



# AIS

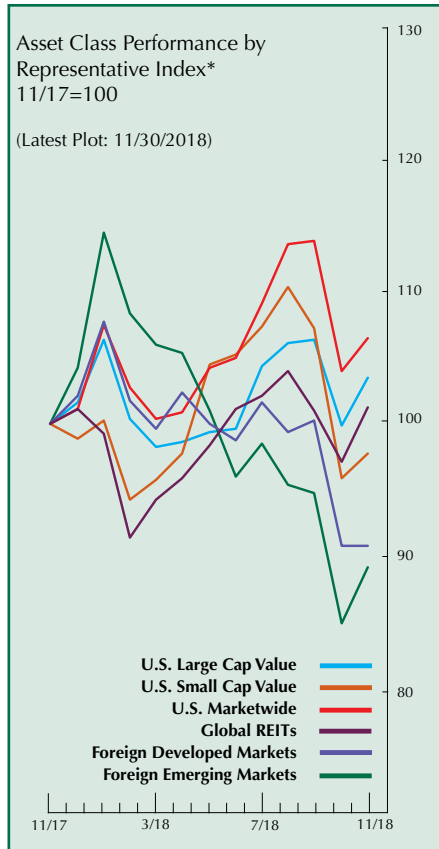
# INVESTMENT GUIDE

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## The Fed has Spoken

On December 19 Federal Reserve chairman Jerome Powell announced that the Fed would increase its target federal-funds rate to a range between 2.25 – 2.50 percent and suggested that two more increases may be in store for 2019.

The stock market, which had maintained some expectation that the Fed might be done raising rates, dropped sharply. The S&P 500 index closed the day down 1.6 percent, bringing its fourth quarter loss to date to just over 16 percent.

The Fed’s short term interest rate policy is discretionary, and as such is unbound by any rule or standard. As a result the fate of global capital markets, with trillions of dollars of investors’ assets at stake, can change dramatically at any time in reaction to the utterances of the Fed chairman. Ultimately, on the Fed’s announcement date, investors wait with bated breath to learn of the judgement rendered by the ten voting members who comprise the Fed’s Open Market Committee.

This process generates needless costs – not just the anxiety it creates for investors but for the economy at large; consumers and producers alike spend valuable resources trying to inform their guess as to what the Fed is going to do – resources that could be put to better uses.

Our parent, AIER, has pointed out that an alternative rules-based mechanism would go a long way in reducing these costs:<sup>1</sup>

*“A rule—to the extent that it is credible—anchors expectations. It lets us know what to expect. And, if we know what the monetary authority will do in the future, it will be much easier for us to decide which production processes to take on. In other words, the benefits are in the binding.”*

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### Rates of Interest

As of December 20, 2018

#### Government Obligations<sup>1</sup>

Fed Funds Rate	2.20%
3-Month Treas. Bill	2.34%
10-Yr. Treas. Note	2.82%
30-Yr. Treas. Bond	3.07%
10-Yr. TIPS	1.01%
Muni Bonds - Nat'l 10-Yr.	2.40%

#### Mortgage Rates<sup>2</sup>

15-Yr Fixed	4.07%
30-Yr Fixed	4.62%

#### Banking<sup>3</sup>

Savings	0.09%
Money Market	0.16%
12-month CD	0.60%

[1] Federal Reserve, fmsbonds.com. Annualized Rates. Notes, bonds, TIPS reflect yield to maturity.

[2] Freddie Mac. Average (National average mortgages with 0.4 points).

[3] FDIC. Average national rates, non-jumbo deposits (<\$100k).

...credibly committing to sound monetary policy makes us more productive than we would be in the absence of such a commitment. By anchoring expectations, it can make it cheaper to engage in long term projects—freeing up some resources to produce more stuff.”

Several rules have been proposed that would bind monetary growth to measurable, publicly available information such as nominal GDP or the rate of price inflation. While each variant has pros and cons, all would largely eliminate guessing and allow us to employ our resources more productively.

Until a rules-based approach is adopted, investors should avoid guessing at the Fed’s next pronouncement. The best countermeasure to Fed-induced volatility is strict adherence to your own rules-based portfolio based on specific allocations tailored to your needs.

1. [The Long Run Benefits of a Monetary Policy Rule](#) By William J. Luther December 21, 2015 Sound Money Project

## MARKET TRENDS AND BUSINESS CYCLES

Investing your savings in the stock market for the long term requires faith that capitalism will continue to generate economic growth. Investors rely on rising stock prices to fund present or future consumption. Stock prices are supported by growth in corporate earnings and earnings in turn rely on robust economic growth.

Wise investors understand this, and often ask whether it is prudent to monitor the business cycle in order to sell their stocks as the economy slows down and reinvest when expansion resumes.

In this article we address this question methodically. We first consider the efficacy of business cycle forecasting, and then assess the plausible connection between business cycles and the stock market. As we shall see, this strategy, like all timing strategies, is a gamble.

