PEABODY RIVER ASSET MANAGEMENT, LLC

P.O. Box 382128
Harvard Square
Cambridge, Massachusetts 02238-2128
www.peabodyriver.com

NEWSLETTER

Issue 15 February 2013

NEWS OF PEABODY RIVER

Technology has been the great enabler of investment management over the last couple of decades. I'm not sure how Peabody River could have managed its business, let alone its clients' portfolios, without the new software and communications tools that facilitate our work. Evidently we could have done it somehow, because small investment management firms existed many years ago, but I can't help thinking that our services would have been amateurish in comparison with the services of the large firms of the time. Today we can provide services that are the equal of those of the big companies.

The latest manifestation of this technological improvement is that you can now monitor your portfolio with an iPhone app. Any of our clients whose portfolios are held by our preferred custodian, Shareholders Service Group, can download the NetExClient app and see their current holdings and prices. Not all of our clients have their accounts at Shareholders Service Group, and many of our clients whose accounts are there also have other accounts, like 401(k)s, that are necessarily held elsewhere. For them, there will soon be another app, from the company that provides our portfolio accounting system, that will allow all them to see all their investment accounts with daily updates. We expect it to become available sometime later this year. We don't yet know if it will be available for Android 'phones.

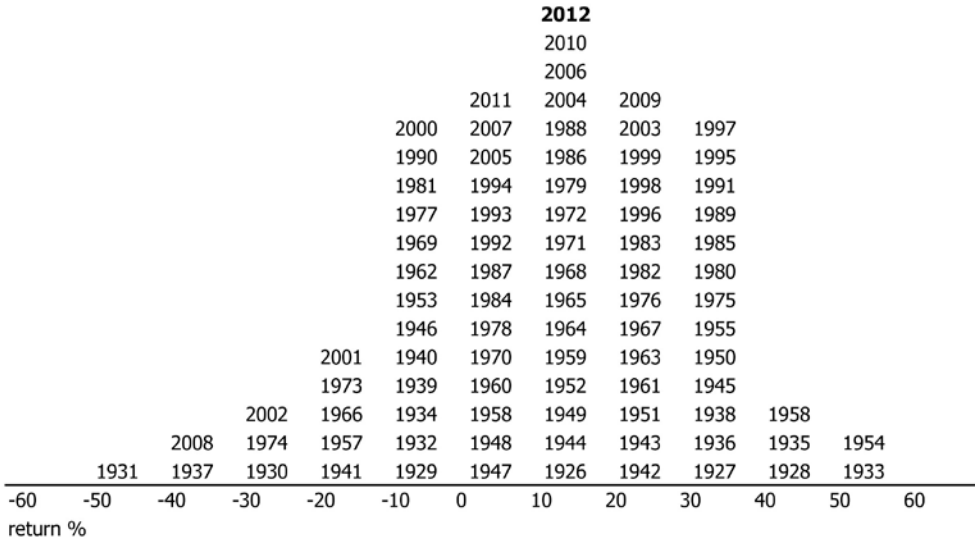
Of course, we advise against obsessing over every change in your portfolio, but it is reassuring when you know that you can see exactly what you have whenever you wish, and wherever you are.

And we remind you that our clients can log on at any time from their home computers to see their accounts, and, for the accounts that are held at Shareholders Service Group, download the information into Quicken.

§

BRIEF REVIEW OF 2012

2012 was a great year for stock markets around the world. With a return of 16.00%, the S&P500 was actually one of the lesser performers.



Contrary to our expectations, European stocks did quite well, with a return of 21.54% (by the Morgan Stanley Capital Europe Index). And that is pretty much the same as the stock markets of the Eurozone countries alone (21.17%, by one index). Fortunately for our clients, although we reduced exposure to Europe last year because we saw too much risk there, we're seldom so confident as to make a 100% decision one way or the other, and we continued to maintain some exposure to Europe. The Pacific region (including Australia) had a return of 15.88% (by the Morgan Stanley Capital Pacific Index). And that was dragged down only by Japan, which we usually, contrary to our normal policy, eliminate entirely from clients' portfolios, and which had a return of 8.18%. Emerging markets continued strong, with a return of 18.22% or 19.24% (depending upon which index you consult). Within the U.S., the stocks of small companies, which we normally overweight, had a return of 18.34%. U.S. real estate, which we normally include in clients' portfolios, with its return of 18.93%, also compared favorably with the S&P 500.

