

Tactical Asset Selector

For better tactical asset decisions, allocate on a June-June basis

The end of the calendar year is a peculiar time for asset prices, especially in the fixed-income markets. The evidence suggests that significant numbers of investment firms modify their portfolios during the weeks leading up to the last trading day of the year. On that day, the riskiness of portfolios will be most intensely scrutinized by regulators, internal auditors, and potential clients.¹ The phenomenon is recognizable as an application of “Goodhart’s Law.”² According to this principle, “when a feature of the economy is picked as an indicator of the economy, then it inexorably ceases to function as that indicator because people start to game it.”³ Furthermore: “When a measure becomes a target, it ceases to be a good measure.”⁴

In the particular instance of portfolio window dressing, the outcome is that year-end asset prices are less representative or trustworthy than prices recorded at other times of the calendar year. If this is true, investors should avoid a year-end calendar when making or new investment decisions or evaluating past strategies.

It’s time for us to take this implication to heart. From 1970 to 2015, the once-a-year trading rule that tests our gold-spreads tactical asset allocation model produced highly satisfactory re-

Our tactical asset allocation model based on gold and spreads was last updated in 2015. In bringing it up to date we now take note of two new research results concerning the timing of allocation decisions and the measurement of spreads. The decision rule produces an average compound return of 15.5 percent.

sults on a December-December basis.⁵ But in updating it, this report will feature June-end transaction decisions as well. At the same time we will incorporate another finding from recent research: recognition that bond-market credit spreads are better expressed as the ratio (rather than the difference) between lower-grade and upper-grade yields.⁶

The model distinguishes among four broad asset classes according to their relationships to leading indicators of economic growth (credit spreads) and inflation (the price of gold). If the performance of an asset is boosted by

a rise in the price of gold, it is “hard”; otherwise it is “soft.” If it is boosted by a widening of spreads, it is an investment “haven”; otherwise it is “risky.” The four classes are represented by the S&P 500 index (representing the soft-risky asset class), 20-year Treasury bonds (representing the soft-haven asset class), an unweighted version of the Goldman Sachs Commodity Index (representing hard-risky assets) and gold (the one and only hard-haven asset).

Tactical allocation decisions are assumed to be made once a year based on market signals from prior movements in the spread between Baa and Aaa bond and the gold price. The time span began in 1969, when the gold price had become volatile for the first time. Covering more than forty decades, the test therefore included a wide range of economic scenarios. The rules we’ve followed in back-testing have been kept extremely simple in order to keep the inevitable ambiguities to a minimum. Year by year, gold was either up or down over the previous year, and the Baa-Aaa spread had either widened or narrowed. No account was taken of the degree of movement in either. These two inputs determined which of the four asset classes was favored over the others at any given time.

1. Asset-price movements before and after year end are consistent with the suspicion that investment firms seek to be more heavily invested in high-quality securities than at other times of the year. See “Haven seeking, window dressing, and bond-market seasonality,” *Interest-Rate Outlook*, HCWE & Co., June 27, 2018.
2. Named for British economist Charles Goodhart, whose statement of it was that “Any observed statistical regularity will tend to collapse once pressure is placed upon it for control purposes.” According to Wikipedia, Goodhart’s thinking generalized ideas voiced earlier by Harvard economist John Campbell and is implicit in the “rational expectations” theory of Chicago economist Robert Lucas.
3. Mario Biagioli, “Watch out for cheats in citation game,” *Nature*, July 12, 2016.
4. Marilyn Strathern, “Improving ratings’: audit in the British University system,” *European Review*, Volume 5, July 1997, pp 305 – 321.
5. The most recent version of the asset-allocation model appears in “Empirical Foundations for Tactical Asset Allocation Decisions,” *Tactical Asset Selector*, HCWE & Co., May 31, 2016. A full account of the model is presented in R. David Ranson, “Some Empirical Foundations for Tactical Asset Allocation Decisions,” *Journal of Wealth Management*, winter 2016, pp. 62-74.
6. See “Two rival metrics for the pricing of credit risk,” *Tactical Asset Selector*, October 21, 2017.

