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2017 PREQIN GLOBAL PRIVATE EQUITY & VENTURE CAPITAL REPORT

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KEYNOTE ADDRESS
- Joseph Bae, **KKR**

Since launching in Asia over a decade ago, how has KKR's strategy evolved in the region?
Over the last 10 years, KKR has built a large regional footprint in Asia in a systematic and disciplined way. As a result, today we have one of the largest private equity platforms in Asia, with seven offices, more than 120 KKR executives and more than $10bn of capital deployed. In addition, 15 executives from KKR Capstone support our efforts. In fact, some of our best returns globally in private equity at the firm have come out of Asia.

While we have grown in size, our strategy has – at a high level – stayed the same: maintain highly localized teams that are fully integrated with our global platform. Asia is not one big market – it is a collection of different markets. By localizing our investment teams, executives can focus on unique origination channels in the local markets we want to do business in. At the same time, KKR's global network is critically important as it offers companies access to our operational capabilities, industry expertise and network of US or European contacts, all of which can help accelerate the growth of the local businesses we partner with.

In the next five years, do you see KKR's Asia strategy continuing to change?
We think there is an increasing advantage to having multiple pools of capital. To succeed in Asia long-term, it is not simply about how big your private equity fund is, but rather about the flexibility you have to partner with key entrepreneurs and stakeholders in the region. At KKR, we are fortunate to have many pools of flexible capital beyond private equity, whether through special situations, direct lending, real estate, or even our Firm's balance sheet. Our ability to take advantage of different investment opportunities up and down the capital structure will be a critical piece in how we continue to succeed in Asia.

Where are you seeing attractive risk/return opportunities in Asia in light of emerging market declines and the general concern about Asia's slowdown?
The current macro growth environment is very different from when we first entered the market in 2005. In certain emerging markets, like China, we are seeing a deceleration of growth and a slowdown in global trade overall. Given these headwinds, we are most inclined to buy complexity and sell simplicity.

Particularly in China, we want to invest behind opportunities where our differentiator is not our capital but rather our ability to provide a solution. For example, we have made multiple investments in Chinese agricultural companies that focus on food safety and security for everything from poultry to milk, beef to feed. As the government works to ensure the country's food safety practices keep pace with economic expansion, gaps in operations and quality control have led to a number of large, food-related incidents in the country, shaking consumers' confidence in the safety of their food. In the aftermath of such events, companies are looking for a partner who can add value and help them implement global best practices to emerge even stronger and safer than before. This is one way we have integrated Environmental, Social and Governance (ESG) principles into our investment process.

We also see unique opportunities in markets such as Japan, Korea and Australia where we believe we can create large-scale corporate carve-outs, taking our operational approach to investing and helping drive meaningful improvements at the companies we invest behind. In emerging markets such as India, we see a shift to more control-oriented opportunities and, therefore, do not focus on small minority growth deals. Instead, we are looking to invest in larger-scale opportunities which might be more complex operationally, but where we are able to provide a solution in addition to supplying capital.

Where do you see the best investment opportunities in Asia in terms of geography?
From a pipeline standpoint, one of our busiest markets today is Japan and there are a number of reasons for that. The country's focus on corporate governance, on corporate reform and the divestiture of non-core assets is creating significant opportunities for firms like us to partner with leading Japanese corporates and acquire non-core businesses to fundamentally reposition their growth trajectory. Our carve-out of Panasonic's healthcare business and its subsequent acquisition of Bayer's global diabetes care business is a prime example of this.

Japan is also interesting in that valuations on a relative basis are quite low in comparison to other mature markets, such as the US and Europe. The financing markets are among the most liquid in the world for Japanese banks and the potential for operational improvement is high. Finally, the competitive landscape within private equity is much more limited in the area given how difficult it is to penetrate the Japanese market. The combination of these factors – and the way KKR's franchise is uniquely positioned in the region – makes Japan an attractive geography for us.

