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Global Diversification: Unveiling the Benefits of International Asset Investments

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ABSTRACT

The following paper discusses diversification benefits and the role of both domestic and international diversification in reducing risk and increasing growth. It transitions into describing asset classes and their roles in building a diverse portfolio. It then discusses international securities and how global assets can mitigate risks associated with domestic markets. Lastly using data from the past 15 years, It shows examples of constructing diverse portfolios with international securities and their potential for growth and lower risk based on a variety of performance metrics.

Introduction

Diversification is the process by which we invest to further enhance the efficiency of capital growth in our portfolios. When diversifying, an investor will spend on a wide variety of assets. These assets can range anywhere from equity stocks and treasury bonds to real estate and gold. The idea behind doing this is that when one of the assets invested in is experiencing losses, the other assets will grow to offset the losses. According to Judith Ward, a Thought Leadership Director with the Individual Investors Group, allocating assets is the primary driver of a portfolio's performance over time. Asset allocation aims to balance risk and reward by breaking up a portfolio's assets according to individual goals, risk tolerance, and investment horizon. As it is a main factor in overall returns, it is a dynamic process, meaning there is constant change. As such, the asset mix should reflect your goals at any point in time. Allocation is one of the most important decisions an investor can make.

This idea of diversification is often limited to just domestic asset diversifying. While domestic diversifying is important, it is equally as important to invest in international markets. International markets do not rise and fall at the same time as domestic markets, meaning owning some securities in international investments internationally "levels out" some of the volatility of an investor's portfolio (Bennyhoff and Kinniry Jr. 2016). It is often believed that international investment is mainly an option used in developing countries. However, it has been shown that there is substantial regional and global diversification benefit for domestic investors in both developing and developed countries (Driessen and Laeven 2004).

Investing solely in one's domestic market exposes an investor to a concentrated set of risks. Economic downturns, regulatory changes, or geopolitical events in a single country can have a disproportionately significant impact on a domestically focused portfolio. By expanding one's investment horizon to encompass international markets, investors can mitigate these risks and potentially achieve more stable returns over time. Furthermore, international investments offer exposure to diverse sectors, industries, and economies that might not be present in the investor's home country, thus providing opportunities for capitalizing on emerging markets and industries. Including these emerging market investments to domestic market portfolios increases diversification benefits (Christoffersen 2014).

In today's interconnected and dynamic global economy, the importance of investing internationally cannot be overstated. As financial markets transcend borders and technology accelerates the flow of information, the potential for diversification, growth, and risk management through international investments has become increasingly vital. This paper delves into the compelling reasons behind the significance of investing across international markets. It also explores several types of assets that can be included in an international portfolio and outlines strategies for constructing a well-balanced investment portfolio that harnesses the benefits of global opportunities.

Asset Classes

Financial assets are essential to the sustenance of the global economy. Financial assets are defined as tradable assets which hold monetary value. Assets are often compiled into asset classes. There is no agreed upon number of asset classes but in this paper, there will be six asset classes to break down: equity, debt, cash, commodities, currencies, and real estate.

Equity securities are assets that represent ownership in a corporation. As an asset class, equity plays an important role in investment analysis and Portfolio management because it often represents a large part of most portfolios. There are numerous examples of equity securities such as common, preferred, treasury stocks and more. The most crucial factor of equity securities is ownership. The main benefit of equity investment is the ability to increase the value of the principal amount invested. Many invest in stocks such as AAPL and MSFT. These tickers represent major corporations such as Apple Inc. and Microsoft. Owning a stock of these companies' is a symbol a piece of ownership.

Debt securities are securities that define the terms of a loan between investors and issuers. These often take the form of bonds and various other money market funds. These are generally considered safe investments as there is often a fixed return for most of these spendings. For example, the most frequently invested in debt security is a bond. Bonds are loans that bondholders make to the bond issuers. Governments and corporations often issue bonds when they're in need of capital growth. Investors are essentially lending money to governments and corporations and expecting returns on these investments with interest until the bond matures. When issuers default on their bonds, investors lose all their investment and any interest that was owed, adding some risk to the investments.

Cash and cash equivalences are simple asset classes consisting of anything that consists of cash and items readily convertible to cash. These assets are very liquid as they can immediately be converted to usable cash. An example of a cash equivalent asset is life insurance because life insurance policies can accumulate cash value.

Currency is the least volatile asset class, especially when compared to equities and bonds, despite their false reputation of being a risky investment. Currencies have a very low correlation compared to other investments and have shown very strong returns over recent years. The currency market is the largest and most liquid market in the world. The U.S bond market and NYSE have slightly under a trillion dollars traded daily while the currency market has $3.2 trillion traded daily.

