



# EQUITIES

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## Why Not 100% Equities

February 12, 2024

Recently, a [new paper](#) has been making a big splash in our small pond of academic/quant investing (it was recently the #1 most downloaded finance paper on [SSRN](#)<sup>1</sup>). By “new,” I just mean “recently written,” as much of it ain’t new. The paper comes to the rather startling game-changing conclusion that long-term investors should be 100% in equities, not in a more diversified portfolio. We have been down this road before with this idea [refuted with alacrity and panache](#)<sup>2</sup> at least as far back as the mid-1990s.<sup>3, 4</sup>

Basically, both the new and old version of this argument for 100% equities come down to the rather trivial observation that the asset with (as supported by both theory and long-term empirics) a higher expected return (stocks) has, on average, a higher realized return. And thus, a long-term investor should own the higher expected return asset. Staggering stuff.

I will be concise (relative to my norm), as this is well-trod ground:

- Equities winning long term vs. bonds isn’t a surprise result, it’s exactly what is supposed to happen and is entirely consistent with very long-established theory (which holds up [pretty darn well](#), BTW). It just ain’t interesting to show the higher expected return asset has generally a higher realized return with the probability of winning (by some margin) increasing with your time horizon. It’s finance 101. It’s actually just math 101. Yet every few years someone writes a paper and gets a lot of attention by showing the higher expected return asset has, wait for it, a higher average realized return.
- I don’t know anyone who thinks a portfolio of stocks and bonds (60%/40% to keep things simple, though that ubiquitous choice is pretty arbitrary) has a higher unconditional expected return than 100% stocks. We (academics, practitioners, anyone who’s taken a cursory look at modern finance) prefer a diversified portfolio because we believe it has a higher return for the risk taken, not a higher expected return.
- In finance 101 we are taught that in general we should separate the choice of 1) what is the best return-for-risk portfolio?, and 2) what risk we should take? This new paper, and many like it, confuse the two. If the best return-for-risk portfolio doesn’t have enough expected return for you, then you lever it (within reason).<sup>5</sup> If it has too much risk for you, you de-lever it with cash. Remarkably this has been [shown to work](#).<sup>6</sup>
- The above is enough to make 100% equity<sup>7</sup> a silly argument.<sup>8</sup> But it gets worse. This sample period is likely biased quite high. Rising valuations have made equities themselves (and especially the USA vs. ex-USA differential) a very likely overestimation of the future. The new paper that kicked off this blog actually looks at both a 100% domestic portfolio and a 50%/50% domestic international version,<sup>9</sup> which is better than simply defaulting to 100% domestic – but many, perhaps most, boil this argument down to “just own the S&P 500.”
- In particular, this only-a-little-new [new paper](#) makes one statement that is just an indefensible whopper. They state, “Given the sheer magnitude of US retirement savings, we estimate that Americans could realize trillions of dollars in welfare gains by adopting the all-equity strategy.” This is very poor economic reasoning. It’s a violation of the same principle supporting my long-time rant that “[there are no sidelines](#)”! Equities are already 100% owned. If some investors read this “new” paper and decide to buy more equities, they have to buy those equities from other investors. This can force the price up, and the expected future return down, but everyone can’t suddenly have double the normal amount of equity dollar return out of thin air.<sup>10</sup> Claiming there are trillions being left on the table is really just non-economic hype.
- I’ve couched everything so far in terms of bonds and stocks, but most of it also applies to liquid alternatives (alts). Liquid alts, even if diversifying and attractive on their own,<sup>11</sup> can be hard to use to improve a portfolio’s top-line expected return (not its risk-adjusted return, which is much easier to do) if they take very low volatility. Low volatility is a problem unless one a) can lever the new better portfolio containing liquid alts or b) can change other weights in the portfolio (e.g., funding from bonds, which are also low volatility, can make low volatility alts useful, if still not as useful as if they were high volatility).
- Of course, why alts cannot be tolerated at more standalone aggressive levels has vexed me since at least 1998.<sup>12</sup> Many effectively say, “investors shouldn’t invest in alternative assets that are [marked-to-market](#) even if they believe in them because they can’t take the drawdowns—even if these drawdowns (and recoveries) are not related to, or even act as a hedge for,<sup>13</sup> their portfolio-wide large stock market exposure.”

- We've found most can't acknowledge that this rationale is the same as saying "this would improve an investor's portfolio, but very occasionally it could make them look [unconventionally bad](#) relative to others, so they might give up on it. Therefore investors should just stand pat with the less-effective portfolio." Citing that many can't do it is not a valid justification for not trying to change things for the better.<sup>14</sup> It is not our collective job to tell investors "keep doing what will likely earn you less for the same risk, as it's just oh so comfortable for you." Rather, it's our job to collectively convince, cajole, and clamor for what we believe is right, and then help investors stick to it. Too often the observation that doing what's right is hard becomes a self-fulfilling prophesy and an excuse to continue doing what's wrong. Well, one day, we will figure out how to "[volatility launder](#)" high-volatility alternatives by not marking them to market – then the problem will be solved.<sup>15 16</sup>

Back to the paper. There is a piece to be written that would be more useful, which:

- 1 Starts with a realistic guess at the equity risk premium that doesn't only examine a period of rising valuations often focusing on the country that ex-post won.
- 2 Explains why the most basic finding of modern finance—that, within reason, you should lever the best portfolio and not put it all in the highest returning asset—is impossible to implement (as opposed to "it's totally possible and really not unsafe, but we're scared we will panic").
- 3 Explains why some subset of investors should take much more risk than they are currently (despite somehow not being able to tolerate a smidge of leverage, again an odd combination).