### Statistical Indicators

The National Bureau of Economic Research (NBER) Business Cycle Dating Committee is the official arbiter of recessions. But recessions are announced only after a lag of several months. So no one knows with certainty whether a recession has begun or ended until well after the fact.

There are, however, many models

that attempt to forecast the business cycle. As data have accumulated and computing power has grown exponentially, many macroeconomic formulations, some based on sophisticated econometric reasoning, have emerged. Despite these advances no model has proven reliable as a means of predicting recession or recovery well in advance.

Economists have had some success with shorter term (six to 12 months) business cycle predictions. Our parent, AIER, has been analyzing statistical indicators (SI) since they were first published by the NBER in the 1950s. AIER has continually refined its model, which provides an empirical assessment of the likelihood of a turning point in the economy (expansion or recession) over the next six to 12 months. The SI stands out among forecasting models because it provides a track record spanning many decades that encompass several business cycles.

The chart below depicts AIER’s “diffusion index” of leading indicators, which is simply the percent of leading indicators pointing toward continued economic expansion. Grey regions indicate periods of economic recession. There have been eight official recessions since 1959.

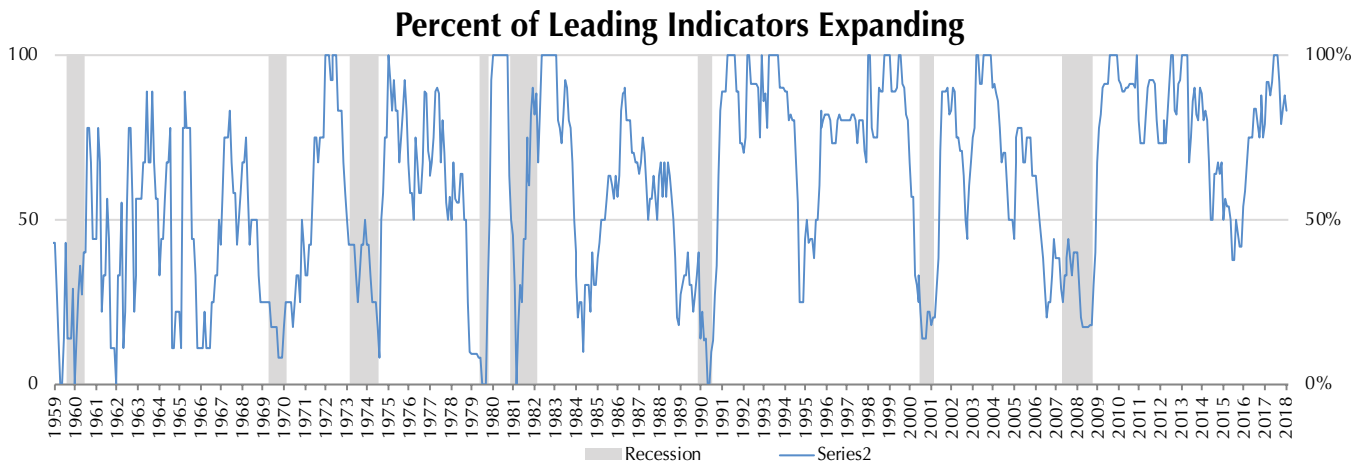
The economy has been expanding since July 2009. However, the index of

leading indicators has recently declined from 100 percent in May of this year to 79 percent as of the last reading in November. Nonetheless it still remains above the 50 percent threshold depicted in the chart. But what does this threshold mean in historical context, with regard to the likelihood of recession?

The most recent recession began in January 2008 and ended July 2009. The index had fallen below 50 percent in January 2007, suggesting an increased likelihood of recession, and remained below 50 percent for twelve months, hitting 25 percent during the first month of the recession. The index hit its trough at 17 percent in early 2009 before rebounding above 50 percent three months after the recession had officially ended (in September 2009).

The prior recession (April 2001 – November 2001) was also preceded by a drop in the index below 50 percent, but that warning signal came just four months before the official start of recession. Similarly, the index recovered to above 50 percent four months after the recession had officially ended. These are two instances when the leading indicators did a good job of predicting recession, and lagged only slightly in predicting recovery.

As we continue backward to 1959,



it becomes clear that the index of leaders fell below 50 percent in advance of all but one recession. Lead times varied however. Prior to the 1990 recession, the indicators fell below 50 percent 14 months early; at the other extreme the leading indicators did not drop below 50 percent until two months into the official start of the 1981-1982 recession.

### False Positives

While the leading indicators provided advance warning of recessions that did occur, there have also been several “false signals” when the index registered below 50 percent for several months and subsequently rebounded, but recession never followed. The most recent instance occurred in 2016. At that time, the leading indicators fell to 38 percent and spent six consecutive months at or below 50 percent. This also happened in September 1984 – March 1986 and June 1995 - May 1996.