Another asset class is commodities. Commodities are often a useful way for investors to diversify. Commodities are investments in four main categories: metals, energy, livestock and meat, and. Energy. Commodities also give investors an opportunity to hedge against inflation. It is important to diversify the types of commodities that are invested so that volatility of is reduced.

The final class of assets is real estate. The real estate asset class is broken down into commercial and residential real estate. Residential real estate is investment in single-family homes, condominiums, townhouses etc. Commercial real estate is an investment in retail, office, self-storage, and any investment which may allow you to grow capital. On its own, real estate offers cash flow, tax breaks, equity building, and a hedge against inflation. Real estate and investment in REITs often allow for lowered volatility in a portfolio through diversification.

It is possible to invest in collections of assets. This can be done through spending in ETFs, mutual funds, hedge funds and more. These funds generally invest in certain sectors of the economy and have numerous variations based on the goals of an investor. For example, VGT is a large sector-specific ETF with tens of billions of dollars invested in tech companies including numerous Big Tech mainstays. Like VGT, investors can invest in a wide variety of ETFs, mutual funds, and various other funds to diversify their portfolios and grow capital.

International Securities

When investing internationally, all the asset classes are available on international markets. Many investors from the U.S. are unsure of how they can include these international securities in their portfolios. One way is through Global or International Equity Indices. Stock market indices, such as the MSCI World Index or FTSE All-World Index contain stats from numerous different countries. Indices like this provide a broad representation of global equity markets and allow investors to track the performance of international securities while also limiting the total amount of research that needs to be done.

Another way to include international securities in a portfolio is through exchange listings. Stock exchanges may allow the trading of foreign securities on the platforms enabling investors to trade these international stocks, bonds, and other financial instruments directly on the local exchange. Investors can also use depository receipts, such as American Depository Receipts (ADRs) or Global Depository Receipts (GDRs), to invest in international securities. ADRs and GDRs are financial instruments issued by banks that represent ownership in foreign companies. They facilitate the trading of foreign securities on local exchanges and allow investors to hold and trade international stocks in their domestic currency.

Investing internationally can go even further than just investing in stock markets. Investors can also invest in real estate overseas. Owning international real estate often gets higher returns on investment. In highly developed countries, profit from real estate investments is minimal. However, if you invest in less-developed countries, there is an opportunity for further growth. Although it is significantly riskier to invest in less-developed countries, as political instability and economic issues are far more common, the growth you experience in poorly developed countries can never be experienced in real estate in countries such as the U.S. or the U.K.

Investing in international real estate also stabilizes real estate changes bought in the U.S. The investment in international assets allows investors to lower the negative effects of instability at home. For example, in 2008, the U.S. underwent a major recession, and while investments in U.S. markets went down the drain, if investors had invested in Asian real estate, they would have experienced stable returns. When owning real estate in the U.S., there is a significantly higher chance of lawsuits than in an Asian country.

Benefits of International Investing

While investing in the U.S., we often think of domestic securities. It has been difficult to argue with this logic in the past as the S&P 500 index has been proven to be very dominant in the international markets. However, to construct ideal portfolios, investors must look beyond their countries' borders. International securities can be a major asset in investing, especially when the U.S. economy is undergoing hardships. To diversify, investors must look at securities in various economies such as Japan, India, China, and various parts of Europe.

Historically, the international market has shown that it can succeed in down periods for the U.S. economy. Since 1973, international markets have outperformed U.S. markets in 23 separate years. Furthermore, whenever the U.S. market experienced returns less than 4%, international markets outperformed 45 out of the

45 examined periods. There are signs that international investments will continue to be a good investment. As of 2023, international equities are trading at valuation discounts lower than U.S. equities on average.

From 1988-2009, equity returns from 41 countries represented in various portfolios over 18 testing periods showed substantial returns for the average American investor (Bouslama and Ouda 2014). Inclusion of emerging and frontier markets can show growth in internationally diversified portfolios. Selecting investments from countries whose assets show low correlation with U.S. markets can lead to profits. International diversification does not require investing in many investments, but rather in a set of investments from countries with low correlations with each other, similar to how one would go about domestic investing (De Santis and Sarno 2008).

