believe that stocks provide higher expected returns relative to bonds, then we would expect our rebalancing transactions to generally be selling stocks -- an asset class with higher expected

returns -- in order to buy bonds -- an asset class with lower expected returns. As long as we expect stocks to continue to outperform bonds, this should reduce our expected returns over the long term.

However, to repeat, because rebalancing reduces our expected volatility, it can serve, ultimately, to better investment outcomes. *The end result of rebalancing is a superior portfolio in the sense that it may improve an investor's returns by encouraging more disciplined investor behavior.* That is, by reducing volatility and maintaining a systematic rebalancing strategy, we can reduce the urge to buy and sell, often at the wrong time.

The lesson is that while it is unlikely that rebalancing increases expected returns per se, most investors should nevertheless adopt a disciplined rebalancing process. This provides protection against our impulses, which all too often are the primary reason investors fail to meet their goals.

This requires a rule or a process with clear parameters that will signal when rebalancing is warranted, and above all must be independent from human emotion.

Our Framework

Selecting an "optimal" rebalance frequency is as much art as science, but we have put together a quantitative framework for establishing a systematic rebalancing strategy. The two initial decisions that must be made about systematic rebalancing are:

1. How often should an investor look at his portfolio to consider whether rebalancing is warranted?
2. What "threshold" should trigger a call for rebalancing? In other words, how far from the target should the allocation be before it is worth it to make the rebalancing trade?

In order to assess these questions, we assessed a hypothetical portfolio comprised of 60 percent U.S. stocks and 40 percent U.S. bonds. We then simulated historical performance based on various rebalancing strategies.

We tested monthly, quarterly, and

Optimal Rebalance Frequencies and Thresholds for 60/40 Stock/Bond Portfolio

	Best		Second Best	
	Using data since 1926	Using data since 1980	Using data since 1926	Using data since 1980
0.0% transaction costs				
low risk aversion (1)	Annual, 45%	Monthly, 25%	Quarterly, 30%	Monthly, 45%
medium risk aversion (5)	Annual, 0%	Quarterly, 15%	Annual, 5%	Annual, 10%
high risk aversion (10)	Annual, 0%	Annual, 0%	Annual, 5%	Annual, 5%
0.10% transaction costs				
low risk aversion (1)	Annual, 45%	Monthly, 45%	Annual, 40%	Monthly, 25%
medium risk aversion (5)	Annual, 25%	Quarterly, 15%	Annual, 20%	Monthly, 25%
high risk aversion (10)	Annual, 10%	Quarterly, 15%	Annual, 5%	Annual, 10%

Source: AIS calculations based on data from CRSP 1-10 Deciles Index, 5-Year Treasuries, and CPI.

annual frequencies to assess how often an investor should look at his portfolio to consider whether it should be rebalanced (theoretically, an investor could choose to look every day, but we determined this to be unrealistic and potentially costly). We also tested different “thresholds” for rebalancing. For example, a threshold of 10 percent triggered a rebalancing whenever an asset class strayed from its assigned target by more than 10 percent. For the 60 percent stock portion of the portfolio, a 10 percent threshold would trigger a rebalancing if the stock allocation fell below 54 percent or rose above 66 percent.

Our methodology acknowledges the trade-off we have described: more frequent rebalancing will reduce volatility but is also likely to reduce expected returns, especially when transaction costs are incorporated. Investors’ preferences vary with respect to this trade-off, so we considered hypothetical returns and volatility of the simulated portfolios in order to help identify a baseline, from which investors could deviate according to their individual preferences.

We employed a “utility” function to help identify this optimal strategy.⁴ This simply provides a mathematical measure that allows us to rank an investor’s hypothetical satisfaction with various outcomes, assuming that the goal is to minimize risk (volatility) for a given level of return.