It is also apparent that the indicators, using the 50 percent threshold, are not useful for predicting recoveries. On most occasions the index rose above 50

percent only after recession had ended.

However, these indicators can be useful as a conservative means of gauging the business cycle. This is important for households that are inclined to engage in precautionary saving and “consumption smoothing” over the business cycle. Consider a family breadwinner employed in a field sensitive to recession, such as a construction worker. In anticipation of a coming recession indicated by the SI, he could increase his rate of savings to avoid a cash crisis in the event he is laid off in the near future. He might be willing to do so despite the risk of living meagerly today in order to avoid a recession that never occurs (i.e., a false positive from the SI).

AIER’s staff economists do not base their outlook on a purely numerical evaluation such as the one described, nor do they rely on leading indicators alone. Our depiction is intended only to point out the difficulties inherent in predicting business cycles based on macroeconomic data. AIER’s statistical indicators provide the best means available for gauging in advance turning points in the business cycle. But as we will see, investors who

attempt to use them to avoid market turmoil during recessions do so at great risk.

### Business Cycles versus Market Cycles

It is apparent that predicting business cycles is itself a steep challenge. But it is nonetheless useful to pose a hypothetical question, granting a generous assumption: Even if somehow we knew in advance exactly when the next recession would begin and end, could we use that information to form an effective market-timing strategy? To answer that, we first must examine the data to see if there is a consistent relationship between the business cycle and the stock market.

Table 1 shows stock market returns during every recession since 1926. An investor with perfect business cycle foresight who abandoned stocks precisely at the start of each recession and reentered precisely at the end would have avoided losses during seven of 15 recessions but missed out on gains during eight.

The table makes clear that the stock market has not reacted consistently during recessions. The magnitude of annualized returns during recessions is also sobering; annualized returns ranged between 37.4 percent and -33.6 percent. Investors who pulled out during recessions clearly would have avoided volatility, but the opportunity cost of doing so was often great.

Though an investor would have benefited from avoiding the stock market during the most recent recession (January 2008 - June 2009), there is no evidence that stocks consistently generate losses during recessions. In fact, stock market timers who got out at the beginning of each recession and back in at the end of each recession would have avoided average (arithmetic) annualized losses of 13.2 percent during the seven recessions with stock market losses, but missed out on average gains of 22.8 percent during the eight recessions when the market returns were positive.

This outcome shouldn’t be surprising. The stock market is constantly evaluating news of all kinds, and is therefore commonly recognized as a leading indicator of the business cycle, not the other way around.<sup>2</sup> *Because the stock market is a forward-looking mechanism, losses typically occur before a recession has started or are concentrated in the earliest months of recessions*

(continued next page)

**Table 1: S&P 500 Total Returns During Recessions<sup>1</sup>**

Recession		Duration (Months)	Total Return	Annualized Total Return
Beginning Month	Ending Month			
Nov-26	Nov-27	13	41.1%	37.4%
Sep-29	Mar-33	43	-76.9%	-33.6%
Jun-37	Jun-38	13	-24.0%	-22.4%
Mar-45	Oct-45	8	19.5%	30.7%
Dec-48	Oct-49	11	15.2%	16.7%
Aug-53	May-54	10	24.2%	29.7%
Sep-57	Apr-58	8	-1.5%	-2.3%
May-60	Feb-61	10	20.3%	24.9%
Jan-70	Nov-70	11	-1.7%	-1.9%
Dec-73	Mar-75	16	-7.9%	-6.0%
Feb-80	Jul-80	6	9.5%	19.8%
Aug-81	Nov-82	16	14.6%	10.7%
Aug-90	Mar-91	8	8.0%	12.2%
Apr-01	Nov-01	8	-0.9%	-1.3%
Jan-08	Jun-09	18	-35.0%	-25.0%

Source: AIS calculations based on NBER recession data from FRED and S&P 500 total return data from DFA Returns 2.0 program. Returns are calculated as the returns from the end of the last month prior to the recession to the end of the final month of recession.

while gains are often concentrated in the earliest months of recovery.<sup>3</sup>

The upshot, for investors who hope to flee the market in order to avoid the volatility associated with recession, is that they tend to get “whipsawed.” They often end up selling only after the news of recession has been priced into market valuations, thus locking in portfolio losses, and by missing out on subsequent gains by re-entering the market only after the market has generated strong returns.

## Investor Know Thyself

To recap the plight of the market timer: Predicting recessions is difficult to begin with, and the challenge becomes nearly insurmountable considering that the successful timer must identify in advance not only the few critical months when he must reduce his equity exposure, but also the narrow window when he must get back in.

The relevant question for investors isn't “Where are we in the cycle?” Rather, it is “Where are you in your life?” Many of our clients reach out to us seeking for help with retirement planning. They often feel that they have enough saved for a secure retirement, but wonder whether they should take some risk off the table.

