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Build Knowledge/Investment Theory & Strategy

What's the Best Asset Allocation Strategy?

By Jim Otar, CMT, CFP
Sept. 25, 2006

Is an asset allocation that starts aggressive and becomes conservative over time better than a long-term approach based on your client's risk tolerance? Or should you use some sort of age-based equity formula? We test these three strategies against real market data to see how clients would fare under each approach.

There are two main categories of asset allocation (AA) strategies: market-based and client-based. Market-based strategies react to prevailing market trends. Trend following, tactical, flexible, and dynamic are some of the popular AA strategies in this category.

On the other hand, client-based asset allocation strategies ignore market trends and focus on the investor. Following are the popular ones:

- **Strategic.** You decide on an asset mix based on your client's risk tolerance and stick with it over time.

- **Age-based.** Typically, the equity percentage is equal to 100 minus age. For example, at age 30, you would have 70% equity and 30% fixed income. At age 65, you would have 35% equity and 65% fixed income.

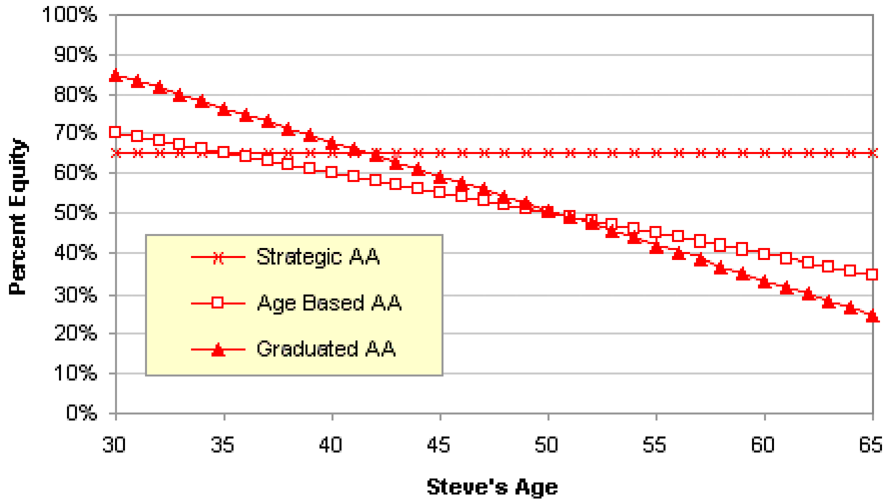
- **Graduated.** These are more extreme versions of the age-based asset allocation. For example, if the client were 35 years away from retirement, the portfolio would typically start with 85% in equities and come down to 25% by age 65.

To analyze the effect of each of these three strategies, let's look at an example: A client, Steve, is 30 years old. He is just starting to save for retirement. His account currently holds only $10,000. He plans to save $10,000 annually, indexed by 3%, until age 65. He can choose between the strategic (65/35 equity/bond), age-based (equity percentage equals 100 minus age), and graduated asset allocation (starting at 85% equity at age 30, ending at 25% equity at age 65). He asks, "Which one of these three strategies will give me the highest dollar amount at age 65?"

Testing the approaches

Figure 1 shows the percentage of equity in Steve's portfolio for each strategy over his 35-year accumulation time horizon. For calculation purposes, we assume a steady annual decline of the equity percentage for the graduated strategy. In real life, asset mix changes are done less often, perhaps once every five years.

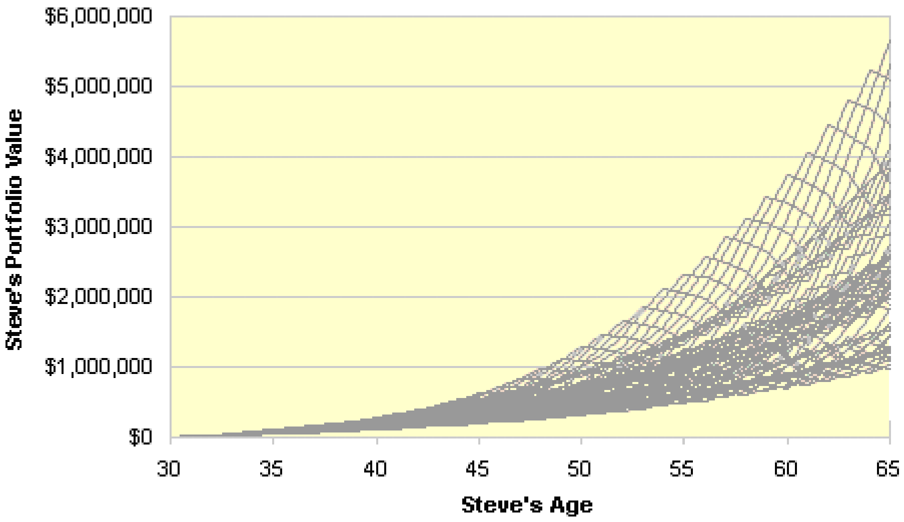
Figure 1: Percent Equity in Steve's Portfolio



