

## ***Fund Analysis/Selection***

# *Active versus passive management*

## **The Arithmetic of Active Management**

FAJ , 1991

*by William F. Sharpe, Timken Professor Emeritus of Finance, Stanford University, and Chairman, William F. Sharpe Associates*

"Today's fad is index funds that track the Standard & Poor's 500. True, the average soundly beat most stock funds over the past decade. But is this an eternal truth or a transitory one?"

"In small stocks, especially, you're probably better off with an active manager than buying the market."

"The case for passive management rests only on complex and unrealistic theories of equilibrium in capital markets."

"Any graduate of the \_\_\_\_ Business School should be able to beat an index fund over the course of a market cycle."

Statements such as these are made with alarming frequency by investment professionals.<sup>1</sup> In some cases, subtle and sophisticated reasoning may be involved. More often (alas), the conclusions can only be justified by assuming that the laws of arithmetic have been suspended for the convenience of those who choose to pursue careers as active managers.

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ALLIANCEBERNSTEIN

No Time to Be Passive—Get Active Now

The lengthy bout of poor performance among active managers has convinced many investors that these strategies don't work. But our research suggests that active managers have been less effective in recent years because of unusual market forces that now appear to be turning in their favor again. We see huge upside potential that plans can capture.

# Strategic versus tactical asset allocation

FAJ , 1991

by Gary P. Brinson, Brian D. Singer and Gilbert L. Beebower

## Determinants of Portfolio Performance II: An Update

**I**N “DETERMINANTS of Portfolio Performance,” published in this journal in 1986, we documented the overwhelming contribution of asset allocation policy to the return performance of a sample of 91 large pension plans.<sup>1</sup> That earlier article developed a systematic framework for the attribution of returns to different types of active investment decisions.

This article, also focusing on **return attribution**, updates the results of the previous study and confirms our original conclusions. Specifically, data from 82 large pension plans over the 1977–87 period indicate that **investment policy** explained, on average, 91.5 per cent of the variation in quarterly total plan returns. In addition, this article provides an expanded performance attribution framework that accounts, not only for security selection and **active asset allocation**, but also for changes in portfolio risk characteristics attributable to risk positioning within individual asset classes.

FAJ , 2000

## Does Asset Allocation Policy Explain 40, 90, or 100 Percent of Performance?

Roger G. Ibbotson and Paul D. Kaplan

*Disagreement over the importance of asset allocation policy stems from asking different questions. We used balanced mutual fund and pension fund data to answer the three relevant questions. We found that about 90 percent of the variability in returns of a typical fund across time is explained by policy, about 40 percent of the variation of returns among funds is explained by policy, and on average about 100 percent of the return level is explained by the policy return level.*

Financial Analysts Journal  
Volume 66 • Number 2  
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## The Equal Importance of Asset Allocation and Active Management

James X. Xiong, CFA, Roger G. Ibbotson,  
Thomas M. Idzorek, CFA, and Peng Chen, CFA