But this question concerns how much growth an investor needs in order to reach her goals, considering her stage of life and other personal circumstances. The answer to that question is independent of what the market might do. If she is confident she has plenty saved for a secure retirement even if the market should underperform over the next few years, she may well conclude that there is no longer any point in maintaining substantial exposure to high risk/high return equities.

Contemplating the future direction of capital markets is also costly in another sense. Pondering the market is a distraction from focusing on your needs and matters that are both within your control and have a significant impact on your ability to meet your goals. These include saving an adequate amount and managing your investment-related costs

and taxes effectively.

## The Rational Alternative

We have established that stock returns are volatile during recessions. Furthermore, attempting to avoid that volatility by timing the business cycle can carry an even greater risk, given the slim chance of identifying the few key months where the largest losses and gains tend to occur. But there is a way to manage volatility while maintaining reasonable exposure to the stock market.

The key is to maintain a fixed allocation across asset classes throughout the business cycle. Portfolio volatility can be effectively managed by simply rebalancing your holdings to match those targets as security prices change. For our PAM clients we typically employ target allocation “bands” for this purpose. We will consider rebalancing a portfolio when the market value of an asset class as a percentage of the total portfolio market value strays 15 percent from its targeted allocation percentage. For example, if an investor has a 10 percent target allocation to U.S. small cap stocks, we will rebalance to that target if his actual allocation were to rise above 11.5 percent or fall below 8.5 percent.

If stock prices fall sufficiently to trigger a reallocation, which may well occur just at the onset of recession, this strategy would incrementally sell bonds or reduce cash in order to buy stocks as they are falling in price. Conversely, when stock prices rise sharply, as they tend to do very early in the recovery phase, one would be incrementally selling stocks to buy bonds or cash. The key advantage is that this strategy is a mechanical process and requires no forecast with regard to when these fleeting but critical turning points will occur.

While rebalancing holds overall portfolio volatility in check throughout the business cycle, there is a trade off because each instance of rebalancing incurs trading costs. Investors especially sensitive to fluctuations in their portfolio value should consider rebalancing more frequently by adopting tighter allocation bands, but also weigh the higher trading

costs that will result.

## The Takeaway

Recessions are difficult to predict. Business cycle forecasts are generally useful only over the short term and are far from perfect.

1. Even if a perfect business cycle forecast were available, it would not be useful in forming market timing strategies because capital markets do not respond to business cycles in a predictable manner. Relying on forecasts of critical turning points, which take place over 1-3 months, is exceptionally risky.
2. A prudent investment strategy is available despite these limitations. Current capital market prices reflect investors' perceptions of risk in aggregate and provide the best estimate of value. As such, market prices provide the best information available for maintaining a sound portfolio via periodic rebalancing.
3. AIER's statistical indicators have been continuously refined over 50 years and serve as the best model available for appraising the business cycle. While they are not useful for predicting stock market changes, they can be quite helpful in cash flow planning and budgeting, for individuals as well as for businesses.

These principals are embedded in our approach. Our recommendations must be consistent with our fiduciary obligation to work in our clients' best interest at all times. Market timing strategies fail to meet this threshold. This is not immutable however; economics is a social science and as research evolves a new approach may eventually emerge and displace the old. However, based on the several decades of data available, those who advocate market timing bear the burden of proof, and it is steep indeed.

1. 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 Tables 1 and 2 portfolio reflect the reinvestment of dividends and capital gains. Returns depicted are hypothetical and do not reflect historical recommendations of AIS.
2. Even this link is tenuous however. Paul Samuelson famously quipped in 1966 that the stock market had at the time successfully predicted nine out of the past five recessions.
3. Marlena I. Lee, “Stock Returns over Business and Market Cycles.” Dimensional Fund Papers Library, March 2009.



## INTEREST RATES AND STOCK PRICES

As U.S. stocks have suffered during the fourth quarter commentators have offered a range of explanations – possible trade wars, the Chinese economy, the midterm elections, to name a few. While these headlines have doubtless had an impact, rising interest rates have certainly have an influence. News by definition is unpredictable. But interest rates explain *how* this news affects stock prices, so it is worth it to understand how this works.

Short-term interest rates in particular have risen from the dead. The annual interest rate on the 3-month Treasury Bill – a guaranteed return from the Federal government that is almost as good as cash – was 2.39 percent as of this writing. In October of 2015, this same investment paid a whopping 0.00 percent. Although the rate has been gradually increasing since then, it appears investors are only now taking notice. Flows into money market funds, CDs and similar investments are up sharply.

So what does this have to do with the decline in the stock market?

The first reason is that rising interest rates affect the cost of borrowing for companies. Companies often finance their growth by borrowing money. They invest in resources – raw material, technology or employees – necessary for improvements or new initiatives. But they only do so as long as their estimated return on that investment exceeds the cost of borrowing. When the “hurdle” is low (zero would appear to qualify) firms load up on debt. Extremely low interest rate can be like fuel on the fire for potential earnings growth, and this gets reflected in stock prices.