By comparison, bonds look wan, but with a return of 4.21% (for the Barclays Capital U.S. Aggregate Bond Index), they still had a healthy positive return, long after many analysts had given up on them, and many sectors of the bond market did markedly better. Master Limited Partnerships had a disappointing year, up only a few percentage points. We recommend these for clients' taxable accounts, and the one consolation of their weak performance is that among the reasons we recommend them is that they are good diversifiers, meaning that they don't always behave like the rest of the U.S. stock market. Only commodities were a grave disappointment, broadly down by a little bit. We recommend only minimal holdings of commodities in any portfolio.

§

Note: Although I try to write all my essays so that they stand on their own, each builds on the concepts explained in the ones that came before. You can find all my earlier essays on the Peabody River Web site, under "Newsletters."

ASSET CLASS ALLOCATION AND PORTFOLIOS

I coulda had class. I coulda been a contender. I coulda been somebody, instead of a bum.
Budd Schulberg

Part 1: Assembling the Pieces

Why Asset Class Allocation?

Imagine that you want to prepare a meal, and that you know very little about cooking. You go to a foodie friend who has culinary expertise, and he advises you, "The most important thing is good food." You ask for something a little more helpful, and he tells you that good food begins with fresh ingredients. You press for some practical guidance, and he tells you how you can identify, for each kind of ingredient, what is fresh and of high quality. And finally, seemingly pulling all this advice together into something truly useful, he provides a brief conspectus of the art of combining and cooking the ingredients into dishes.

This may be all well and good if you want just to cook something, anything, regardless of what it is. But unless you already know that one or more of those dishes is right for you, this advice is almost certainly insufficient. It lacks something important, even apart from step-by-step instructions: Organizing principles. Are you interested in appetizers, main courses, desserts, or even a complete five-course meal? Is this a summer meal or a winter meal? Do you or your guests have allergies that have to be taken into account?

At this point in our discussion of investing, you're in a similar fix. We've looked into the ingredients of investing, and, in my last essay, we saw how to cook these ingredients together to make a portfolio. That may at first have seemed sufficient: Gather together good investments (or at any rate, investments), and then **optimize** them. As I explained, to optimize the investments means, mix them together into a portfolio in proportions that maximize their combined return at a level of investment risk such that the balance of return and risk is exquisitely suited to your taste. But even knowing how to optimize, you still lack organizing principles for sorting through all the possible ingredients and recipes that you might cook into a portfolio.

Abandoning the culinary metaphor, from which I've sucked out pretty much all nourishing meaning, I will consider in this essay one dominant method for making sense of the investments that we put

into our portfolios. Making sense—but not yet developing an overall plan. That will come in my next essay but one.

Almost from the first of my essays, I've oscillated between references to discrete investments, like individual stocks and bonds, and references to entire classes of investments, like stocks as a collective, and bonds as a collective. While I did this with the worthy intention of making my expositions clearer, it was wooly intellectually.

The organizational method that I'm considering here sorts this out. It is **asset class allocation**, or just **asset allocation** for short [1]: building a portfolio not so much from a consideration of individual, discrete investments as from the larger, more or less homogeneous agglomerations, like "stocks," "bonds," "real estate," "venture capital," and so forth, to which the individual investments belong.

There are other organizational methods. One, which I will introduce in my next essay, is more esoteric and works best with stocks alone, though it can be applied to other kinds of investments. It consists of what we in the profession call **alpha** and **beta**. Beyond this, the classification of investments according to their status under tax laws ranks very high, but I will pass over that because it depends so mightily on politics and ever-changing tax law, possibly rendering whatever I might say irrelevant after a year or two.

Asset class allocation has been so thoroughly absorbed into the culture of investing that today, most investment guidance is built around it, and you may even have heard that it is the foundation of an investment plan. And like nearly all respectable investment ideas, it is misunderstood and abused. One misconception is that asset class allocation and portfolio management are the same thing. Toward the end of this essay (in Part 2), I'll explain why they aren't. Let's start by considering another misconception.

What is an Asset Class?

Once, in a newspaper advertisement placed by a Wall Street firm, I saw the firm's wise investment counsel depicted in a schematic like this:

[1] I'm the only person I know who rigorously insists on using all three words, "asset class allocation." I do so because the full expression's meaning is clearer. On rare occasions, I've heard "asset allocation" used to mean the choice of weights to place on individual assets, not on classes of assets. You're far more likely, though, to hear "asset allocation" in the sense of "asset class allocation." By the way, the term for allocating investments among different accounts according to their tax status is "asset location," but this is much less commonly used.