Our baseline assessment suggests that a reasonable starting point for rebalancing is to look at the portfolio on a **quarterly basis** and rebalance when asset allocations are outside of a **15**

percent threshold (see table above).⁵

Since 1980, this rebalancing strategy would have had the effect of reducing the return by about 0.11 percent per year while reducing volatility by 0.19 percent per year, relative to a portfolio that was not rebalanced.

For investors with a higher tolerance for risk, it makes sense to potentially widen the rebalance threshold, to perhaps 25 percent. For investors with a lower tolerance for risk, it can make sense to narrow the threshold to 10 percent or less. Though it may seem counterintuitive, this suggests that risk-averse investors would trade more frequently than more risk tolerant investors.

Employee-investors with employer-sponsored retirement plans, such as 401(k) plans typically make contributions to their accounts with every paycheck. The investor establishes target allocations when the plan is established. After that investing is relatively “hands free” because every payday a portion of her earnings is automatically allocated pro rata according to those targets. These regular cash infusions serve to keep the portfolio in line with the targets, reducing the need to rebalance the portfolio deliberately.

Many 401(k) platforms also offer automated, periodic rebalancing with no transaction costs and, since these plans are tax-deferred, rebalancing trades generate no realized taxable gains. With no trading or tax costs it makes sense to reduce the threshold to 0 percent. This will result in rebalancing trades at every time interval selected by the investor (monthly, quarterly, or annual intervals

are often available). The investor need only decide how frequently to rebalance, but again, no optimal frequency is apparent. In general, for investors who can withstand larger swings in their portfolio value – those with a proclivity to “let it ride” – annual rebalancing might be adequate. For those investors that prefer to minimize their volatility, a monthly interval is probably more suitable.

There are other considerations to take into account when rebalancing. Investors with taxable accounts should consider the tax ramifications of trading. There may be less incentive for these investors to rebalance when unrealized capital gains are present. For investors with both taxable and tax-deferred accounts, rebalancing can be more complicated, because, while an investor’s target allocation plan should apply to the combined value of all his accounts, asset classes should be held within accounts based on their relative tax-efficiency (for example, many investors concentrate their REIT allocations in IRAs or 401(k) accounts).

Conclusion

In general, we find that systematic rebalancing is appropriate for most investors because it acts to reduce long-term volatility and makes it easier for investors to maintain a portfolio consistent with their risk tolerance. For investors who are more sensitive to risk or who incur low transaction costs, it may make sense to rebalance more frequently and adopt a relatively narrow threshold. For investors with a higher tolerance for risk or with higher transaction costs, it can make sense to allow the portfolio to drift more, by looking less frequently and by adopting a wider rebalancing threshold. Investors should consider quarterly frequency with a 15 percent threshold to be a reasonable starting point.

1. Annualized standard deviation of 60/40 and 77/23 portfolios: 11.4 percent, 14.4 percent, respectively.
 2. Daryanani, Gobind. 2008. “Opportunistic Rebalancing: A New Paradigm for Wealth Managers.” *Journal of Financial Planning* 21 (1):48-61.
 3. Lee, Marlena I. 2008. “Rebalancing and Returns.” *Dimensional Fund Advisors*. https://us.dimensional.com/media/50842/rebalancing_and_returns.pdf.
 4. Utility = (Percent Return) – [(0.005) x (Risk Aversion Coefficient) x (Percent Volatility²)]
 5. Based on data since 1980. Model assumes transaction costs of 0.10 percent per trade and risk aversion coefficient of 5.

THE HIGH-YIELD DOW INVESTMENT STRATEGY

Recommended HYD Portfolio

As of September 15, 2016

	Rank	Yield (%)	Price (\$)	Status	—Percent of Portfolio—	
					Value (%)	No. Shares (%) ¹
Verizon	1	4.44	51.92	Holding**	24.41	33.59
Chevron	2	4.30	99.50	Holding**	24.24	17.42
Caterpillar	3	3.75	82.03	Buying	23.02	20.07
IBM	4	3.59	155.66	Buying	11.88	5.46
Exxon Mobil	5	3.53	85.08	Holding	4.95	4.16
Pfizer	6	3.51	34.14	Holding	1.57	3.30
Cisco	8	3.32	31.31	Holding	3.25	7.41
General Electric	10	3.09	29.75	Selling	2.51	6.03
McDonald's	11	3.07	116.14	Holding	4.17	2.57
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, we are also showing the number of shares of each stock as a percentage of the total number of shares in the entire portfolio.

