JULY 2018

THE TRIAGO QUARTERLY

Dear Reader,

As you peruse these pages, you may pick up on our pronounced opinion: We believe private equity is on a long-term growth path – across economic and market cycles – that should see records for assets under management and fund sizes regularly broken.

Indeed, record fund sizes are increasingly influencing fundraising. That's resulting in more uneven peaks and valleys for annual commitments. But that's in a marketplace characterized by growing investor demand.

We've left it for our distinguished roundtable participants to debate just how big fund sizes can get. Growth and the increasing competition that comes with it also means that several years of historically high acquisition prices for PE assets have morphed into the norm. We believe, however, that the growing dominance of buy-and-build strategies and the superior corporate governance of PE justifies those prices – time will judge.

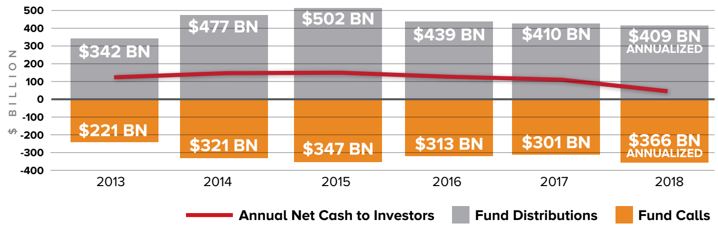
As always, we hope the information found here will help you make informed decisions.

Sincerely, The Triago Team

SNAPSHOT

PE acquisition surge leads to higher calls...

Capital Contributions and Distributions



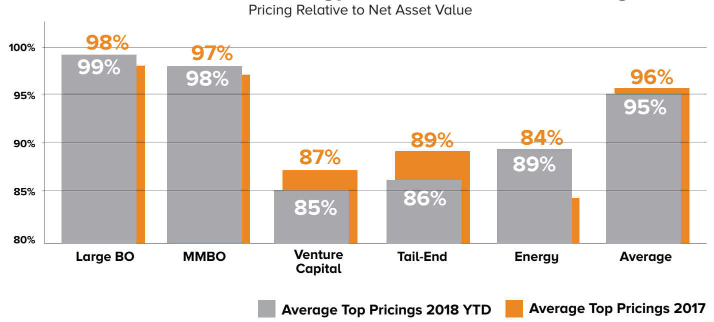
...as NAV keeps rising, after a strong 2017.

Private Equity Net Asset Value Change – Global

STRATEGY	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	Q1 2018
Large BO	+24.2%	+15.8%	+3.9%	+16.2%	+20.3%	+2.7%
MM BO	+11.9%	+16.1%	+5.6%	+14.6%	+19.5%	+3.1%
VC	+18.7%	+16.3%	+7.8%	+5.1%	+10.9%	+4.1%
Special Sit.	+11.1%	+5.1%	+1.3%	- 2.0%	+11.6%	+2.8%
Energy	+6.4%	-0.8%	-31.9%	+9.1%	+7.1%	+0.5%
Average	**+16.4%**	**+14.1%**	**+2.6%**	**+11.9%**	**+16.2%**	**+2.8%**

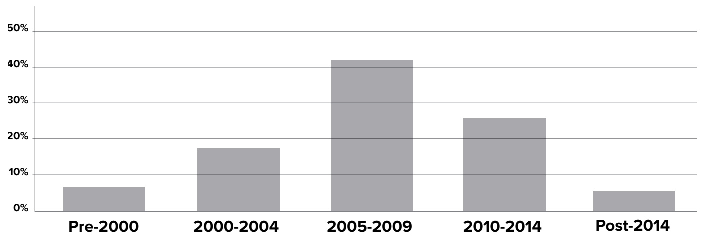
Buyout funds hit new secondary records...

Fund Types Sold on the Secondary Market
Pricing Relative to Net Asset Value



...but high tail-end volume weighs on average pricing.

6-Month Secondary Volume by Vintage Year[1]
Based on Number of Funds Sold



[1]Period covered: January 1, 2018 to June 30, 2018. Tail-ends – all vintages 2008 or earlier – are 63% by number and 24% by value of funds sold.

Private Equity Experiences a Fundraising Lull

Mega-fund spikes will increasingly influence fundraising, as vehicles close in record time.

