

Some Thoughts on Diversification

by I. Conoclast

The benefits of investment may be thought of as what one gets while owning the asset and what one receives when the ownership is terminated. The rate of return may be thought of as the discount rate that converts the stream of income during ownership and the termination proceeds to the acquisition costs. Thus, for example, a ten year treasury issued at par to yield 6% and held to maturity has an internal rate of return of 6%. A sale before maturity, say in five years, may be at a premium or discount thereby affecting the rate of return. However, if the note is held to maturity, the rise and fall of prevailing rates has not affected the rate of return on the investment. What has been affected when periodic evaluations are made is the rate of return which *would have been earned* had the asset been sold. On a periodic basis, the evaluation of an imputed rate of return, is made under unrealistic assumptions. It is not a realized rate of return - and, the realized rate of return is the realistic objective of the investment.

Modern portfolio theory (MPT) [and I wonder about the acronym] holds that diversification of assets may increase returns at given risk levels, or alternatively, may provide the same returns at reduced risk levels. Applications of the theory use volatility of returns implied by market price fluctuations as the composite of risks. The returns are measured periodically by imputing sales of the assets at market prices. As just noted, A... the evaluation of an imputed rate of return, is made under unrealistic assumptions. It is not a realized rate of return - and, the realized rate of return is the realistic objective of the investment. @

MPT is set in an interesting and perhaps useful paradigm. It is certainly the dominant theory in modern portfolio strategy, which is at least consistent with its name, modern portfolio theory. The thesis developed here is that there is a more useful way of looking at diversification. One might call it the genesis of a post-modern portfolio theory.

Time Horizons

Time horizons are critical to diversification strategy. Diversification serves to protect the investor from excessive concentration of risks. The major risks may be thought of as business risk (the chance of loss because of not getting the investment back), price level risk (the chance of loss of purchasing power even if the investment is recovered), and liquidity risk (the chance of loss from quickly or prematurely converting the asset to cash).

* I. Conoclast is the sometimes pseudonym for Dr. Maury Seldin of the Hoyt Group. For those interested in creative pseudonyms, tune in to Click and Clack, Car Talk, public radio, 10 AM on Saturdays.

Rather than using diversification to maximize **imputed** rates of return (or minimize risk at some level of imputed return), with periodic measurements of volatile market prices, diversification may be used to maximize **realized** rates of return within given risk constraints over the relevant time horizon. The concept is to maximize the **realized** rate of return within the risk constraints that one is prepared to take. For example, one may set a time horizon of ten years for the purposes of portfolio construction. The idea is that one may determine the risk profile (considering business risk, price level risk, and liquidity risk) that is acceptable for the ten year period and construct the portfolio to maximize returns within the risk constraints determined. Thus, the purchase of a ten year treasury note at par while containing a liquidity risk, has no realized gain or loss if held to maturity. The market fluctuations are irrelevant as long as the security is not sold. Expected portfolio returns, if based on benefits while the securities are owned and benefits when the ownership is terminated, may be calculated, using an amortization of the acquisition premium or discount over the term of the note, using the ten year, 6% treasury example, if held to maturity. If the holding period is other than maturity, or there is no maturity, the amortization is to the expected sales date at the expected sales proceeds.

If one is using a thirty year treasury with fifteen years left to run, the options are to amortize to maturity or impute a sales price in ten years. By amortizing to maturity, one is imputing a value for ten years hence, but not necessarily forecasting that as a market price. That imputed value in ten years is workable if the investor is prepared to stay with the note until maturity. Thus, the strategy is to give up the liquidity, i.e., bear the risk of an unexpected necessity to sell before maturity, in order to get the higher return usually associated with the longer term commitment.

In the case of treasury notes with a five years to maturity, the yield is to maturity. At the end of five years the imputed interest rate risk will be realized, i.e., the risk that the funds cannot be reinvested at comparable rates. This interest rate risk is imbedded in the liquidity risk which also contains the risk associated with the extent of an organized market for the security, i.e., the spread costs in a transaction.

Such a strategy of a ten year time horizon should certainly be revisited within five years. In five years, if not sooner, the portfolio would be reviewed in the context of a new ten year time horizon. Indeed, one could use a one year rolling review with a ten year rolling time horizon. The idea is that the liquidity needs of the portfolio may be met by the cash flow structure of the income producing investments including such use of maturing investments as was necessary to supplement periodic income.