It can be argued that diversifying internationally is more important than diversifying industrially. In the past 27 years, international diversification outperformed industrial diversification when investors made sure that they would mitigate market, political, and inflation risks (Attig, Guedhami, Nazaire, and Sy 2023). These numbers, however, may be slightly skewed due to the numerous crises that took place over the past 3 decades (i.e., IT bubble burst, global financial crisis, COVID-19 pandemic). In a study of the years 1984-1997, it was found that global diversification did not return higher than industrial diversification (Denis, Denis, and Yost 2002). However, as the global economy is going through a transitionary period and has changed significantly since the findings from 2002 were reported, it would be beneficial to diversify internationally.

Investing in international securities is long overdue as numerous markets emerge around the world to challenge the United States' dominance. Investing in international investments should no longer be included in just the portfolios of the ultra-rich. Instead, it should be a mainstay in the portfolios of everyday investors who are concerned about the well-being of their investment portfolios (Greene 2007)

Lastly, investing internationally promotes a broader understanding of global economics and geopolitical factors. It encourages investors to stay informed about global events, trade dynamics, and currency fluctuations. This broader perspective fosters better decision-making as investors learn to navigate the complexities of the international financial landscape. Additionally, international investments can lead to the transfer of knowledge, technology, and best practices between countries, fostering cross-border collaboration and innovation.

Constructing an International Portfolio

Constructing investment portfolios with international securities in mind has been difficult, particularly over the last decade. Since 2011, international markets have been consistently outperformed by U.S. markets. However, historical data has shown that the U.S market and international markets have moved cyclically since 1975. This data leads us to the conclusion that soon, international stocks will prove to be a strong investment.

An easy way to mitigate risk while investing in international securities is to invest in exchange trade funds. Exchange trade funds (ETFs), though they don't return as flashy returns as individual stocks, are a great way to hedge against the risk of the domestic market.

The following portfolios were made using a portfolio simulator and allocating ideal percent into each investment based completely on a maximized Sharpe ratio. A Sharpe ratio is a measure of risk-adjusted returns. Any Sharpe ratio above 1 is considered quite good and is indicative of a strong portfolio.

One portfolio including ETFs would have 5.00% Vanguard FTSE Pacific ETF (VPL), an ETF that tracks the performances of stocks issued by major companies located in the Pacific region; 5.00% Vanguard Utilities ETF (VPU), an ETF which measures investment returns in the utilities sector; 8.00% Vanguard Global ex-US Real Estate ETF (VNQI), an ETF which represents real estate in 30 various countries; 8.84% in Wasatch Emerging India Investor (WAINX), a fund which focuses on the highest-quality growth stocks in India; 5.00% on Agnico Eagle Mines Limited (AEM), a stock for Canadian-based gold mining company Agnico Eagle; 8.00% lululemon athletica inc. (LULU), a stock for Canadian multinational athletic apparel retailer Lululemon

Atletica; 30.13% Elevance Health Inc. (ELV), an American health insurance provider's stock; and lastly a 30.04% investment Novo Nordisk A/S (NVO), a Danish multinational pharmaceutical company.

This portfolio, though it does not have very high returns, has a strong Sharpe ratio of 1.12 and a decent stock market correlation of 0.69. This means the portfolio is relatively low risk and returns of 17.84%, the portfolio can be considered a strong low risk, strong reward portfolio.

Another internationally diverse portfolio, for example, begins with a 31.34% allocation to AstraZeneca PLC (AZN), a British-Swedish research-based pharmaceutical company. Next is Meta Platforms Inc (META), one of the largest and most established social media platforms of the century, with an investment of 23.58%. Furthermore, an 18.08% investment in Vestas Wind Systems (VWDRY), a Danish company specializing in wind turbines; a 14.99% invest in Canadian Pacific Kansas City Limited (CP), a railroad company based in Canada; and BYD (BYDDY), an EV company based in China.

This portfolio would have an annualized return 26.25% and a starting balance of $10,000 in January 2013 would lead to an end balance of $120,167 in August 2023. Similar to the previous portfolio, this allocation of assets would lead to a Sharpe ratio of 1.20. Furthermore, this portfolio has an even lower market correlation with only 0.65 and a beta value of 0.89. This means that the portfolio is likely to provide excess returns relative to what is expected.

Another portfolio including international investments would begin with 33.14% of the starting balance invested in ASML Holding N.V. (ASML), a semiconductor manufacturing company from the Netherlands. Next would be a 30.41% investment in the Swiss food and drink processing corporation, Nestlé SA ADR (NSRGY). This would be followed by an 18.41% investment in Netflix, Inc. (NFLX), the streaming giant from the United States; a 15.52% investment in MercadoLibre, Inc. (MELI), the e-commerce company founded in Argentina and headquartered in Uruguay; and topped off by a 2.63% investment in Agnico Eagle Mines Limited (AEM), the Canadian-based gold producer.

