

P E R S P E C T I V E

The Illiquidity Discount?

December 19, 2019

Implied in [my parody](#)¹ and more explicit in my colleagues' excellent [work](#) on private equity (PE) is a rather bold notion. It's one we've been bandying about for at least a decade, but it seems increasingly relevant these days. Conventional wisdom is you get an expected return premium for bearing illiquidity.² Illiquidity is a bad thing, and, all else equal, you need to be paid extra for taking it on. But, what if this is backwards? What if investors will actually pay a higher price and accept a lower expected return for very illiquid assets?³

I have a long history of odd conversations⁴ about private investing and my thinking about it has evolved over time. When I was much younger (like 25 and working at Goldman Sachs Asset Management) and even more arrogant (can you imagine such a thing?), I thought PE managers and investors just didn't get it (but, of course, that I did). I thought they believed that their investments were "uncorrelated" to traditional markets and I thought that this was dumb. In my defense there was some evidence for this idea. I recall many presentations back then that explicitly claimed this silly lack of correlation. And, there certainly were some who actually believed it to be true. But, even back then, and increasingly over time, I think that many, and perhaps nearly all investors in PE today, would say that over long horizons PE is very correlated to public equities (I mean, it's levered small to mid-cap, right?). If we have a ten-year bear market for stocks, which many have forgotten can occur but I promise is at least possible though rarely the expected case, I think most of our forecasts for private equity would be for some fairly extreme pain and for it not to act as a big portfolio diversifier. I used to think that was a vital point that was not understood. I haven't changed my view that PE is actually quite correlated to traditional markets (particularly a portfolio of PE investments which will, like all portfolios, diversify away much of the idiosyncratic risk). But, I now think that this really isn't the vital point at all. That means that in the past I wasn't so bright, and others so benighted.⁶ Hard truths.

If people get that PE is truly volatile but you just don't see it, what's all the excitement about? Well, big time multi-year illiquidity and its oft-accompanying pricing opacity may actually be a feature not a bug! Liquid, accurately priced investments let you know precisely how volatile they are and they smack you in the face with it.^{7, 8} What if many investors actually realize that this accurate and timely information will make them worse investors as they'll use that liquidity to panic and redeem at the worst times? What if illiquid, very infrequently and inaccurately priced investments made them better investors as essentially it allows them to ignore such investments given low measured volatility and very modest paper drawdowns? "Ignore" in this case equals "stick with through harrowing times when you might sell if you had to face up to the full losses." What if investors are simply smart enough to know that they can take on a lot more risk (true long-term risk) if it's simply not shoved in their face every day (or multi-year period!)? Could the same investor who finds private equity easy to stick with also find a levered publicly traded small-cap portfolio impossible to stick with even if they're economically very similar investments?^{9, 10} Sounds pretty plausible to me. Of course, the question is whether this stick-to-itiveness comes at a price (lower expected returns than the comparable risk but liquid and marked-to-market investment) and, if so, is that price large or small, and is it generally accepted as a cost of an easier ride or hidden? For instance, are investment committees being told "we like these investments, even at a potential return discount to comparable liquid aggressive investments, because we'll all be better off in the long term if we just have less information"?

While I phrase it somewhat sarcastically above I'm not sure there's anything wrong with such tricks. Investors have used simple heuristics, even ones that are silly in some ways, for as long as there've been investors. Someone in ancient Rome was likely a better investor because an investment that was really down L% only showed up as down XXV% in his or her quarterly report scroll. As an example, take dollar-cost-averaging. It's dumb. To prove that, imagine you were handed two portfolios, one the final equity portfolio you really want, the other all cash. Many, even most, investors wouldn't immediately buy the final desired equity portfolio. No, that risks massive regret. Not buying any also risks massive regret. But if you average in slowly, perhaps you minimize this regret? But it's a silly thing to do on just the numbers. For instance, if you were handed the all-equity portfolio you actually ultimately wanted, instead of being handed cash, you would not sell it just to average back in, would you?¹¹ Of course not. So, the averaging-in strategy is silly. But silly perhaps only to a Vulcan. What if it leads to better outcomes for the non-Vulgans? What if the investor were right, they can't take the regret, and that might lead them to do things like panicking and selling back out if they buy in immediately and markets dive? Just showing that an action isn't rational in a narrow return/risk sense doesn't mean that it isn't rational in a broader sense.¹²

The preference for illiquid, infrequently-priced assets that don't smash you in the face with their volatility (even though it's really there) could be rational in the same sense. Perhaps a levered small cap portfolio is a rational investment for long-term investors, but there's little chance they'd stick with it full-cycle. However, they find PE easy to stick with?¹³ It's not hard for me to imagine these are both true for some (or many).

