

An Opening of Minds



"I think investors are starting to come around to the view that stocks aren't quite as special as they once thought," says Rob Arnott

By Jonathan Barnes

"My career has largely been successful as a consequence of the fact that I love to test ideas," says Rob Arnott, chairman and CEO of Research Affiliates and former editor in chief of the *Financial Analysts Journal*. Arnott's reputation for testing conventional investment wisdom made him one of the key contributors when the Research Foundation of CFA Institute gathered leading academics and practitioners in 2011 to discuss the equity risk premium (ERP), the expected return for equities in excess of a risk-free rate. He delivered a presentation titled "Equity Risk Premium Myths," which was subsequently included in the book *Rethinking the Equity Risk Premium*. In this interview with *CFA Institute Magazine*, Arnott corrects some of the misconceptions about the ERP, argues that "a cult of equities is worshipping a false idol," deconstructs the notion of a risk-free rate, and explains why "our industry, both on the practitioner and on the academic sides, has tremendous inertia, a resistance to new ideas."

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Do we need a stronger definition of the equity risk premium?

All too often, the term “equity risk premium” is attached to widely different concepts. It is applied to the historical difference in returns between stocks and bonds—or between stocks and cash—and it is also applied to forward-looking expectational return differences. Really, a risk premium is an *expectational* return, so when we look at historical returns, I think it is important to use different terminology. I prefer the term “historical excess return,” not risk premium.

If we turn attention from past to future, the equity risk premium should be the expected incremental return that an investor will likely earn from a willingness to hold stocks instead of bonds or cash. So, one needs to further define one’s terms. The risk premium versus bonds and the risk premium versus cash are very different. Today, cash yields nothing; 30-year bonds have yields around 3%.

Which measure is more widely used?

Academia tends to think of the equity risk premium relative to a risk-free rate (never mind that there is nothing that is really risk free in life), and typically that is thought of as a cash yield. A much more relevant measure is equities versus long bonds because they both have a long investment horizon. Cash is very risky for the long-term investor!

When we look at stocks relative to long bonds, we can do some very simple arithmetic as it relates to expectational returns. Thirty-year bonds have yields around 3%, and the real return as indicated by long-term Treasury Inflation-Protected Securities (TIPS) is 0.5%, give or take.

Stocks produce returns in a real return form because earnings and dividends grow with inflation, plus a real growth kicker. Historically, going back a hundred years, you find earnings and dividends have grown a little less than 1.5% above the rate of inflation. If you add that to the current yield, you get something on the order of a 3.5% expected real return, as against 0.5% for long TIPS. That gives you a 3% risk premium. And that assumes that past rates of growth can continue, given the headwinds from our aging population, as well as our burgeoning debt and deficits.

So when we reframe the definition in terms of forward-looking return expectations for stocks (relative to forward-looking real return expectations for long bonds), we get a comparison of two relatively similar-horizon investments

and a comparison that has some real economic meaning. That’s my preferred way of thinking about the equity risk premium.

Is more standardization of the ERP needed?

Discussions about the equity risk premium often occur in vague terms: How much more do you expect to earn from a willingness to bear equity market risk? How much more return relative to what? Over what investment horizon? These questions are left ambiguous in all too many examinations of the equity risk premium. If they are defined with any precision, you get much more reasonable apples-with-apples comparisons. Then, you have an ability to examine the underlying assumptions.

There is an annual academic survey of estimates on the equity risk premium in which the ERP is defined as a long-term return against T-bills. But you still have to factor inflation expectations, and on a long-term basis, inflation is anyone’s guess, not to mention the future real T-bill yields. So, even with studies that define their terms, if you have a gap in return horizon—cash has a horizon that is measured in weeks or months, stocks have a horizon that is measured in decades—then again, you get into ambiguous comparisons of apples and oranges and a relatively meaningless phenomenon.

Can you explain the myth that the equity risk premium is 5%?

The notion that stocks beat bonds by 5% was embraced in the 1990s by much of the consulting community (and through the consulting community, by much of the plan sponsor community). It is something of a core belief in the practitioner community. This myth is very dangerous because the long-term historical excess return—while not far from 5%—is driven in large measure by a change in valuation multiples for equities. The long-term historical average dividend yield for stocks going back a hundred or more years is about 4%. If the yield now is 2%—a rise in valuation multiples from 25 years of dividends to 50 years of dividends—that is a big change in valuation multiples. So, it creates an inflated historical excess return, which people then translate into an inflated expectational risk premium.

How does your estimate of 3% compare historically?

It’s above the historic norms. In 2002, I wrote a paper with Peter Bernstein for the *Financial Analysts Journal* that showed that the reasonable historical equity risk premium—not the excess

return—but what would reasonably have been expected historically for stocks relative to long bonds—was 2.4%.