And with regards to sector?
We continue to be attracted to sectors tied to domestic consumption in emerging markets. This includes longer-term trends around a rising middle class, urbanization, services and consumption, and means we are spending a lot of time in healthcare, food, consumer and financial services sectors. Nonetheless, a lot of those sectors today are overvalued, so we need to be quite disciplined about how we deploy capital into them. More recently, we have started investing in markets like Indonesia

– where we made our first two private equity investments this year – because we can get access to very significant domestic consumption trends at a much more interesting valuation than we can in markets like China and India.

Are you seeing more buyout and control deals across Asia-Pacific?
Absolutely. In markets like Korea and Japan, that has always been our core target deal. In India, there has been a meaningful shift in opportunity to do interesting control deals and we are hoping to see more buyout and control deals becoming available in China, especially given the succession issues entrepreneurs are facing in the region and the slowing growth environment.

We are seeing a record level of cross-border M&A activity from companies from markets such as China. What is driving this activity, and what opportunities are you seeing?
One of the distinct developments in the global M&A market over the last five years is the emergence of Asian strategic buyers. Of all cross-border M&A deals today, approximately 25% involve Chinese buyers and 11% involve Japanese buyers. So, over one-third of today's global M&A market is being dominated by Chinese and Japanese buyers. A big reason for this is the excess liquidity on-shore and companies' fundamental desire to gain access to technologies, customers and new channels of growth abroad. This is especially true in the manufacturing sector, where Chinese companies want to migrate to higher value-added manufacturing and away from commodity manufacturing.

This is an opportunity for global firms like ours that are integrated across the US, Europe and Asia. For example, in the last year we executed on transformational cross-border deals with two of our portfolio companies: Haier, which acquired GE's global home appliance business, and Panasonic Healthcare, which acquired Bayer's global diabetes care unit. These acquisitions repositioned the companies as dominant global businesses and helped fulfil a long-term strategic desire of the management teams to expand abroad. Being able to connect buyers and sellers from around the world has also been a big reason for our achieving of premium prices for assets we are selling out of our portfolio.

What is your approach to deal sourcing in Asia?
First and foremost, it is being positioned in the market as solutions providers, and not simply as financial investors. We want to be chosen as a partner in order to fundamentally help improve companies and grow businesses.

We have a highly localized approach to deal sourcing. Maintaining a deep local network of relationships and teams is a key element of how we source deals. In the last decade, the majority of what we have done in Asia has been on a proprietary basis, participating in very few secondaries and auctions. We also try to develop a specialized expertise in certain areas, such as food safety and specialty agriculture, to differentiate ourselves in terms of industry knowledge.

Valuations in Asia have only corrected to a moderate extent in light of market uncertainty. How do you source deals in this environment?
Equity markets have performed very differently in emerging markets over the last five years than they have in the US and Europe. While valuations in those regions are very high, Asia has been in a 72-month downturn in equities. This is mostly driven by concerns around a slowdown in China as well as weakness in foreign currency with the expectation that the US dollar will rise. We believe we are close to where we think the market is stabilizing in the emerging markets. Therefore, now is an interesting vintage for us to be more aggressive in deploying capital as we believe we are closer to the bottom of the cycle than the top.

With the low valuation environment in Asia today, how difficult has it been to monetize your investments at attractive prices?
In the last 10 years, we have invested \$10bn and returned over \$11bn back to our investors, with \$9bn being returned in the last five years alone. We have found that if you have a high-quality business in Asia that is growing, the exit will likely take care of itself, either through the IPO market or through a strategic sale of the business. The key is being nimble, flexible and ensuring you hit the windows for exit at the right time.

What are the main challenges heading into 2017 and what is your advice to navigate these?
Given the global political movement towards populism, I expect to see more volatility in addition to continued headwinds facing global trade. Another challenge would be the significant structural changes needing to take place in the Chinese markets to rebalance their economy. To navigate these properly, I would stress the need to be flexible, opportunistic and focused on the risk-reward you are looking to take in the marketplace. Investing across Asia today is not a simple bet. To succeed, you must have a very specific strategy in terms of how you are going to create value above and beyond what the macro market is doing.