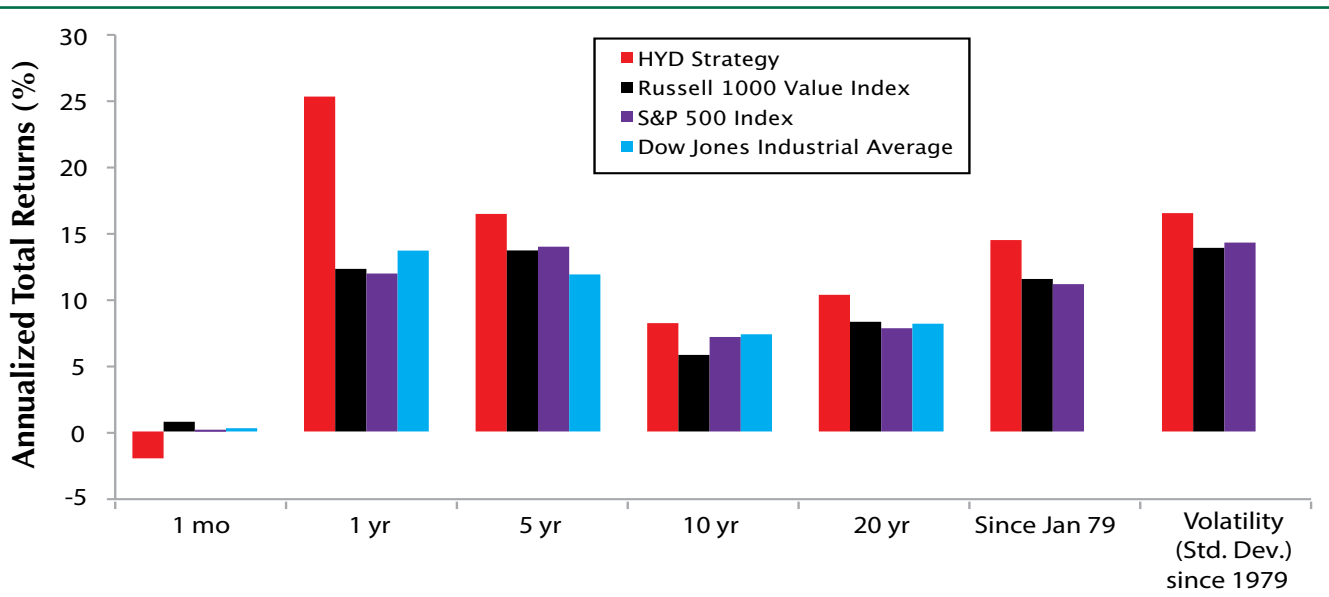
Performance was achieved by means of retroactive application of a model designed with the benefit of hindsight.

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 August 31, 2016*. Returns for the 5-,10- and 20-year periods are annualized, as is the volatility (standard deviation) of returns. (January 1979 is the earliest date for which data was available for both the HYD model and relevant benchmark indexes).

	<u>1 mo.</u>	<u>1 yr.</u>	<u>5 yrs.</u>	<u>10 yrs.</u>	<u>20 yrs.</u>	<u>Since Jan 79</u>	<u>Volatility (Std. Dev.) since 1979</u>
HYD Strategy	-2.14	26.61	17.29	8.61	10.86	15.21	17.35
Russell 1000 Value Index	0.77	12.92	14.39	6.08	8.72	12.12	14.59
S&P 500 Index	0.14	12.55	14.69	7.51	8.21	11.71	15.01
Dow Jones Industrial Average	0.26	14.37	12.48	7.72	8.56	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. **Performance was achieved by means of retroactive application of a model designed with the benefit of hindsight.** 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 Index 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 0.73% management fee, the annual rate assessed to a \$500,000 account managed through our High Yield Dow investment service.