Table 1

Results of Mid-Year Asset-Allocation Decisions Based on Gold and Spreads

| from the middle of 2014 | | | | | | | |
|---------------------------------------|----------------|------------------------------|-----------------------------------|------------------------|--------------|-----------------------------------|------------|
| decision date end of | change in gold | change in Baa- Aaa spread | change in Baa- Aaa yield ratio | favored asset class | total return | return from the 3 other assets | difference |
| 6/14 | -5% | -37 bp | -9% pts. | US stocks | 7.4% | -8.0 % | 15.5% pts. |
| 6/15 | -8 | 39 | 9 | T-bonds | 17.8 | 1.7 | 16.1 |
| 6/16 | 8 | 9 | 7 | Gold | -5.9 | 5.8 | -11.7 |
| 6/17 | -1 | -34 | -11 | US stocks | 14.4 | 2.6 | 11.8 |
| <i>compound average annual return</i> | | | | | 8.0 | 0.4 | |

Data: Month-average yields on Baa and Aaa corporate bonds (Moody's/Federal Reserve Bank of St. Louis) and month-average prices for gold, together with monthly total returns for the S&P 500 companies and 20-year Treasury bonds (University of Chicago/Dimensional Fund Advisors), the Goldman Sachs Commodity Index (Goldman Sachs) and gold (*Metals Week*).

Tactical results for recent years. Table 1 summarizes the outcome of asset-allocation decisions based on gold and spreads signals since the middle of 2014. Column 2 shows the prior percentage one-year change for the month of June, and the next two columns the prior one-year change in the Baa-Aaa spread measured in two different ways. The implied asset choice is shown in column 5, and the performance result of adopting that asset choice from mid-year to mid-year appears in column 6.

On these particular occasions it turns out that either method of measuring credit spreads signaled the same allocation choices. Three out of four decisions were successful. That is, the return from the selected asset exceeded the average return from an equally-weighted mix of the other three, as indicated in the last column.

During this time frame, returns on all asset classes tended to be historically low, averaging only 1.9 percent

collectively, and reflecting the unusual strength of the dollar at that time.⁷ For all four years taken together, the trading rule produced an excellent result. The return from investing in the asset selected by the rule averaged 8.0 percent, compared with a near-zero return from the unselected assets collectively.

Unfortunately, much of this success is attributable to assuming mid-year rather than end-of-year allocation decisions. For comparison, Table 2 shows the most recent three completed years of the December-December trading rule.

As in Table 1, it makes no difference for these years which metric for yield-spread movements is used. But the result of December-December decisions is unimpressive, beginning with the decision dated December 2015. This negative result should be unsurprising, since that was precisely the month in which the price of gold reversed its downward trend and, almost

simultaneously, credit spreads reversed their widening trend.⁸ It was the worst time to make an asset-allocation decision: at a turning point in market signals. A second failure at the end of 2016 may be attributable to a dramatic fall in the price of oil in early 2017, which was at odds with the ex-energy commodity price picture. The Goldman Sachs commodity index gives is production-weighted and gives notoriously high and variable weight to the price of petroleum.

December-December and June-June trading rules for the full time frame.

To provide a complete picture of the results of modifying and updating the trading rule, the first step is to bring the December-December model up to date through the end of 2017. That's a span of 47 years. We will then take the opportunity to switch to June-June decisions, and run the trading rule from mid-1969 to mid-2018, a span of 48 years.

Table 2

Results of Year-End Asset-Allocation Decisions Based on Gold and Spreads

| from the end of 2014 | | | | | | | |
|---------------------------------------|----------------|------------------------------|-----------------------------------|------------------------|--------------|-----------------------------------|------------|
| decision date end of | change in gold | change in Baa- Aaa spread | change in Baa- Aaa yield ratio | favored asset class | total return | return from the 3 other assets | difference |
| 12/14 | -2% | 19 bp | 9% pts. | T-bonds | -0.1% | -10.9% | 10.8% pts. |
| 12/15 | -11 | 54 | 12 | T-bonds | 6.7 | 9.3 | -2.6 |
| 12/16 | 8 | -72 | -19 | commodities | 8.9 | 15.6 | -6.7 |
| <i>compound average annual return</i> | | | | | 5.1 | 4.0 | 1.1 |

Data: As for Table 1.

