Two New Retirement Income Withdrawal Strategies

In retirement income planning, the "4% rule" has been reliable general guidance since the 1990s.

The 4% rule speaks to retirees' initial withdrawal rates. It says if retirees withdraw roughly 4% of their savings in their first year of retirement and adjust that dollar amount annually up or down by the rate of inflation of the preceding year, then they stand about a 90% chance of sustaining that income stream for 30 years—and a 10% chance of running out of money sooner.

In other words, a retiree with $1 million invested in a diversified portfolio of stocks and bonds could withdraw $40,000 her first year of retirement. Then if the inflation rate in subsequent years hypothetically ran 3%, her second year's withdrawal would be $41,200, her third year's withdrawal would be $42,436, and so on.

T. Rowe Price financial planners have long used the 4% rule but have never treated it as etched in stone, advising retirees to assess their portfolios and withdrawal levels at least annually.

But with the recent, historically anomalous period of ultra-low interest rates, the rule has come under challenge—with some studies saying retirees should consider initial withdrawal rates below 4% so as not to raise their risk of running out of money in less than 30 years.

Given that, T. Rowe Price researchers recently reexamined the 4% rule, testing its outcomes across the spectrum of stock and bond valuations—as well as testing an alternate withdrawal strategy that could allow retirees to initially withdraw more than 5%.

Based on historical data going back to 1926, the study looked at two potential adjustments to the 4% rule, an initial adjustment based on the valuations of stocks or bonds at the time of retirement and a more dynamic strategy of forgoing upward inflation adjustments following any year in which the retiree's portfolio lost value.

> **"Overall, the new study is really good news. It may calm some investors contemplating retirement. It says 4% actually is a relatively conservative initial withdrawal rate. We're going to have market performance cycles, including those in which retirees may lose money. But if they're willing from time to time to not increase their withdrawals for inflation, they may be even able to begin retirement with a higher withdrawal rate."**

The study focused on the "feasible initial withdrawal rate" (FIWR): The withdrawal rate for the first year of retirement—subsequently adjusted for inflation—that was sustained for 30 years in 90% of the rolling historical periods examined.

The study generally found:

- **Valuation Strategy:** Over a 30-year retirement, the valuations of bonds and stocks at the time of retirement directly impact the FIWR. Higher stock or bond valuations at the time of retirement lowered the FIWR and, conversely, lower stock or bond valuations raised it.

All-bond portfolios of course were more sensitive to bond valuations, and all-equity or blended portfolios were more sensitive to stock market valuations.

Regardless of stock or bond valuations at the time of retirement, however, the study found 4.3% as the overall FIWR for a diversified portfolio of 60% stocks and 40% bonds that was rebalanced monthly—a critical finding affirming the general viability of the 4% guideline.

- **Dynamic Strategy:** Instead of following the conventional withdrawal method of taking annual adjustments for inflation, retirees could pursue an alternate strategy of not taking inflation increases in years following those in which their portfolios lost money.

Using this dynamic strategy for a blended portfolio of 60% stocks and 40% bonds, retirees could have raised their overall FIWR to 5.1%, regardless of stock or bond valuations at the time of retirement.

With a $1 million portfolio, this translates to $51,000 in income in the first year of retirement versus $43,000 income using the conventional method's overall FIWR of 4.3%.

"Overall, the new study is really good news," Christine Fahlund, a senior T. Rowe Price financial planner, says. "It may calm some investors contemplating retirement. It says 4% actually is a relatively conservative initial withdrawal rate. We're going to have market performance cycles, including those in which retirees may lose money. But if they're willing from time to time to not increase their withdrawals for inflation, they may be even able to begin retirement with a higher withdrawal rate."

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"And if this is all too complex for retirees and they would just like to follow the overall 4% guideline, then more good news is that they generally should be able to still rely on that."