Source: Jim Otar, CMT, CFP

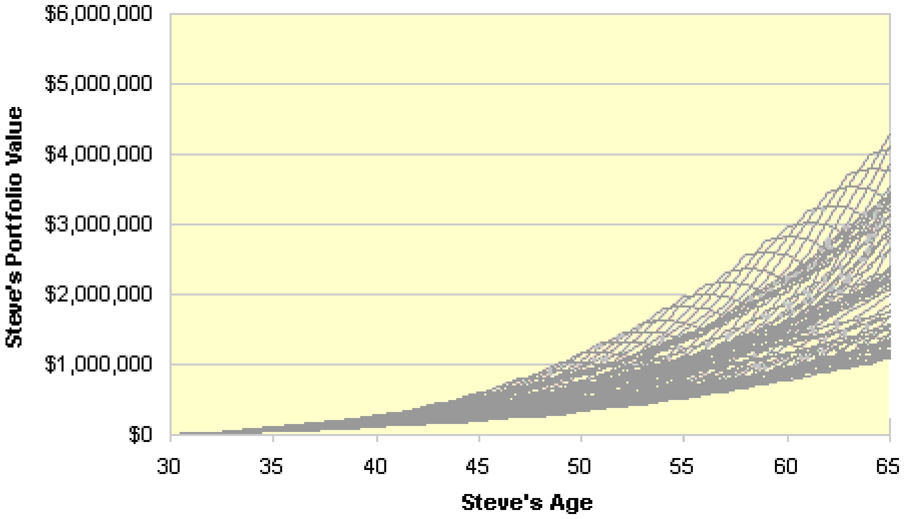
We plug these numbers into our retirement calculator, which is based on market history. Figures 2 to 4 show the potential outcomes. Each line shows Steve's portfolio value starting in any one of the years since 1900, using historical data for the S&P 500 index as a proxy for equity performance.

Figure 2: Portfolio Value Using Strategic Asset Allocation



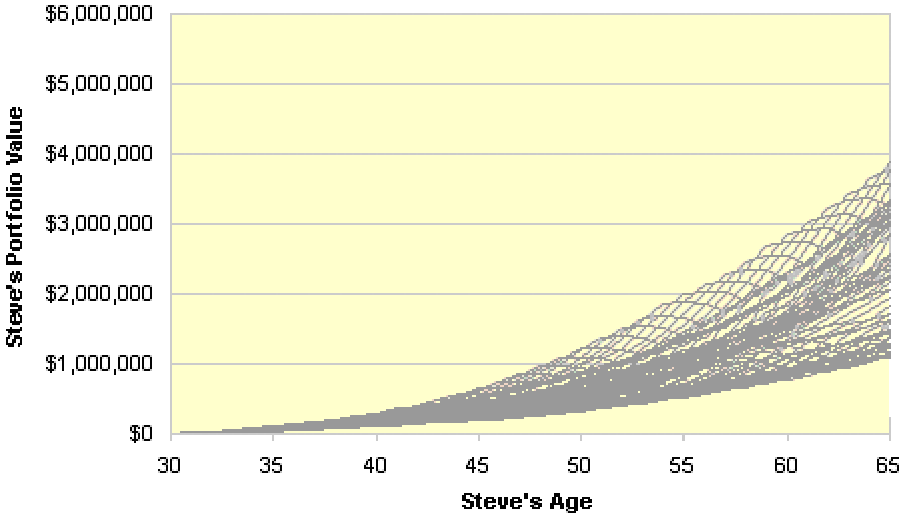
Source: Source: Jim Otar, CMT, CFP

Figure 3: Portfolio Value Using Age-Based Asset Allocation



Source: Jim Otar, CMT, CFP

Figure 4: Portfolio Value Using Graduated Asset Allocation



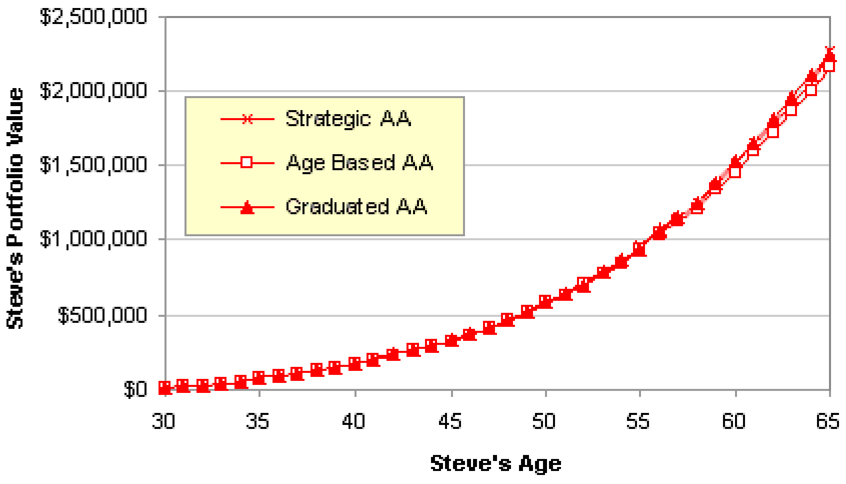
Source: Jim Otar, CMT, CFP

What is the difference in the outcome for these three strategies? Almost nothing!