Asset classes and representative index chart on page 65: large cap value, Russell 1000 Value Index; small cap value, Russell 2000 Value Index; large cap growth, Russell 1000 Growth Index; Global REITs, S&P Global REIT Index; foreign developed markets, MSCI EAFE Index; emerging markets, MSCI Emerging Markets Index

RECENT MARKET STATISTICS

Precious Metals & Commodity Prices (\$)

	9/15/16	Mo. Earlier	Yr. Earlier
Gold, London p.m. fixing	1,310.80	1,339.40	1,105.95
Silver, London Spot Price	18.96	19.90	14.35
Copper, COMEX Spot Price	215.20	215.15	243.00
Crude Oil, W. Texas Int. Spot	43.91	45.74	44.59
Bloomberg Commodity Spot Index	308.14	315.63	294.77
Bloomberg Commodity Index	83.08	85.24	88.57
Reuters-Jefferies CRB Index	180.68	185.14	196.02

Interest Rates (%)

U.S. Treasury bills - 91 day	0.29	0.29	0.06
182 day	0.48	0.43	0.27
52 week	0.60	0.54	0.45
U.S. Treasury bonds - 10 year	1.69	1.56	2.29
Corporates:			
High Quality - 10+ year	3.52	3.33	4.18
Medium Quality - 10+ year	4.41	4.25	5.44
Federal Reserve Discount Rate	1.00	1.00	0.75
New York Prime Rate	3.50	3.50	3.25
Euro Rates			
3 month	-0.30	-0.30	-0.04
Government bonds - 10 year	0.00	-0.06	0.60
Swiss Rates - 3 month	-0.75	-0.74	-0.73
Government bonds - 10 year	-0.38	-0.48	-0.07

Exchange Rates (\$)**

British Pound	1.323900	1.288000	1.534400
Canadian Dollar	0.760200	0.773700	0.754700
Euro	1.124400	1.118400	1.126900
Japanese Yen	0.009796	0.009876	0.008304
South African Rand	0.070189	0.075175	0.074253
Swiss Franc	1.029000	1.027900	1.026600

**Note: As of 4/15/2016, the source for the exchange rates has changed to Bloomberg.

Securities Markets

	9/15/16	Mo. Earlier	Yr. Earlier
S & P 500 Stock Composite	2,147.26	2,190.15	1,978.09
Dow Jones Industrial Average	18,212.48	18,636.05	16,599.85
Barclays US Agg Credit Index	2,751.64	2,776.56	2,545.00
Nasdaq Composite	5,249.69	5,262.02	4,860.52
Financial Times Gold Mines Index	1,706.29	2,026.34	816.11
FT EMEA (African) Gold Mines	1,960.95	2,425.55	1,003.04
FT Asia Pacific Gold Mines	8,753.68	10,000.61	4,279.94
FT Americas Gold Mines	1,319.75	1,557.49	614.39

Coin Prices (\$)

	9/15/16	Mo. Earlier	Yr. Earlier	Prem (%)
American Eagle (1.00)	1,346.80	1,373.70	1,142.32	2.75
Austrian 100-Corona (0.9803)	1,286.58	1,312.95	1,069.89	0.12
British Sovereign (0.2354)	319.56	325.89	268.37	3.56
Canadian Maple Leaf (1.00)	1,330.80	1,357.20	1,124.35	1.53
Mexican 50-Peso (1.2057)	1,572.30	1,604.73	1,318.52	-0.51
Mexican Ounce (1.00)	1,360.80	1,387.70	1,113.83	3.81
S. African Krugerrand (1.00)	1,331.80	1,358.70	1,126.72	1.60
U.S. Double Eagle-\$20 (0.9675)				
St. Gaudens (M5-60)	1,325.00	1,335.00	1,285.00	4.48
Liberty (Type I-AU50)	2,150.00	2,150.00	2,225.00	69.53
Liberty (Type II-AU50)	1,375.00	1,375.00	1,425.00	8.42
Liberty (Type III-AU50)	1,320.00	1,330.00	1,265.00	4.08
U.S. Silver Coins (\$1,000 face value, circulated)				
90% Silver Circ. (715 oz.)	14,188.00	15,058.50	13,694.50	4.66
40% Silver Circ. (292 oz.)	5,674.00	5,809.00	4,198.00	2.49
Silver Dollars Circ.	21,750.00	21,750.00	15,504.00	48.29

