



An International Perspective on Safe Withdrawal Rates

By Wade Pfau
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We are excited to announce that Wade Pfau has agreed to write a monthly column for Advisor Perspectives covering key developments in research surrounding safe withdrawal rates. His first article will appear in next week. In the meantime, here is a never-before-published article he originally wrote last December. It summarizes his research article from the [December 2010 Journal of Financial Planning](#).

Prospective retirees must consider whether they are comfortable basing retirement decisions on the impressive but perhaps anomalous numbers found in historical US data. What has been safe for US retirees in the past has been far less secure for their foreign counterparts.

Conventional wisdom states that, when it comes to retirement planning, the 4% “safe withdrawal rate” (SWR) rule is the platinum standard. That rule, dating back to William Bengen’s 1994 [article](#) in *Journal of Financial Planning*, says that a new retiree can safely withdraw 4% of their savings in the first year of retirement and adjust this amount for inflation in subsequent years. Bengen found that this strategy is safe in the sense that the strategy will not lead the retiree to exhaust all of his or her remaining assets for at least 30 years.

The 4% rule has been widely adopted by the popular press and financial planners as an appropriate general rule of thumb for retirees. Since Bengen’s paper, numerous researchers have developed strategies to allow retirees to safely exceed a 4% withdrawal rate. Though the SWR fluctuates a bit from study to study, depending on the dataset and assumptions used for its calculation, my own research suggests a safe withdrawal rate for the US of 4.02%. That was the highest amount that could be sustained in the worst-case retirement year. I find that using the Dimson, Marsh, Staunton Global Returns Data for 17 developed market countries since 1900.

The problem with SWR research based on historical data, however, is that most every study has been based on the same Ibbotson Associates dataset on US financial market returns since 1926. The time period covered by such data may have been a particularly fortuitous one for the United States that will produce dangerously overinflated SWRs if asset returns fail to be so stunning in the future.

Indeed, over the time period in question the US consistently enjoyed among the highest inflation-adjusted returns and lowest volatilities for stocks, bonds, bills and inflation. For stocks, only three countries enjoyed higher returns, and the only four countries experienced less volatility in stock returns. This combination of high returns and low



volatility is remarkable for the US and helps to support higher withdrawal rates. The story is similar for bonds, bills, and inflation as well. For bonds, only three countries enjoyed higher real returns, and only two countries enjoyed less volatility for those returns. Only two countries experienced lower average inflation than the 2.98% we enjoyed in the US.

As a consequence, tests using US data should provide for relatively high SWRs from retirement savings. From an international perspective, the US enjoyed a particularly favorable climate for asset returns in the twentieth century, and to the extent that the US may experience mean reversion in the current century, SWRs as presently calculated may no longer seem so safe.

The results have shown that from an international perspective, a 4% withdrawal rate has been problematic. The calculated SWR exceeds 4% in only three of the other 16 countries: Canada, Sweden, and Denmark. As for other countries, the most unfortunate retiree of all was a Japanese person retiring in 1940, whose maximum SWR was a miserably low 0.47% as high inflation and low real returns plagued Japan during and after the war. Six countries experienced withdrawal rates below 3%: Spain, Italy, Belgium, France, Germany, and Japan. In Italy, the 4% rule failed 62.5% of the time, and in Japan, such high withdrawals were sustainable for only three years in the worst-case scenario.

For stock allocations between 30% and 90%, the US enjoyed higher SWRs than any country except for Canada. For the US, the maximum occurs at 57% to 60% stocks, but unlike many of the countries that show a much more pointed hump, the maximum is only slightly less for stock allocations between about 30% and 80%. Except for Switzerland, retirees in the various countries were generally better off when holding at least 50% of their savings in stocks.

Safe withdrawal rates did not derive their safety from conservative asset allocations.

In several ways, my assumptions provide an overly optimistic view of withdrawal rates. In each year for each country, I assumed that retirees have the perfect foresight to choose the specific fixed asset allocation among their country's stocks, bonds, and bills that would provide the highest withdrawal rate. Relaxing this assumption, for instance, and instead using a 50/50 asset allocation for stocks and bonds across the board would cause the 4% rule to fail at least once in every country. I also assumed that retirees do not have to pay any portfolio management or advisor fees from their assets beyond what they otherwise withdraw for their expenses.

On the other hand, researchers have demonstrated that including more financial assets, using dynamic rules to adjust withdrawals to market conditions, and changing rebalancing strategies can all serve to increase SWRs, and these modifications have not been incorporated here. Furthermore, some of the worst outcomes were connected with World Wars I and II, and investors who are confident that world war is a relic of the past may feel comfortable ignoring those cases, or may at least assume that during World War III retiring



comfortably would be the last thing on their mind.

These findings may be rather frightening. After all, who but the wealthiest could possibly save enough to live comfortably using the SWR of 0.47% based on global historical data? From the perspective of a US retiree, the issue is whether the future we will experience the same asset return patterns as in the past, or whether Americans should expect mean reversion that would lower asset returns to levels more in line with what many other countries have experienced. It may be tempting to hope that asset returns in the twenty-first century US will continue to be as spectacular as in the last century, but it should not be casually assumed.

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