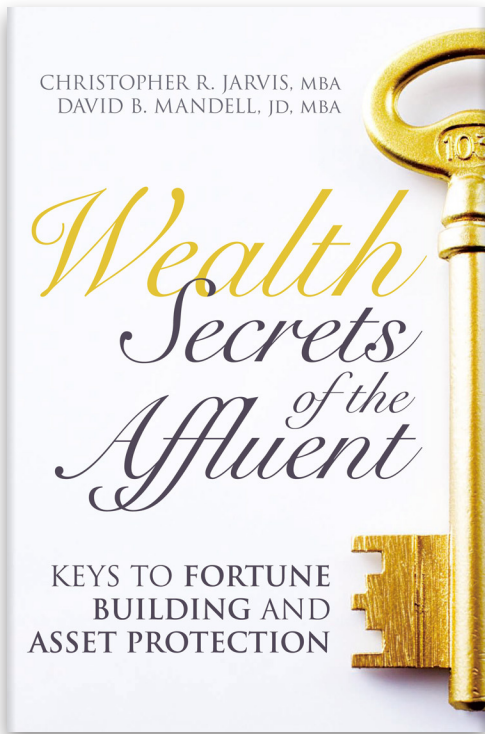


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*Chapter 46:*

A NOBEL PRIZE IS NOT ENOUGH

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## CHAPTER 46

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# A NOBEL PRIZE IS NOT ENOUGH

Many investment advisors may boast that their strategy is based on a Nobel Prize-winning theory. Though this is impressive, it has two faults:

1. Nearly everyone's strategy is based on that same theory.
2. The theory has a number of limitations that were acknowledged by the Nobel Laureates themselves.

The purpose of this chapter is threefold. First, we will give you a very basic understanding of the aforementioned Nobel Prize-win-

ning investment theory. Second, we will point out the limitations of the theory. Third, we will suggest how to make the theory work for your particular comprehensive financial plan.

## THE MODERN PORTFOLIO THEORY AND THE CAPITAL ASSET PRICING MODEL

In 1990, the Nobel Prize in Economics was awarded to Harry Markowitz, Merton Miller, and William Sharpe for their Modern Portfolio Theory (MPT) and Capital Asset Pricing Model (CAPM). With apologies to Messrs. Markowitz, Miller, and Sharpe, we would like to offer simplistic summaries of the Capital Asset Pricing Model and Modern Portfolio Theory. There are three concepts you must be able to grasp before putting them together to form the CAPM and MPT. Those are:

1. Types of risk
2. Risk vs. reward
3. Diversification of investments

### Types of Risk

CAPM divides the risk of any investment into two types of risk: specific risk and market (or systematic) risk. Specific risk is unique to an individual investment, while systematic risk affects all investments in the market and is also known as “market risk.” Let’s look at examples of each.

**Specific risk.** Do you remember the Tylenol scare about 25 years ago? Someone tainted a number of bottles of Tylenol with cyanide. This obviously affected the stock price of Johnson & Johnson, the maker of Tylenol. The risk of this type of occurrence is an example of specific risk because it didn’t have an effect on all makers of analgesics in the market, just Johnson

& Johnson.

**Market or systematic risk.** Do you recall the stock market crash of 1929? That incident affected all investments in the market. The risk of a crash is certainly the most extreme example of market risk. A more current example is what the market pundits call a market correction or a 10 percent decline from a recent high.

When you make an investment, that investment is subject to both market and specific risk. In a portfolio of investments, you are subject to market risk, which affects the whole portfolio, and a combination of specific risks that affect each individual investment distinctly.

### Risk vs. Reward

Over an extended period of time, rewards are generally higher for those who take more risk. Individuals who start their own businesses and are ultimately successful will probably make considerably more money than those individuals who took the less risky route and went to work for someone else. The entrepreneur risked his time and money. If successful, he will be rewarded handsomely for the risk he took.

Doctors and lawyers bypass the opportunity to make money right out of college. Instead, they spend more money going to medical school or law school and delay their income-producing careers by another three to seven years. For this risk of time and money, they are generally rewarded with higher income opportunities than other college graduates. Within the medical field, for example, some doctors pursue even more education and defer income even further to become surgeons. Still further, there are plastic, neurological, orthopedic, and dermatologic surgeons who undergo additional training. Within those fields, there is additional training as orthopedic surgeons may become spine specialists or dermatology surgeons

may go on to learn Mohs (a specialty technique for removing cancer cells) to better handle cancer cell extraction. Usually, an increased investment in time and money (risk) leads to greater income potential (reward).

## Diversification of Investments

Diversification is a business school term for “not putting all of your eggs in one basket.” When applied to investments, it has two meanings. First, it means diversifying among asset classes. This is more popularly known as asset allocation. Asset allocation involves investing in a combination of stocks, bonds, real estate, cash, and other investment classes. Diversification also applies to the individual investments made within each asset class—not investing in just a few stocks, just a few bonds, or in one or two parcels of real estate. As an example, most investment managers recommend a portfolio of at least 30 securities to achieve a minimally acceptable level of diversification.

Earlier, we explained the idea that an investment portfolio is subject to (1) market risk and (2) the specific risks of each of the assets in the portfolio. One interesting finding of the CAPM and MPT is that in a well-diversified portfolio, all specific risks cancel each other out. In other words, specific risk can be diversified away. Investors can reduce the overall risk in their portfolios by spreading their risk across and within different asset classes. At face value, this makes perfect intuitive sense. However, the mathematical proof for this statement and the subsequent model for creating the most efficient set of portfolios were worthy of a Nobel Prize.

