The importance of diversification in investment portfolios and the tips leading to risk-management

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Abstract: This paper gives information about how to diversify portfolios which means having multiple kinds of securities and through this analyzes risk-management strategies by evaluating and mitigating potential risks. Risks can be grouped as systematic and unsystematic risks, and both of which can be urgent and lead to potential loss or unexpected gain according to the certain situations. Securities mostly can be influenced by market risk called beta which refers to the the correlation between the changes in market indexes and particular stock's price. And this paper deals with some cases how this relationship can vary in terms of various markets.

Keywords: Diversification, CAPM model, stock market, systematic and unsystematic risks, beta coefficient.

Introduction

Diversification is a crucial strategy in investment portfolios as it helps to spread risk across different assets, reducing the impact of any single investment underperforming. Here are some key points on the importance of diversification and tips for effective risk management:

Importance of Diversification:

- Risk Reduction: Diversification helps to lower the overall risk in your investment portfolio by not putting all your eggs in one basket. If one asset class or investment performs poorly, others may perform better, balancing out the overall returns.

- Steady Returns: By investing in a mix of assets with different risk profiles, you can achieve more stable and consistent returns over time. This can help to smooth out the volatility in your portfolio.
- Market Exposure: Diversification allows you to have exposure to different markets, sectors, and asset classes, reducing the impact of a downturn in any one specific area.
- Liquidity Management: Holding a diversified portfolio can also help with liquidity management, ensuring that you have assets that can be easily converted into cash when needed.

Now let’s turn to the types of risks in detaills:

Systematic risk and unsystematic risk are two important concepts in the field of finance and investment. Here's an overview of each:

Systematic Risk:

- Definition: Systematic risk, also known as market risk or undiversifiable risk, is the risk inherent to the entire market or an entire market segment. It affects the overall market and cannot be eliminated through diversification because it is related to external factors that impact all investments.

- Causes: Systematic risk factors include economic recessions, political instability, interest rate changes, natural disasters, wars, and other macroeconomic factors that affect the overall performance of the market.

- Examples:

  - Market Risk: Fluctuations in stock prices due to changes in interest rates or economic indicators.

  - Inflation Risk: Decrease in purchasing power due to rising inflation rates.

  - Interest Rate Risk: Impact on bond prices due to changes in interest rates set by central banks.

- Management: Investors can manage systematic risk through asset allocation strategies, such as diversifying across different asset classes and geographical regions. However, it cannot be fully eliminated.

Unsystematic Risk:

- Definition: Unsystematic risk, also known as specific risk or diversifiable risk, is the risk that is specific to a particular company or industry. It can be reduced through diversification because it is not related to factors affecting the overall market.

- Causes: Unsystematic risk factors include company-specific events like management changes, product recalls, labor strikes, or competitive pressures that affect individual stocks or industries.

- Examples:

  - Business Risk: Risks associated with a company's operations, such as supply chain disruptions or regulatory changes.

  - Financial Risk: Risks related to a company's financial structure, such as high debt levels or credit rating downgrades.

  - Legal Risk: Risks arising from lawsuits, regulatory fines, or changes in legislation affecting a specific industry.

- Management: Investors can reduce unsystematic risk by diversifying their portfolios across different companies, industries, and sectors. By spreading investments across various assets, they can mitigate the impact of negative events on any single investment.

Understanding the differences between systematic and unsystematic risks is crucial for investors in managing their portfolios effectively and optimizing their risk-return trade-off. By diversifying across assets and considering both types of risks, investors can build more resilient portfolios that are better positioned to weather market uncertainties.

Tips for Effective Risk Management through Diversification:

- Asset Allocation: Allocate your investments across different asset classes such as stocks, bonds, real estate, commodities, and cash equivalents. Each asset class has its own risk-return profile, so spreading your investments across them can help manage risk.

- Diversify within Asset Classes: Within each asset class, diversify further by investing in different securities or instruments. For example, in stocks, consider investing in companies from various industries and regions.
- Rebalance Regularly: Periodically review and rebalance your portfolio to ensure that your asset allocation aligns with your investment goals and risk tolerance. Rebalancing involves selling assets that have performed well and buying assets that are underperforming to maintain the desired mix.
- Consider Correlations: Look at the correlation between different assets in your portfolio. Ideally, you want assets that are not highly correlated so that they don't all move in the same direction at the same time.
- Risk Tolerance Assessment: Understand your risk tolerance and investment goals before diversifying your portfolio. Your risk tolerance will determine how aggressive or conservative your diversification strategy should be.
- Professional Advice: If you're unsure about how to diversify effectively or need help managing risk in your portfolio, consider seeking advice from a financial advisor or investment professional.

By following these tips and principles of diversification, you can effectively manage risk in your investment portfolio and work towards achieving your financial goals with more stability and confidence.

