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Return Dispersion and Active Management

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Abstract

The cross-sectional variation of U.S. stock returns has been unusually high in the past few years. The wide dispersion in security returns has led to correspondingly wide dispersion in fund returns. For example, the cross-sectional standard deviation of returns on actively managed domestic equity mutual funds was 24 percent in 1999, compare fund performa has little to do with f manage examination of traditi assume constan nded to incor enchmark mean re fic measure of securi

The cros levels in the fall of 19 999 and 2000 than at any other point in modern market history. The return spread is best

measured by dispersion—the cross-sectional standard deviation of individual security returns within an asset class. Dispersion can be thought of as the cross-sectional analog to volatility—the standard deviation of returns on a security or portfolio over time.

Economic historians believe that periods of wide equity return dispersion are associated with structural shifts in the underlying economy resulting from political or technological disruptions. The fundamental restructuring of the economic order leads to large corporate revaluations, with some companies going up in value while others decline. A possible candidate for the current episode of equity market dispersion is a technological shift—the emergence of new information technologies and the perceived changes in corporate competitive advantages associated with their use.

The recent increase in security return dispersion has important implications for active management. Portfolio theory predicts that wide security dispersion will translate into wide dispersion of fund returns. We document the accuracy of this prediction. We found a very high correspondence between individual-security return dispersion and fund return dispersion on a year-to-year basis. For example, not only was 1999 a year of unusually wide dispersion for security returns, but it was also a year in which the dispersion of returns of actively managed domestic equity mutual funds was at an all-time high—24 percent compared with the typical range of 5–10 percent.

An appreciation for the correspondence between dispersion in security and fund returns can help reverse some common misconceptions about active management. For example, publicity about the recently large spread in fund returns can be misinterpreted as evidence of a larger variation in managerial talent. In fact, it is simply an artifa which manage onal variatior on that market e active manage e before costs ement dictat nted for, exactly h and transact all actively manage fficiency. Rather, i ean and

the costs of active management. We show that as return dispersion increases, the percentage of outperformers also increases.

Perhaps the most important implication of intertemporal variation in return dispersion is in the area of individual-fund performance measurement. During a year with marketwide fund dispersion of 5 percent, a positive alpha (return in excess of the benchmark) of 10 percentage points is a significant achievement. In a year when fund dispersion is 20 percent, a 10 percentage point alpha means a lot less. Averaging alphas over time without consideration for intertemporal variations in dispersion can lead to a material misstatement of relative performance.

We show how performance benchmarking can be extended to incorporate the information embedded in return dispersion, as well as information on the benchmark mean, by correcting fund alphas with a period- and asset-class-specific measure of security return dispersion. Weighting alpha observations by the inverse of return dispersion can be characterized as an econometric correction for heteroscedasticity. We argue that multiperiod performance statistics that correct for intertemporal variations in return dispersion are better indicators of managerial talent and may provide improved predictions of future added value. Return dispersion corrections are particularly relevant in the measurement of U.S. equity portfolio performance over the past several years.

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