Adds Stefan Hubrich, T. Rowe Price's director of asset allocation research, whose team conducted the new study, "The 4% FIWR is conservative because it requires success in 90% of the cases—so it implicitly allows for some bad equity return events to happen at some points during 30 years.

"High equity valuations at retirement have led to lower returns down the road but the '4% rule,' in a sense, takes that possibility into account," he says. "Moreover, there actually were many 30-year periods in which you could have taken more control using the valuation or dynamic strategies to start withdrawing at a higher initial rate."

Valuation Strategy

The recent concern that retirees' initial withdrawal rate should be lower than 4% because of low bond yields is essentially a valuation statement based on bonds' recent and unusually high valuations (and low yields). For an all-bond portfolio, the T. Rowe Price study found that generally true.

For an all-bond portfolio, the study found an overall 2.8% FIWR, regardless of bond valuations at the time of retirement. (See chart this page.) A 2.8% FIWR is essentially the "4% rule" for an all-bond portfolio.

However, if 10-year Treasury yields were less than 2.58% at the time of retirement, as they were earlier this year, then retirees would have had to lower their FIWR to 2.5%.

Conversely, if Treasury yields were higher than 3.45% at the time of retirement, then retirees could have succeeded with a higher FIWR. (See bond valuation note at the end of this article.)

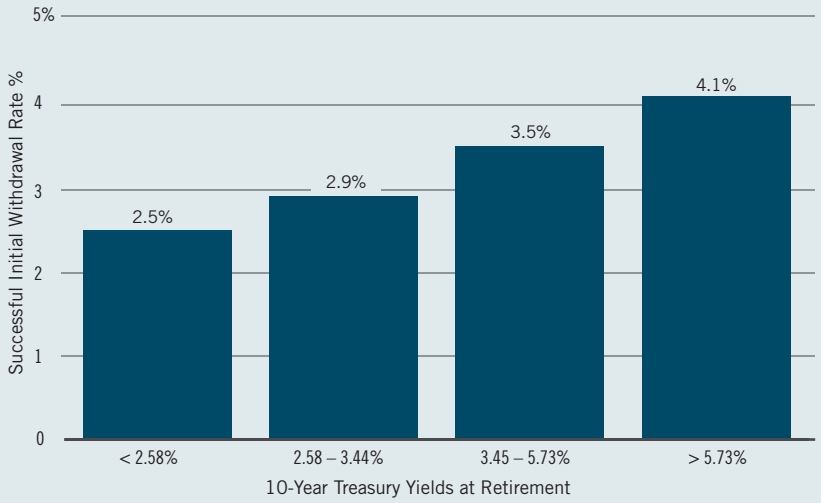
With an all-stock portfolio, the study found an overall 4.1% FIWR if stock

Valuation Strategy for Initial Withdrawals

Using historical data for all-bond and all-stock portfolios, the following "feasible initial withdrawal rates" or FIWRs—grouped by the valuations of bonds or stocks at the time of retirement—would have sustained 30 years of withdrawals (adjusted annually for the actual rate of inflation) in 90% of all the cases studied. *This study is not a forecast. See note below for more details.*

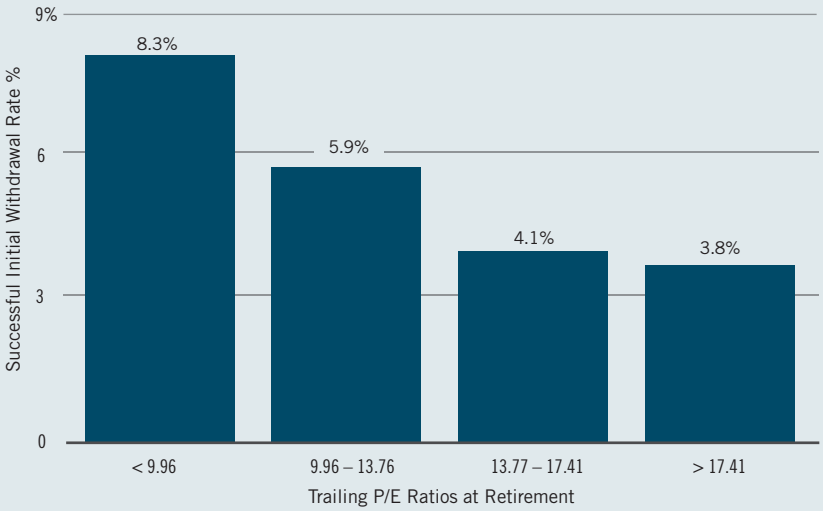
Higher Bond Yields Allowed Higher Withdrawal Rates