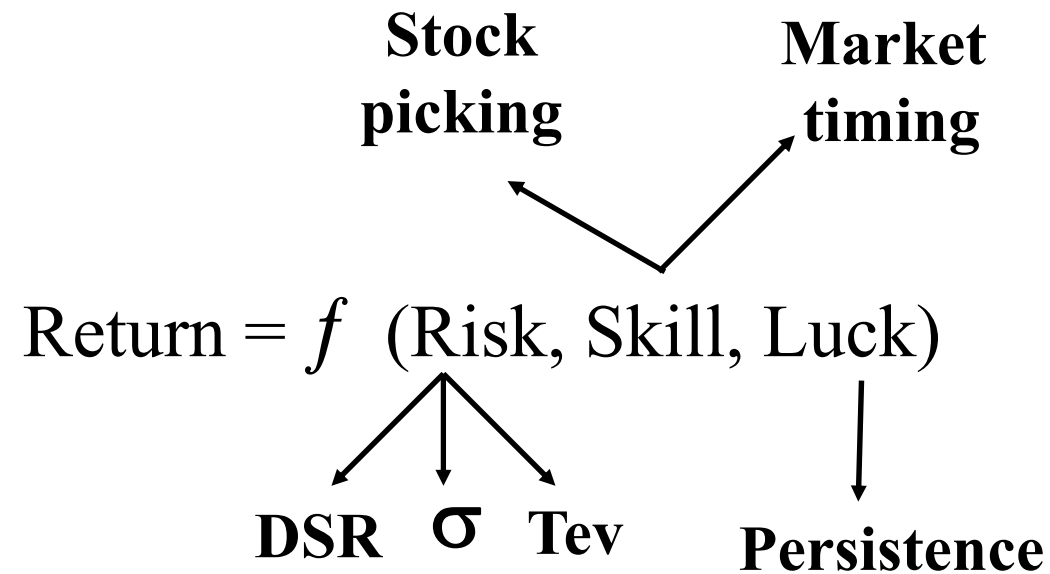
## Asset Allocation Is King

By Thomas M. Idzorek

Forget about that 90% number. After removing the market movement, asset allocation and active management are equally important in explaining return variations.

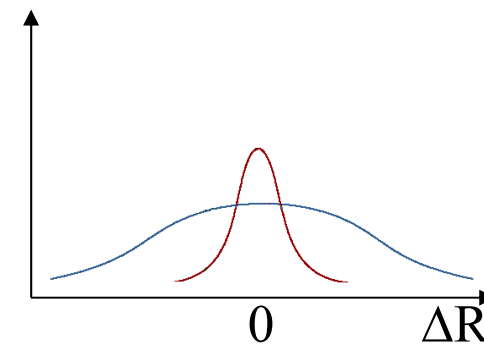
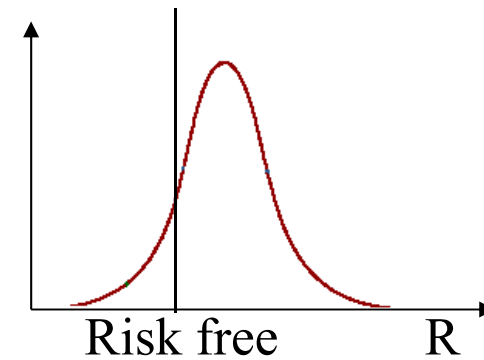
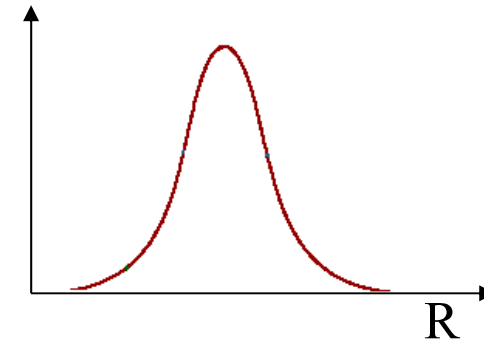
*3<sup>o</sup> goal:*  
*Ex post performance evaluation*