I would likely disagree with such a paper, but it would also likely be more reasonable than "just put it all, but not more than all (that's leverage!), in the highest expected return asset," and contain some useful analysis. In turn, simply looking at historical results and urging investors to "buy the thing that's gone up the most over the long term" is not financial analysis, it is finger painting.

The bottom line is diversification works, theory works (eventually), owning one asset is suboptimal, extrapolating the winning country over a period of valuation increases is dangerous, finance 101 is actually helpful – and we'll likely have to do this again after the next bull market.

[1] Not of all time, but over the past 60 days.

[2] If I do say so myself.

[3] And yes, I was annoyed [they didn't even cite me](#). My destruction of the 100% equity recommendation has been around for almost 30 years, is quite well known, has been even stronger out-of-sample than in-sample, and has led directly to an investment product (which for some reason I left on the table for my friends at [WisdomTree](#) to create). If I were a paranoid man, it almost seems like the authors didn't want to address these arguments. And, for the record, I am indeed a paranoid man. But, beyond just not referencing me, not addressing the "lever the best portfolio" idea itself seems jarring in 2024 (actually it was jarring in [1994](#)).

[4] To complicate things, unlike the [1994](#) and [1996](#) papers referenced above, the new paper isn't just comparing static portfolios, but 100% equities to a hypothetical "target date fund" that starts out with mostly equities and ends up with mostly bonds. Though once again, as we'll discuss below, the choice of portfolio vs. the choice of risk to take is also muddled in such target date funds. What target date funds should do if (if) they want to reduce the risk over time is start out by leveraging a diversified portfolio (60%/40% as an oversimplification – [risk parity fans](#) would argue for more bonds vs. equities) and then de-lever that portfolio over time, ending with a rather low-risk (but still diversified, lots of cash plus some 60%/40%) portfolio at the end. We've tried convincing "Big Target Date" to do this but to no avail. Besides being generally a higher risk-adjusted return at nearly all points in time than an almost-always less-diversified target date fund, save for the fleeting moment when they may be equivalent, our suggestion would also smooth out the path dependency based on when stocks and bonds perform particularly well or poorly. That is, a traditional target date fund wants equities to perform better than bonds early and bonds to perform better late (assuming the same overall performance of both). The "always diversified but reducing leverage over time" portfolio doesn't care about the path of stocks vs. bonds (it does care about the path of 60%/40% in total). Last point: on gliding down risk over time, that holds if one accepts the usual idea that the old should take less risk than the young. On this point, I find myself reticent, mostly agreeing with the [latest paper](#) that this seemingly obvious and ubiquitously held idea is likely wrong. In particular, if the old have accrued significant wealth, they might actually be more risk tolerant than the young, and almost certainly are so if a fair amount of their investing motive is now bequest.

[5] My friend Corey Hoffstein has a wonderful term for this: [return stacking](#). BTW, "within reason" is not doing a ton of work here, as the leverage levels needed to make 60%/40% comparable risk to 100% equities are not at all scary.

[6] It's the very aversion to even modest leverage that likely leads to the famous low beta effect (the tendency for lower beta assets to outperform higher beta assets, considering the beta of both) in both [individual equities](#) and [asset classes](#) (and quite a few other places). Ironically, that leads to an even larger advantage for those willing to lever the highest return-for-risk portfolio versus those who only invest in the highest expected return asset (as the lower expected return asset now has alpha). Even more ironic is the fact this aversion to even modest leverage only shows up for liquid securities, and seemingly not in places like private equity, private debt, and real estate where leverage is often the norm. It's "selective leverage aversion" – only if you have to report the marks.

[7] By the way, why don't these same people ever advocate 110% equity? That is, borrow 10% and buy more equity. Guarantees in this business are dangerous, but that portfolio rebalanced at a reasonable frequency ain't going -100% (something one should always think about with leverage) and is about as likely to beat 100% equities long-term as 100% equities is to beat cash. What's the limiting principle on how much pure equity they recommend? Obviously I don't think they have one. It's just that 100% sounds reasonable.

[8] The argument is silly unless the portfolio is highly constrained in what it can do and the investor is very risk tolerant/aggressive — kind of an odd combination many seem to mistakenly believe describes themselves.

[9] Though even showing a portfolio 100% in the country that ex-post won makes little sense to me unless it's to get some higher numbers in the mix!

[10] This is what would happen immediately. Long-term some additional equity would be issued, as the prices would be higher and the expected return lower (issuers like paying less to investors and would likely issue a bit more). So, there would indeed be some additional equities to be had, but again, ironically, at a lower profit going forward. That is clearly not what the authors had in mind. In general, advice like the authors' is about "alpha" which, if they were right, would help those who listened at the expense of those who didn't. It is not about growing the pie and their statement otherwise (trillions!) is surprisingly naive.

[11] If not, they can't be saved.

[12] I'm old. But please do not explain to me that people can't stick with what's right; I have noticed the problem. Rather, please explain why they can't do what's right and why you don't urge them to when it is in their best interests to do so if they can.

[13] I'm obviously thinking of times like when long-short value investing got slammed in 1999-2000 and 2019-2020 when markets soured, but then came back in the subsequent tougher times for markets.

[14] In fact, it can force people into accepting [lower expected returns](#) in assets where they deserve higher for the risks taken.

[15] Actually, we did [take a shot](#) at this but we then gave up and decided just to [whine about it](#).

[16] In 1998 when creating our first AQR strategy, we chose to make it market-neutral and very aggressive (north of equity-like targeted volatility). When talking about this strategy to potential investors I was asked many times "we don't need that kind of volatility—how about half that?" I replied every time "uh, just give us half the money." I was right on the math but wrong about people (I have continued that tendency in my personal life). But, in my defense, eventually the people should come around to the math if the math is right and well-meaning advisors and managers preach what's true.

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