The T. Rowe Price study found an overall FIWR of 2.8% for an intermediate-term investment-grade bond portfolio. But higher FIWRs also succeeded when 10-year Treasury yields at the time of retirement were relatively high.



Lower Stock Valuations Allowed Higher Withdrawal Rates

For an all-stock portfolio, the overall FIWR was 4.1% when stock valuations were not considered. But higher FIWRs also succeeded when stock valuations at the time of retirement, as measured by stocks' trailing price/earnings (P/E) ratio, were relatively low.



Note: This historical study covered 690 30-year withdrawal periods starting January 1926 through June 2013. In the study, investment-grade bond returns were from Ibbotson and were represented by the U.S. IT Government Index 1926–1972, the Lehman Brothers Government/Corporate Index 1973–1975, and the Barclays U.S. Aggregate Bond Index from 1976–present. Stock data were represented by the S&P 500 Index, from Ibbotson. Historical inflation data were used, from the Federal Reserve Bank of St. Louis. Trailing P/E is calculated by dividing the current stock index level by index earnings per share for the past 12 months. Ten-year yield and trailing P/E data were sourced from data sets maintained by Yale economist Robert Shiller.

valuations at the time of retirement were not taken into account.

As shown in the chart on page 16, if stock valuations were relatively low, retirees could have started with a much higher FIWR. Conversely, if stock valuations were relatively high at the time of retirement, then retirees could have used a lower FIWR. (See stock valuation note at the end of this article.)

The FIWR range based on stock valuations was more than four percentage points, from 3.8% to 8.3%.

This is perhaps counterintuitive: In the study, lower stock valuations—and therefore likely lower portfolio balances—at the time of retirement meant a higher FIWR was possible.

Mr. Hubrich explains this is because when stock valuations were relatively low at the start of the 30-year periods studied, that "generally portended better long-term equity returns—a normalization of valuations in subsequent years. And when they were extremely high, that generally portended muted forward equity returns, also a normalization.

"It's important to note that the valuation/returns relationship played out meaningfully over long periods of time—decades, which is what retirement income planning involves. The relationship is not nearly as reliable over shorter periods of time."

It also should be noted that a higher FIWR does not necessarily mean a higher dollar withdrawal amount because lower valuations typically result from equity market corrections. So the higher FIWR often would be applied to a lower portfolio balance.

Of course, T. Rowe Price financial planners recommend diversified portfolios for investors while accumulating savings and in retirement. So the study also tested the valuation strategy for a blended portfolio of 60% stocks and 40% bonds.

With the diversified portfolio, the study found stock valuations—not bond valuations—had a greater and more consistent impact on the FIWR. Put simply, that was because stocks outweigh bonds in this portfolio and are much more volatile than bonds, so the 60/40 portfolio's risk profile is more stock-like than bond-like, Mr. Hubrich says.

The study found, regardless of stock valuations, a 4.3% FIWR for a 60/40 portfolio. But, depending on stock valuations, the range of FIWRs was almost three percentage points, 3.9% to 6.8%. (See chart this page.)

> **"This can be a very powerful strategy. Giving up your relatively small, annual inflation increase every now and then is a small price to pay for that higher initial withdrawal rate."**

Dynamic Strategy

For some retirees, the valuation strategy might prove too time-consuming as they would have to track down the 10-year Treasury yield or the S&P 500 Index's trailing price/earnings (P/E) ratio at the time of their retirement.