So, if we are looking at 3% today, that means that right now we have a modestly outsized equity risk premium (if future economic growth matches past growth). It's predicated on negative real yields at the long end of the bond market, so that is a big problem. If you are looking at anemic real returns on bonds (and less-anemic real returns on stocks), you get a positive risk premium through the unfortunate path of generally dismal returns.

Another myth is that the ERP is static over time, companies, and markets. Can you say more?

There are respected academics who build their theories on the notion that the equity risk premium must be static. Yet, on the other hand, there are those who argue that the equity risk premium varies from one stock to another. If it varies from one stock to another, why shouldn't it vary from one month or year to another? The notion of a static equity risk premium is another unfortunate myth.

The risk premium is really a function of pricing. When bond yields are high, the risk premium can get very skinny indeed. Ever so briefly in 2000, you could buy TIPS, *long-term* TIPS, extending out 20–30 years that had a yield of over 4%. I believe the top was 4.3%. A 4.3% real return guaranteed with full faith and credit of the U.S. Treasury is a marvelous default risk-free return. To have that available in bonds at a time when stocks had a yield of 1% is really quite breathtaking. So, what we find is that the risk premium is dynamic. It changes over time.

And across companies and markets.

Yes, let's look across companies. Bank of America is a huge company and comprises less than 1% of the U.S. stock market. Apple is a much smaller company that comprises over 4% of the U.S. stock market. Is it reasonable to assume that Apple—with wonderful growth, no serious competition, and viewed widely as a safe haven—should have the same risk premium as Bank of America, a company that has in recent years seemed to lose its way strategically and is facing daunting headwinds in the years ahead? Should they be priced at the same forward-looking rate of return? Probably not.

By the same token, compare the risk premium when people were worried about financial Armageddon in early 2009 and the risk premium when people felt that things were getting

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solidly back on track in early 2011. Should that risk premium be the same from one year to the next? Of course not.

So, yes, risk premia vary cross-sectionally, across time, across markets, across companies. Is the Greek risk premium higher than the U.S. risk premium today? Yeah, I would think so, which means that investors in Greek stocks should be expecting a higher return than investors in U.S. stocks because of the higher expected uncertainty.

Why are these myths so enduring?

I think the myths are a consequence of inertia. Our industry, both on the practitioner and on the academic sides, has tremendous inertia, a resistance to new ideas. Once people are taught a particular way of thinking, there is a resistance to questioning that way of thinking. One could characterize it even as a bit of intellectual laziness. People embrace an idea that they have been taught, and they hang on to that idea. They are reluctant to relinquish it in favor of something else.

People are taught the normal risk premium is 5%. In early 2001, Ron Ryan and I wrote a paper titled "The Death of the Risk Premium," which was first published as a First Quadrant "President's Letter" and later published in the *Journal of Portfolio Management*, where we suggested that the equity risk premium was now negative. That created a firestorm of controversy and even outrage in some quarters—to suggest that stocks would produce a lower return than bonds. But if stocks have a dividend yield of 1% and bonds have a yield of 6% in an environment of 2% inflation, that points to a negative risk premium, unless stocks can deliver long-term earnings and dividend growth north of 5%. There is nothing written into contract law in the finance community that says, "Stocks must have a positive risk premium."



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Why are you so interested in these myths?

My career has largely been successful as a consequence of the fact that I love to test ideas. The more widely accepted an idea is, the more I am inclined to say, “Let’s test it and see if it is true.”

One of the things that startled me over the course of my career is how few people pursue that line of reasoning—“If an idea is well accepted, maybe we should test it”—and how many people resist those tests when they turn out to suggest that conventional wisdom is wrong. Conventional wisdom isn’t always wrong; it’s just not always *right*.

How risk free is the risk-free rate?

I think the whole notion of a risk-free rate is a distraction which takes our eye off of the ball in terms of how people think about investments. First, risk free in what context?

The risk of a 30-day Treasury bill defaulting is, for all intents and purposes, zero. The risk of it producing a real return that is less than we expect—that is a much bigger risk because the uncertainty about next month’s CPI has a certain standard deviation that makes that so-called risk-free asset a little less risk free than we might think or hope.

Try to persuade any investor with a long-term liability—a typical pension fund, for instance—that owning and rolling T-bills is a risk-free way to fund those pensions. Come on! We don’t know what the rates are going to be over the coming years. We don’t know what the inflation is going to be, and we don’t know what the growth of the liability itself will be. There is *no such thing* as a risk-free rate. The sooner we abandon the notion that there is a risk-free rate, the better off we will be.

If not risk free, then what?

For most long-term investors, the *risk-minimizing* asset—not *risk free*—is something that is

duration-matched to your intended spending stream and to your liabilities. If you are a pension fund, for instance, if those liabilities have an inflation kicker to them—if they are sensitive to the rates of inflation—then long TIPS are your risk-minimizing asset.