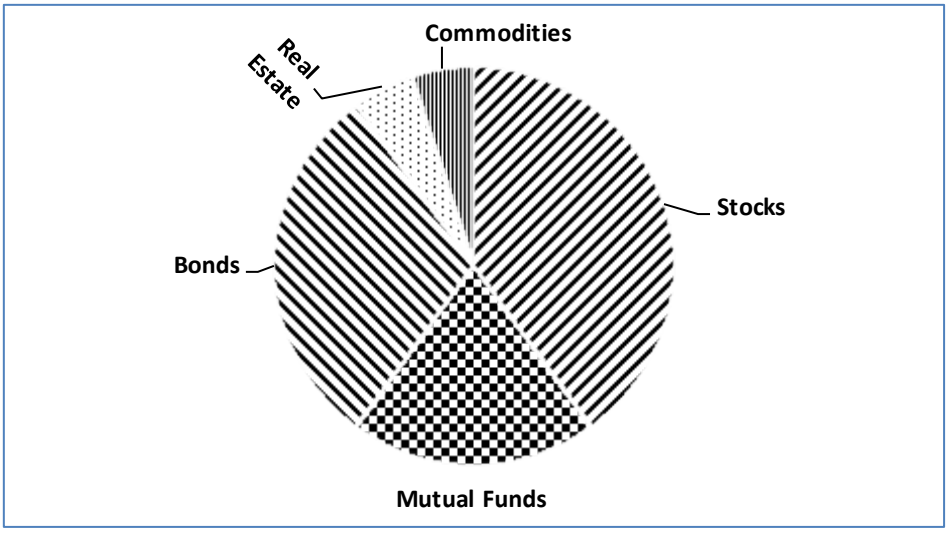


Figure 1

What's wrong with this picture?

Stocks, bonds, and real estate are asset classes, groups of discrete investments that share fundamental economic and legal features with other members of their class, but not with members of other asset classes. For example, a bond represents a loan by the holder of the bond (the investor) to its issuer (normally a government or a corporation), and the issuer must, with rare exceptions, repay this loan by a specified date, usually with interest. A stock, in contrast, represents, not a loan, but a share of ownership in a corporation, with no terminal date. Real estate is also a matter of ownership, but of land and whatever buildings are on it. Mutual funds, in contradistinction to all of these, are only vessels, containers for stocks and bonds and so forth; they are *not* an asset class. When you collect exotic fish, you don't count the glass tanks as a separate species, not even if the glass is molded to look like a fish. Similarly, exchange-traded funds (ETFs), which you can buy and sell *as if* they were stocks, are not stocks, but vessels that contain multiple individual investments. Management companies can gather up stocks, bonds, and even real estate (in the form of real estate investment trusts, or REITs) into mutual funds and ETFs. Although mutual funds and exchange-traded funds are not in themselves asset classes, you can characterize them as belonging to the asset classes of the investments that they contain. Some mutual funds and ETFs are stock funds; some are bond funds; and some are combinations. A technology stock mutual fund, for example, can be classified as "stocks." Exchange-traded funds are still comparatively new—twenty years old this year—but there's a kind of mutual fund, the **closed-end fund**, that is somewhat similar to them in that you can buy and sell shares of a closed end fund on the stock exchange as if they were stocks, and such funds have been around for a very long time.

Of course, the advertisement that confused mutual funds with asset classes was designed by marketers, not investment advisors, even the least educated of whom wouldn't make that mistake.

All the same, coming from an ostensible authority, it was bound to mislead some members of the public.

The point of organizing the investments in a portfolio by asset class is not that the investments in any one class share legal and economic traits; it's that, because of these traits, they exhibit herd behavior. That is, the investments in any one asset class share a tendency to go up and down in concert, producing similar returns with similar volatility. There's nothing forcing them to do so; there could be a stock that resembles bonds in its returns and volatility more than it resembles other stocks. But the herding instinct dominates. Even if you can't predict which way the investments will go, you can be reasonably confident that most assets in an asset class will go more or less together. [2] If they didn't, then markets wouldn't go up and down. And "market" is sometimes synonymous with "asset class," as when we talk of the stock market, the bond market, and the real estate market.

Mutual funds go up and down together over long spans of time *only* to the extent that the investments that they contain are drawn from the same asset classes. They don't go up and down together because they are mutual funds. Likewise, so-called **alternative investments** are not an asset class. Alternative investments include hedge funds, venture capital, and private equity. These things go up and down together only to the extent that they are similar to each other, which is not very much. [3] (Hedge funds, in particular, are beyond the scope of this series of essays.)

It's comparatively easy to say what is not an asset class, and much more difficult to say what is. In practice, investment professionals define asset classes in different ways. So, while stocks, bonds, and real estate are clearly distinct and by general consensus separate asset classes, it's not so clear that international stocks, corporate bonds, government bonds, and so forth are distinct asset classes. Copper, oil, and wheat could hardly be more different, but they're all produce of the earth and traded in bulk, not in discrete units, and are therefore almost always lumped together as a class called "commodities." This is a bit awkward, because commodities as a group don't have such a strong tendency to hang together, although they share some economic commonalities.

