# Market Portfolio

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## What is a Market Portfolio?

A market portfolio is a theoretical bundle of investments that includes every type of asset available in the investment universe, with each asset weighted in proportion to its total presence in the market. The expected return of a market portfolio is identical to the expected return of the market as a whole.

## The Basics of Market Portfolio

A market portfolio, by nature of being completely diversified, is subject only to systematic risk, or risk that affects the market as a whole, and not to unsystematic risk, which is the risk inherent to a particular asset class.

billion. The market portfolio consists of each of these companies, which are weighed in the portfolio as follows:

Company A portfolio weight = $2 billion / $20 billion = 10%

Company B portfolio weight = $5 billion / $20 billion = 25%

Company C portfolio weight = $13 billion / $20 billion = 65%

KEY TAKEAWAYS

- A market portfolio is a theoretical, diversified group of every type of investment in the world, with each asset weighted in proportion to its total presence in the market.
- Market portfolios are a key part of the capital asset pricing model, a commonly used foundation for choosing which investments to add to a diversified portfolio.
- Roll's Critique is an economic theory that suggests that it is impossible to create a truly diversified market portfolio—and that the concept is a purely theoretical one.

## The Market Portfolio in the Capital Asset Pricing Model

The market portfolio is an essential component of the capital asset pricing model (CAPM). Widely used for pricing assets, especially equities, the CAPM shows what an asset's expected

Consumption CAPM formula. Investopedia

Where:

R = expected return

R(f) = the risk-free rate

R(m) = the expected return of the market portfolio

$\beta_c$ = the beta of the asset in question versus the market portfolio

For example, if the risk-free rate is 3%, the expected return of the market portfolio is 10%, and the beta of the asset with respect to the market portfolio is 1.2, the expected return of the asset is:

Expected return = 3% + 1.2 x (10% - 3%) = 3% + 8.4% = 11.4%

## Limitations of a Market Portfolio

Economist Richard Roll suggested in a 1977 paper that it is impossible to create a truly

## Real World Example of a Market Portfolio

In a 2017 study, "Historical Returns of the Market Portfolio," the economists Ronald Q. Doeswijk, Trevin Lam, and Laurens Swinkels attempted to document how a global multi-asset portfolio has performed over the period 1960 to 2017. They found that real compounded returns varied from 2.87% to 4.93%, depending on the currency used. In U.S. dollars, the return was 4.45%.

## Related Terms

### Capital Asset Pricing Model (CAPM)

The Capital Asset Pricing Model is a model that describes the relationship between risk and expected return. more

### How the Consumption Capital Asset Pricing Model Works

The consumption capital asset pricing model is an extension of the capital asset pricing model that focuses on a consumption beta instead of a market beta. more

### Excess Returns

Excess returns are returns achieved above and beyond the return of a proxy. Excess returns will depend on a designated investment return comparison for analysis. more

### Country Risk Premium (CRP) Definition

Country Risk Premium (CRP) is the additional return or premium demanded by investors to compensate them for the higher risk of investing overseas. more

### Understanding Beta and How to Calculate It

Beta is a measure of the volatility, or systematic risk, of a security or a portfolio in comparison to the market as a whole. Beta is used in the capital asset pricing model (CAPM). more

### Capital Market Line (CML) Definition

The capital market line (CML) represents portfolios that optimally combine risk and return. more

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