As interest rates increase, the hurdle gets a little higher. It’s no longer a no-brainer to for a firm to borrow lots of money. Growth opportunities are riskier, so fewer projects get the green light. Investors take notice and stock prices stop rising or even fall.

The second reason rising interest rates have a negative impact on stock prices has to do with how investors value a company. Fundamentally, the value of a company is the sum of its future cash flows. Cash flows in the distant future are worth less to investors than cash flows in the present.

Imagine you’re offered a choice of \$100 today or \$100 next year. Clearly, you would prefer \$100 today. Now

imagine you’re offered \$100 today or \$105 next year. You may now be willing to wait a year for the \$105. This process is known as discounting a future value to compare it with its value today. At some future value you’d be indifferent. This implicit rate is known as the “discount rate.”

As interest rates rise, the discount rate increases because the investors’ alternative -- investing at a fixed rate of interest -- has increased. If the company’s future prospects have not changed, its future, unknown cash flows are “worth” less today, which depresses a company’s value in the mind of investors.

With that framework in mind it’s easier to understand what’s going on in the stock market. Three years ago, if you had \$10,000 to invest, it was difficult to accept a 0.00 percent interest rate on safe government bonds or in a bank savings account. Many investors decided it was worth it to take on more risk by investing in the stock market.

Now it appears that to many the choice has become less obvious. Although 2.39 percent is still low from a historical perspective, it is quite attractive compared with the near-zero percent

rate we saw for seven straight years from 2008 through 2015. Quite simply, many investors have decided to take some profits that they’ve made in the stock market and shift to something with a safer rate of return.

Since rates have been rising gradually for three years, it’s hard to attribute the sudden drop in the stock market to higher interest rates alone. It’s likely that rising rates *combined* with these other risky developments in the news have simply triggered an aggregate shift in sentiment among investors toward safer investments.

It’s impossible to tell whether this trend will continue. Although the Federal Reserve appears to be sticking to its plan to raise short-term interest rates, plans are always subject to change. And it’s impossible to know what the collective investor response will be to any future event, let alone changes in interest rates. For now at least, the market’s gyrations appear consistent with economic theory. The lesson for investors is that interest rate changes are a fundamental driver of stock market volatility.



Looney

“Drat! I suppose the market has already discounted this, too.”

CartoonCollections.com

**THE HIGH-YIELD DOW INVESTMENT STRATEGY**

**Recommended HYD Portfolio**

As of December 15, 2018					—Percent of Portfolio—	
	Rank	Yield (%)	Price (\$)	Status	Value (%)	No. Shares (%) <sup>1</sup>
IBM	1	5.24	119.90	Holding**	21.16	12.15
Exxon Mobil	2	4.34	75.58	Buying	23.06	21.01
Verizon	3	4.22	57.08	Holding**	28.99	34.97
Chevron	4	3.94	113.83	Holding**	15.50	9.38
Pfizer	7	3.11	43.80	Selling	8.56	13.45
Proctor & Gamble	8	2.97	96.64	Holding	1.94	1.38
General Electric	NA	0.60	7.10	Holding	0.79	7.66
Cash (6-mo. T-Bill)	N/A	N/A			0.01	N/A
Totals					100.00	100.00

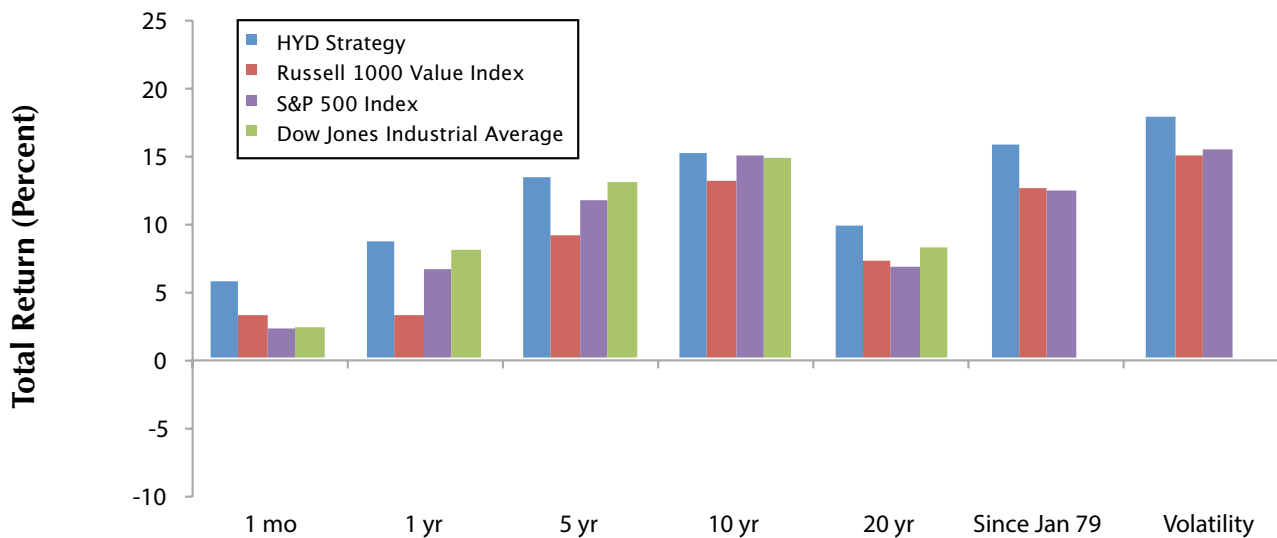
\*\*Currently indicated purchases approximately equal to indicated purchases 18 months ago.<sup>1</sup> Because the percentage of each issue in the portfolio by value reflects the prices shown in the table (closing prices on the date indicated), we are also showing the number of shares of each stock 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](http://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 November 30, 2018\*. Returns for the 5-, 10- and 20-year periods are annualized, as is the volatility (standard deviation) of returns.