Some $224 billion was committed to private equity funds globally in the first six months of 2018. A further $96 billion was earmarked for co-investment, direct investment and separate accounts – a record in any six-month period for shadow capital, or monies committed outside of classic fund structures. The aggregate trails total amounts committed to private equity in the same period last year and in 2016, but it's the third highest amount on record for the first half of the calendar year and is an indication of exceptional investor demand for private equity.

With investors from family offices to sovereign wealth funds allocating increasing sums to private equity, and a host of larger fundraisings likely to hit closes in the second half of 2018, Triago expects a year-end fundraising tally of approximately $500 billion. That's 19 percent below last year's all-time high of $619 billion and some 7 percent below 2016's $539 billion – two years driven by mega-fundraisings of unprecedented size (see our page three roundtable on this topic).

While investors would seem to be investing at the fastest rate on record in 2018 – funds are hitting final close after only 13 months on the road, surpassing the previous record of 14 months achieved in 2006 and 2017 – we expect annual fundraising patterns to be increasingly lumpy. Funds of exceptional size will continue to drive periodic surges in commitments, setting new value records for fundraising and fund type. At the current pace of commitment, shadow capital should hit a record $192 billion this year, some 5 percent and 6 percent respectively above the 2015 apex and the sum collected in 2016 – the second highest on record.

Although exits from private equity investments are on a par with last year, private equity-backed purchases surged in the first half. Capital calls used to finance acquisitions stand at $183 billion in the first six months of the year and annualized, will hit an 11-year record of $366 billion. That would only be surpassed by 2007's $472 billion in calls and 2006's $463 billion tally. With first half distributions from exits running at an annualized rate of $409 billion, fund managers should return to investors about $1.12 for every dollar called up this year.

The average buyout fund surpassed global measures of public market value like the MSCI World index in 2017, while in the first quarter of this year the typical private equity fund registered a 2.8 percent average increase in net asset value, versus negative returns for most public market indexes. Triago believes that the record and near-record purchase prices for private equity-backed acquisitions in recent years have been paralleled by an increase in the operational expertise of fund managers. This has done much to neutralize the risk of higher pricing – even to justify it – a fact that's particularly evident in financial market downturns.

Operational expertise justifies higher pricing for PE assets.

Even though private equity fund net asset value has risen by over a fifth in the last 18 months, buyout funds on the secondary market have broken last year's pricing records, with large and mid-market funds transacting at respectively 99 percent and 98 percent of net asset value through July 20. Mirroring the strong rise in oil prices, energy funds have seen their average pricing rise to 89 percent of NAV, up from 84 percent last year.

What is particularly noteworthy about 2018's secondary market is that so-called tail-end vehicles, funds that are 10 or more years old, account for some 63 percent of funds sold by number and 24 percent transferred by value – double historic averages. Prices for tail-ends have fallen to 86 percent of NAV from 89 percent last year, as a rising wave of investors look to extricate themselves from an exceptionally large number of long-in-the-tooth funds – the result of the 2005-2008 fundraising boom.

Secondary market volume of $24 billion in the first half – typically weaker than the latter half of the year – makes it likely that 2017's all-time annual high of $45 billion will be handily beaten. Along with a generous dollop of leverage – some 27 percent of market volume in the first half – transactions should be fueled by $124 billion in unspent equity earmarked for secondary purchases by specialists, funds-of-funds and in-house institutional investors.

How Big Can PE Funds Get?

If ever-larger funds deliver good returns, the sky may be the limit.

As limited partners invest more with fewer managers, private equity funds are setting records for size. Pitchbook reports that the typical fund hit an all-time high of $900 million in 2017, while Preqin notes a 234 percent jump in average fund size over three years. Records for particular types of PE funds include the $24.7 billion raised for Apollo's ninth buyout fund, the $13.9 billion KKR gathered for its twelfth North American fund and the nearly $100 billion amassed for the tech focused SoftBank Vision Fund, which is equally the largest PE vehicle ever raised. Our roundtable participants discuss the dynamics of ever-larger funds and when, if ever, we might see a disconnect between fund size and performance.

