

SÉBASTIEN PAGE

Senior Associate, State Street Associates



Asset Allocation versus Security Selection¹

Looking beyond historical data raises the status of security selection

When it comes to the relative importance

of asset allocation and security selection, the overwhelming consensus is that asset allocation is more important. This is because many investors fail to distinguish between the consequences of investor behaviour and the opportunities offered by the capital markets.

The widely held view that asset allocation is more important arises, in part, from a 1986 study by Brinson, Hood and Beebower called *Determinants of Portfolio Performance* which attributes the performance of 91 large corporate pension funds to three investment activities: policy, timing and security selection. The analysis revealed that asset allocation policy accounted for 93.6 per cent of total return variation over time.

Yet selecting stocks for the equity portion of a portfolio is substantially more important than choosing a portfolio's exposure among stocks, bonds and cash. It is important to look beyond the historical performance of actual funds because these results depend on two separate factors: the opportunities that arise from a variation in asset class and security returns, as well as the extent to which investors exercise discretion in exploiting these opportunities.

For this study, the term 'importance' is defined as the extent to which a particular investment activity causes dispersion in wealth. Using a bootstrap methodology, the importance of security selection is measured by holding a consistent asset mix at a 60/30/10 among stocks, bonds and cash, and calculating the variation in return on the basis of the variation among randomly diversified stock portfolios.² The next step is to measure the importance of asset allocation by holding constant individual security weights and calculating variation in return due purely to asset allocation variation around an expected allocation of

60/30/10 to stocks, bonds and cash.

Random variation among individual securities within the stock component of a portfolio causes substantially more return variation than random asset allocation among stocks, bonds and cash, holding constant the individual security weights within the stock component. In fact, the dispersion around average performance arising from security selection is substantially greater than the dispersion arising from asset allocation in every major developed country.

It can be argued that annualized cumulative return is not an appropriate metric because it ignores risk. This concern is addressed by ranking the asset allocation and security selection portfolios by utility, which encompasses both return and risk. This involves the use of a mean-variance approximation of log-wealth utility. The results show that the dispersion of utility, as well as return, is much greater among portfolios that vary by security composition than it is for portfolios varying by asset class.

Overall, the simulation results and actual fund performance highlight an often ignored, yet important, feature in the institutional investment industry. Security selection strategies do not offer as wide a distribution of opportunities as the distribution that arises naturally from security returns. In fact, it is believed that managers compress the natural opportunity set to reduce their exposure to risk.

A log-wealth utility function assumes utility is equal to the logarithm of wealth which, in turn, implies that utility increases with wealth, but at a decreasing rate. It is one of a family of utility functions that assume investors have constant relative risk aversion. ■

1. This presentation was based on an article written with Mark Kritzman. A full version is forthcoming in the *Journal of Asset Management*.

2. Bootstrapping is a procedure by which new samples are generated from an original data set by randomly selecting observations from the original data set. It differs from Monte Carlo simulation in that it draws randomly from an empirical sample, whereas Monte Carlo simulation draws randomly from a theoretical distribution.