	<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 since 1979</u>
HYD Strategy	5.37	8.18	12.78	14.49	9.30	15.07	17.06
Russell 1000 Value Index	2.99	2.96	8.65	12.46	6.87	11.97	14.32
S&P 500 Index	2.04	6.27	11.12	14.31	6.42	11.81	14.73
Dow Jones Industrial Average	2.11	7.62	12.39	14.14	7.79	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 (\$)					Recent Market Returns							
	12/14/18	Mo. Earlier	Yr. Earlier	Prem. (%)	Data through November 30, 2018							
					U.S. Stocks (Mktwd)	Foreign Dev. Stocks	Foreign Emerg. Stocks	Global REITs	U.S. Bonds	Foreign Bonds (hedged)	Gold	
Gold, London p.m. fixing	<b>1,235.35</b>	1,211.85	1,254.60		2.00%	-0.09%	4.12%	3.52%	0.60%	0.44%	0.21%	
Silver, London Spot Price	<b>14.58</b>	14.13	15.99		↑	↓	↑	↑	↑	↑	↑	
Crude Oil, W. Texas Int. Spot	<b>51.26</b>	56.45	57.29									
Coin Prices (\$)¹					1-month							
American Eagle (1.00)	<b>1,260.35</b>	1,236.85	1,279.60	2.02								
Austrian 100-Corona (0.98)	<b>1,204.64</b>	1,181.61	1,223.51	-0.50	3-month							
British Sovereign (0.2354)	<b>290.80</b>	285.27	295.33	0.00								
Canadian Maple Leaf (1.00)	<b>1,245.35</b>	1,221.85	1,264.60	0.81								
Mexican 50-Peso (1.2056)	<b>1,481.34</b>	1,453.01	1,504.55	-0.54	1 year							
Mexican Ounce (1.00)	<b>1,253.35</b>	1,229.85	1,272.60	1.46								
S. African Krugerrand (1.00)	<b>1,242.35</b>	1,218.85	1,261.60	0.57								
U.S. Double Eagle-\$20 (0.9675)					5 year (annualized)							
St. Gaudens (MS-60)	<b>1,215.00</b>	1,190.00	1,230.00	1.66								
Liberty (Type II-AU50)	<b>1,325.00</b>	1,325.00	1,325.00	10.86	15 year (annualized)							
Liberty (Type III-AU50)	<b>1,206.00</b>	1,162.00	1,220.00	0.90								
U.S. Silver Coins (\$1,000 face value, circulated)												
90% Silver Circ. (715 oz.)	<b>10,146.50</b>	9,929.50	11,363.00	-2.67								
40% Silver Circ. (292 oz.)	<b>4,117.00</b>	4,027.50	4,461.50	-3.30								
Silver Dollars Circ.	<b>18,000.00</b>	18,000.00	22,875.00	59.62								
¹Premium 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.					<b>Best and worst one-year returns, Jan. 2001 - Nov. 2018</b>							
					Best	<b>56.0%</b>	<b>57.2%</b>	<b>91.6%</b>	<b>85.7%</b>	<b>13.8%</b>	<b>7.1%</b>	<b>57.6%</b>
					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	<b>-43.5%</b>	<b>-50.3%</b>	<b>-56.6%</b>	<b>-59.5%</b>	<b>-2.5%</b>	<b>0.1%</b>	<b>-27.4%</b>
					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 (\$)			12-Month (\$)		Latest Dividend Amount (\$)	Record Date	Payable Date	Indicated Annual Dividend (\$)	Yield† (%)	