Finally, to address our main topic, what's the next implication of extreme illiquidity and pricing opacity being a feature not a bug? Well, you

pay up in price (and give up in expected return) for features you value (not bugs you can't stand). Attractive smoothness of returns may not come for free. If illiquidity is more positive than negative to many investors, it could easily mean paying a higher price and accepting a somewhat lower return to obtain it. Sounds really counter-intuitive, I know. But it also sounds, to me, pretty plausible.

Given the fees and other features of PE, is it hard to imagine that investors are paying up a bit in price, and accepting a modestly lower net expected return (than, say, an analogous levered small-cap portfolio) to get something they know they will stick with? Opinions can vary, but I don't think so.

So, I think it's entirely possible that investors are accepting a discounted expected net return (though discounted from a high level as we are starting with levered small-cap not a low-risk, low-return investment) for the privilege of not being told the prices.

That may be frustrating to those of us who live in the violent world of liquid, accurate, mark-to-market pricing. But, that doesn't mean it's crazy. It may be stone cold rational (in that broader sense). And while my discussion has focused on PE, the idea applies to all illiquid assets with smooth returns.^{1, 15}

There really may be an illiquidity discount (in expected returns) with the opposite sign from the illiquidity premium we've always assumed. Many know that in PE they're getting some serious smoothing, and a palatable (as it's way understated) reported volatility. But it's likely that many still assume they're getting a return advantage also.¹⁶ It seems very plausible that only one half of that free lunch may be true. Mind blowing I know.

I mean, let's get real, does anyone seriously doubt that at least part of the attraction of PE, and its wildly growing popularity, is an increasing acceptance among investors that they will have to get very aggressive to reach their goals (e.g., underfunded pension plans and the like), but still possess an absolute aversion to living under the true reported volatility this aggression entails? I'll end by making the self-serving message implicit throughout this piece explicit. Liquid, truly uncorrelated alternatives actually diversify a portfolio both short- and long-term. They offer real diversification, not the diversification that comes from not reporting actual returns. But, when they have very painful periods (as you may have noticed!) you have to live through it in all its excruciating glory. This is perhaps a better portfolio than very correlated alternative assets possibly at an expected return discount. But only better if you can indeed live with it. If investors are going to move from a better portfolio to a worse one because it's easier to live with, that may, yet again, be rational, but they should be open-eyed about what they're doing.

[1] You knew it was a parody right?

[2] The terminology can be confusing. You can call this an illiquidity premium if you're framing it in terms of expected returns or an illiquidity discount if you're framing it in terms of purchase prices (which, of course, move opposite from expected returns going forward). I mainly choose the expected return framework but often present it both ways choosing clarity over elegance. (To make things worse, some use the term liquidity premium for the same concept when I think they really mean illiquidity premium; I won't.)

[3] As you'll see, the assets need to be very illiquid for what we'll discuss to kick in. I don't think I'm contradicting the idea that if one stock is somewhat less liquid than another perhaps you need an expected return premium to own it. Rather, for the issues I'm discussing here to matter, the investment must be very illiquid as much of the point is being able to ignore its volatility, not just having to sell it over three days instead of one hour, or that your trading costs are somewhat higher. So, yes, there may or may not be an illiquidity premium (higher expected returns for less liquid assets) for mild illiquidity but, as we'll see, potentially the opposite (lower expected returns for much less liquid assets) for extreme illiquidity. The world continues to be an odd place.

[4] During the Asian debt crisis of October 1997 there was one day when the S&P 500 was down about 7%. We were a few years into running our first quant market-neutral portfolio and this was a nice acid test. We thought we passed as our best guess of the day's P/L was +1-2%. I say best guess as the USA market was crashing in the afternoon while much of the rest of the world was closed. One of our positions was short the USA against the world. One great way to look awesome is to be short a crashing market and long a closed one. This was one of my early brushes with the positive side of illiquidity (I'm really talking asynchronous market prices here but please let me have this one). One bad event for me was when Jon Corzine, then the head of Goldman Sachs, came by our area and looked at the screen. It said we were up something like +7%. Again, it was recording big profits from our shorts and our longs were closed. +1-2% was our estimate of what it would really amount to when Asia and Europe moved the next day. I had to explain that to Jon and tell him we were very excited about +1-2% in a product trying to be market-neutral in a smashing down market. But you just can't take someone from +7% to +1-2% and expect them to be at all excited. I still remember the disappointment on his face. The story isn't over. Just a few minutes later the then head of GSAM's private equity came by and asked me how we were doing. I was quick to say "about flat" (note, I even haircuffed it a bit). I will always remember his response. He said "us too." I, in probably a cracking high distress voice, said "no you're not!" He asked what I meant. I said something like "well, you're kind of a levered small to mid-cap portfolio right?" He said "right." I followed up with "so if you had to sell yesterday versus today you'd get way less today right?" To his credit, he said "oh way less!" But then he followed up with more words that still haunt me: "but we don't have to sell." I guess this blog entry might serve as an apology to him 22 years later for the look that came over my face at that point. I thought he was crazy, but he may have been crazy like a fox.

