How to Beat Global Equity Indices with Low Risk Country Allocation Strategies

Further Challenges to the CAPM Risk/Return Framework

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INTRODUCTION

Capital asset pricing theory tells us that there is a positive relationship between expected risk and expected return and that investors may obtain a higher expected rate of return on their holdings only by incurring additional risk. Although espoused by most institutional investors, these assumptions have always been challenged by a minority of practitioners, including myself, who have maintained that it is possible to achieve risk-adjusted excess returns by exploiting the market inefficiencies pronounced nonexistent or, at best, anomalous by the academicians.

Although the strategies that have been devised to take advantage of the "anomalies" are as diverse as their architects, they all rest on the recognition that reality is different from the sophisticated models developed by the proponents of modern portfolio theory, who have perpetuated the myth of "efficient" markets in the face of abundant evidence that stock prices, far from being determined by rational processes, are the product of the all-too-often irrational behavior of investors, alternatively driven by fear and greed.

In my own work, which has focused on the global equity markets, I have found that over the long term, investors can outperform global equity indices on a risk-adjusted basis by concentrating investments in undervalued markets selected on the basis of certain selection criteria with demonstrated predictive power regarding relative performance.[1]

## HIGHER RISK DOES NOT NECESSARILY MEAN HIGHER RETURN

A careful risk-return analysis of a number of different global equity strategies tested over the years has shown that, contrary to the premise central to modern portfolio theory, the correlation

between risk and return is *negative.* Investors are not rewarded for assuming higher risk. Instead, *high risk is associated with lower returns and vice versa.*

Illustrations of the negative relationship between risk and return also show that equally-weighted market indices are more "efficient" than cap-weighted market indices, which is inconsistent with the capital asset pricing theory as well.

Figure 18.1 shows the results of global equity strategies based on cash earnings during the 20-year period from January 1970 to December 1989. The hypothetical investment vehicles were 18 Morgan Stanley Capital International (MSCI) country indices[2] sorted into four groups according to their respective cash earnings/corresponding index levels. The low-risk strategy of investing in the markets with the highest cash earnings in relation to price resulted in the highest returns (19.17 percent per year); the high-risk strategy of investing in the markets with the lowest cash earnings in relation to price resulted in the lowest returns (4.37 percent per year).[3]

FIGURE 18.1 Cash Flow Strategies, Risk-Return Relationship (Local Currencies, 1970-1989)
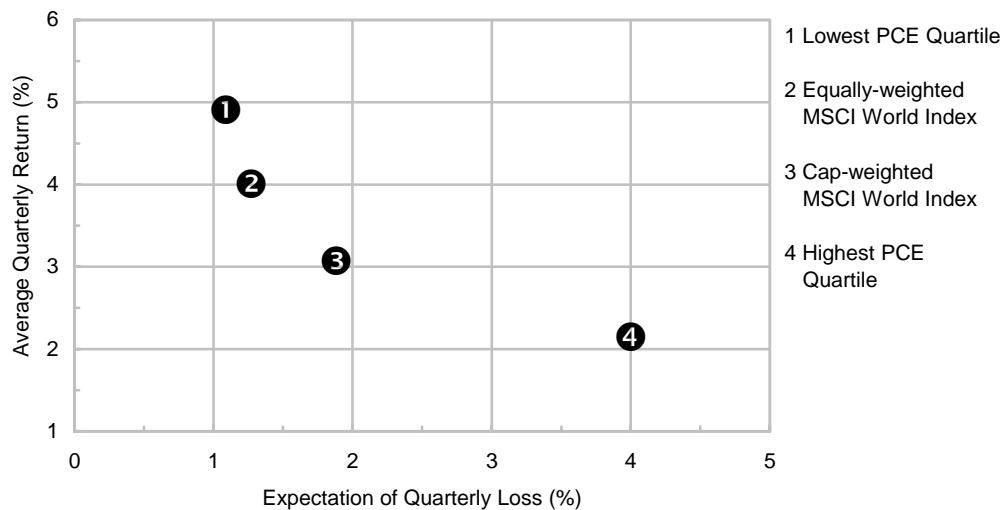
SOURCE: Keppler Asset Management Inc., New York

VOLATILITY IS NOT ALWAYS THE BEST MEASURE OF RISK

Because the traditional variance (standard deviation) measure of risk is of very limited relevance in many investment situations, the risk adjusted return shown in Figure 18.1 was calculated by using the Keppler Ratio, which indicates the return per unit of expectation of loss, rather than the Sharpe Ratio, which indicates the return per unit of variability.