## HOW DO THE CAPM AND MPT WORK FOR YOU?

The Capital Asset Pricing Model and Modern Portfolio Theory provide a mathematical model for minimizing systematic risk in any investment portfolio. Once an investor determines the level of risk he is comfortable with (risk tolerance), he can follow the mathemat-

ical model to construct a portfolio that will optimize the risk-reward balance. In other words, by following this theory, the investor can maximize his expected returns for any level of risk. All such maximized portfolios exist on what the financial people call the “efficient frontier.”

Certainly, we are not going to contend that the findings of three Nobel Laureates are incorrect. Rather, we are going to point out the acknowledged limitations in their theory and offer additional insights that might help you.

As acknowledged by the laureates, the CAPM and MPT are designed to work in a simplified world where:

- There are no taxes or transaction costs.
- All investors have identical investment horizons.
- All investors have identical perceptions regarding the expected returns, volatilities, and correlations of available risky investments.

As there is no such thing as a simple world, these three components actually present the limitations of the CAPM and MPT as financial tools that provide wise investment advice. Below we discuss these problems and suggest ways that the Affluent overcome them in an effort to invest wisely.

### Problem #1: All Investors Pay Different Taxes and Transaction Costs

The first limitation of the theory involves taxes and transaction costs. Obviously, we consider tax to be a significant concern of the Affluent. If we didn’t, we wouldn’t have devoted an entire part of the book exclusively to this topic. If all of your stock investments are in a nontaxable account, like an IRA, you don’t have to worry

about taxes until you begin taking distributions. You could look to maximize the pretax returns on your portfolio for a given amount of risk because taxes have no impact until you take withdrawals.

A common situation is to have a portion of the total stock portfolio in a retirement account and a portion in a taxable environment. If this is true for you, you will need to determine which investments will be made in the tax-favored accounts and which investments will be made in taxable accounts. If you are in prime earning years and are in the 35 percent-plus federal income tax brackets, the following rules should suit you well.

1. Hold all interest-bearing and dividend-producing assets within a tax-favored account. Otherwise, as much as 44 percent of the earnings will go to paying income taxes each year. You are better off deferring the tax and earning money on the government's dime.
2. Hold all long-term growth assets in your taxable accounts. If you don't intend to sell these assets for at least one year, you will only pay 15 to 24 percent capital gains taxes when you sell. You can control the deferral of taxes by controlling recognition of gains. If you hold these assets in a pension account, you would be taxed at 35 percent federal (plus state) when you make withdrawals. Why pay the government twice?

These are just basic strategies to supplement the CAPM and MPT when taxes are an issue. There is much more to be learned about taxes in the chapters within the Fifth Key.

## Problem #2: All Investors Do Not Have Identical Investment Horizons

Another obvious problem with the CAPM and MPT is that all investors do not have identical investment horizons. Some investors need

their money in 30 days and some don't need it for 30 years. The investor who needs his money in less than a month would be well served by a CD or money market account. Investors that don't need their money for 30 years should have nearly 100 percent of their investments in equities (stocks) and other long-term investments.

If you have assets that you do not need for five years, you can afford to take some risks with those assets and should seriously consider investing in the stock market. If you need the money in less than a year, cash equivalents are your best option. For the assets that need to be accessed in one to five years, some combination thereof may work well.

### Problem #3: All Investors Have Very Different Perceptions of Risk and Expected Returns

The environment where the CAPM and MPT work best is one where everyone has the same knowledge of all assets and the same access to purchasing assets. Yet, investors have very different perceptions of expected returns, volatilities and correlations of available risky investments. For stocks and bonds, where there is more research available than you could possibly read, perceptions of the risk of any given stock are broad. People can't even agree on the value or the risk of certain stocks.

As far as availability, there is also a very wide gap. If you are only investing \$100,000, you may be restricted to mutual funds that can have very high transaction costs and taxes (see problem 1 above). If you have more than \$500,000 to invest, you have access to unique products and your transaction costs are considerably lower relative to the smaller investor. If you have \$5 million or more, you can access products that others can only dream of buying. These may include small businesses and initial public offerings, to name a couple.

For those of you who have experimented with, or are experts in,

real estate investing, you know the gap in knowledge between buyer and seller is a key competitive factor for the investor. Many professional real estate investors have admitted that over 50 percent of their profits are a direct result of a buyer not understanding the real estate market. The CAPM and MPT call for a percentage of your portfolio to be invested in real estate assets. However, for the real estate expert who understands this market better than most, we would deviate from the strategy and recommend he stick with what he knows best and profit from his advantage in this arena.

For the investor with little knowledge of real estate, we would suggest he avoid investing in real estate (other than a home) for two reasons. First, the time necessary to manage the property or the costs to pay someone else to do so will decimate the earnings the property generates. Second, there is no reason to jump into a market where you have a distinct disadvantage. This adds risk to your portfolio instead of reducing it as you had hoped to do by utilizing the CAPM and MPT.

The Affluent know what they know. The Savvy Affluent know what they don't know. By understanding the investment landscape (if not the investments themselves), the Savvy Affluent can avoid unnecessary risk in an investment portfolio. In the next chapter, you will learn how to avoid decimation of wealth by taxes and inflation.

## CONSIDER THIS

The Capital Asset Pricing Model and Modern Portfolio Theory have contributed greatly to the field of portfolio selection. In fact, these theories are the basis for a significant percentage of institutional investors and mutual fund managers. They have also played a large role in the field of financial risk management. However, as you saw in this chapter, there are problems with the practical application of these theories. You should work with an experienced financial planner and investment advisor who can help you apply these theories to your particular situation while integrating them into your compre-

hensive financial plan by working with the other members of your advisory team. As you will learn from the remainder of the book, you may wish to invest in a vehicle that offers you other benefits in addition to capital appreciation such as asset protection, tax deferral, or protection against a premature death. These are the types of investments the remainder of this Key and the Ninth Key will address.