Note: Premium reflects percentage difference between coin price and value of metal in a coin, with gold at \$1,310.80 per ounce and silver at \$18.96 per ounce. The weight in troy ounces of the precious metal in coins is indicated in parentheses.

THE DOW JONES INDUSTRIALS RANKED BY YIELD*

Ticker Symbol	Market Prices (\$)			12-Month (\$)		Latest Dividend Amount (\$)	Record Date	Indicated Payable Date	Indicated Annual Dividend (\$)	Yield† (%)	
	9/15/16	8/15/16	9/15/15	High	Low						
Verizon	VZ	51.98	53.61	46.37	56.95	42.20	0.578	10/7/2016	11/1/2016	2.31	4.44
Chevron	CVX	99.50	102.77	77.17	107.58	75.10	1.070	8/19/2016	9/12/2016	4.28	4.30
Caterpillar	CAT	82.03	84.15	74.58	84.73	56.36	0.770	7/20/2016	8/20/2016	3.08	3.76
IBM	IBM	155.66	161.88	147.53	164.95	116.90	1.400	8/10/2016	9/10/2016	5.60	3.60
Exxon Mobil	XOM	85.08	87.81	72.86	95.55	71.55	0.750	8/12/2016	9/9/2016	3.00	3.53
Pfizer	PFE	34.14	35.11	33.17	37.39	28.25	0.300	8/5/2016	9/1/2016	1.20	3.52
Boeing	BA	127.77	134.66	136.30	150.59	102.10	1.090	8/12/2016	9/2/2016	4.36	3.41
Cisco	CSCO	31.31	31.19	25.98	31.95	22.46	0.260	10/5/2016	10/26/2016	1.04	3.32
Coca-Cola	KO	42.36	44.24	38.50	47.13	38.47	0.350	9/15/2016	10/3/2016	1.40	3.30
General Electric	GE	29.75	31.24	25.30	33.00	24.26	0.230	9/19/2016	10/25/2016	0.92	3.09
McDonald's	MCD	116.14	118.52	98.19	131.96	95.78	0.890	9/1/2016	9/16/2016	3.56	3.07
Procter and Gamble	PG	88.06	87.02	69.45	88.87	69.37	0.670	7/22/2016	8/15/2016	2.68	3.04
Merck	MRK	62.38	63.32	53.55	64.00	47.97	0.460	9/15/2016	10/7/2016	1.84	2.95
J P Morgan	JPM	66.64	65.72	63.58	69.03	52.50	0.480	7/6/2016	7/31/2016	1.92	2.88
Intel Corp	INTC	36.56	34.91	29.73	38.05	27.68	0.260	11/7/2016	12/1/2016	1.04	2.85
Wal-Mart Stores	WMT	72.40	73.32	64.32	75.19	56.30	0.500	12/9/2016	1/3/2017	2.00	2.76
Johnson & Johnson	JNJ	118.63	122.31	94.40	126.07	89.90	0.800	8/23/2016	9/6/2016	3.20	2.70
United Tech.	UTX	102.71	109.69	92.68	109.83	83.39	0.660	8/19/2016	9/10/2016	2.64	2.57
Microsoft Corp.	MSFT	57.19	58.12	43.98	58.70	43.05	0.360	8/18/2016	9/8/2016	1.44	2.52
3M Company	MMM	176.59	180.56	143.60	182.27	134.64	1.110	8/19/2016	9/12/2016	4.44	2.51
Travelers	TRV	114.94	118.35	100.86	119.32	97.18	0.670	9/9/2016	9/30/2016	2.68	2.33
Dupont	DD	67.56	68.64	48.30	75.72	47.11	0.380	8/15/2016	9/12/2016	1.52	2.25
Home Depot, Inc.	HD	126.96	137.06	116.18	139.00	109.62	0.690	9/1/2016	9/15/2016	2.76	2.17
Apple	AAPL	115.57	109.48	116.28	123.82	89.47	0.570	8/8/2016	8/11/2016	2.28	1.97
Unitedhealth Group	UNH	135.61	141.62	120.03	144.48	107.51	0.625	9/9/2016	9/20/2016	2.50	1.84
American Express	AXP	63.83	65.63	76.50	78.40	50.27	0.290	7/1/2016	8/10/2016	1.16	1.82
Goldman Sachs	GS	168.08	165.55	187.45	199.90	138.20	0.650	9/1/2016	9/29/2016	2.60	1.55
Walt Disney	DIS	92.50	97.10	103.43	120.65	86.25	0.710	7/11/2016	7/28/2016	1.42	1.54
Nike	NKE	55.47	56.77	56.92	68.20	51.48	0.160	9/6/2016	10/3/2016	0.64	1.15
Visa Inc.	V	82.01	80.91	70.51	83.63	66.12	0.140	8/19/2016	9/6/2016	0.56	0.68