Risk Strategies

Liquidity. Liquidity, the risk of loss from quick conversion to cash may be thought of as being composed of two components. One is the interest rate risk which is a change in capital value associated with rate changes in the market place (or the obverse of not being able to

reinvest maturing obligations at the same or better rates). The other is the spreads (that influence transaction costs) resulting from the thinness of markets. That may be reflected in a time to sell and/or the difference between buy and sell prices at the same time.

Investors who bear liquidity risks demand and get premiums in the market for bearing such risks. Short term treasuries have the lowest liquidity risks and have very small premiums.. Ordinarily, the premium goes up with time to maturity giving a rising yield curve. Securities with no maturity, such as common stocks, have premiums most closely related to trading volume, reflected in bid and asked spreads. Real estate, with high transaction costs, is much less liquid category.

As implied in the earlier discussion, a good liquidity strategy is to mix asset types in the portfolio with an eye to meeting liquidity needs through cash flows from periodic income supplemented by maturing obligations. The idea is to avoid having to sell in an unfavorable market. This is especially applicable to real estate which has some of the highest premiums for the lack of liquidity. To an increasing extent, this is also true of real estate investment trusts, REITs, in that the flow of funds to REITs is in an ebb and flow pattern that will from time to time have unfavorable pricing relative to underlying assets and competitive stocks.

The time horizon approach facilitates portfolio construction designed to take advantage of as much liquidity risk as the investor sees as appropriate.

Price Level Risk. With the advent of inflation indexed treasuries, portfolio construction to guard against price level risk has received a significant additional tool. Putting aside the income taxation issue inherent in the way in which the instruments= indexed value adjustments are taxed, there is a clear neutralization method for the risks of inflation. Alternative methods of dealing with the risk include premiums for expected inflation (as reflected in the interest rate), variable rates, participations of various sorts, and direct ownership of assets with income that is responsive to inflation, e.g., rental apartments.

Some investors fear inflation more than others, and maybe with good cause. Depending upon the tolerance level of the particular investor some protection from inflation needs to be built into the portfolio. Since tolerance levels differ, the impact of unexpected inflation does not have to be neutralized. All that needs to be done is the design for the tolerable level of risk. That will leave lots of choices as to form of investment and even more so, specific investments.

Business Risks. Modern portfolio theory is probably most useful for the business risks because the source of the risks is quite diverse. It would take a fairly sophisticated model to isolate the generating factors. One conceptual approach, however, would be a national input-output analysis with an adjustment mechanism for a changing international impact. The resulting industry by industry analyses could provide a pick and choose approach, or a diversification that would neutralize the different patterns of industry volatility. This is

not advocated because of the practical difficulties, but conceptually, one could diversify out the differences among various business risks.

What is popular with some institutions is a diversify to the available options. Essentially, the concept is to perform no worse than the market (at the expense of performing no better). There is a lot of the "it's more painful to lose than pleasant to win" philosophy out there.

A strategy could be very aggressive by picking a few industries expected to do well, and diversify among them. The strategy may become less aggressive by adding industries, not only selecting on criteria of expected performance in total returns of specific opportunities in stock investments (or other ownership interests), but also upon differences in expected cyclical performance, by industry.

Whatever the diversification method chosen for the business risk, the key is that diversification is focused on type of risk tolerable to the investor so that returns are maximized within the risk constraints, and that the focus is on **realized** returns over the relevant time period, not imputed returns periodically measured by what would be realized if the assets were sold.

Post-Modern Portfolio Theory

Post-modern portfolio theory is rooted in the old adage that the money is not made until the asset is sold and the cash received. It is further rooted in recognition that risks come from diverse societal forces and that the combinations that occurred in the past are not expected to be the combinations of the future. Thus, composite historical volatility of returns or patterns of returns provide no useful predictor of future returns. The best forecast of future returns or volatility are predicated on the decomposition of the risks. Thus, the historical performance of assets tied to specific risk factors may shed light on the future, but only to the extent that the underlying factors are the variables that are analyzed.

While it makes sense to do the best available in the forecasting of the risks, it is wisest to realize the limitations of forecasting. Thus, strategy becomes appropriate. Strategy is basically defensive. It is policy based on dealing with the risks and uncertainty of how events will unfold. Thus, one strategy is to evaluate the tolerable levels risk, by type of risk, and build diversification by risk, not by asset type. By so doing, one may maximize returns within risk constraints, and may use the concepts of modern portfolio theory to so do, provided that the risks are decomposed and that then returns are **realized**, not imputed by sales that are not intended and that do not occur. That is the genesis of a post-modern portfolio theory.*

*Interestingly enough it is rooted in a book published three decades ago.