If the assumption of a symmetric distribution of returns is violated, the reward-variability ratio is not exact. In cases where there is a positive skewness of returns, risk is assumed to be higher than it is in reality. Conversely, if returns are negatively skewed during the performance measurement period, the Sharpe Ratio shows risk to be lower than it actually is.

However, even if we where to accept price volatility as a legitimate measure of risk, the fact remains that there is a negative correlation between risk (as defined by the proponents of modern portfolio theory) and returns. Figure 18.2 shows that the low-volatility strategy of investing in the

national equity markets with the highest cash earnings in relation to price resulted in significantly higher returns than the high-volatility strategy of investing in the markets with the lowest cash earnings in relation to price.

REDEFINING RISK

A similar negative correlation between risk and return can be established on the basis of other valuation criteria such as dividend yields or price-earnings ratios. The negative correlation is particularly obvious when standard deviation and beta are replaced by more realistic risk measures which focus on the downside, rather than on the ups and downs, based on the recognition that risk has to do with adversity rather than uncertainty.

FIGURE 18.2 Cash Flow Strategies, Volatility-Return Relationship (Local Currencies, 1970-1989)
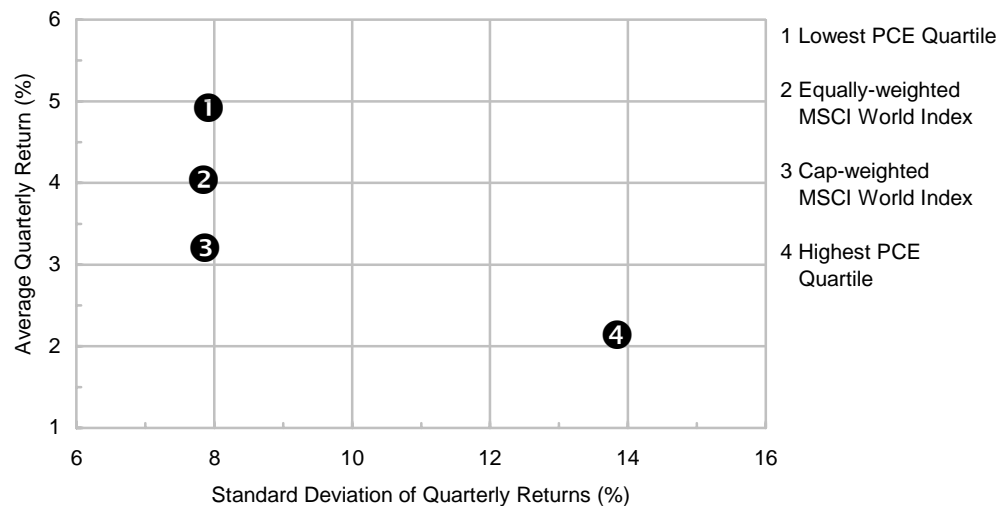
SOURCE: Keppler Asset Management Inc., New York

Volatility may be a useful concept for futures traders who can easily switch from long to short positions, but it is of little relevance to most equity investors. The notion that portfolio risk is strictly a function of the volatility of portfolio returns rest on invalid assumptions and does not appeal to common sense. Volatility is very desirable in bull markets. With the exception of short sellers I have never heard a market participant complain about positive deviations from the mean return. Few practitioners would equate that welcome occurrence with risk. Most investors intuitively feel that risk should have something to do with losing money, or, as Robert Jeffrey put it, with "having insufficient cash with which to make essential payments."[4]