* See the Recommended HYD Portfolio table on page 70 for current recommendations. † Based on indicated dividends and market price as of 9/15/16.

Extra dividends are not included in annual yields. H New 52-week high. L New 52-week low. All data adjusted for splits and spin-offs. 12-month data begins 8/15/16.

I Dividend increased since 8/15/16 D Dividend decreased since 8/15/16

RECOMMENDED INVESTMENT VEHICLES

Descriptive Quarterly Statistics, as of 6/30/16

Security Symbol	Avg. Market Cap. / Avg. Maturity	No. of Holdings	Ratios		P/B	12 Mo. Yield (%)	Annualized Returns ⁴ (%), as of 8/31/16					
			Expense ³ (%)	Sharpe			Turnover (%)	1 yr.	3 yr.	5 yr.	1 yr.	3 yr.
Short/Intermediate Fixed Income												
Vanguard Short-Term Bond Index	2.8 Yrs.	2366	0.16	0.89	-	1.41	2.26	1.77	1.40	1.62	1.17	0.79
iShares Barclays 1-3 Yr. Credit Bond	2.03 Yrs.	1040	0.20	1.38	-	1.31	2.17	1.43	1.52	1.57	0.93	1.00
iShares Barclays 1-3 Yr. Treasury Bond	1.89 Yrs.	109	0.15	0.59	-	0.61	0.92	0.75	0.51	0.64	0.55	0.33
Vanguard Limited-Term Tax-Exempt	3.2 Yrs.	3546	0.20	0.94	-	1.48	2.41	1.95	1.54	2.41	1.95	1.54
SPDR N.B. Short-Term Municipal Bond	2.97 Yrs.	792	0.20	0.52	-	0.93	1.87	1.60	1.18	1.87	1.60	1.18
Inflation-Protected Fixed Income												
iShares Barclays TIPS Bond	8.71 Yrs.	41	0.20	0.02	-	0.35	5.27	2.59	1.64	4.73	2.12	1.09
Vanguard Inflation-Protected Securities	8.8 Yrs.	40	0.20	0.02	-	0.73	5.22	2.63	1.64	4.88	1.97	0.86
International Fixed Income												
Vanguard Total International Bond Index	9.4 Yrs.	4060	0.17	-	13	1.52	7.99	5.93	-	7.28	5.25	-
Real Estate												
Vanguard REIT Index	17.01 B	153	0.26	0.70	11	2.52	25.43	15.78	13.30	23.79	14.27	12.01
SPDR Dow Jones REIT	19.73 B	100	0.25	0.70	6	2.66	23.84	15.98	13.05	21.80	14.27	11.53
Vanguard Global ex-US Real Estate	9.58 B	656	0.36	0.24	12	1.06	12.24	5.73	7.04	10.66	4.10	5.39
iShares International Property ETF	10.03 B	408	0.48	0.39	8	1.09	10.80	6.46	7.61	9.42	4.99	6.07
SPDR Dow Jones Global Real Estate ETF	16.11 B	235	0.50	0.61	6	1.80	17.49	11.56	10.18	15.90	10.09	8.68
U.S. Large Cap Value												
Vanguard Value Index	133.30 B	317	0.22	0.89	8	2.07	13.76	11.14	14.28	13.09	10.30	13.56