	12/14/18	11/15/18	12/15/17	High	Low						
IBM	IBM	119.90	121.44	152.50	171.13	114.09	1.570	11/9/18	12/10/18	6.280	5.24
Exxon Mobil	XOM	75.58	78.19	83.03	89.30	72.16	0.820	11/13/18	12/10/18	3.280	4.34
Verizon	VZ	57.08	59.08	52.67	61.58	46.09	0.603	10/10/18	11/1/18	2.410	4.22
Chevron	CVX	113.83	116.95	119.73	133.88	107.54	1.120	11/16/18	12/10/18	4.480	3.94
J P Morgan	JPM	100.29	110.07	106.14	119.33	99.06	0.800	10/5/18	10/31/18	3.200	3.19
Coca-Cola	KO	49.34	49.74	46.19	50.84	41.45	0.390	11/30/18	12/14/18	1.560	3.16
Pfizer	PFE	43.80	43.21	37.20	46.47	33.20	0.340	11/9/18	12/3/18	1.360	3.11
Procter and Gamble	PG	96.64	93.83	91.89	96.90	70.73	0.717	10/19/18	11/15/18	2.869	2.97
Cisco	CSCO	45.82	46.77	38.19	49.47	37.35	0.330	10/5/18	10/24/18	1.320	2.88
DowDupont	DWDP	52.78	58.73	70.00	77.08	51.32	0.380	11/30/18	12/14/18	1.520	2.88
Merck	MRK	76.48	74.84	56.24	80.19	52.83	0.550	12/17/18	1/8/19	2.200	2.88
3M Company	MMM	196.10	204.91	238.00	259.77	181.98	1.360	11/23/18	12/12/18	5.440	2.77
Caterpillar	CAT	126.77	129.42	146.69	173.24	112.06	0.860	10/22/18	11/20/18	3.440	2.71
Johnson & Johnson	JNJ	133.00	144.50	142.46	148.99	118.62	0.900	11/27/18	12/11/18	3.600	2.71
Travelers	TRV	120.55	125.59	134.89	150.55	119.67	0.770	12/10/18	12/31/18	3.080	2.55
McDonald's	MCD	183.29	183.56	174.06	190.88	146.84	1.160	12/3/18	12/17/18	4.640	2.53
Intel Corp	INTC	47.86	48.11	44.56	57.60	42.04	0.300	11/7/18	12/1/18	1.200	2.51
United Tech.	UTX	118.80	129.73	126.17	144.15	115.40	0.735	11/16/18	12/10/18	2.940	2.47
Home Depot, Inc.	HD	172.29	177.36	182.58	215.43	167.00	1.030	11/29/18	12/13/18	4.120	2.39
Wal-Mart Stores	WMT	91.85	99.54	97.11	109.98	81.78	0.520	12/7/18	1/2/19	2.080	2.26
Walgreen's	WBA	78.74	82.29	71.94	86.31	59.07	0.440	11/12/18	12/12/18	1.760	2.24
Boeing	BA	318.75	341.57	293.94	394.28	293.01	1.710	11/9/18	12/7/18	6.840	2.15
Goldman Sachs	GS	172.77	203.74	257.17	275.31	168.07	0.800	11/30/18	12/28/18	3.200	1.85
Apple	AAPL	165.48	191.41	173.97	233.47	150.24	0.730	11/12/18	11/15/18	2.920	1.76
Microsoft Corp.	MSFT	106.03	107.28	86.85	116.18	83.83	0.460	11/15/18	12/13/18	1.840	1.74
Walt Disney	DIS	112.20	117.11	111.27	120.20	97.68	0.880	7/9/18	7/26/18	1.760	1.57
American Express	AXP	105.70	109.60	98.52	114.55	87.54	0.390	10/5/18	11/9/18	1.560	1.48
Unitedhealth Group	UNH	265.02	264.94	221.82	287.94	208.48	0.900	12/3/18	12/13/18	3.600	1.36
Nike	NKE	72.53	74.33	64.79	86.04	60.13	0.220	9/4/18	10/1/18	0.880	1.21
Visa Inc.	V	135.09	141.84	113.82	151.56	111.02	0.250	11/16/18	12/4/18	1.000	0.74