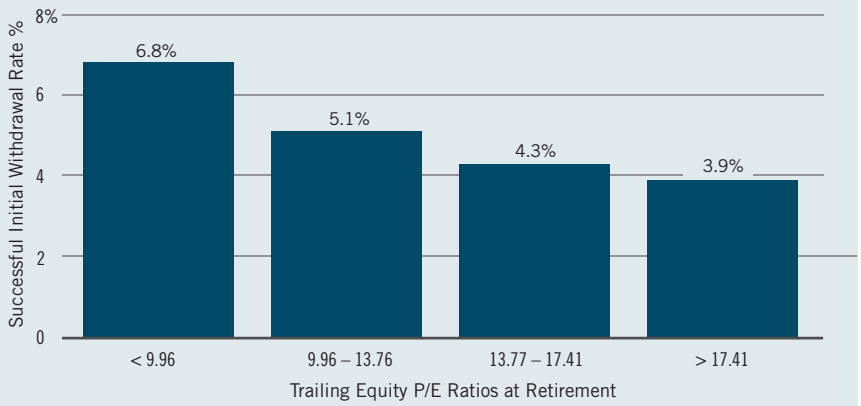
Though it requires annual decisions, the dynamic strategy may be easier to follow—and may enable retirees to start with a higher overall FIWR, 5.1%, for a 60/40 portfolio, the study found.

To carry out the dynamic strategy after their initial withdrawal of 5.1%, retirees would have to know their portfolio balance at the start of each year, after subtracting their annual withdrawal, and see if it was lower or higher than their portfolio balance at the end of each year. In other words, they would check to see if their portfolio's return was positive or not.

If the portfolio balance has dropped, the dynamic strategy calls for retirees to not take their annual inflation adjustment in the following year. Then, if their portfolio registers a gain for the next year, they'd resume increasing their withdrawal by the annual inflation rate.

Valuation Strategy for 60/40 Portfolio

The T. Rowe Price study found a FIWR of 4.3% for a 60% stock and 40% bond portfolio, regardless of the valuations of stocks or bonds. But, as equity valuations had much more impact on the outcomes for this portfolio than bond valuations, higher FIWRs succeeded if stock valuations—as measured by their trailing 12-month price/earnings (P/E) ratio—were relatively low at the time of retirement. *This is not a forecast.*



Note: In the study, the 60/40 portfolio was rebalanced monthly. See note below the chart on page 16 for more study details.

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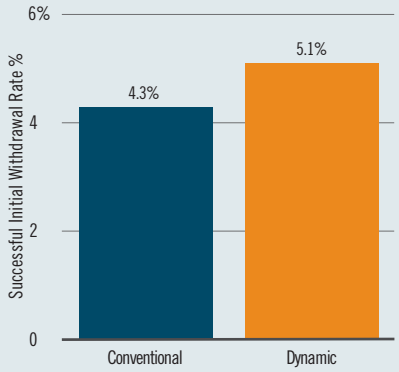
Dynamic Strategy

Using the dynamic withdrawal strategy—of not taking annual withdrawal inflation increases following years in which portfolios lost value—the T. Rowe Price study found that retirees could have taken a higher overall FIWR than with the conventional strategy of always adjusting annual withdrawals for inflation. For a 60/40 portfolio, the study found an overall FIWR of 5.1%—versus a 4.3% overall FIWR for the conventional method—regardless of stock or bond valuations at the time of retirement. This chart compares the FIWRs of the conventional method and the dynamic strategy when valuations were not taken into account. *This is not a forecast.*



Note: Using the conventional method, annual withdrawals were taken at the start of each year, and the amounts after the initial withdrawals were raised or lowered based on the preceding year's inflation rate. With the dynamic strategy, when portfolios lost value, no inflation adjustments were taken in the following year, except if the inflation rate was negative. See notes below the charts on pages 16 and 17 for more details.