iShares Russell 1000 Value Index	113.53 B	684	0.20	0.80	13	1.83	12.72	10.48	14.16	11.80	9.69	13.49
U.S. Mid Cap												
Vanguard Mid-Cap ETF	0.53 B	1406	0.60	0.45	26	1.78	8.13	11.40	14.04	7.56	10.81	13.57
iShares Russell Mid-Cap Index	3.52 B	855	0.20	0.73	16	1.79	9.72	11.08	14.10	9.04	10.49	13.59
U.S. Small Cap Value												
iShares Russell Microcap Index	131.76 B	633	0.20	1.02	13	5.54	3.98	7.16	12.95	3.40	6.67	12.49
Vanguard Small-Cap Value Index	131.77 B	336	0.22	0.94	9	4.83	11.93	11.19	14.62	11.18	10.40	13.92
U.S. Marketwide												
Vanguard Total Stock Market Index	114.46 B	3641	0.16	0.90	3	2.73	11.32	11.57	14.30	10.82	10.90	13.74
Fidelity Spartan Total Market Index	110.77 B	-	0.10	0.90	3	2.70	11.30	11.60	14.33	10.19	10.73	13.49
Foreign-Developed Markets												
iShares MSCI EAFE Growth Index	57.62 B	554	0.40	0.31	25	2.73	3.25	3.88	5.64	2.48	3.24	5.07
iShares MSCI EAFE Value Index	53.18 B	519	0.40	0.06	25	1.08	-3.96	0.47	3.78	-5.17	-0.67	2.77
Vanguard FTSE Developed Market	45.97 B	3746	0.09	0.24	3	1.50	2.80	3.10	5.42	1.42	2.03	4.46
SPDR S&P International Small Cap	1.26 B	2285	0.40	0.51	51	1.27	9.04	6.34	5.83	8.11	4.31	4.18
Foreign-Emerging Markets												
Vanguard FTSE Emerging Market Stock	40.13 B	3636	0.33	-0.17	7	1.42	10.46	1.91	-0.57	9.51	0.94	-1.42
Gold-Related Funds												
iShares Gold Trust	8.21 B	-	0.25	-0.19	-	-	15.04	-2.32	-6.54	15.04	-2.32	-6.54
SPDR Gold Shares	37.09 B	-	0.40	-0.20	-	-	14.90	-2.48	-6.68	14.90	-2.48	-6.68

Data provided by the funds and Morningstar. ¹Exchange Traded Fund, traded on NYSE. ²0.5% fee for redemption in 90 days. ³For Vanguard funds, expense ratios shown are for mutual funds, ETFs have lower expenses. ⁴For Vanguard Funds, returns shown are for mutual funds; ETFs' returns may deviate. ⁵VGXRX includes a 0.25% fee on purchases and redemptions, which are paid directly into the fund. ⁶These are admiral shares and have a \$10,000 required minimum initial investment. *Pre-liquidation. Calculated using the highest individual federal income tax rates in effect at the time of each distribution and do not reflect the impact of state and local taxes or individual tax situations.

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