Investment professionals often refer to **asset sub-classes**. Government bonds and corporate bonds are sub-classes of bonds. International stocks and domestic stocks are sub-classes of stocks. Investment professionals seldom, if ever, think of industries, such as technology, or retail, or finance, as being asset sub-classes; rather, they think of industries more as a complementary classification system within the asset class of stocks. But that's just a matter of convention, and there's no reason not to think of them as asset sub-classes if you're so inclined.

---

[2] There is a new, alternative approach to organizing investments, based on economic factors rather than asset classes, which, at least theoretically, takes greater account of the investments' actual or observable tendencies to move together.

[3] When it comes to building (that is, optimizing) a portfolio, however, it is perfectly reasonably to mix individual hedge funds or private equity investments with entire asset classes.

Size sometimes defines asset sub-classes. Specifically, the stocks of large companies, small companies, and mid-size companies are thought, because of their differing investment behavior, to be of different asset sub-classes. It has long been known that the stocks of small companies, in aggregate and over the long run, have produced much larger returns than the stocks of large companies, in aggregate, and their returns are also much more volatile.[4] For a long time, the stocks of mid-size companies, in aggregate, have turned in very good performance, leading many investment advisors to recommend an emphasis on this group of stocks in clients' portfolios.

There's yet another complementary way of classifying stocks: into so-called **growth stocks** and **value stocks**. The names can mislead, inasmuch as the value of every stock depends on some expectation of growth, whether positive or negative, and a comparison of that value to its current price, but at the same time, the names are honestly descriptive, in that growth stocks are the ones of companies that are expected to grow fast (or, sometimes, of those that have recently grown fast), whereas value stocks are ones that appear to be priced at a discount to their intrinsic worth even after allowing for their modest growth prospects, and whose prices should therefore rise to match that true value.[5] Although there continue to be advisors who tout growth stocks—and these stocks do make for compelling tales of glorious futures—there's a large body of evidence, rigorously confirmed by academic research, that, depending upon how you define them, value stocks have outperformed the stock market in the long run. (At the same time, there's much debate over whether you can take advantage of this effect after the costs of buying and selling, and whether the superior performance looks quite so good after reckoning in the risks of these stocks.) There's no such evidence for growth stocks. All the same, during different *short* stretches of time, either growth stocks or value stocks will turn in superior performance. There is no natural demarcation between growth stocks and value stocks, so any division of the universe of stocks between the two sub-classes relies upon arbitrary accounting rules. Some analysts would have three kinds of stocks: those that are value stocks, those that are growth stocks, and those that are neither. Others would say that "all that isn't Belgrave Square is Strand and Piccadilly": Whatever isn't a value stock is a growth stock.

So, for some analysts, not only are there large-company stocks, small-company stocks, and mid-size-company stocks, but there are also large-company value stocks, large-company growth stocks, and so forth. All of these are asset subclasses. Like value stocks and growth stocks, every other asset sub-class has its day, when it leads the pack in returns, even though only one of them can be the winner in the long run.

---

[4] There is a sense in which, however, their return is disproportionate to their risk, which I will discuss in my next essay. That's why they are attractive to many investors.

[5] See Peabody River Asset Management *Newsletter*, issue 6, January 2010, essay, "How Professionals Select Investments."

Asset sub-classes can overlap in other ways. The emerging-market bonds that you encounter in mutual funds and ETFs are usually the bonds issued by the governments of developing countries, so they can be classed as emerging-market bonds, as government bonds, and as international bonds, as well as just bonds. Small-company stocks exist in many countries, and it's practicable to emphasize, in a portfolio, the stocks of small companies based not just in the U.S., but around the world.

Until the recent financial crisis, some portfolio managers were treating **Master Limited Partnerships** (MLPs), a somewhat unusual form of share ownership with a special treatment under the tax code, as a cash substitute, because they seemed safe and offered the prospect of much greater income than you get from cash. Big mistake. MLPs are much more like stocks than like cash, and have stock-like risks. During the crisis, they first plummeted into the depths in a very uncash-like way, then froze in value. (They've since come back strong.[6])

It's Not Just on the Barrelhead

And what about cash? What is cash, anyway? It encompasses bank accounts, currency (though the contents of your pocket usually don't reckon into your investment plan), certificates of deposit, money market funds, and, especially from the point of view of an investment analyst, very short-term U.S. government Treasury bonds, which are called **bills**. These are bonds that mature in 90 days, or six months, or a year. Sometimes, when I'm trying to develop the big picture of a client's account, I'll even reckon a traditional annuity as part of the cash holdings, because it's safe and has almost no return (even though it's not very liquid and is subject to the solvency of the insurance company that issued it). Cash is cash only in the currency of your own country. Foreign currencies are not, from your point of view, cash. They're investments in currencies. Because most exchange rates are allowed to fluctuate and do, foreign currencies are nothing if not risky.

