

## WATS vs. Monte Carlo Simulation

There has recently been a lot of discussion about Monte Carlo Simulation (MCS) and its use in the investment community to project possible future outcomes. While MCS is a huge improvement over straight-line projections, it has its problems. The biggest problems with MCS are in building models that are representative and robust, and in understanding the results.

### How MCS Works

The inputs for an MCS study are basically the same as those used for Efficient Frontiers: expected rates of return and correlations amongst the assets. Additionally, MCS requires you to provide expected distributions of the returns for the assets. To build a robust MCS model requires quite a lot of analysis of the assets in question. On top of that, you must make several assumptions about the inter-relatedness of the assets and the expected return distributions.

“For many planners, [MCS] technology falls into the ‘it’s interesting, but...’ category, where the reasons for not using the software outweigh the potential benefits.”  
*Ed McCarthy, Associate Editor of the Journal of Financial Planning*

Once the model is built and verified (which can take a substantial amount of time), you are ready to run the simulations. To run the simulations, MCS randomly generates returns for the assets in question within the parameters of the model you have constructed.

The complexity of the model, combined with the randomness of the process, makes the output of MCS difficult to understand and even more difficult to explain.

MCS tries to forecast possible future outcomes based on complex, artificial representations of the past. When building WATS, the designers wondered, “Instead of building such complicated models, why not use the actual historical events themselves to help make investment decisions?”

### History Has Credibility

Which of the following statements is more meaningful?

- A) Using Monte Carlo Simulation to model investment performance your investment strategy has a 90% chance of success.
- B) Historically, your investment strategy has worked 90% of the time.

Which is easier to explain to a client?

WATS tests and compares investment strategies by looking at historical success rates, which are computed by running simulations just as if you actually lived through every possible historical period. With WATS the complexities of the capital markets do not need to be simulated— instead, WATS uses the actual history itself, something MCS does not do.

To understand the WATS methodology, consider this example: Joe Bravo is retiring at age 65 with \$1 million in liquid assets. Joe's portfolio consists of 50% stocks and 50% bonds. His plan

"For decades the investment industry has shown Americans how to accumulate assets for retirement. It's now time for the payoff-- living off those portfolios. This is a new ballgame that requires new ways of thinking and new tools. WATS is one of the best I've seen. It's fast, easy to use and, best of all, it's rigorous. WATS will let you go forward with confidence in your plan."

*Michael J. C. Roth, former president of USAA Investment Management Company*

is to spend 8% of the value of the account each year while in retirement. At the same time he wants to leave at least \$1 million behind for his children. Joe is comfortable looking at a 30-year horizon.

With WATS, you can quickly give Joe the following information:

Your plan has a historical success rate of 30%. On average you have \$946 thousand left in the account at the end of 30 years. If you are willing to drop your spending rate to 7%

you can boost your historical success rate to 70%, with an average of \$1.3 million left in the account. Additionally, if you are willing to consider more aggressive asset allocations, we can get your withdrawal rate up to 8% with 100% historical success using an allocation of 80% stocks, 15% bonds and 5% T-Bills, which has an average ending value of \$1.5 million.

MCS is an excellent way to test investment strategies when the investments being considered have relatively little historical data. When real historical data is available, however, MCS introduces randomness and mathematical complexity that is not necessary. If you have real historical data, WATS is a much better way to test investment strategies.

### **Pricing, Demo and Customer Satisfaction**

There are two versions of WATS, the Advisor Edition for \$199 and the Personal Edition for \$49.95. The Personal Edition uses the same simulation engine as the Advisor Edition but does not have 1) Morningstar import, 2) Black Box, 3) IRR Calculator or 4) Efficient Frontier Modeling.

Certain affiliates save 10% or more off the regular price of \$199. Call toll-free 1-888-863-0221 or email [info@zunna.com](mailto:info@zunna.com) to see if you qualify for special pricing.

To run an on-line demo of WATS using your web browser, please visit our website at [www.zunna.com](http://www.zunna.com). For more information call toll-free 1-888-863-0221 or email [info@zunna.com](mailto:info@zunna.com).

Our goal is total customer satisfaction. All of our products have a 30-day money back guarantee. We invite you to try our products risk-free. If you are unhappy for any reason we will refund the full purchase price.