## **THE EFFICIENT FRONTIER REVISITED**



<sup>1</sup>Standard Deviation: A statistical measure of the historical volatility of an investment, usually computed using 36 monthly returns. More generally, a measure of the extent to which numbers are spread around their average. The higher the number, the more volatility is to be expected. <sup>2</sup>No investment strategy can guarantee returns in a declining market. Source data used to create the chart: Calculated by Rydex Investments using information and data presented in Ibbotson Investment Analysis Software (12/31/2004), ©2005 Ibbotson Associates, Inc. All rights reserved. Used with permission. **Performance displayed represents past performance, which is no guarantee of future results**. This example is for illustrative purposes only. The chart above depicts the efficient frontier of equity and bond portfolios illustrated in 10% increments. Equity returns are based on the returns of the S&P 500 Index which includes the reinvestment of dividends and is adjusted for inflation. Bond returns include the reinvestment of dividends and are adjusted for inflation and based on Ibbotson Long-Term Government Bond Index which has a maturity near 20 years. The S&P 500 Index is a numanaged capitalization-weighted index of 500 stocks designed to measure performance of the broad domestic economy through changes in the aggregate market value of 500 stocks representing all major industries. The Ibbotson Long-Term Government Bond Index is a total return are weighted by market value including accrued interest. The bonds represented in this index are backed by the U.S. Government, yet involve risk of principal loss if sold prior to maturity. The S&P 500 and the Ibbotson Long-Term Government Bond Index are unmanaged and not available for direct investment. Materials prepared by Rydex Distributors, Inc., an affiliate of Rydex Investments.

## THE EFFICIENT FRONTIER REP-RESENTS THOSE PORTFOLIOS THAT ARE CONSIDERED THE MOST EFFICIENT—THAT IS, HAVE THE GREATEST RETURN FOR A GIVEN LEVEL OF RISK.

Investors should generally seek the greatest return for a given level of risk. This concept, known as the efficient frontier, was first defined in 1952 by Harry Markowitz in the Nobel Prize-winning research that launched Modern Portfolio Theory.

The efficient frontier plots all optimal portfolios in a given time period based on three measures:

- mean return
- standard deviation (a measurement of risk)
- correlation of assets (a statistical measure of how two securities move in relation to each other)

Portfolios near the bottom left of the chart have relatively low risk and returns. Those near the upper right offer higher returns, but at a higher risk. The classic efficient frontier is shaped like a fish hook. It begins at the left tail with a 100% fixed-income investment. Equities are added in 10% increments until you reach the right tail, which represents a 100% equity portfolio.

## THE RISK/RETURN RATIO

As investors take on more risk in their portfolios, they expect their returns to go up. Investors can manage their risk tolerance through asset allocation and by selecting investments that meet their risk/return expectations.<sup>2</sup>

## **THE INEFFICIENT FRONTIER?**





This image shows the efficient frontier by decade since 1960.

The black fishhook on the chart indicates the historical average efficient frontier for the entire period. With each decade, the shape of the hook shifts and moves, depending on market conditions.

Investors expect their returns to go up as they take on more risk. However, the risk/return ratio, like the efficient frontier itself, changes along with market cycles.

In a strong market such as in the 1990s, you may be handsomely rewarded for taking on more risk.

In a weak market such as in the 1970s, you may only reap minimal returns, while taking on more risk.

In the efficient frontier for 2000-2004, the fishhook is actually inverted—indicating more risk for no additional returns, or for negative returns.

A static portfolio may not be right for changing market conditions. Call your financial professional today to reevaluate your portfolio for today's markets—and ensure that it still meets your risk/return expectations.

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