DAVID JEFFREY
Partner and Head of Europe at StepStone

INGMAR VALLANO
Senior Managing Director at Ardian

STEVE KAPLAN
Neubauer Family Distinguished Service Professor at The University of Chicago Booth School of Business

What's driving the phenomenon of ever-larger fund sizes in private equity?

DJ: It comes down to exceptionally benign environments for fundraising and deal making. In a world of low to negative interest rates, unprecedented numbers of investors are looking to invest record sums in private equity, which is seen by many as the only asset category right now that's credibly promising double-digit returns. That great fundraising market is complemented by a deal environment where it's very easy to get large sums invested, thanks to plentiful, cheap, low-covenant leverage and high multiples for sellers. Interestingly, deployment of record fund sizes is also helped by the fact that relatively more equity is being invested in deals than has historically been the case.

SK: I'd zero in on three factors that are making ever-larger fund sizes possible. Firstly, we are seeing major fundraising economies of scale tied to the fact that very big investors like public pension funds and sovereign wealth funds now want to deploy billions with just a few managers. That favors the creation of very big investment funds. Secondly, there are economies of scale in operational engineering – the operating improvements that now frequently predominate over financial engineering in fund strategy. If you hire a former CEO for an operational mission at a portfolio company, his or her talents can be applied to a host of other portfolio companies. Moreover, the bigger your fund's pool of money, the more operational talent you can hire. Finally, large funds are producing returns that pretty much match those of smaller funds. If large funds start to materially underperform smaller funds, you'll see a halt to growing fund sizes.

IV: I'd also point out that ever-bigger fund sizes wouldn't be possible today if the last wave of record-setting funds in the 2005 to 2008 period had not been able to produce solid returns. Their ability to do that – with managers in many instances turning around companies that were badly hit by the financial crisis – means that there's a lot of confidence among investors in very big funds and in the well-resourced general partner groups sponsoring them.

When it comes to producing returns that match or exceed the historical expectations of investors, are there limits on how large private equity funds can become?

"We'd like to offer you an investment in our XXL fund. We're ordering by size now, not chronology."

SK: Given today's record fund sizes, I think it's likely that heightened competition for assets will compress returns and lead, in the next few years, to some investor disappointment. I don't think funds can get much bigger than they currently are. And I suspect that the biggest fund to date – the $100 billion SoftBank Vision Fund – is an anomaly that won't be repeated considering the difficulty of finding a suitable number of market-beating investments for a fund of its size. Anecdotally, I hear that some of the largest funds today are dialing in lower return expectations for their deals, with some basing investments on as low as a 15 percent gross annual return rather than the historical 20 percent. Large funds will have to at least equal the public markets, net of fees, over the next few years to remain attractive for investors.

IV: Steve's premise that heightened competition will eventually bring returns down and cap fund size makes sense, but I don't think we're there yet, considering the expectations of investors and how long it will take to come to a reliable conclusion regarding the performance of the biggest funds relative to smaller funds and public markets. The fact that large funds are putting more equity into deals, as David pointed out, reducing their riskiness, while boosting their size, is also appealing to investors. Additionally, limited partners accept the notion that to hit expected return multiples the biggest private equity funds will take more time to sell assets than in the past – that's largely a function of today's record-high acquisition multiples. There's a widely held sentiment that it's better to have a very significant slug of money locked up a bit longer in private equity than to have it invested in low return fixed income or in what looks like fully priced, relatively risky stock markets.

DJ: The Vision Fund is an anomaly today, since it's so much bigger than anything else that's out there. Nonetheless, it is finding investment targets and deploying money at a good clip. The reality is that it takes about four to six years to get an accurate read on a fund's trajectory, with the majority of funds fluctuating between performance quartiles in their first few years. To elaborate slightly on Steve's point and return to the basic premise of the question, historical expectations of return are less relevant to the future of large funds than are their relative performance compared to public equities. That's what investors will continue to base their private equity allocations on.

What are the advantages of investing in ever-larger funds versus investing in PE's traditional core, mid-sized funds and small funds?