# ***Determinants of mutual fund returns***

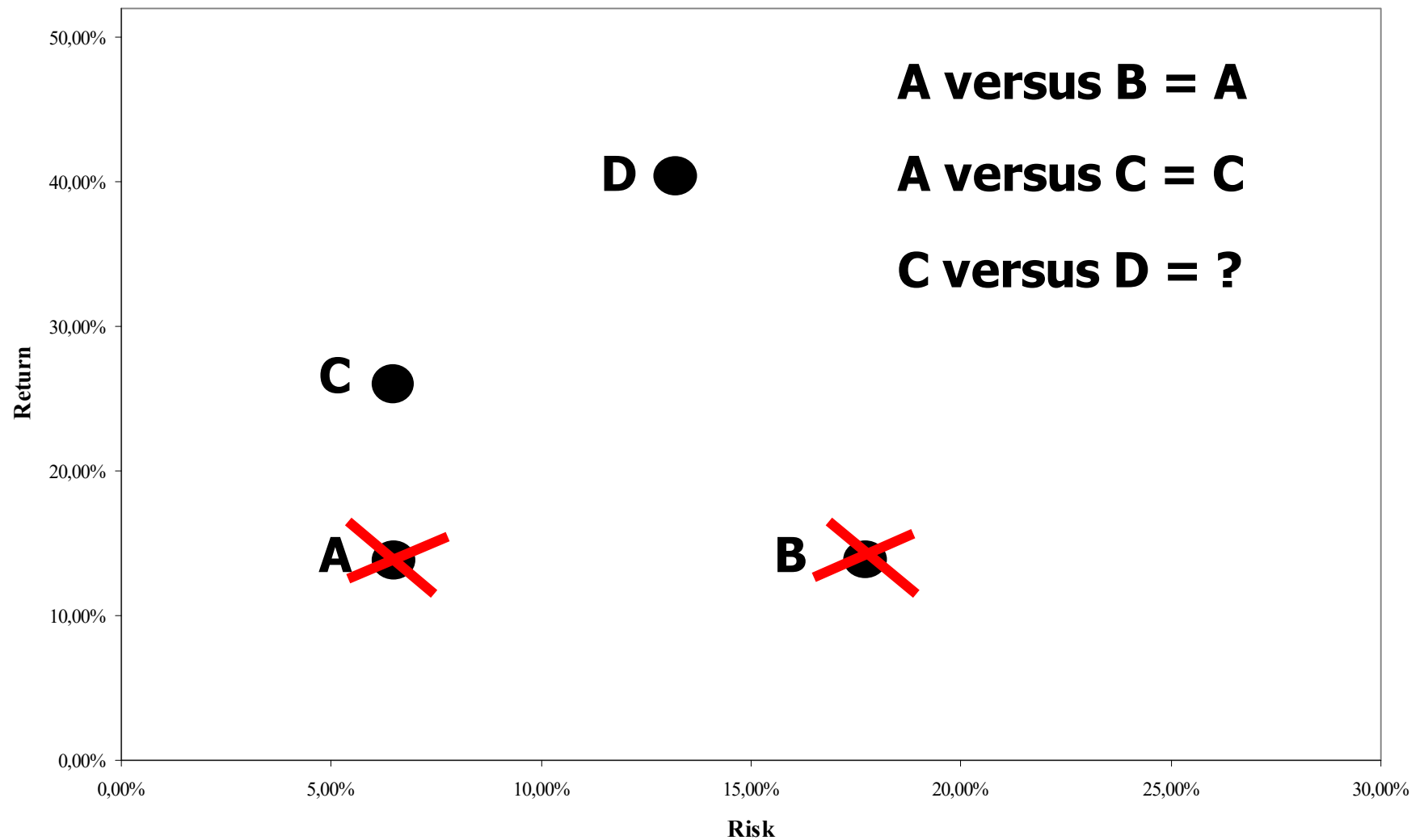


## *Risk measures*

- Standard deviation
- Downside risk
- Tracking error (volatility)



