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A Pretty Good Outcome

Let's try a thought experiment - What if . . .

What if we build a passive portfolio from the 32 asset categories shown in the graphic below using the following weighs: 30.3% US stocks, 29.3% international stocks, 5.0% US Treasury bonds, 31.5% US investment grade corporate bonds, 1.4% international bonds, 1.3% gold, and 1.2% other commodities. Over the last 102 years (ending 1/31/2021) this portfolio would have delivered 11.53% per annum. That's pretty good.

But none of us can wait for 102 years to pass. Maybe we only have 7½ years to wait. Maybe we need to spend the account 7½ years from today. What then?

Over the typical (or median) 7½ year investment time window, this portfolio returned 11.8%. But that's the typical result. Maybe you only needed to earn say 5%. If you put a blindfold on and randomly selected a 7½ year time window (from out of the last 102 years), what was your chance of earning 5% (or better), the answer is 99.9%.

Instead, maybe you needed to earn 6%, in which case the probability was 99.0%. Or 7% which resulted in 96.0% probability. Or even 7½% where the likelihood fell to 92.4%. In fact, if you only needed to earn 4.82%, then selecting a random 7½ year investment time window from out of the last 102 years gave you a 100.0% probability of success. Not bad. In fact, the typical or median outcome is for an initial $100 investment to grow to $231 by the end of the 7½ year period.

7 U.S. stock sectors	9 International stock sectors	1 Industrial and agricultural commodities	1 Inflation protection	5 U.S. Treasury bond sectors	5 Specialized bond sectors	4 Precious metal sectors

Ranging from Industrials to Energy	Ranging from the United Kingdom to Japan	Ultra diversified industrial and agricultural commodities	Treasury Inflation-Protected Securities bonds	Ranging from very short-term U.S. Treasury bonds to ultra long-term	Ranging from liquid investment grade corporates to international bonds	Ranging from gold to palladium

So, what's the trick?

For this passive portfolio to deliver an 11.8% annualized return over the typical or median 7½ year time window (selected from out of the last 102 years), there must be a gimmick or a trick. Well, there isn't.

So, what's the rest of the story? Think about other popular passive indices, for example, the S&P 500 for US stocks, the Bloomberg Barclays Aggregate Bond for bonds, or the MSCI EAFE for international stocks. Each of these is a passive Buy&Hold index. But each also follows pre-specified rules that drive their continuous redefinition and rebalancing. For example, sometimes the S&P 500 has 495 stocks, sometimes it has 508 stocks, companies are coming and going from the index regularly, the weights

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of the stocks that comprise the index change every single day, and changes to the index are made using subjective judgement by an ever-evolving committee. Yet, it is a passive index.

The thought-experiment portfolio described above is also similarly passive. Although it undergoes far less change than that described above for the S&P 500 Index and whatever changes do occur are never subjective. Instead, it makes use of a simple observation, i.e., relative winners have a tendency to repeat for just one more month. And the same is true for relative losers. As a consequence, the thought-experiment portfolio heavily overweights the seven asset categories exhibiting the greatest relative trending over the last eleven months and strongly underweights (or excludes) the rest.

As a consequence, this portfolio has the average asset allocation described above, but at any instant in time, will deviate from this average so as to heavily overweight recent relative winners (and exclude or underweight the rest). The thought-experiment portfolio is continuously reshaping itself so as to remain in strong alignment with what has been working in the recent past.

What are reasonable objections?

Transactions costs erode performance - The asset categories that comprise the relative winners and relative losers generally change from month to month. Reflecting these changes entails trading and trading induces transactions costs.

Knowledgeable investment researchers have observed that failure to take these transactions costs into account will make the results look better than what could have been obtained. To correct for this problem, the results stated above assume a high level of transactions costs, ones that are overly conservative. For example, it is assumed that the one-way cost to trade a diversified package of precious metals using the most popular ETF would cost approximately 33 basis points (i.e., 0.33%).

Trust but verify - One of our nation's past presidents often used the phrase "trust but verify." This is a prudent approach when dealing with all investment strategies. Thankfully, the portfolio construction rules and the underlying data that define the thought-experiment portfolio are fully transparent and readily available. It is a simple and straightforward exercise to confirm the validity of the numbers presented above. And we will help anyone who would like to give it a try.

Next steps

Your financial advisor has a menu of possible investment solutions. The solution that is most appropriate to your unique needs and circumstances can only grow out of a meaningful discussion with your advisor. Reach out to them, talk with your advisor.

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Important disclosures

It is not possible to invest, directly, in an index.

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Past performance is not an indicator of future results.

All performance appearing in this document is hypothetical and back-tested. Any hypothetical back-tested information provided herein is illustrative only and derived from a proprietary model designed with the benefit of hindsight based on certain data (which may or may not correspond with the data that someone else would use to back-test the portfolio) and assumptions and estimates (not all of which may be specified herein and which are subject to change without notice). The results obtained from different models, assumptions, estimates and/or data may be materially different from the results presented herein and such hypothetical back-tested information should not be considered indicative of the actual results that might be obtained from an investment or participation in a financial instrument or transaction referencing the portfolio.