Figure 18.3 shows that, contrary to one of the basic assumptions of modern portfolio theory, returns are not necessarily normally distributed. The frequency distribution of market returns is no classic bell curve. The shape is skewed rather than symmetric, and outliers are substantially different from those expected in a normal or lognormal distribution.
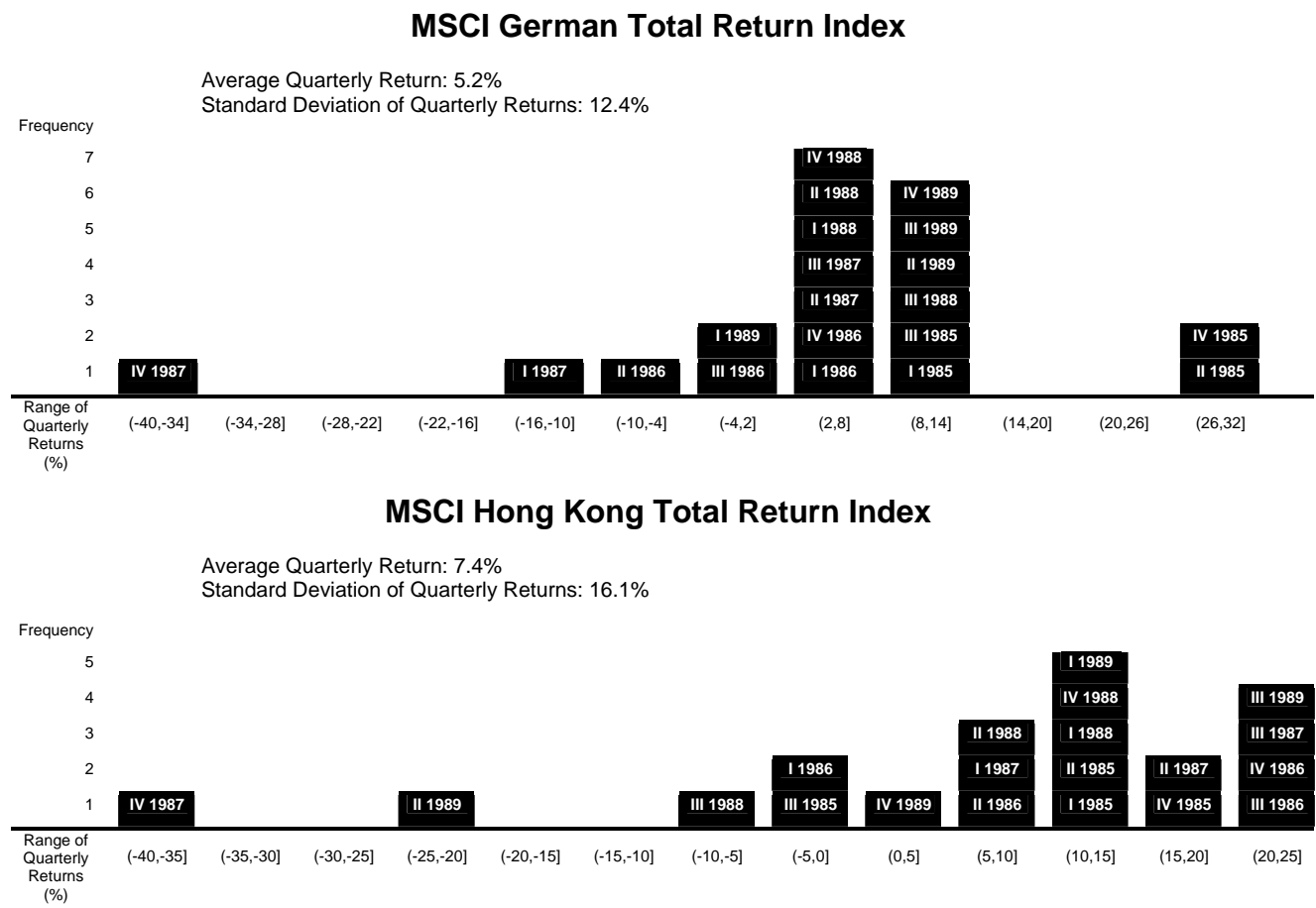
Given the limited relevance of volatility in most investment contexts, standard deviation and beta should be replaced by risk measures that are not based on the assumption of a symmetric distribution of returns, such as the largest drawdown from a previous high or the expectation of loss,

