Under the hood: Ground breaking private equity study examines actual investments, not just funds

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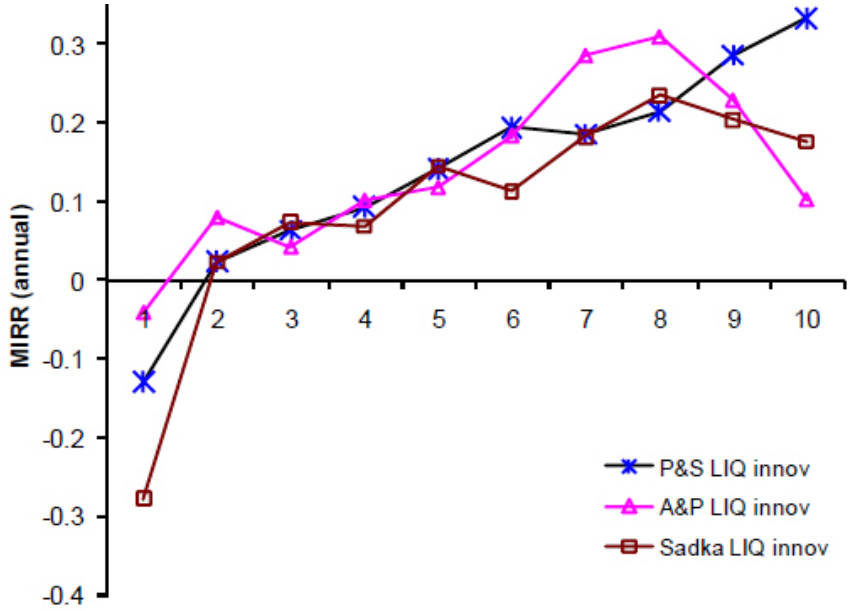
Last December, after a particularly tough year during which liquidity was only beginning to drip back into markets, the Harvard Endowment was faced with a quandary that affected hundreds of other endowments across the United States – sell illiquid investments like private equity at a discount or borrow money to shore up its liquidity position. Harvard eventually chose to borrow – **issuing $1.5 billion of bonds**. Long hailed as the ideal investment for the "long term" investor, illiquid alternative investments are now blamed for precipitating the worst year on record for university endowments. So much for the "Yale Model", right?

Maybe not. While it makes a lot of intuitive sense that private equity fund returns benefit from the relative illiquidity of that *asset class*, no academic study has apparently ever documented the role of illiquidity in the returns of *individual private equity plays* (i.e. not of the funds, but of the individual investments made by those funds and directly by institutional investors).

That is, until now. **A paper** by Francesco Franzoni, Eric Nowak (both of the University of Lugano) and Ludovic Phalippou (of the University of Amsterdam) aims to measure the effect of overall liquidity conditions on the returns of private equity investments themselves. The trio managed to get their hands on a unique database that contained the individual investments made by over 1,000 funds.

As Harvard can now tell you with certainty, the trio found that private equity investments are highly dependent on overall market liquidity. When market liquidity is high, private equity investors can unload their PE stakes for a premium. When market liquidity is low, forget about it. There are several ways to measure overall market liquidity so Franzoni, Nowak and Phalippou used three different measures. When they looked at the modified IRRs (IRRs with intermediate cash flows invested in the S&P 500) of investments in each decile of liquidity, from lowest liquidity regimes on the left to the highest ones on the right, they saw the following:

0.4



The MIRRs were way lower for the second decile than they were for the top decile. But they were lower still for the lowest liquidity environments (ones like last year's and the previous year's, we would guess). Put another way, a one standard deviation improvement in liquidity conditions translated into a 7-12% increase in returns (depending on the measure of liquidity used).

So are private equity IRRs simply the result of liquidity – or does private equity provide a priced risk factor, an enduring return akin to the equity risk premium? Unfortunately, the answer seems to be "no". The trio found that private equity investments did have a risk premium of 18%. But that 18% can be broken down into a market risk premium of 10%, a Fama/French value premium of 5%, and a liquidity risk premium of 3% – leaving a grand total of zero percent of alpha.

Periods of low liquidity often come during market downturns. So you'd be excused for wondering if the apparent poor performance of private equity investments in low liquidity environments is simply a result of coincident anemic public equity returns. But the authors thought of that. They took this into account by adding several other variables to their regressions and still found that (our emphasis):

> *"…liquidity conditions are significantly related to returns after controlling for investment characteristics, stock market factors, and macroeconomic variables. This evidence reinforces the belief that liquidity has an independent causal effect on investment performance."*

So what does this mean for the private equity funds who make these investments?

For starters, it means that the hurdle rate for PE funds should be closer to 18% than to the generally-accepted 8%. That's a tough nut to swallow for private equity managers. But it's nothing new for hedge fund managers who have been told to use a higher (or more appropriate) hurdle rate for some time now.

It also means that larger funds have disproportionate amounts of liquidity risk. Larger PE funds are more likely to employ leverage (think LBO fund vs. VC fund). But the bigger the fund, the more likely it is that its lenders will pull in the reigns and force a fire sale just as overall market liquidity takes a turn for the worse.

In addition, they say, the bigger the fund, the less nimble it is and the more likely it is to get stuck holding a grenade when it blows up. In other words, no one wants to be a big fish in a small pond during a drought. That's why, write the authors:

> *"…Larger investors like Calpers do not invest in small PE firms, [as] this may make them more exposed to liquidity risk than small PE investors."*

It would appear from Harvard's thirst for liquidity in December 2009 that the same might be said for all sizes of PE

fund, not just the small ones.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