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The data underlying the results, is monthly total return index data. This index data starts on 01/31/1919 and ends on 2/1/2021 and was provided by Global Financial Data, Inc., San Juan Capistrano, CA on 2/24/2021. Global Financial Data, Inc. can be reached at www.globalfinancialdata.com.

The thought-experiment portfolio was constructed as follows:

- The portfolio consists of the seven best performing asset classes, as measured over the prior eleven months, just completed (plus a fixed/permanent 0.7% allocation to cash equivalents (using the GFD Indices USA Total Return T-Bill Index) and a fixed/permanent 29.3% allocation to liquid investment grade U.S. corporate bonds (using the Dow Jones Corporate Bond Return Index)).
- The seven best performing asset classes are revised once each month at month-end closing values.
- The portfolio is rebalanced monthly, and uses scaled weights (as opposed to equal-weights) at all times (in addition to the constant 0.7% allocation to cash equivalents and the 29.3% allocation to liquid investment grade U.S. corporate bonds).
- The seven best performing asset classes are selected from the 32 passive indices listed below under the sections titled: U.S. Stock Indices, U.S. Bond Indices, International Stock Indices, International Bond Indices, and Commodities.

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- The term "seven best performing" is defined as which seven asset classes (drawn from the 32 passive indices) had current month-end index values that were the furthest above (in proportionate percentage terms) their respective average levels over the just completed eleven months (using month-end total return index levels).

- The seven best performing asset categories are not equal-weighted, instead, they use scaled weights. Scaled weights are used because this increases the probability (or likelihood) of the portfolio generating at least 4.0% compound annual return over a randomly selected 7½-year rolling time window. For example, liquid investment grade U.S. corporate bonds are weighted more heavily than are international stocks. Similarly, commodities other than gold are weighted more lightly than are international stocks.

- You may request to receive the:
    - Historical monthly asset class weightings for the portfolio from your advisor. This data shows the exact composition of the portfolio, month-by-month, throughout its entire history.
    - Average weightings to the eight major asset categories comprising the portfolio since inception. These major asset categories are defined as: U.S. stocks, International stocks, U.S. Treasury bonds, Liquid investment grade U.S. corporate bonds, U.S. high yield bonds, International fixed income, Gold, and Other commodities.
    - Assumed one-way transactions costs for each of the 32 asset categories. These range from a low of 0 basis points for the GFD Indices USA Total Return T-Bill Index to a high of 32.95 basis points for a basket of precious metals consisting of gold (0.030oz), silver (1.100oz), platinum (0.004oz), and palladium (0.006oz).

U.S. Stock Indices - (1) S&P 500 Total Return Index (w/GFD extension), (2) S&P 500 Utilities Total Return Index 55, (3) Dow Jones Industrials Total Return Index, (4) Dow Jones Transportation Average Return Index, (5) S&P 500 Industrials Total Return Index 20, (6) Energy (Fama French, Market value-weighted portfolio, Total returns, Market broken into 10 industry portfolios), and (7) HiTech (Fama French, Market value-weighted portfolio, Total returns, Market broken into 10 industry portfolios).

U.S. Bond Indices - (1) GFD Indices USA Total Return T-Bill Index, (2) USA 30-year Government Bond Return Index, (3) USA 5-year Government Note Total Return Index, (4) USA 3-year Government Note Return Index, (5) GFD Indices USA 10-year Government Bond Total Return Index, (6) BofA Merrill Lynch US Inflation-Linked Treasury Total Return Index, (7) Dow Jones Corporate Bond Return Index, (8) GFD Indices USA Total Return AAA Corporate Bond Index, (9) Bloomberg Barclays US Aggregate Bond Index, and (10) Bank of America Merrill Lynch US High Yield Master II Total Return Index Value.

International Stock Indices - (1) UK FTSE All-Share Return Index (w/GFD extension), (2) Japan Topix Total Return Index, (3) Germany CDAX Total Return Index (w/GFD extension), (4) Australia ASX Accumulation Index-All Ordinaries, (5) OMX Helsinki All-Share Gross Index - Finland, (6) OMX Stockholm Benchmark Gross Index (GFD extension - Sweden, (7) OMX Copenhagen All-Share Gross Index - Denmark, (8) France CAC All-Tradable Total Return Index, and (9) Brussels All-Share Return Index (w/GFD extension) - Belgium.

International Bond Indices - (1) GFD Indices World x/USA Countries Government Bond GDP-weighted Return Index.

Commodities - (1) Gold Bullion Price-New York (US$/Ounce), (2) A basket of precious metals consisting of gold (0.030oz), silver (1.100oz), platinum (0.004oz), and palladium (0.006oz), (3) Reuters CRB Total Return Index (w/GFD extension), (4) Silver Cash Price (US$/Ounce), (5) Palladium (USD per Troy Ounce).

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