which focuses on both the probability and the magnitude of negative results. Risk measures must be flexible enough to deal with a broad range of portfolio objectives and constraints. The expectation of loss qualifies in this respect, because it allows us to define risk as the probability and magnitude of negative deviations from any required rate of return, depending on the liquidity needs of the investor.[5]

CONCLUSION

Why is it important to analyze risk realistically? As Charles D. Ellis has pointed out, money management has become a "losers' game" in which the ultimate winners will be those who make the fewest mistakes.[6] Minimizing risk is therefore critical to investment success.

FIGURE 18.3 Examples of Skewed Distributions of Returns (December 1984-December 1989)

MSCI German Total Return Index

Average Quarterly Return: 5.2%
Standard Deviation of Quarterly Returns: 12.4%

MSCI Hong Kong Total Return Index

Average Quarterly Return: 7.4%
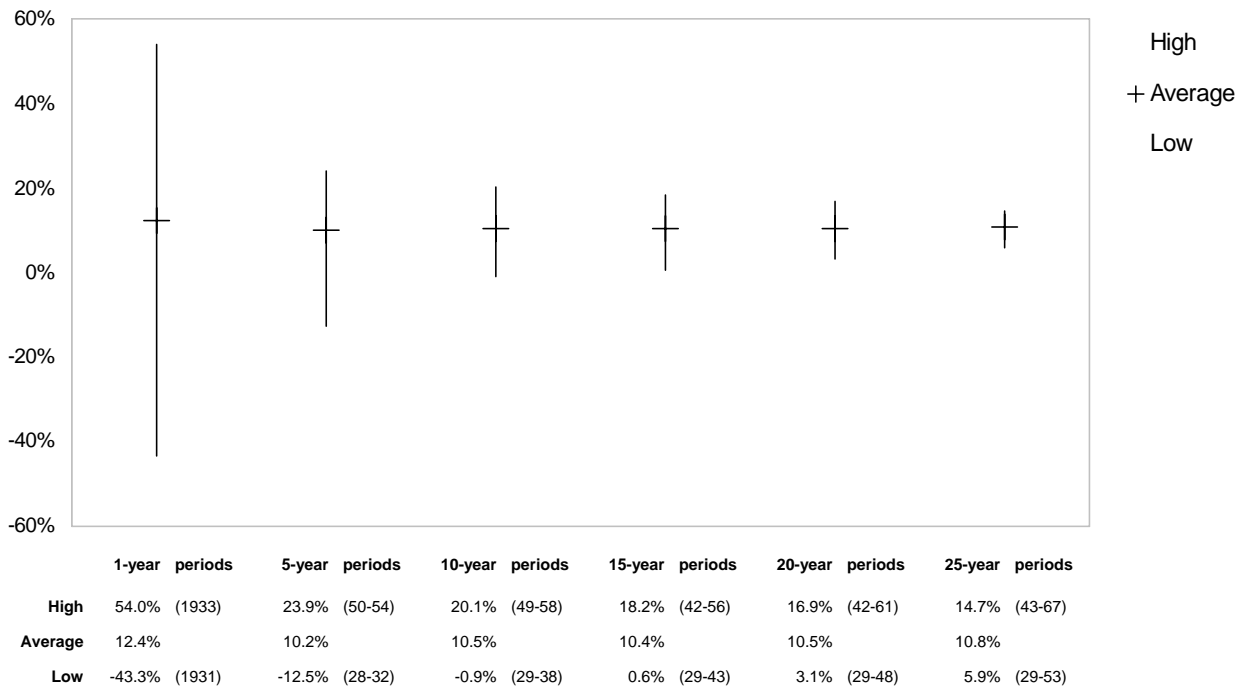Standard Deviation of Quarterly Returns: 16.1%