IV: The biggest vehicles exhibit less volatility overall than small or mid-sized funds and are sponsored by GPs with particularly long-standing, deep track records that are relatively easy to analyze and judge. Those elements give a high degree of comfort to investors. Now if you're talking about relative advantages between the latest crop of record-sized funds and their predecessors, there are no intrinsic pluses or minuses that I see, though that may change as fund size evolves further. The real questions investors should be asking about fund size should be specific to each particular team. The goal should be to determine whether a particular fund group has the capacity to manage the assets they're targeting, whether the pool is big or small.

DJ: Yes, both big and small funds are beautiful, as Ingmar implies. Larger funds benefit from powerful brand names, global footprints, phenomenal banking relationships, low volatility, and infrastructures that attract top-tier managers and operating executives. There is a finite universe of these very large funds and their returns and loss ratios are highly clustered. At the smaller end of the market you get a much bigger dispersion of returns, but the potential for investment home runs is greater in this segment, as small portfolio companies can grow into much larger ones. If you're not a mammoth-sized LP, for whom small fund investing doesn't move the return needle, then the universe of hundreds of smaller funds is very attractive, provided you have the resources and experience to identify and invest with top quartile managers.

SK: Despite my skepticism concerning the ability of exceptionally large funds to outperform, a plus for the relative performance of big funds has been a broadly more competitive environment in the middle and lower market for acquisitions, where auction processes now dominate even for the sale of companies with just $5 million in annual cash flow. Small funds, though, are upping their game and bringing in many of the same techniques the large funds employ to increase operational performance. Time will tell if that pays off and if today's smaller funds prove more nimble at producing outperformance than the biggest funds. That said, as a practical matter, a preoccupation with relative size – as Ingmar and David noted – should not trump an investor's most important priority, analyzing each fund team's ability to manage its collective assets, whether big or small, within its chosen strategy.

Are there particular strategies where very large funds are likely to perform best?

DJ: The simple answer is yes. Large carve-outs of corporate divisions or big public to private deals are some obvious areas where large funds are often more suited to the task at hand than smaller funds. These kinds of complex deals require large reserves of operational partners and industry advisers to work on both due diligence and value creation. Deep operational expertise is a characteristic of very big funds. Complex or large-scale market consolidation or buy-and-build strategies are similarly resource intensive and suited to larger funds. Very large funds also have a real edge when it comes to hiring former industrial, governmental or regulatory experts to their teams, giving them both networking and branding advantages in particular industries and geographies.

SK: The largest funds today are highly diversified in terms of industries and geography – I'm not sure it makes sense to try to identify particular strategies in which they are likely to excel. But given the nature of economic cycles and the exceptional length of the current expansion, we're likely to see a downturn in the global economy at some point in the next two-to-four years. In that case, broad diversification and the exceptional size of the companies that these funds invest in may cushion against industry and country specific fallout.

> Large fund groups want to open PE to retail investors.
>
> *Steve Kaplan, Booth School of Business*

IV: Regarding Steve's point about resilience, I wouldn't dispute it, but I'll note that a key reason the groups that sponsor really big funds have been able to gather such exceptionally large investment pools is precisely because when they were much smaller they were able to come out of economic downturn with good returns and strong portfolio companies. Their track record of resilience when they were much smaller actually explains much of their growth today.

If fund sizes keep rising, what kind of fundamental change might that provoke?

SK: Some of the groups sponsoring large funds are looking to open up private equity investing to retail investors. One tailwind they have is the reduction in publicly traded companies, whose numbers have dwindled by half over the last 20 years, with stock markets increasingly dominated by tech companies. Some private companies also want to stay out of public markets – seemingly indefinitely. In the United States, where the private equity vanguard is, it's possible regulators and politicians will open up PE investing to retail investors and the holders of 401 (k) retirement accounts. Private companies could provide additional diversification for retail portfolios. Their holding periods also are well suited to long-term retirement accounts.

IV: One mechanical effect of ever-larger fund size will be an increasingly big, more liquid secondary market. The secondary market has grown in parallel with increasing fund sizes and there is a symbiotic relationship between the two. Bigger funds feed volume in the secondary market and the size of the stakes that are put up for sale. In turn, the ability to exit these large funds with increasing ease, thanks to secondaries, makes investors more comfortable investing in larger funds and private equity in general.

