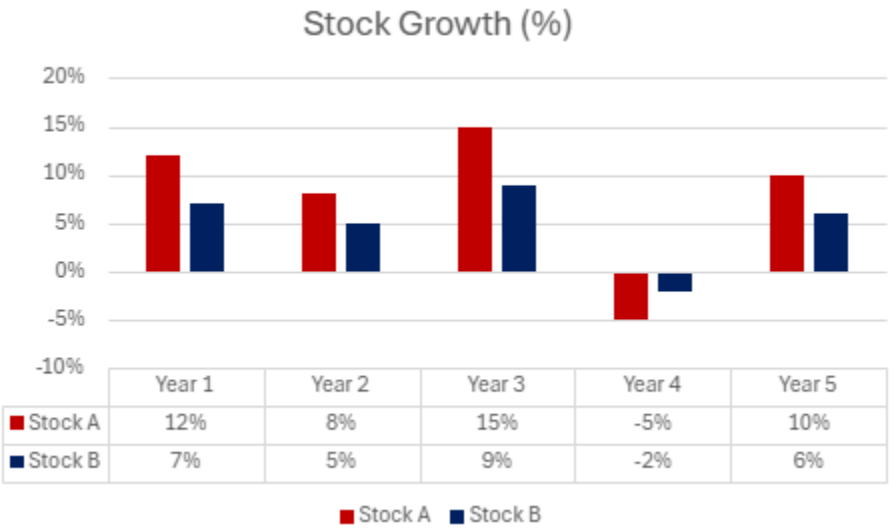
Investment Risk Analysis Report for Capital Growth Investments

Introduction:

Assessing investment risk is essential for making well-informed portfolio decisions. This report examines total risk using standard deviation and market risk using beta, while differentiating between systematic and unsystematic risk. It analyses two stocks—Stock A, a technology company, and Stock B, a retail company—to support a strategic investment recommendation, enabling investors to evaluate potential risks and returns effectively.

Measuring Total Risk (Standard Deviation Calculation):



Standard deviation is a key measure of a stock's return volatility, with higher values indicating greater fluctuations and risk, while lower values suggest increased stability. Stock A has an average return of 8% and a standard deviation of 0.077, demonstrating higher volatility and a greater tendency for price swings. In contrast, Stock B has an average return of 5% and a standard deviation of 0.042, reflecting more stable and consistent returns. The significant difference in standard deviation highlights Stock A's heightened risk compared to Stock B, making it the less stable investment in terms of return variability.

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Measuring Market Risk with Beta Analysis:

Beta measures a stock's sensitivity to overall market movements, with values above 1 indicating increased volatility and values below 1 suggesting greater stability. Stock A has a beta of 1.3, making it more volatile than the market and amplifying both upward and downward price movements. Investors should expect significant fluctuations in response to broader market trends. In contrast, Stock B has a beta of 0.8, reflecting lower volatility and more controlled price movements relative to overall market shifts. This lower beta suggests that Stock B is a more stable investment, with reduced exposure to sudden market changes, making it a preferable option for risk-averse investors.

Capital Asset Pricing Model (CAPM) Calculation:

The expected return for each stock is calculated using the Capital Asset Pricing Model (CAPM):

$$R_e = R_f + \beta(R_m - R_f)$$

Where R_f = Risk-free rate (2%), R_m = Market return (7%), and β = Stock Beta.

$$Stock\ A\ R_e = 2 + 1.3(7 - 2)$$
$$= 8.5$$
$$Stock\ B\ R_e = 2 + 0.8(7 - 2)$$
$$= 6.0$$

The expected return reflects the potential profitability of an investment while accounting for market risk. Stock A, with an expected return of 8.5%, exhibits greater sensitivity to market fluctuations. In contrast, Stock B has a lower expected return of 6%, reflecting its comparatively lower risk profile and greater stability.

Systematic vs. Unsystematic Risk:

Systematic Risk:

Systematic risk affects all investments due to broad economic factors such as inflation, interest rate fluctuations, and geopolitical events. It cannot be mitigated through diversification and is reflected in a stock's beta, which measures its sensitivity to market movements.

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Unsystematic Risk:

Unsystematic risk is company-specific and arises from factors such as poor management, operational inefficiencies, regulatory changes, or industry-related challenges. It is captured in a stock's standard deviation, which quantifies return variability.

Investors can reduce unsystematic risk by diversifying their portfolio across various industries, ensuring that negative impacts in one sector do not significantly affect overall portfolio performance. A well-balanced portfolio minimises company-specific risks and enhances stability in investment performance.

Summary:

Stock A exhibits higher volatility and greater sensitivity to market fluctuations, as indicated by its elevated beta and standard deviation. While its expected return of 8.5% suggests strong profit potential, this comes with increased risk, making it more suitable for investors with a higher risk tolerance.

In contrast, Stock B demonstrates lower volatility with a reduced beta and standard deviation, offering greater stability. Although its expected return is lower at 6%, it carries significantly less risk, making it a preferable choice for more conservative investors seeking steadier returns.

Stock B is recommended for investors prioritising stability, whereas Stock A may appeal to those willing to endure market fluctuations for higher returns. A diversified portfolio incorporating both stocks could provide risk mitigation benefits while maintaining strong return potential, ensuring an optimised and balanced investment strategy.