7. This relationship is a result of expressing asset returns in US dollars. See "Don't be fooled when all asset classes seem to prosper at the same time," *Strategic Asset Selector*, HCWE & Co., September 16, 2016.

8. "A double turning point in the asset-allocation picture," *Tactical Asset Selector*, HCWE & Co., July 29, 2016.

Table 3 shows the year-by-year results and summary statistics for the December-December trading rule, using the Baa-Aaa yield ratio as a measure of credit spreads.

Table 3

A High-Return Trading Rule based on Gold and the Baa-Aaa Yield Ratio

| one year ending | prior year change in: | | | total return from: | | |
|-----------------|-----------------------|---------|-----------|--------------------|--------------|------------|
| | gold | Baa/Aaa | | chosen asset | unchosen mix | difference |
| | | | | | | |
| 1970 | 15% | 0% pts. | southwest | 4.0% | 11.7% | -7.6% pts. |
| 1971 | 7 | 7 | northeast | 16.7 | 15.7 | 1.0 |
| 1972 | 16 | -4 | southeast | 43.8 | 24.5 | 19.4 |
| 1973 | 47 | -4 | southeast | 70.5 | 19.1 | 51.5 |
| 1974 | 66 | -2 | southeast | 30.0 | 14.7 | 15.3 |
| 1975 | 73 | 9 | northeast | -24.8 | 13.9 | -38.7 |
| 1976 | -29 | 1 | northwest | 16.8 | 4.2 | 12.5 |
| 1977 | 2 | -6 | southeast | 5.7 | 4.9 | 0.8 |
| 1978 | 20 | -5 | southeast | 28.0 | 14.1 | 13.9 |
| 1979 | 29 | -1 | southeast | 68.5 | 49.7 | 18.8 |
| 1980 | 121 | 4 | northeast | 12.5 | 10.1 | 2.4 |
| 1981 | 29 | 2 | northeast | -32.1 | -8.9 | -23.3 |
| 1982 | -31 | 2 | northwest | 40.4 | 14.2 | 26.1 |
| 1983 | 9 | 3 | northeast | -16.3 | 10.0 | -26.3 |
| 1984 | -13 | -10 | southwest | 6.2 | -3.4 | 9.6 |
| 1985 | -17 | 1 | northwest | 31.0 | 16.4 | 14.6 |
| 1986 | 1 | 4 | northeast | 19.5 | 16.2 | 3.4 |
| 1987 | 21 | 3 | northeast | 24.5 | 15.9 | 8.5 |
| 1988 | 24 | -6 | southeast | 31.3 | 3.5 | 27.8 |
| 1989 | -14 | 0 | southwest | 31.7 | 11.0 | 20.6 |
| 1990 | -2 | 0 | southwest | -3.1 | 8.3 | -11.4 |
| 1991 | -8 | 4 | northwest | 19.3 | 5.3 | 14.0 |
| 1992 | -5 | -4 | southwest | 7.6 | 2.1 | 5.5 |
| 1993 | -7 | -1 | southwest | 10.1 | 11.3 | -1.2 |
| 1994 | 15 | 1 | northeast | -2.4 | 1.9 | -4.3 |
| 1995 | -1 | -3 | southwest | 37.6 | 14.6 | 23.0 |
| 1996 | 2 | 2 | northeast | -4.6 | 11.3 | -15.9 |
| 1997 | -5 | 0 | southwest | 33.4 | -4.7 | 38.0 |
| 1998 | -22 | -1 | southwest | 28.6 | -3.6 | 32.1 |
| 1999 | 1 | 8 | northeast | 0.5 | 11.3 | -10.7 |
| 2000 | -3 | -8 | southwest | -9.1 | 10.5 | -19.6 |
| 2001 | -4 | 3 | northwest | 3.7 | -9.4 | 13.1 |
| 2002 | 2 | 8 | northeast | 25.6 | 3.6 | 22.0 |
| 2003 | 20 | 1 | northeast | 19.9 | 16.5 | 3.4 |
| 2004 | 23 | -3 | southeast | 13.1 | 8.3 | 4.8 |
| 2005 | 9 | -5 | southeast | 24.3 | 10.2 | 14.1 |
| 2006 | 16 | 5 | northeast | 23.2 | 9.3 | 13.9 |
| 2007 | 23 | -1 | southeast | 16.4 | 15.8 | 0.7 |
| 2008 | 28 | 4 | northeast | 4.3 | -14.7 | 19.0 |
| 2009 | 2 | 45 | northeast | 25.0 | 10.4 | 14.6 |
| 2010 | 39 | -45 | southeast | 20.6 | 18.2 | 2.4 |
| 2011 | 23 | 0 | northeast | 8.9 | 8.6 | 0.3 |
| 2012 | 19 | 12 | northeast | 8.3 | 7.4 | 0.9 |
| 2013 | 2 | -7 | southeast | -10.7 | -2.1 | -8.6 |
| 2014 | -27 | -10 | southwest | 13.7 | 4.2 | 9.5 |
| 2015 | -2 | 9 | northwest | -0.1 | -10.9 | 10.8 |
| 2016 | -11 | 12 | northwest | 6.7 | 9.3 | -2.6 |
| 2017 | 8 | -19 | southeast | 8.9 | 15.6 | -6.7 |

