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Why I Wouldn't Worry About Risk-Adjusted Discount Rates

Someone asked me a question about using risk-adjusted discount rates when valuing stocks. Here's my answer.

The discount rate for a stock should be the opportunity cost of putting money in it instead of something else. For your average investor, the next best alternative to where they'd put money instead of this stock would seem to be an index. If they don't buy this stock, they wouldn't buy a government bond – they'd buy an index. So, the discount rate shouldn't be a government bond. It should be an index.

When writing up stocks, the opportunity cost I use is the expected return in the S&P 500. In theory, I think the right discount rate for a stock would just be the return you expected from an index you could otherwise invest in. You could use other measures. For example, it is not really honest for me to use as my discount rate the return I expect on the S&P 500, because the actual returns of stocks I've bought since I've been investing (20+ years) have not been similar to the return of

the S&P 500 during the same time period. So, in theory - I should be calculating opportunity cost as the compound annual growth rate I think I could make with other stocks I could pick. I suppose, in theory, it would be best to tie this to my actual returns over time. However, this isn't a very good way to talk about stocks with other people. For example, if investor A has averaged 5% a year over his 25 years of investing and investor B has averaged 15% a year and the index has averaged 10% a year all over the same 25 years - I don't really think the general public should use a 10% rate and our two hypothetical investors should use rates of 5% and 15%. Instead, we should probably try to apply a discount rate that takes into account what we think an index will return in the future. What should that number be? I'm not sure. About 8% would make sense to me. To be on the safe side, 10% would be fine. Indexes haven't really returned much more than 10% over the very long term. So, unless you had reason to believe the index you are using as a benchmark is incredibly cheap at the moment - it wouldn't make sense to use a rate greater than 10%. I think using a 10% discount rate as your hurdle would tend to undervalue stocks going forward. But, that's just an opinion. What I mean is I think that if you buy a stock assuming it will return 10% a year over the next 15 years or so - you're likely to be getting a better bargain in that stock than if you bought into the S&P 500.

Note, however, that this means if you are aiming for much higher returns - you'd kind of be using a higher discount rate. I don't think that's a good way to think of it. I think it's best to just apply the same discount rate to stocks generally. Some people would say you should

adjust the discount rate for stocks of varying riskiness. But, that doesn't make sense to me. It would make more sense to me to just appraise all stocks using the same discount rate (say 10% to make it simple) and then insist on wider price discounts to your appraised value of the stock in some cases than in others. So, if a professional investor is aiming for much higher returns than the general public - he wouldn't say I'm using a 15-20% discount rate. Instead, he'd say I am buying stocks only when they are at 0.5x or 0.65x or whatever I think they are worth. In other words, the professional can't afford to buy stocks that he sees as close to fairly valued. The general public can.

I have a real problem with applying different discount rates to different stocks to account for their inherent riskiness - because, I think this is just a way of justifying the choice to follow the crowd. Let's say you find a stock that can grow 10% a year while yielding an additional 5% a year for dividends, buybacks, etc. on top of that. You also find Coca-Cola (KO) or something and decide it can pay you out like 4% a year and grow like 4% a year or something. There are people who will say that Coke could be as cheap as the example of a 10% grower plus 5% yield payer I gave. But, this makes little sense. It won't work right for a long-term investor. If you just wait 15 years, the first company would've turned your \$1 into \$8. Coke would've turned your \$1 into \$3. For a long-term investor, this isn't really a gap that can ever be closed in later periods. But, over short-term speculations - this often will work. Because you are really making a bet on what multiples the stocks will end up at. It's not so much you're saying Coke's lack of riskiness is so low that it can make up in the long-run for the risk that

the other company will fail to compound (that risk would have to be huge over a 15-year holding period - I mean, you'd need like a greater than 50% chance of a total loss to make up for its compounding advantage over Coke. If you felt from the start that this other company had a 50% or higher chance of going to zero within 15 years - don't bother calculating a discount rate, just don't buy stocks like that.) What I think most people are saying when they say something like Coke is so low risk is that they don't see how a P/E ratio of 25 will ever go to 10 on a stock like Coke. And that may be justified. In fact, the expected volatility of a stock's P/E multiple might be a very important factor over shorter periods of time. But, it becomes less important for long-term investors. A highly volatile P/E ratio on a long-term investment won't ruin the investment if you are ultimately right about its high rate of growth.