[5] There are other highly relevant discussions about PE I'm not going to come close to touching here. Is there indeed gross-of-fee "alpha" in general vs. just levered small to mid-cap? Can you ex ante identify the managers with this alpha and get access to them? Does this all survive fairly massive (and varied in how they get you) fees? All very interesting, but not the topic here. I will also stay way away from the political controversies over whether they are exploitative tools of the oligarchy destroying working people or vehicles to continually make our economy more efficient by taking capital from the failing, funding the succeeding, and applying efficiencies that seem cold, and even sometimes cruel, in the short term but are how the "creative destruction" of free markets work. You probably know I have a bit of a tendency towards the latter explanation but there can be some truth to both. I also am not addressing the legitimately contentious issue of [how they're taxed](#).

[6] [Access](#) is yet another contentious issue. For too long we have suffered from smoothed volatility inequality with only the well-off able to fool themselves into thinking their investments aren't volatile.

[7] Yes, yes, volatility is only estimated, and certainly may be an incomplete risk model. You're overthinking it.

[8] An idea well-known to psychology and behavioral finance is that of "salience." The basic idea is that if you are observing something you might overreact to it, but if you're not reminded of it you might tend to ignore it.

[9] During the GFC the maximum drawdown of PE indices was about -28% versus small-cap value stocks (unlevered!) of about -60%. Does anyone think this reflects their actual comparative performance if one could accurately mark-to-market? Another thing to consider is many investment allocators ultimately report to someone who gets much more involved during extreme events. Being able to report -28% not -60%, or much worse, is, apparently, sometimes helpful :). Source: Cambridge Associates (PE returns are represented by quarterly returns of the U.S. Buyout portion of the overall Cambridge U.S. Private Equity Index) and the Kenneth R. French Data Library (small-cap value stocks are represented by monthly returns of the Small HiBM series from the 6 Portfolios Formed on Size and Book-to-Market).

[10] For a more extreme example, imagine private equity funds in Japan in late 1989. Does anyone think they would've provided stellar diversification over the next 10-20 years?

[11] Anybody who wants to ruin this example with "but what about t-costs" can leave right now.

[12] I'm kind of abusing, or at least overtasking, the terms rational and irrational here. The point is knowing you have some irrationalities, like "I'll panic and sell at the worst time if this thing crashes" but being self-aware and acting rational (investing in things that won't lead to this) around this tendency.

[13] Another highly related possible benefit of PE's illiquidity is that it handcuffs investors to "sticking with it" through bad times by contract. Throwing your hat over the wall as they say. The distinction is we stress that smoother measured (not actual!) returns make bad times feel less bad and thus reduce investor need to capitulate – not the contractual difficulty in actually capitulating. But they are overlapping concepts. As an aside, the growing secondary markets in PE offer a possible key to those handcuffs. I predict the smoothing is the more important thing versus the contractual commitment and that this "key" doesn't change much.

[14] For instance, while not nearly as extreme as PE, [hedge funds](#) are probably somewhat easier to stick with because of some "return smoothing." Real estate is likely as, if not even more, extreme than PE.

[15] Many, including us, have mused, sometimes [sarcastically](#) but with an edge of seriousness, about why we can't create a set of liquid strategies where clients simply agree on a long lock-up and we all agree not to look at the pricing until the end. It turns out there are some considerable legal and practical barriers to knowing the exact current valuation of an investment and just not telling anyone. Also, when you make the smoothing this intentional and explicit it seems likely some of the magic the smoothing brings ("these things aren't so volatile") might go away. Sadly, you can't actually enjoy the magic trick and understand how it works at the same time.

[16] Part of this confusion comes from the fact that levered small- to mid-cap stocks are still aggressive high expected return investments so the total is still likely to be attractive if held long-term. Everyone's happy! The discount in expected returns we're talking about is versus this likely high level, a level also likely achievable with non-smoothed liquid assets perhaps, as is the central conjecture of this piece, at an even higher expected return.

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