| one year ending | prior year change in: | | | total return from: | | |
|------------------------------|-----------------------|---------|--|--------------------|--------------|------------|
| | gold | Baa/Aaa | | chosen asset | unchosen mix | difference |
| | | | | | | |
| mean | | | | 15.36% | 8.87% | 6.49% pts. |
| compound mean | | | | 13.67 | 8.39 | 5.28 |
| standard deviation | | | | 19.83 | 10.39 | |
| - upside | | | | 26.46 | 14.31 | |
| - downside | | | | 15.04 | 8.06 | |
| fraction of positive results | | | | | | 72.9 |
| corrected success ratio | | | | | | 73.4 |

Data: As for Table 1.

The last few lines of the table show that the average compound return from annual asset selections was 13.67 percent, compared with 8.39 percent from the unselected assets collec-

Table 4

A High-Return Trading Rule based on Gold and the Baa-Aaa Yield Ratio

| one year ending | prior-year change in: | | | total return from: | | |
|-----------------|-----------------------|----------|-----------|--------------------|--------------|------------|
| | gold | Baa/Aaa | | chosen asset | unchosen mix | difference |
| | | | | | | |
| 1971 | -15% | -1% pts. | southwest | 41.9% | 14.4% | 27.5% pts. |
| 1972 | 13 | 5 | northeast | 61.2 | 14.8 | 46.4 |
| 1973 | 54 | -1 | southeast | 71.1 | 30.5 | 40.6 |
| 1974 | 93 | -3 | southeast | 48.3 | -0.1 | 48.5 |
| 1975 | 28 | -1 | southeast | 5.9 | 15.1 | -9.3 |
| 1976 | 6 | 12 | northeast | -25.5 | 11.0 | -36.6 |
| 1977 | -23 | -6 | southwest | 0.5 | 4.8 | -4.2 |
| 1978 | 12 | -3 | southeast | 14.8 | 8.4 | 6.4 |
| 1979 | 30 | -2 | southeast | 39.4 | 24.3 | 15.1 |
| 1980 | 52 | 2 | northeast | 135.5 | 19.7 | 115.8 |
| 1981 | 115 | 8 | northeast | -34.8 | -3.3 | -31.6 |
| 1982 | -23 | -5 | southwest | -11.4 | -8.4 | -3.0 |
| 1983 | -32 | -1 | southwest | 61.0 | 28.1 | 32.9 |
| 1984 | 31 | 0 | southeast | 1.7 | -6.9 | 8.6 |
| 1985 | -9 | -3 | southwest | 31.0 | 6.1 | 24.9 |
| 1986 | -16 | 2 | northwest | 36.4 | 16.6 | 19.8 |
| 1987 | 8 | 0 | southeast | 35.2 | 18.2 | 17.0 |
| 1988 | 31 | 0 | southeast | 30.9 | -1.2 | 32.0 |
| 1989 | 0 | -1 | southeast | 26.3 | 8.1 | 18.2 |
| 1990 | -19 | -1 | southwest | 16.5 | 5.0 | 11.5 |
| 1991 | -4 | 0 | northwest | 9.0 | 8.1 | 0.9 |
| 1992 | 4 | 0 | northeast | -6.8 | 12.0 | -18.8 |
| 1993 | -7 | 0 | southwest | 13.6 | 9.6 | 4.1 |
| 1994 | 9 | 0 | southeast | 5.3 | -0.2 | 5.5 |
| 1995 | 4 | -2 | southeast | 4.8 | 15.3 | -10.6 |
| 1996 | 0 | 0 | southeast | 17.5 | 9.3 | 8.2 |
| 1997 | -1 | 1 | northwest | 9.0 | 8.6 | 0.4 |
| 1998 | -12 | -1 | southwest | 30.2 | -2.8 | 33.0 |
| 1999 | -14 | 1 | northwest | -0.2 | 0.8 | -1.0 |
| 2000 | -11 | 2 | northwest | 7.0 | 14.2 | -7.2 |
| 2001 | 9 | 0 | southeast | -3.2 | -3.8 | 0.6 |
| 2002 | -5 | 0 | northwest | 8.8 | -1.8 | 10.6 |
| 2003 | 19 | 9 | northeast | 8.6 | 10.7 | -2.1 |
| 2004 | 11 | 5 | northeast | 14.4 | 13.4 | 1.0 |