If we think in terms of risk-minimizing assets over a horizon long enough to matter, we arrive at very, very different answers. All of a sudden, what feels low risk (a cash-dominated portfolio) turns out to be very high risk measured in terms of long-term return expectations and long-term liabilities. Something that feels pretty volatile, a 30-year TIPS instrument, winds up being very low risk measured against long-term liabilities. So, I think we do ourselves a great favor if we abandon the notion of a risk-free rate and replace it with a notion of a risk-minimizing asset or portfolio over a horizon matching the intended liabilities.

Would that alter the traditional asset-pricing models that evaluate risk-return trade-offs?

Peter Bernstein and I published a paper way back in 1988 in the *Harvard Business Review* (they assigned the title “The Right Way to Manage Your Pension Fund,” which I thought was a pretty arrogant title). The paper simply said, “If you redefine your efficient frontier to characterize risk as the mismatch between your assets and liabilities, you wind up with a very different efficient frontier and a very different portfolio mix.” We urged consultants and pension funds to consider optimizing their holdings on the basis of a redefinition of risk. To this day, I believe that makes absolute sense, and to this day, hardly anyone does it.

How does the LIBOR scandal tie in to this?

I think that the LIBOR scandal is simultaneously a big deal and much ado about nothing, which sounds contradictory.

I say much ado about nothing because when people price swaps off LIBOR, when it is a gamed LIBOR, they figure out what they want to charge for the swap and they price it relative to that gamed LIBOR. The gaming of the LIBOR has nothing to do with the rate that they are charging. The rate that they are charging relative to LIBOR is really an outcome of setting a rate that you want to charge and subtracting the gamed LIBOR from it. So if the gaming of LIBOR is much the same from one period to the next, no one is harmed.

But it was a very big deal in the sense that people trusted that it was a fair interbank borrowing rate. We have had so many damaging body blows to the public's sense of trust in the capital markets. How useful are the capital markets if we can't trust them? How effective is the capitalist system that is predicated on trust? When we do a deal, we trust that the other side will honor their side of the deal.

You attended the CFA Institute forums on the equity risk premium in 2001 and 2011. What did you learn? What was your experience at the forums?

They were fun. As I mentioned, when Ron Ryan and I wrote the paper "The Death of the Equity Risk Premium" in 2000, we ran into a buzz saw of resistance. Today, you don't get that push-back. One thing that has changed is that people, probably by dint of the pain of the last dozen years, are beginning to recognize that the cult of equities is itself promulgating huge myths.

The notion that double-digit returns are natural for stocks, the notion that lower yields are the market's way of telling you to expect faster growth, the notion that stocks are assuredly going to produce higher returns than long bonds for those patient enough to stay the course over the course of one or two economic cycles and that stocks are less risky than bonds for the truly long-term investor—these are all myths that are fast dissipating.

My view that a cult of equities is worshipping a false idol is no longer a fringe view that gets one consigned to our industry's virtual lunatic asylum. It's becoming an acceptable view. So I think we are seeing an opening of minds. The opening of minds is unfortunately a dozen years too late to avert damage, but it is important and interesting to see that it is happening.

You've written on the necessity of challenging deeply rooted assumptions of finance theory. Can you explain?

Neoclassical finance and the capital asset pricing model are predicated on an array of powerful

theories and, in many cases, mathematical proofs that demonstrate that if the market behaves in thus and such a fashion, it will have thus and such implications.

Take the capital asset pricing model. If markets are efficient and if investors share a common view on forward-looking risks and returns, if investors trade for free with no taxes and no trading costs, and if all investors have a similar utility function, then the market-clearing portfolio will be the "mean-variance-efficient portfolio" and you can't beat it on a risk-adjusted basis.

That is a very powerful conclusion—deservingly winning a Nobel Prize for Bill Sharpe—built on a foundation of heroic and clearly inaccurate assumptions. I think finance theory is *wonderful*, but I think it is important that we acknowledge that finance theory is theory. It is not the real world. Theory is designed to tell us how the world *ought* to work. The more we can learn from theory and conform theory to better match the real world, the deeper our understanding of markets.

I think, with the coming quarter century, it will be marvelous if we see a marriage—and it will be an uncomfortable marriage—of neoclassical finance with behavioral finance, a theoretical foundation for the empirical observations of behavioral finance. The big issues in finance theory are really simple. If you assume that the theory is correct and true, then we are tacitly assuming that the assumptions are correct and true. And yet nobody would argue that the assumptions are true. I think we need to back off from the notion that theory is reality.

Are equities worth the risk, given the potentially low equity risk premium?

I think investors are starting to come around to the view that stocks aren't quite as special as they once thought. The sad irony is that the more extravagantly expensive stocks are, the more members you will have in the cult of equities. The reason for that is simple. Stocks become extravagantly expensive by performing brilliantly. After they have performed brilliantly, it is painful to argue the case that stocks are a lousy investment. People come around to the view that stocks aren't guaranteed a premium return *after* equities have underperformed badly for a long period of time. That is unfortunate and it is ironic, but it is a simple fact.

Jonathan Barnes is a financial journalist and author of the novel *Reunion*.

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