DJ: Considering the ever-growing size of funds, we are entering an era where the flagbearers in this industry – the biggest fund groups – have to ensure not just a lucrative internal rate of return for their investors, but must also spearhead a meaningful external rate of return for an extended list of stakeholders, a list that grows larger as PE funds grow bigger. Being signatories to initiatives like the United Nations' Principles of Responsible Investing, having a strong commitment to diversity, and establishing effective environmental, social and governance practices at portfolio companies is not only good for that growing list of stakeholders; it will also represent a growth catalyst for large private equity funds and for PE generally.

PRIVATE EQUITY BLOG

A round-up of issues and challenges for general partners and limited partners.

Historically elevated prices are here to stay

High acquisition prices are usually listed as the chief worry for investors, yet PE continues to produce excellent returns. We would argue that prices – currently at 9.5 times corporate cash flow, according to S&P Global Market Intelligence – have risen with the growing competence of fund managers to extract value through operational improvements. In fact, we agree with the assessment of Partners Group: "the era of [PE] investors being able to buy assets more cheaply than those in the public markets has come to an end" and "high valuations are a structural – not cyclical – shift in market dynamics.[1]" PE's absolute returns may decline with greater competition, but PE's superior corporate governance – less focused on the short-term metrics and control issues that formal codes and modes of behavior dictate at public companies – should keep returns well above those of stocks as valuation gaps shrink.

Most PE investments are now buy-and-build deals

By number, some 67 percent of global PE deals this year have been follow-on investments, representing a dramatic shift from the one-and-done deals that accounted for a majority of investments prior to 2014. The growing dominance of buy-and-build strategies is dictated by historically high pricing – another example of how PE has adapted to greater competition. Buy-and-build favors specialists who have the market knowledge to build platform companies in fragmented sectors like healthcare, and it plays to the strengths of diversified fund groups with the resources to hire large pools of operating partners (see our roundtable). Because it takes longer for buy-and-build investments to come to fruition, hold periods for portfolio companies will continue to lengthen, as will fund life.

> Specialists and large fund groups dominate buy-and-build.

Leverage up, but interest cover is healthy

Average leverage for buyouts in the first half of 2018 stands at 6.36 times cash flow, according to Thomson Reuters, the highest level since 2007 when leverage hit a 6.49 multiple. Despite the high, debt servicing costs average about 41 percent of cash flow – well below peaks hit during the last two global recessions. Moreover, data from S&P Global Market Intelligence and Wells Fargo Securities shows that more than 70 percent of leveraged loans have interest rate coverage equal to three times or more borrowers' cash flow. That's the highest percentage on record this century. Another element standing companies in good stead in the event of recession: 82 percent of loans tracked by S&P Global Market Intelligence are free of the restrictive covenants that can push companies into bankruptcy during hard times – up from just 20 percent in 2011.

As tail-ends dwindle, restructurings and secondaries will grow

Fund restructurings – the collective transfer of PE fund ownership from one group of investors to another – climbed to $6.5 billion, or 27 percent of secondary market volume, in the first six months of 2018, on pace for annual records. Accounting for only 5 percent of volume a decade ago, today's restructurings are fed in part by the fundraising bulge of 2005 to 2008. Indeed, the sale of tail-end funds – vintages from 10 or more years ago – is rising, as noted on page two. This year may prove the apex for the tail-end trend, given years of falling fundraising following the 2008 financial crisis. Yet restructuring and overall secondary market volume should keep growing, with investors using both collective and individual transfers as liquidity tools, particularly if prices, fed by record amounts earmarked for secondary investment, remain high on average; all the more likely as the supply of tail-ends falls.

U.S. tax reform benefits are not priced into secondaries

Hamilton Lane estimates that profitable private equity-owned U.S. companies will see their values climb between 3 percent and 17 percent over the next several quarters, with headline U.S. corporate tax rates falling this year to 21 percent from 35 percent, and capital spending now deductible up front. Secondary transactions, priced off of trailing net asset values, have been relatively unaffected so far by the rising valuations likely to come with tax reform. Going forward, the biggest value gains tied to tax reform for secondaries will be for funds with lots of unrealized value but little to no unspent capital.

[1] The Rise of "Governance Correctness", Partners Group, 2018

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