Peterson Research Institute

Global Investment Analysis (GIA)

GLOBAL INVESTMENT ANALYSIS

GIA

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Portfolio Theory in the Real World

for Superannuation Directors and Trustees

The Directors and Trustees of Superannuation and other investment funds have significant responsibilities. Meeting these responsibilities requires, among other things, an understanding of how investment thinking and theory works when applied to the real world. The purpose of this note is to provide an understandable outline of the fundamental underpinnings of investment and portfolio theory.

Principles

There are a small number of investment principles that were developed by Markowitz, Sharpe and others roughly 50 years ago, and a vast edifice of mathematical formula and often competing theories has been built on top of them. It is useful to be reminded of these almost self-evident truths about portfolios:

1. Returns are **additive**
2. Returns can be earned by taking **Investment Risks**
3. Investment Risks can be **diversified**

To these investment fundamentals I would also add:

4. The objective of an investment fund is to take **as much risk as possible** subject to appropriate risk management
5. The **only sources** of returns in an investment portfolio are:

Implications for Investors

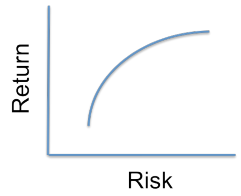
A number of implications for investors follow from these principles:

a. A higher level of Investment Risk (Market + Manager) in a portfolio should lead to a **higher return** over time. (1 + 2)
b. A higher level of investment risk in a portfolio **does not** necessarily lead to higher levels of portfolio risk. (3)
c. A portfolio with only Market Risk, or only Manager Risk, is **undiversified**, and hence relatively high risk.

Non-Implications for Investors

As important as the implications set out above, investors should also be aware of certain commonly held **investment fallacies** that **do not follow** from the basic principles:

a. **Risk / Return Trade-off** – It is commonly stated that a 'trade-off' exists where higher levels of investment return can only be achieved with higher levels of investment risk. This trade-off slopes **upwards** to the right on a risk/return graph.



However, if you do not artificially restrict investments only to market investments, then it follows from (b) and (c) above, that the "trade-off" can slope **downwards.**

b. **The Importance of Asset Allocation** – A common misinterpretation, or misrepresentation, occurs with a 1986 study by Brinson, Hood and Beebower on the variability of investment returns. Note, this was a study on the **variability, not the LEVEL** of returns in a portfolio. In fact the BHB study says nothing about the sources of return.

   Analysing the Sources of Return (Cash + Market + Manager) in actual superannuation portfolios using our Global Investment Analysis (GIA) system we have found that:
   - Approximately 40% of portfolio return is the cash return (i.e. from allocating the funds to invest);
   - Up to 40% comes from taking market risks (i.e. putting funds in shares, bonds, etc., rather than cash);
   - Approximately 20% of return came from manager skill.

GIA is provided free to Institutional Investors at www.**prigia.com**