† Based on indicated dividends and market price as of 12/15/18. Extra dividends are not included in annual yields.

All data adjusted for splits and spin-offs. 12-month data begins 12/15/17.

**ASSET CLASS INVESTMENT VEHICLES**

**Data as of November 30, 2018**

**Fixed Income**

	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)
								1-Year	3-Year	5-Year	
Short-Term Bonds	Vanguard Short-Term Bond Adm	2.90 yrs	2539	0.07	50		1.98	0.32	0.88	0.95	0.72
Short-Term Bonds	SPDR Portfolio Short Term Corp Bd ETF	1.96 yrs	1132	0.07	67		2.32	0.90	1.38	1.23	0.81
Short-Term Bonds	iShares 1-3 Year Treasury Bond ETF	1.94 yrs	65	0.15	85		1.62	0.68	0.54	0.50	0.45
Interm-Term	Vanguard Total Bond Market Adm	8.60 yrs	17394	0.05	55		2.79	-1.36	1.30	1.96	1.10
Interm-Term	iShares Core US Aggregate Bond ETF	8.15 yrs	6940	0.05	252		2.57	-1.38	1.28	1.97	1.06
Tax-Exempt	Vanguard Ltd-Term Tax-Exempt Inv	2.80 yrs	5026	0.19	19		1.79	1.34	0.99	1.18	0.00
Tax-Exempt	SPDR Nuveen Blmbg Barclays ST MunBd ETF	3.12 yrs	1347	0.20	32		1.19	0.88	0.42	0.69	0.00
Tax-Exempt	Vanguard Interm-Term Tx-Ex Inv	5.50 yrs	7949	0.19	15		2.82	0.94	1.76	2.89	0.00
Inflation-Protected	iShares TIPS Bond ETF	7.97 yrs	39	0.20	32		3.00	-1.03	1.50	1.16	0.82
Inflation-Protected	Vanguard Inflation-Protected Securities Inv	8.30 yrs	44	0.20	22		3.23	-1.13	1.42	1.11	0.96
International	Vanguard Total International Bond Adm	9.30 yrs	5314	0.11	19		2.23	1.85	2.84	3.60	0.76

**Real Estate (REITs)**

U.S. REITs	Vanguard REIT Adm	12.56 B	187	0.12	6	2.21	4.23	1.93	5.80	9.25	1.48
U.S. REITs	SPDR Dow Jones REIT	12.04 B	99	0.25	9	2.13	3.38	4.65	5.59	9.69	1.58
Int'l REITs	Vanguard Global ex-US Real Estate Adm (2)	5.78 B	631	0.14	6	0.90	5.33	-4.57	6.15	3.70	1.58
Int'l REITs	iShares International Developed Property	6.28 B	357	0.48	11	0.88	4.96	-4.14	5.15	3.34	1.63
Global (incl. U.S.)	SPDR Dow Jones Global Real Estate ETF	9.45 B	226	0.50	13	1.48	3.74	1.31	4.01	6.04	1.48

**U.S. Stocks**

Large Cap (blend)	Vanguard S&P 500 Adm	102.77 B	515	0.04	3	2.96	1.82	6.23	12.12	11.08	0.59
Large Cap (blend)	iShares Core S&P 500	101.01 B	507	0.04	4	2.96	1.82	6.09	12.05	11.05	0.55
Large Cap (blend)	iShares Russell 1000 ETF	77.75 B	988	0.15	4	2.89	1.76	5.71	11.72	10.72	0.53
Large Cap Value	Vanguard Value Adm	96.08 B	349	0.05	9	2.17	2.40	5.86	12.23	10.33	0.76
Large Cap Value	iShares Russell 1000 Value	60.60 B	730	0.20	15	1.91	2.28	2.69	9.57	8.42	0.66
Small Cap (blend)	iShares Core S&P Small-Cap ETF	1.62 B	606	0.07	12	1.93	1.31	3.66	12.46	9.42	0.41
Small Cap (blend)	Schwab US Small-Cap ETF	2.45 B	1748	0.05	9	1.90	1.34	0.16	9.58	7.57	0.45
Small Cap Value	Vanguard Small Cap Value Adm	3.37 B	871	0.07	19	1.71	2.10	-0.42	9.56	8.40	0.66
Small Cap Value	iShares Russell 2000 Value	1.60 B	1375	0.24	23	1.32	1.91	-1.92	10.00	6.65	0.62
Small Cap Value	iShares Micro-Cap	0.48 B	1453	0.60	22	1.68	1.11	-1.49	8.60	6.26	0.38
Marketwide	Vanguard Total Stock Market Adm	58.87 B	3646	0.04	3	2.79	1.81	5.60	11.82	10.61	0.66
Marketwide	Fidelity Total Market Index	58.58 B	3404	0.02	2	2.79	1.66	5.49	11.79	10.59	0.94

**Foreign Stocks**

Developed Markets	Vanguard FTSE Developed Markets Adm	21.53 B	3959	0.07	3	1.43	3.25	-8.09	4.75	n/a	0.80
Developed Markets	iShares Core MSCI EAFE ETF	22.51 B	2504	0.08	2	1.50	3.20	-7.77	4.67	2.44	0.73
Emerging Markets	Vanguard Emerging Markets Stock Adm	17.72 B	4084	0.14	6	1.50	2.65	-8.90	8.02	1.74	0.83
Emerging Markets	Schwab Emerging Markets Equity ETF	27.88 B	971	0.13	18	1.54	2.61	-7.22	8.84	2.22	0.68

**Gold-Related Funds**

Gold ETFs	SPDR Gold Minishares			0.18			0.00	n/a	n/a	n/a	0.00
Gold ETFs	GraniteShares Gold Trust			0.17			0.00	-4.41	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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