For some analysts, cash is an asset class. For others, cash is the asset that transcends class. Cash holds a privileged position in the investment universe. It has no positive return to speak of, and it has virtually no risk. "No risk," in the case of cash, has a rather peculiar meaning, because cash also, for most investors, offers the certainty of loss after they pay taxes on the interest it earns, if that interest mainly compensates for inflation. When an economist uses the technical term **risk-free asset**, she's usually thinking of cash.[7] Seen this way, cash is what you hold when you don't invest. But cash has a way of changing its nature depending upon how you view it. There can be strategic reasons predicated on specific economic forecasts to convert some portion of an investment portfolio into cash, in which case it becomes an investment and does function as an asset class.

[6] Though they didn't acquit themselves well in 2012.

[7] In some contexts, she may be considering longer-term bonds to be the risk-free asset.

You should thus be wary of any investment manager who, while holding cash for the "strategic" reason that he's awaiting the "right opportunity" to invest it, does not reckon the cash into his investment performance. Let's say, for example, that at the beginning of the year, such a manager has invested half the portfolio in a very good investment that returns 20% over the course of the year, and keeps half the portfolio in cash while awaiting another suitable investment opportunity. That manager should report that his return was 10% for the year, not 20%. Or let's say that you own an investment that doubles in value in a year, but it started as only 1% of your portfolio and all the rest was cash; you're not tremendously better off because of that great investment. This is why the formal standards for presenting and publicizing an investment manager's performance, promulgated by the CFA Institute, require that cash holdings be reckoned into the performance of portfolios if the manager has control over the proportion of the portfolios that is allocated to cash.

Origins of Asset Class Allocation

Although asset class allocation is now considered by many financial advisors, and therefore much of the public, to be the basis of any investment plan, it's a comparatively new investment methodology, not more than about forty years old. I can't say who invented it—that has to await a future historian of finance—but I've checked this with Google Books: I can't find the phrase "asset class allocation" or "asset allocation" before around 1970. Sure, in earlier times, investors were aware of the distinctions among stocks and bonds and real estate, but in the mental framework of the time, these weren't perceived collectively as asset classes. You invested in bonds for relatively safe income, and in stocks for a speculative appreciation in price. The stocks of electric and water utilities, and of the original AT&T, were seen as betwixt and between: As highly regulated monopolies, these utilities' stocks generated generous and fairly secure income in the form of dividends. In that financially simpler time, you could buy your house, and maybe an additional property or two for rental income, but such real estate holdings were necessarily undiversified. There were no real estate investment trusts that could be gathered into diversified funds available to all. Now that we think not so much of income by itself and of price appreciation by itself, but of total return (as I explained in one of my earliest essays),[8] and we have objective measures of risk, however imperfect, we identify stocks, bonds, real estate, and so forth, as members of comparable collective entities that have different historical and future values of rates of return and risk. That is, we see these groups as different instantiations of a new concept that we call an "asset class."

For asset class allocation to become an investment methodology and then advance to becoming commonplace, something more was required than just a perceptual shift or an intellectual fad. It required a theoretical foundation, and that foundation was Modern Portfolio Theory. Some readers may look askance at that statement. As I wrote in my previous essay, many investment professionals mistakenly believe that Modern Portfolio Theory has been disproven. But asset class allocation has

[8] See Peabody River Asset Management *Newsletter*, issue 2, July 2008, essay, "How to Think about Investment Returns."

settled so firmly into the soil of investment practice that its foundation has long since ceased to be visible.

Asset Class Allocation and Modern Portfolio Theory

In my previous essay, I summed up Modern Portfolio Theory thus:

1) For any given level of investment risk, a portfolio can have multiple possible returns, resulting from combining its constituent investments in differing proportions (if there are more than two investments).
2) At any given level of investment risk, a rational investor would like to get the greatest possible return from his portfolio.
3) There are infinitely many levels of investment risk. (This is true in theory, though as a practical matter, no one cares about, let alone can measure, infinitesimal distinctions between levels of risk.)
4) Out of those infinitely many, the investor should choose the particular pairing of risk and greatest possible return that accords with her degree of risk tolerance.

That's for investing in general, but it pretty much sums up, too, the basic ideas of asset class allocation, if we rewrite the first proposition as

> For any given level of investment risk, a portfolio can have multiple possible returns, resulting from combining its constituent asset classes in differing proportions (if there are more than two asset classes).