SOURCE: Keppler Asset Management Inc., New York

If we are to reduce risk, we have to fully understand its main sources. Benjamin Graham suggested that the concept of risk should be applied "solely to a loss of value which either is realized through actual sale, or is caused by a significant deterioration in the company's position – or, more frequently perhaps, is the results of the payment of an excessive price in relation to the intrinsic worth of the security."[7] Robert Jeffrey correctly described risk as "a function of the characteristics of a portfolio's liabilities as well as of its assets and, in particular, of the cash flow relationship between the two over time."[8]

Thus, the two most important risk factors are overvaluation and dependence on short-term results. We know that the average rate of return of asset classes such as stocks and bonds is hardly affected by time, but the range of distributions of actual returns around the mean is greatly affected by the investor's time-horizon. Figure 18.4 shows the range of nominal returns on U.S. stocks for various holding periods from 1926 to 1992. The message is clear: Investments (such as stocks) that are highly risky in the short term become less risky as the investment horizon lengthens.

If risk, in the last analysis, is a function of price and time, and minimizing risk is the key to achieving superior returns in the domestic and international equity markets, the prescription for investment success can be condensed to the following simple formula "Don't overpay, and invest for the long term!"

FIGURE 18.4 Range of Nominal Returns on U.S. Common Stocks (Various Holding Periods, 1926-1992)

	1-year periods		5-year periods		10-year periods		15-year periods		20-year periods		25-year periods	
High	54.0%	(1933)	23.9%	(50-54)	20.1%	(49-58)	18.2%	(42-56)	16.9%	(42-61)	14.7%	(43-67)
Average	12.4%		10.2%		10.5%		10.4%		10.5%		10.8%	
Low	-43.3%	(1931)	-12.5%	(28-32)	-0.9%	(29-38)	0.6%	(29-43)	3.1%	(29-48)	5.9%	(29-53)

SOURCE: Keppler Asset Management Inc., New York

NOTES

[1] See A. Michael Keppler, "The Importance of Dividend Yields in Country Selection," *Journal of Portfolio Management, 17* (Winter 1991): 24-29; "Further Evidence on the Predictability of International Equity Returns," *Journal of Portfolio Management, 18* (Fall 1991): 48-53.

[2] The 18 MSCI country indices comprised the markets of:

1. Australia	7. Germany	13. Singapore/Malaysia
2. Austria	8. Hong Kong	14. Spain
3. Belgium	9. Italy	15. Sweden
4. Canada	10. Japan	16. Switzerland
5. Denmark	11. The Netherlands	17. United Kingdom
6. France	12. Norway	18. United States

[3] This was true for both the local currency and U.S. Dollar analyses. Subperiod results, which confirm the findings, suggest that the relationships are generic rather than time-specific. The analyses will be updated as of the end of 1994, to show 25-year results.

[4] Robert H. Jeffrey, "A new Paradigm for Portfolio Risk," *Journal of Portfolio Management, 2* (Fall 1984): 39.

[5] To evaluate the risk of a given investment program or strategy, I subject the portfolio to a thorough downside analysis:

- Number of losing/underperforming periods;
- Probability of loss/shortfall below the required rate of return;
- Average loss/shortfall in losing/underperforming periods;
- Expectation of loss/shortfall;
- Longest losing/underperforming streak;
- Largest drawdown from a previous high.

[6] Charles D. Ellis, "The Losers' Game," *Financial Analysis Journal, 31* (July-August 1975): 19-26.

[7] Benjamin Graham, *The Intelligent Investor,* 4th rev. ed. (New York: Harper & Row, 1973), 61.

[8] Jeffrey, *op cit., 33.*