So, how do you take "riskiness" of stocks into account.

There are a few ways to do this.

One is a very Buffett like approach. Only buy stocks with "floors" under them that are well above zero. This is like the "non-diversified" trick to achieve the benefits of diversification. The biggest benefit of diversification - for example, buying an index as opposed to a stock - is that the floor on the index is probably very high vs. an individual stock. So, under the worst circumstances you could imagine a stock might drop 100% and never recover. An index might drop - and stay dropped for a meaningful amount of time - by 80% or less under

similarly bad circumstances. Top to bottom, indexes have dropped more than that. But, unless you are extremely unlucky in timing purchases of an index - it's not going to be easy to sustain the last 25-35% of an individual stock selection mistake. So, picking the absolute worst index you can in terms of fundamentals and buying it at an extremely inflated price and so on is just not likely to cost you more than 65-75% of your principal for very long as opposed to 100% when you make a catastrophic mistake in a stock.

If you look at Buffett's purchases - with very few exceptions - they work like an index. He just buys stocks that are so safe from a catastrophic risk perspective (they are high quality, they are consistently profitable, they aren't especially leveraged, they are lower volatility, they have decent access to capital, they are durable, etc.) that if he makes a terrible mistake - his terrible mistake is going to have much the same floor as an index. This is not true of individual stocks many value investors pick. Unlike Buffett, most value investors are totally willing to pick a specific stock that could not just by 50%, 65%, or 75% - but by a full 100%. Buffett very, very rarely invests meaningful amounts of money in things that could sustain losses bigger than a diversified mistake would. So, in a sense, you can pick individual stocks that are so safe (so "low volatility" and high credit rating and so on) that the downside on a concentrated bet is not much different than the downside on an index. Now, you'll still have huge "tracking error". Buffett can vastly underperform an index for years at a time with a single stock pick. But, he can't go to zero in an individual

stock - even one as bad as IBM - the way some value investors did in Sears.

So, stocks with a strong floor in the sense of not having a high risk of going to zero should be preferred over stocks that do have such a risk. In fact, from the perspective of what "discount rate" to pick for stocks - I think adjustments for the risk of going to zero would be the thing that would make the most sense. I still wouldn't adjust the discount rate to do this. I don't think Buffett does that. I think he just doesn't buy stuff he thinks can go to zero.

So, from a practical perspective, two things about discount rates stand out. One, you want to use a discount rate at least equal to an index for all stocks. So, if you really do believe the S&P 500 will do 10% a year indefinitely - you should never buy a stock you expect to do 9% a year indefinitely. That would be an unnecessary complication. It's just speculative. The stock could do better or worse than an index. But, you're basically playing a hunch when buying the stock and complicating your investments for no reason. Every stock you buy needs to have an expected future return - in your mind - higher than the index.

The other thing is it should have a manageable downside risk. Something of a floor on the stock and some degree of confidence in the return are legitimate risk reduction concerns, because we can actually translate them into something geometric. We can do some math with them. For example, if you have a choice of buying two

stocks: one has a 100% chance of returning 5% a year for the next 15 years and the other has a 50% chance of returning 15% a year for the next 15 years and a 60% chance of going to zero - which is the better bet? In theory, the stock with the 60% chance of going to zero is the better bet. A compounding difference of 10% per year for a full 15 years justifies that huge amount of added risk. That's because a 100% chance of having \$2 in 15 years (\$1 compounded at 5% a year for 15 years) is actually not as valuable as a 40% chance of having \$8 in 15 years ($\$8 * 0.4 = \3.20 ; $\$3.20 > \2).