The median portfolio

The median is where half of the outcomes have higher and half have lower portfolio asset value. Look at Figure 5. It makes almost no difference which one of these strategies Steve follows. After 35 years, the difference between any two strategies is barely distinguishable. The strategic AA method accumulated $2.27 million, the age-based one generated $2.16 million, and the graduated AA strategy brought the portfolio to $2.25 million.

Figure 5: Median Portfolio Values

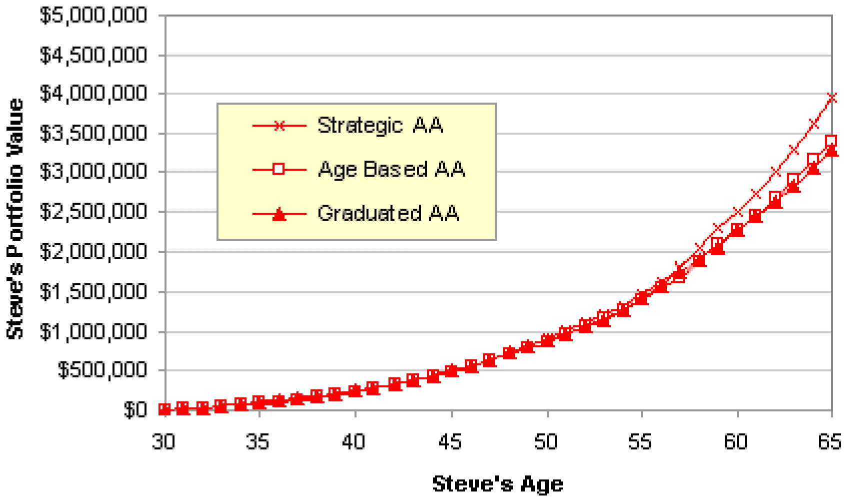


Source: Jim Otar, CMT, CFP

The lucky portfolio

Here, I define "lucky" as the top decile (top 10%) of all historic outcomes since 1900. Figure 5 shows the outcome if Steve got lucky and caught secular bull markets. At age 65, the strategic AA made 20% more money than the graduated AA. This is a significant difference. It came at a slightly higher volatility, but I don't care about volatility when looking at lucky outcomes. This is the "good" volatility, and I don't consider it a risk factor.

Figure 5: Lucky (Top Decile) Portfolio Values

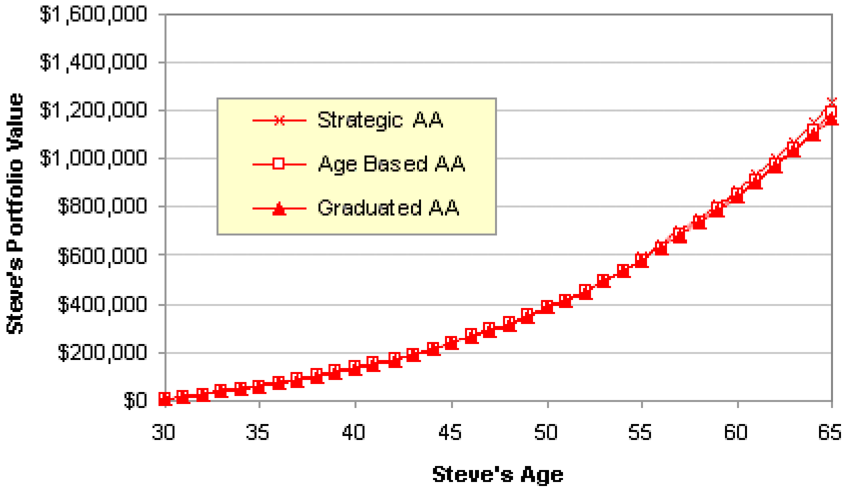


Source: Jim Otar, CMT, CFP

The unlucky portfolio

What if Steve is unlucky? Here, "unlucky" means the bottom decile (bottom 10%) of all outcomes since 1900. At age 65, the strategic asset allocation produced 5% more money than the graduated strategy. You might say, "But this must surely come at a higher risk!" No, that is not true. The standard deviation of annual returns for the strategic asset allocation was 1.4%; for the graduated allocation, 1.8%. Yes, you can have your cake and eat it too.

Figure 6: Unlucky (Bottom Decile) Portfolio Values



Source: Jim Otar, CMT, CFP

Conclusion

It makes virtually no difference which one of these three strategies Steve follows during the accumulation stage. However, there is a more shocking revelation: All else being equal, missing only one year's contribution will have a significantly more negative effect on the outcome than choosing the "wrong" strategy.

So, the best advice you can give Steve is: "It doesn't matter which one of those three strategies you follow; just make sure that you save regularly!" Nor do you need to get too caught up in the hype surrounding the different strategies—in the long run, your clients will fare about the same.

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