I then explained how the portfolio manager who chooses to work with one of the mathematical models that embody the theory "optimizes" the portfolio so that the investments are mixed in just the right proportions to produce a combination of return and risk that is exactly suited to the risk tolerance of the investor. And finally, I pointed out that exact mathematical calculation wasn't actually required. If the portfolio manager doesn't have the precise numerical values for the expected returns and risks (and correlations of returns) and risk tolerance, then she makes an intuitive judgment or estimate of what constitutes the optimal portfolio.

This is how an investment advisor produces an asset class allocation for a client. He can buy and use asset class allocation software, whose underlying mathematical procedures are those of the optimizers I described, or he can make a judgment. (Commercial asset allocation software commonly—but not always—incorporates the most naïve of the mathematical models of return and volatility, and often relies upon or at least defaults to historical statistics, instead of forecast statistics.)

I've seen some investment advisors, perhaps laboring under the misconception that the customer is always right, allowing their clients to choose their own asset class allocations. Or maybe their

thinking is beholden to the old schema of the difference between stocks and bonds, and they believe that the client knows best how to choose between income and speculative growth. But if asset class allocation is really a matter of balancing return and risk (as it is), then any client who can sensibly do this by himself doesn't need an investment advisor. I've already, in discussing risk tolerance,[9] pointed out the near-fallacy of self-diagnosis. If the client doesn't know what returns to expect from the various asset classes, doesn't understand the nature of investment risk, and can't estimate the levels of risk of the asset classes, how can he possibly judge his own risk tolerance or choose an asset class allocation to match it? And if the investment advisor doesn't even know what the client is expecting, why should the advisor cede the judgment to him?

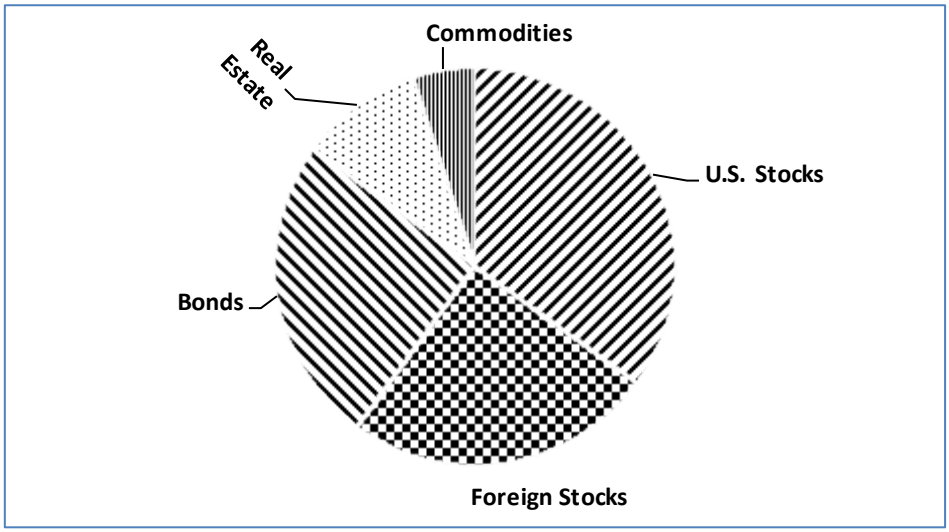


Figure 2

It is usual, and sensible, to represent asset class allocations with "pie charts". Figure 2, unlike Figure 1, is a fair example. It is but a short step from this visualization to a common mental interpretation of asset class allocation as a sort of store-bought plastic party platter of hors d'oeuvres, one of those round dishes with wedge-shaped compartments for the different dips and vegetables, which are filled in standard proportions. The investor chooses the pre-packaged platter that suits his tastes (or his estimate of the tastes of his guests). The main problem with this interpretation is that proper asset class allocation should not presume that the compartments are rigid. Rather, proper asset class allocation is more as if, were the hummus in one platter to have more garlic and lemon juice and therefore to be more delicious than the hummus in another platter, you'd make its compartment larger and the other compartments smaller, all else being the same.

So, for example, imagine that there are just two asset classes: stocks and bonds. And let's consider two investors who have one particular level of risk tolerance. Then both of those investors should have the same asset class allocation between stocks and bonds, right?