# *The risk and return trade off*



## *The risk adjusted performance measures*

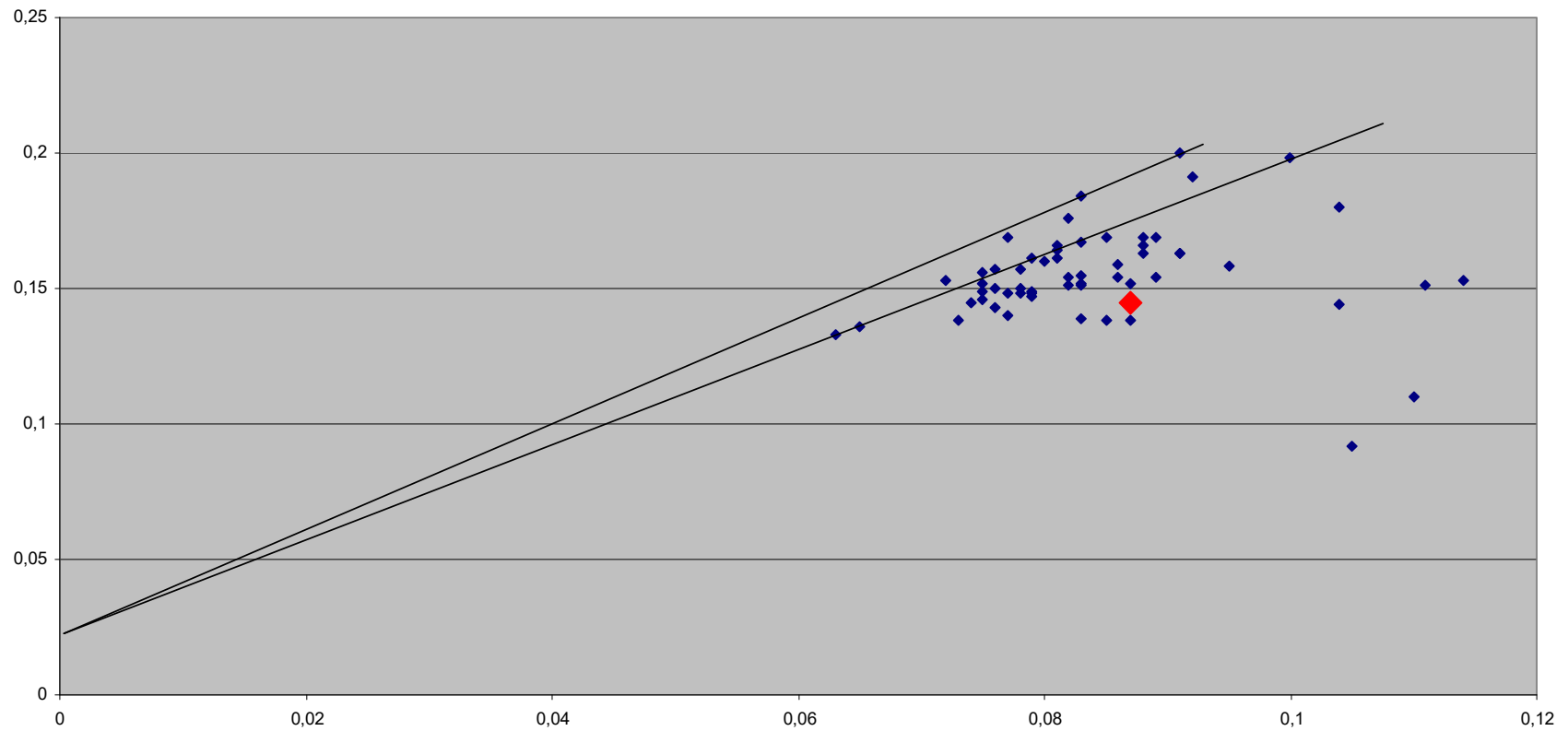
- Sharpe ratio
- Sortino ratio
- Information ratio