Such annual inflation adjustments are embedded in the conventional withdrawal method. But not taking an increase after annual portfolio losses has a substantial positive impact on the initial withdrawal rate. (See top chart this page.)

"This can be a very powerful strategy," Ms. Fahlund says. "Giving up your relatively small, annual inflation increase every now and then is a small price to pay for that higher initial withdrawal rate."

In that sense, the dynamic strategy resonates with an earlier T. Rowe Price study that showed retirees who are hit with large portfolio losses from a bear stock market in their first year of retirement could potentially recover much of their chance of sustaining a 30-year income stream if they simply do not take upward inflation adjustments for five years.

And for those who want to take their withdrawal strategy one step further, it could be possible to combine the dynamic and valuation strategies.

As shown in the chart on the bottom of this page, if stock valuations were relatively low at the time of the initial withdrawal, the study found that even higher FIWRs—possibly as high as 7.5%—succeeded.

Ms. Fahlund notes that, to some degree, many retirees already may practice an informal version of the dynamic strategy—by holding steady or cutting back their withdrawals when their portfolios drop in value.

And she adds that, although both the valuation and dynamic strategies have been effective, "they are just rules of thumb. So whatever retirees do, we've always advised that they should reexamine market conditions, their portfolios, and withdrawal amounts at least once a year to see if they are on track."

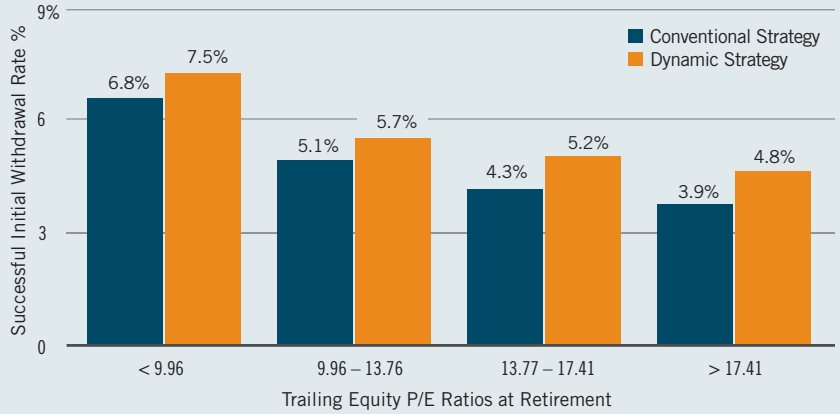
Bond valuations: As of September 30, 2013, 10-year Treasuries yielded 2.61%, so bonds were not as highly valued and therefore not as low yielding as earlier this year—putting bond yields in the second quartile of bond valuations in the chart on page 16.

Stock valuations: For this study, stock valuations were determined by the trailing P/E ratio of the S&P 500 Index, which is calculated by dividing stock prices by their earnings for the prior 12 months. As of September 30, 2013, the trailing P/E was 19.14%, a higher valuation than earlier this year and well into the top quartile of stock valuations in the chart on page 16. At the same time, it should be noted that T. Rowe Price portfolio managers believe a relatively high stock valuation by just one metric should not be seen in isolation as a deterrent to investing in stocks. A range of other metrics and factors come into play for medium-term stock investment decisions versus 30-year financial planning decisions—among them, economic prospects and the relative attractiveness of stocks versus bonds.

Past performance cannot guarantee future results. All investments are subject to market risk, including possible loss of principal. It is not possible to directly invest in an index.

Dynamic and Valuation Strategies Together

For a 60/40 portfolio, this chart shows the FIWRs for both the dynamic strategy and the conventional method of withdrawals when equity valuations were taken into account. *This is not a forecast.*



See notes below the other chart on this page and the charts on pages 16 and 17 for more details.