[9] See Peabody River Asset Management *Newsletter*, issue 12, October 2011, essay, "Why Invest? (Part 1 of 2)"

Not necessarily. Let's say that, if absolutely everything is the same for the two investors, an allocation of 60% stocks and 40% bonds would be right for each. (And we'll assume that bonds, as an asset class and as usual, will be less risky than stocks.) But one investor's stock allocation consists entirely of an S&P 500 stock index fund. (An index fund is a mutual fund that mimics the price changes of an index of an entire asset class or of an asset sub-class, as the S&P 500 index is for large-company U.S. stocks.) The other investor, however, has the benefit of an investment advisor who has real skill, and can pick stocks that will produce greater returns, with less risk, than the S&P 500. If that's the case (and all else is equal), then if the first investor allocates 60% of his portfolio to stocks, the second investor should allocate more than 60% of his portfolio to stocks (and necessarily less than 40% to bonds). In short, the right asset class allocation depends upon the characteristics of the investments actually held, not on the characteristics of the asset class as an abstraction. You shouldn't calculate an asset class allocation using the statistics of a generic, abstract asset class, then fill up each asset class compartment with a set of select, preferred investments whose expected returns and risks aren't representative of that asset class.[10]

Even if investments are always priced appropriately, as the Efficient Markets Hypothesis postulates, so that there can be no such person as the aforesaid hypothetical advisor who picks stocks that will have returns superior to the returns of the asset class as a whole, my argument still bears on the asset class allocation decision.[11]

Let's consider the same two investors as before. The first investor is just the same, with his 60% and 40% allocations to stocks and bonds. The second investor, though, no longer has an advisor with real skill. Rather, he has an advisor with more wisdom than the first investor, and who allocates the stock holdings between an S&P 500 stock index fund and an index fund that tracks the stocks of emerging markets. Your intuition might lead you to reckon thus: Emerging markets are much riskier than the U.S. stock market; the second investor's stock holdings are therefore riskier than the first investor's; therefore, his total allocation to stocks should be less than 60%.

And your intuition would be wrong.

---

[10] If, however, you focus too closely on the individual holdings, then you miss the point of asset class allocation as an organizing method. Asset class allocation simplifies and clarifies the investment process and can eliminate the requirement to select individual investments; it isn't, as a matter of mathematics or economics, foundational. It can't take into consideration the myriad interactions of the returns of individual investments at the "atomic" level, so to speak. Because of this, even with perfect data, and a perfectly accurate model of risk and return, and precise calculations, a calculated asset class allocation would result in a portfolio that was approximately, not truly optimal.

[11] For more on the Efficient Markets Hypothesis, see Peabody River Asset Management *Newsletter*, issue 8, July 2010, essay, "Is the Market Efficient?"

Long before introducing Modern Portfolio Theory, I explained the possible benefit of diversification, which may, if done in the right proportions, result in a greater return with less risk than any single constituent of the portfolio. Even if emerging market stocks produce just the same return as U.S. stocks—and many of us professionals think that, overall, they'll produce a greater return in the long run—some admixture of them in a portfolio of stocks can reduce the risk of the combination. It's therefore far more likely than not that the optimal asset class allocation for the second investor will again include *more* than 60% stocks, not less.

What Goes into an Asset Class Allocation Decision

The calculation or estimation of an asset class allocation demands numerical expectations for the returns and risks of the separate asset classes (and for their interactions, that is, the correlations of their returns). Sometimes, full-time market analysts, generally the ones who work at major Wall Street firms, will pull together the forecasts that other analysts have made for individual stocks into an aggregate forecast for the entire stock market. This is called a "bottom-up" forecast. More often, forecasts for stocks as an asset class are based on broad economic analysis; broad economic analyses underlie analysts' forecasts for nearly all the other asset classes and subclasses, too. (In the case of stocks, this is sometimes called a "top-down" forecast.) How one makes such forecasts is far, far beyond the scope of this essay, generally requiring a grasp of economic theory and practical economic indicators. When, in the view of some analysts, it doesn't require all of this, it then requires at least rigorously constructed mathematical models of asset class behavior. In a very superficial way, these forms of analysis are analogous to the fundamental analyses that analysts carry out when they try to value individual stocks, as I described them in an earlier essay.[12] And in a way that isn't a superficial analogy at all, but identical, yet another school of analysts uses so-called "technical analysis" to divine the returns to the various asset classes. That is, they project future returns solely from patterns that they detect in sequences of past prices. I will not repeat here my explanation of how unbelievable I find this sort of divination, except to add that it is even more unbelievable when applied to asset classes than when applied to an individual stock: It requires that the same and precise sorts of psychological motivations that the technical analysts impute to the buyers and sellers of individual stocks, for which just—just—have some casual plausibility, also drive the buying and selling of entire asset classes, in aggregate.