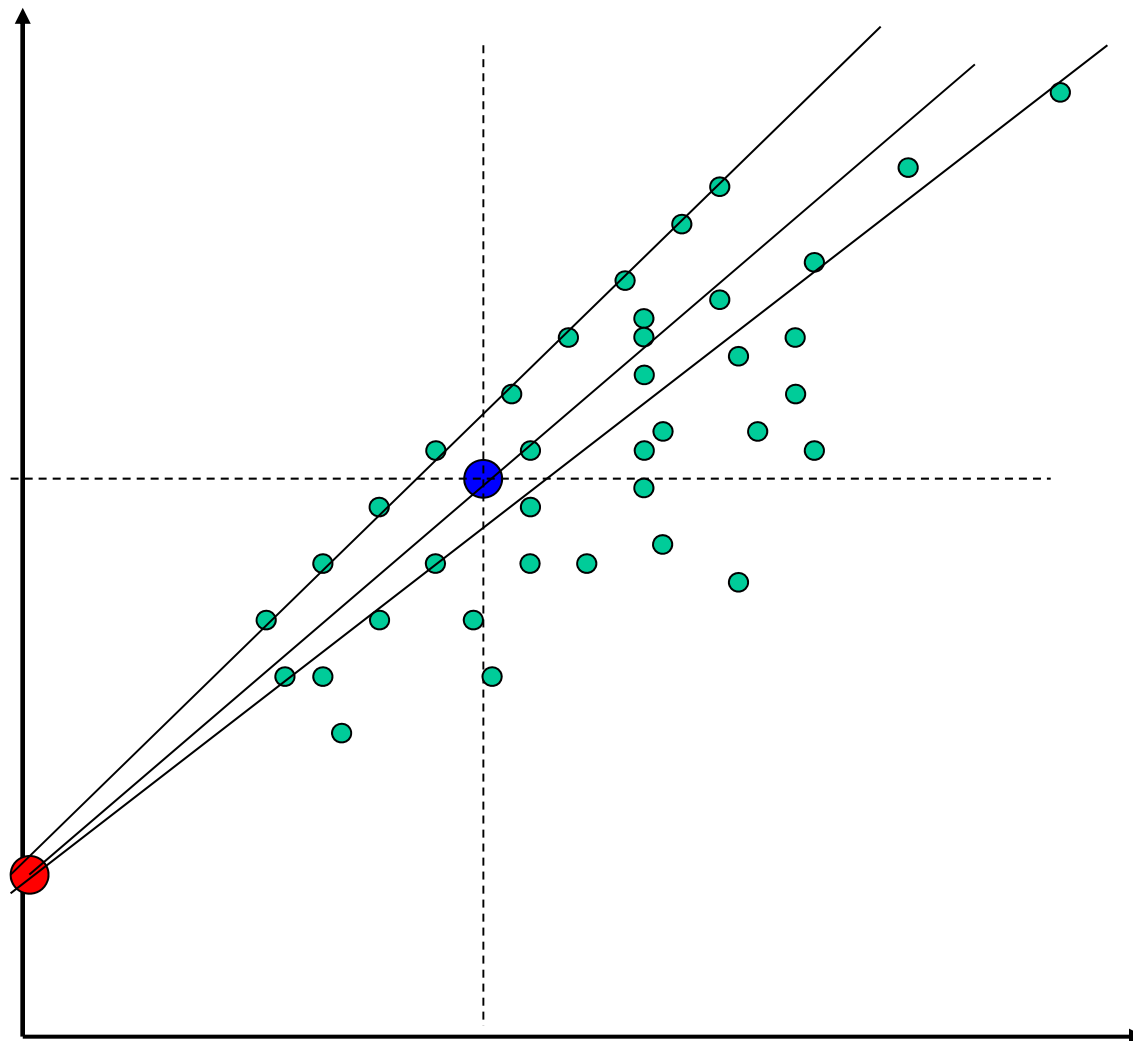
## *The Sharpe ratio*

$$Sharpe \approx \frac{\overline{R}_{fund} - R_{Risk-free}}{\sigma_{fund}}$$

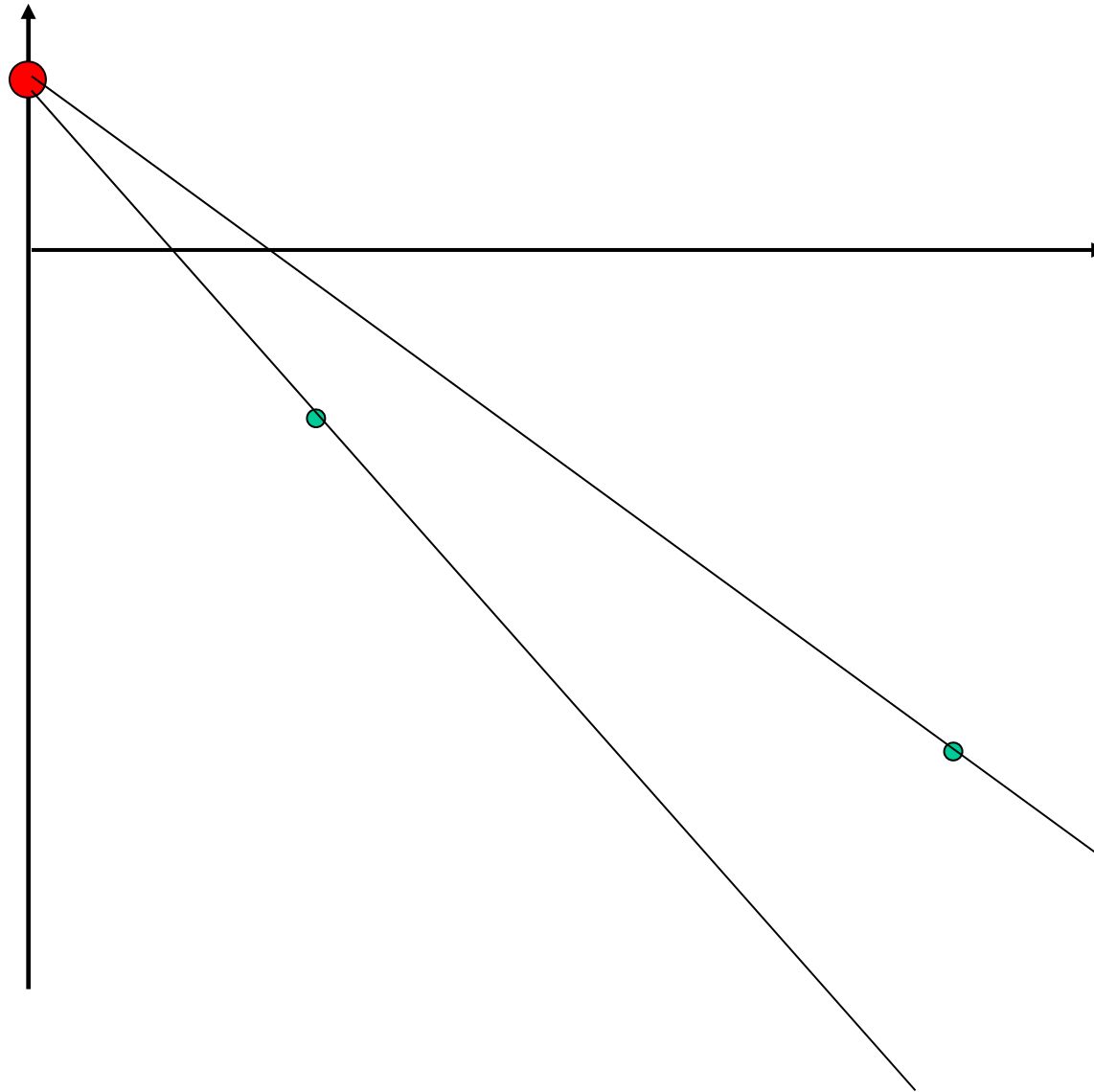
# *The Sharpe ratio*



## *The Sharpe ratio: efficiency and risk*



## *The Sharpe ratio with negative excess returns*



## *Other risk adjusted performance measures*

$$\text{Sharpe} \approx \frac{\overline{R}_{fund} - R_{Risk-free}}{\sigma_{fund}}$$

↓

$$\text{Sortino} = \frac{\overline{R}_{fund} - R_{Risk-free}}{DSR_{fund}}$$

## *The information ratio*

The information ratio is computed as the Sharpe ratio using the benchmark instead of the risk free rate

$$\text{Information Ratio} = \frac{\overline{R}_{fund} - \overline{R}_{Benchmark}}{TEV_{fund}}$$

## *Approaches to style analysis*

“Investment style is now the dominant principle used to classify, analyze, and deploy equity portfolios. Investment research firms classify equity funds for ratings and other purposes into categories based on investment style. Institutional investors, consultants, financial investors, and individuals use investment style as a criterion for selecting funds, either to achieve diversification or make style bets. In response to the emphasis that investors place on investment style, many equity mutual funds identify themselves as being of a certain style by using phrases such as “mid-cap growth” or “small company value” in their names”.

P. Kaplan, in Holdings-based and Returns-based Style Models

## *Approaches to style analysis*

- Official classification and benchmark are not able to provide a reliable information about the investment style of the fund
- The objective of style analysis is to investigate the portfolio choices made by the manager and to build peer groups of homogeneous funds
- *Holdings-based style analysis* is a “bottom-up” approach in which the characteristics of a fund over a period of time are derived from the characteristics of the securities it contains at various points in time over the period.
- *Returns-based style analysis* is a statical approach based on a regression of mutual fund returns against a basket of passive indexes.



## *Returns-based Style Analysis*

$$R_{Fund,t} = \left[ w_1 R_{Mkt1,t} + w_2 R_{Mkt2,t} + \dots + w_n R_{Mktn,t} \right] + e_t$$

$$\text{Max } R^2$$

subject to constraints:

$$w_i \geq 0$$

$$\sum_{i=1}^n w_i = 1$$