Still, I'd be really cautious about ever buying something you think has a 60% chance of being worthless within 15 years even if the upside was as big as I described here. However, it's a useful thing to think about. It does illustrate how serious the mistake would be of locking yourself into a certain 5% return instead of an uncertain 15% return. If you locked yourself into that for the long-term, the opportunity lost is so expensive that you could've justified taking a ton of risk instead.

I don't want to advocate a high risk taking approach on the basis that hitting a long-term compounder is worth it compared to sticking to sub-index level returns. But, it is true. And that's why I brought up the example of NACCO. It works both ways. The perceived upside in those other coal stocks was so great that people who emailed me couldn't see why I'd pick something with much less upside like NACCO. To explain that, you have to imagine how I might be seeing the stock. The way I must've been seeing it is that the downside was more limited than people thought (not the upside). Think of that same

comparison of a 15% a year stock vs. a 5% a year stock. A good solution to that problem is what if you could find something that you thought - under the most likely scenario - was priced to return something close to 15% a year AND had a very low (like close to zero) chance of returning less than 5% a year. Then, you're really expecting your \$1 investment today to become something between \$2 and \$8 in 15 years - with little risk of becoming \$0.

Because of the way stock investing works - there are three things to look for. One is the combination of a high annual return and a long period of time. So, for example, a high growth rate and high ROE and a long runway for growth (a compounder). The other possibility is a very cheap stock (so, high FCF yield) and extreme durability. Even if it never grows, a stock with a P/FCF of 6x where you know FCF will never really shrink and the business will be around forever - that would actually pay off for you much like a compounder. Those both promise a lot of upside. One caveat here is that all the math I see done on expected values of stocks using ideas like upside/downside and probabilities and so on use short-term estimates that are more appropriate to like betting in poker or something than to stock investing. The upside is really the annual spread between your investment and an index and the amount of time that can be sustained. So, like a 15% FCF yield that's 100% certain forever is very valuable because 15% minus 10% sustained forever is an upside that compounds to be a very big advantage. So, the annual edge and the durability of the edge are the two things that determine upside. Since I don't believe in using different discount rates, you could think of me as

saying that really you should just buy whatever investment promises the largest spread or simply whatever investment with a similar spread promises the most durability. The one argument against this is the stock "flipper" argument. In other words, investing in a 15% minus 10% equals 5% spread that can be sustained forever isn't preferable to putting together a string of smaller spreads that close faster (buying at 75 cents on the dollar and selling at 90 cents and repeating annually actually returns more than a permanent 15% compounder).

The third thing to look for is the downside. So, other things equal - a stock with less risk of going to zero is more valuable.

This breaks down into 3 things to consider:

- 1) How big is my annual % advantage in this stock vs. the index?
- 2) How long can this advantage be maintained?
- 3) How low is my risk of this stock going to zero?

If #1 is small, I see no point in the investment no matter what the answer to #2 and #3 are. So, if you think an index will return 6-8% a year and you buy something you expect to return 9% a year - I'm not sure that's a good idea no matter how long that advantage can be maintained and how close to 100% sure you are the stock can never go to zero. However, if the advantage was wider (like 12% a year) than answers to questions #2 and #3 become important.

So, I just believe in an absolute hurdle that has to be cleared. For me,

that hurdle is the index you might buy. So, I can never buy a stock that I don't believe (rightly or wrongly at the time) will have some return advantage over the index. This, more than anything else, is what keeps me "a value investor". It's much harder to buy truly expensive stocks if you always keep in mind that every business - no matter how much you like it - has to present itself today as a stock you expect to beat the index over the long-term.

As far as worrying about specific country risk and thing like that. It has to translate into #1, #2, or #3 for you to evaluate. Do some countries have stocks with a higher risk of going to zero because they're in that country?

Yes.

The biggest is fraud risk. I'd avoid countries where there's much fraud unless you become good at spotting fraud and also unless you can visit management in person, visit sites, etc.

I don't apply different discount rates to different countries. I just don't buy any stocks from a lot of different countries. If I could get comfortable with those countries - and I might one day - then, I'd be willing to buy the stocks without applying a different discount rate to them.

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