An Example of Asset Class Allocation

Now that we've planned our meal, and we have ingredients and a recipe, let's cook!. To make the exercise simple, we'll allocate your wealth between only two asset classes: U.S. stocks and 20-year U.S. Government bonds. In an earlier essay, I explained what the equity risk premium is: It's the

[12] See Peabody River Asset Management *Newsletter*, issue 6, January 2010, essay, "How Professionals Select Investments."

return that the stock market gives you above the rate of return on cash as compensation for the stock market's risk. And I showed (very cursorily) why I think that, over the future long term, the market's rate of total return (return on cash + equity risk premium + inflation) will be no more than about 7% per year, which is less than it's been over the historical long term. But the annual *rate* of return is less than the *average* annual return, which I estimated to be no more than about 9%. Since I wrote that essay, the market's gone up quite a bit, which suggests that to justify my old estimate of the long-term average, the future average annual return has to be even less. Let's say it will be 8.5%, tops.

We could calculate a bond risk premium for the bond market broadly, but we can also look up the annual rate of return for a bond that matures on a specific date; it's called the **yield-to-maturity**, which, for government bonds, you can find on almost any financial news site.[13] As I write, the yield-to-maturity of a 20-year U.S. government bond is 2.95%, which implies an average annual return, over 20 years, of about 3.4%.

Like many investment advisors, we'll use the volatility of stocks and bonds over the long term and the correlation of their returns (the measure of their tendency to move up and down at the same time) over the long term as forecasts for their long-term volatilities and correlations. Experience shows that this is reasonable, and wishful thinking guarantees it.

And after a long conversation with you, I've learned that you have substantial financial goals, so you want your portfolio to grow much larger, but those goals are far in the future; you're 45 years old, so you have 20 years to go until your planned retirement; you have a comfortable income in comparison with your routine expenses even though you're working only 30 hours a week, which also means that if your investments go badly, you can easily work extra hours and save more money; you're well insured against the possibility of disasters; and you have a strong stomach for the volatility of your investments. I've explained to you investment risk and the possibility and probabilities of significant losses. We've therefore agreed that your tolerance for investment risk is fairly high.

Mixing all these ingredients together, I either calculate or estimate an optimal portfolio for you. Perhaps it comes out to an allocation of 80% U.S. stocks and 20% bonds (20-year U.S. Government bonds)[14]. If I'm not picking individual stocks, this, finally, will be my investment advice to you, the

[13] The yield-to-maturity, because it corresponds to the bond's price, is determined by trading in the bond market. It includes inflation, and so does not equal the future change in real value. Only if you make two assumptions, one reasonable and the other unwarranted, does the yield-to-maturity equal the future return: that you hold the bond until the maturity date, and that you reinvest the interest payments at the same annual rate as the yield-to-maturity. But in my example, there are no interest payments before the maturity date.

[14] This is a hypothetical example. These days, I don't recommend U.S. Government bonds to anyone. No actual portfolios were harmed in the writing of this essay.

portfolio that I will manage for you. We'll expect it to have an average annual return of no more than about 6.8% (=0.8*8.5% + 0.2*3.4%). And it will be pretty risky.[15]

Bon appetit!

In practice, with more than two asset classes, the allocation decision is much more difficult. Asset allocation software, if you grant that its underlying premises are correct—and we all know that they aren't, but we disagree on how far their approximations can lead us astray—can overcome the difficulties.

As one of those investment advisors who don't use asset allocation software, I have my own procedure. I can't speak for other investment advisors, but my method is first to put the asset classes and sub-classes into two groups: the more risky, which include stocks, real estate, MLPs, and high-yield bonds; and the less risky, which include most other kinds of bonds, most commodities, and cash. I come up with rough allocations to asset classes and sub-classes within each group, and then set and later adjust the allocations between the two groups and within the groups depending upon my client's ability to tolerate investment risk. This isn't mathematical finance, and I don't fool myself into believing that this method is anything other than a rough heuristic, or that the resulting asset class allocation is better than an approximation to the optimal. But given the unavoidable uncertainties of my estimates of future returns and risks, I believe that it is good enough for a long-term plan.

> In Part 2, I will poke and prod at the idea of asset class allocation. You'll see why some arguments trotted out to justify it are faulty. You'll see why it doesn't necessarily throw overboard the Efficient Markets Hypothesis. I'll consider alternative ways of rebalancing asset class allocations. And you'll see why asset class allocation alone cannot be the totality of portfolio management.

[15] The rate of return is less than the average return because of the volatility of returns. The calculation of the volatility of the total portfolio is complicated; it isn't an average of the volatilities of the returns of the asset classes, because it has to take into account the correlations of their returns, which is what makes diversification so worthwhile. And, as I've repeatedly explained, looking at volatility by itself leads to an underestimate of the risk of extreme losses.