| 2005 | 10 | -12 | southeast | 8.9 | 12.1 | -3.2 |
| 2006 | 10 | 5 | northeast | 40.4 | 12.0 | 28.3 |
| 2007 | 38 | -3 | southeast | 2.9 | 10.8 | -8.0 |
| 2008 | 10 | 1 | northeast | 43.0 | 10.0 | 33.0 |
| 2009 | 36 | 9 | northeast | 0.5 | -19.3 | 19.8 |
| 2010 | 6 | 9 | northeast | 33.1 | 11.1 | 22.0 |
| 2011 | 30 | -6 | southeast | 28.0 | 17.3 | 10.7 |
| 2012 | 24 | -12 | southeast | -6.4 | 13.7 | -20.1 |
| 2013 | 4 | 23 | northeast | -25.4 | 1.6 | -27.0 |
| 2014 | -16 | -16 | southwest | 24.6 | 8.5 | 16.1 |
| 2015 | -5 | -9 | southwest | 7.4 | -8.0 | 15.5 |
| 2016 | -8 | 9 | northwest | 17.8 | 1.7 | 16.1 |
| 2017 | 8 | 7 | northeast | -5.9 | 5.8 | -11.7 |
| 2018 | -1 | -11 | southwest | 14.4 | 2.6 | 11.8 |

| one year ending | prior-year change in: | | | total return from: | | |
|------------------------------|-----------------------|---------|--|--------------------|--------------|-------------|
| | gold | Baa/Aaa | | chosen asset | unchosen mix | difference |
| | | | | | | |
| mean | | | | 18.48% | 7.88% | 10.59% pts. |
| compound mean | | | | 15.55 | 7.45 | 8.10 |
| standard deviation | | | | 28.16 | 9.61 | |
| - upside | | | | 35.89 | 13.40 | |
| - downside | | | | 17.09 | 7.08 | |
| fraction of positive results | | | | | | 68.75 |
| corrected success ratio | | | | | | 78.34 |

Data: As for Table 1.

tively: a margin of 5.28% pts. a year. The “success ratio” or fraction of years in which the asset selected out-performed the other three was 73 percent.

Table 4 shows the results of the June-June decision rule.

The average compound return from selecting one asset in June each year was 15.55 percent, compared with 7.45 percent more than from the unselected assets collectively: a margin of 8.10% pts. a year. This is a great improvement relative to the December rule in Table 3. The return from the selected asset is fully double the return from the other three. The “success ratio” was 69 percent unweighted, and 78 percent weighted according to the number of performance points at stake each year.

These results also help to confirm our preference for using the Baa/Aaa ratio as the spreads signal. When the basis-points spread is used instead, the asset selection rule produces an average compound return of 15.06 percent, 7.46 percentage points more than from the unselected assets.

Investment conclusions. Our gold-spreads tactical asset allocation trading rule has performed well since it was last tested in 2015. Two methodological improvements based on research conducted since that time have helped. To avoid December asset pricing distortions resulting from window dressing, we are now testing annual allocation decisions on a June-June basis. And as a

measure of whether credit spreads have tightened or widened we are now using movements in the ratio between Baa and Aaa bond yields.

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