This set of investments would have an annualized return of 30.44%. If an investor poured $10,000 in this portfolio in 2009, the investment would result in holding $492,733 as of August 2023. Furthermore, with a Sharpe ratio of 1.26 this would be a very strong portfolio. However, this portfolio would be considered quite high risk as it does have a correlation of 0.75 but the portfolio can still provide a very high reward.

Finally, if an investor were to consider all the previous stocks mentioned and create the ideal portfolio for them, adding a few more various stocks not included, the following would be the allocation: 4.10% META (USA), 20.66% AAPL (USA), 17.87% NTES (China), 5.59% BYD (China), 24.24% AZN (UK), 4.25% HDB (India), 7.40% VWDRY (Denmark), 1.88% MELI (Argentina), and 14.00% NFLX (USA). Ten thousand dollars in this allocation of assets in 2013 would lead to holding $171,272 as of August 2023. The portfolio also has a very strong Sharpe ratio of 1.48 and a beta value would be 0.91, leaving an opportunity for excess returns. Those allocations of assets per country are as follows:

1. USA – 38.76%
2. UK – 24.24%
3. China – 23.46%
4. Denmark – 7.40%
5. India – 4.25%
6. Argentina – 1.88%
7.

This set of data showcases that high returns can be experienced while diversifying internationally while also allowing for growth in down periods of domestic markets.

Conclusion

In conclusion, the significance of international investing cannot be overstated in the contemporary financial landscape. As globalization continues to shape economies and markets, embracing international investments offers a pathway to enhanced diversification, growth, and risk management. Through exposure to different sectors, economies, and regulatory environments, investors can create portfolios that are resilient in the face of localized disruptions. By diversifying across countries and regions, investors can reduce the impact of market-specific events and capitalize on opportunities that might not be available in their home markets.

Furthermore, the benefits of international investing extend beyond financial gains. Engaging with global markets fosters a deeper understanding of geopolitical dynamics, economic trends, and cross-border collaborations. It encourages a broader perspective that enriches decision-making and promotes the transfer of knowledge and innovation across borders. As the world continues to evolve and markets become increasingly interconnected, international investing remains a crucial tool for investors to achieve their financial objectives while embracing the opportunities and challenges of a globalized economy.

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References

Kinniry Jr., F. M., & Bennyhoff, D. G. (2018). *Vanguard advisor's alpha - opus financial solutions*. Vanguard Advisor's Alpha. https://www.opusfinancialsolutions.com/files/vanguard_advisors_alpha.pdf

T. Rowe Price Personal Investor - Why Purposeful Asset Allocation Is Key for Long-Term Success. (n.d.). Www.troweprice.com. https://www.troweprice.com/personal-investing/resources/insights/asset-allocation-planning-for-retirement.html

Driessen, J., & Laeven, L. A. (2005). International Portfolio Diversification Benefits: Cross-Country Evidence from a Local Perspective. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.1870872

Christoffersen, S. E. K., Musto, D. K., & Wermers, R. (2014). Investor Flows to Asset Managers: Causes and Consequences. *Annual Review of Financial Economics*, *6*(1), 289–310. https://doi.org/10.1146/annurev-financial-110613-034339

Bouslama, O., & Ouda, O. B. (2014). International Portfolio Diversification Benefits: The Relevance of Emerging Markets. *International Journal of Economics and Finance*, *6*(3). https://doi.org/10.5539/ijef.v6n3p200

De Santis, R. A., & Sarno, L. (2008). Assessing the Benefits of International Portfolio Diversification in Bonds and Stocks. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.1105383

Attig, Najah & Guedhami, Omrane & Nazaire, Gregory & Sy, Oumar, 2023. "What explains the benefits of international portfolio diversification?," Journal of International Financial Markets, Institutions and Money, Elsevier, vol. 83(C).

Denis, D. J., Denis, D. K., & Yost, K. (2000). Global Diversification, Industrial Diversification, and Firm Value. *SSRN Electronic Journal*, *57*(5). https://doi.org/10.2139/ssrn.244721

Greene, E. F. (2007). *Beyond Borders: Time to Tear Down the Barriers to Global Investing*.

Spiegel, Jeff *Why international stocks may continue to outperform.* BlackRock. https://www.blackrock.com/us/financial-professionals/insights/invest-internationally

Triennial Central Bank Survey Foreign exchange and derivatives market activity in 2007. (2007). https://www.bis.org/publ/rpfxf07t.pdf