Results

The Beta coefficient and the Capital Asset Pricing Model (CAPM) are important concepts in finance, particularly in the field of asset pricing and portfolio management. Here's an overview of each:

Beta Coefficient:

- Definition: Beta is a measure of a stock's volatility in relation to the overall market. It indicates how sensitive a stock's returns are to changes in the market returns. A beta of 1 means the stock moves in line with the market, while a beta greater than 1 indicates higher volatility, and a beta less than 1 indicates lower volatility.

- Calculation: The beta coefficient is calculated using regression analysis, where the stock's historical returns are compared to the market returns. Mathematically, beta is the slope of the regression line that best fits the historical data points.

- Interpretation:

  - A beta of 1 implies the stock moves in line with the market.

  - A beta greater than 1 indicates the stock is more volatile than the market.

  - A beta less than 1 suggests the stock is less volatile than the market.

- Usage: Beta is used in the CAPM model to determine the expected return on an asset based on its risk relative to the market.

Capital Asset Pricing Model (CAPM):

- Definition: The CAPM is a model used to determine the expected return on an asset based on its risk and the expected return of the overall market. It provides a framework for calculating the required rate of return for an investment based on its riskiness.

- Formula:

The CAPM formula is:

$E(R_i) = R_f + \beta_i \times (E(R_m) - R_f)$ where:

- $E(R_i)$ is the expected return on asset i,
- R_f is the risk-free rate,
- β_i is the beta of asset i,
- $E(R_m)$ is the expected return of the market.

- Assumptions:

  - Investors are rational and risk-averse.

  - There is a risk-free rate at which investors can borrow or lend money.

  - Investors can hold diversified portfolios to eliminate unsystematic risk.

- Usage: The CAPM helps investors determine whether an investment provides adequate returns given its risk level. It also aids in calculating the cost of equity for a company when evaluating investment opportunities or determining the required rate of return for a project.

By using beta coefficients in conjunction with the CAPM model, investors can assess the risk-return trade-off of individual assets and make informed decisions about their investment portfolios based on their risk preferences and market expectations in the stock market.

Conclusion

The key to managing investment risk is diversification, which is achieved mainly by reducing unsystematic risk by holding a variety of assets in various markets and geographical areas. By ensuring that certain assets perform better than others, this technique stabilises returns overall by offsetting underperforming investments. Diversification lessens the potential loss of systematic risk by spreading its impact across the portfolio, even though it cannot be completely removed because it affects all investments because of larger economic reasons.

By relating expected returns to systematic risk, which is quantified by beta (β), the Capital Asset Pricing Model (CAPM) emphasises the significance of this strategy. CAPM assumes that unsystematic risk is minimized through diversification, emphasizing that a diversified portfolio aligns with market risk and enhances potential returns. Therefore, by diversifying, investors can achieve a balanced portfolio that manages risk effectively and fosters more stable, long-term growth.

Reference

Levy H., Sarnat M. International diversification of investment portfolios //The American Economic Review. – 1970. – T. 60. – №. 4. – C. 668-675.

Jayeola, Dare, Zuhaimy Ismail, and Suliadi Sufahani. "Effects of diversification of assets in optimizing risk of portfolio." *Malaysian Journal of Fundamental and Applied Sciences* 13.4 (2017): 584-587.

Power M. The risk management of everything //The Journal of Risk Finance. – 2004. – T. 5. – №. 3. – C. 58-65.

Manuj I., Mentzer J. T. Global supply chain risk management strategies //International journal of physical distribution & logistics management. – 2008. – Т. 38. – №. 3. – С. 192-223.

Menapace L., Colson G., Raffaelli R. Risk aversion, subjective beliefs, and farmer risk management strategies //American Journal of Agricultural Economics. – 2013. – Т. 95. – №. 2. – С. 384-389.

Jagannathan R. et al. The CAPM debate //Federal Reserve Bank of Minneapolis Quarterly Review. – 1995. – Т. 19. – №. 4. – С. 2-17.

Reinganum M. R. A new empirical perspective on the CAPM //Journal of financial and quantitative analysis. – 1981. – Т. 16. – №. 4. – С. 439-462.

Zhang L. The investment CAPM //European Financial Management. – 2017. – Т. 23. – №. 4. – С. 545-603.

Minasyan V. B., Limitovskiy M. A. CAPM and Diversification of the Investment Portfolio Under Heterogeneous Volatility //Available at SSRN 1522511. – 2009.

Beja A. On systematic and unsystematic components of financial risk //The journal of finance. – 1972. – Т. 27. – №. 1. – С. 37-45.

Sukrianingrum D. R., Manda G. S. The effect of systematic risk and unsystematic risk on expected return of optimal portfolio //SAR (Soedirman Accounting Review): Journal of Accounting and Business. – 2020. – Т. 5. – №. 2. – С. 181-195.

Bradfield D. Investment Basics XLVI. On estimating the beta coefficient //Investment Analysts Journal. – 2003. – Т. 32. – №. 57. – С. 47-53.

Bradfield D. Investment Basics XLVI. On estimating the beta coefficient //Investment Analysts Journal. – 2003. – Т. 32. – №. 57. – С. 47-53.