KKR
Founded in 1976, KKR is a leading global investment firm that invests in multiple asset classes. In our private equity business, we invest our own capital alongside third-party capital through a group of private equity funds and co-investment vehicles, for long-term appreciation, generally through controlling ownership of a company or strategic minority positions. In our investments, we aim to grow and build long-term value, which we believe ultimately benefits our fund investors as well as the companies in which we invest, their employees, and the communities in which the companies operate.

JOSEPH BAE
Mr. Bae has been with KKR for over 20 years and is the Managing Partner of KKR Asia and the Global Head of KKR's Infrastructure and Energy Real Asset businesses. He is the Chairman of KKR's Asia Private Equity Investment Committee. He also serves as a member of KKR's Americas and European Private Equity Investment Committees and KKR's Energy, Infrastructure and Special Situations Investment Committees.

www.kkr.com

PRIVATE EQUITY: 2016 IN NUMBERS

THE INDUSTRY IS LARGER THAN EVER

$2.49tn
Private equity assets under management as of June 2016, an all-time high.

$820bn
Dry powder held by private equity funds as of December 2016, up from $755bn at the end of 2015.

ANOTHER ROBUST YEAR FOR FUNDRAISING

$347bn
Aggregate capital raised by 830 private equity funds closed in 2016.

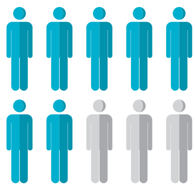
$10.8bn
Ardian raised the largest secondaries fund ever closed, Ardian Secondary Fund VII.

CAPITAL IS INCREASINGLY CONCENTRATED

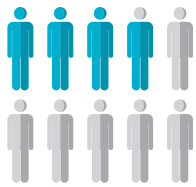
$471mn
Average size of private equity funds closed in 2016, an all-time high.

26%
of aggregate capital raised was secured by the 10 largest funds closed in 2016, up from 19% in 2014.

HIGH VALUATIONS ARE A CONCERN

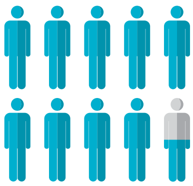


70%
of investors consider valuations to be one of the key issues facing the private equity industry.



38%
of fund managers believe that pricing for portfolio companies is higher than 12 months ago, compared to 19% that believe pricing is lower.

STRONG RETURNS AND DISTRIBUTIONS



95%
of investors believe that their private equity portfolios have met or exceeded performance expectations over the past 12 months, up from 81% in December 2011.

$257bn
Total capital distributions in H1 2016, following the record $472bn distributed in 2015.

LP APPETITE REMAINS HEALTHY

84%
of investors have a positive perception of private equity, the greatest proportion among alternative asset classes.

48%
of investors plan to increase their allocation to private equity over the long term, compared with only 6% that plan to decrease exposure.

PRIVATE EQUITY IN 2017

- Christopher Elvin, **Preqin**

2016 was another stellar year for private equity and the total AUM for the industry now stands at $2.49tn as of June 2016 (the latest data available), an all-time high. The question on many people's minds is 'how much longer will it continue?' While the reality is that only time will tell, private equity is well positioned for another strong year in 2017, despite continuing economic concerns and wider political volatility.

PRIVATE EQUITY CONTINUES TO DELIVER FOR INVESTORS

In the three years to June 2016, private equity investors have seen annualized returns of 16.4%, the highest among private capital strategies. As a result of this strong performance, investors have continued to see distributions significantly surpass capital calls: $257bn was distributed in the first half of 2016 compared with $129bn in capital calls – so a net cash flow of $128bn back to LPs. The trend of capital distributions surpassing capital calls is now in its sixth year, and it is the third year in which net cash flows to investors have been well in excess of $100bn.

Fifty-seven percent of institutional investors now have an allocation to private equity, and as a result of high distribution levels, investor satisfaction is at an all-time high – 95% of investors recently surveyed (see pages 85-87) stated that private equity had met or exceeded their expectations in the past year; 48% of respondents plan to increase their allocations to private equity over the long term, while a further 46% will maintain their allocations. Similarly, 49% of LPs are looking to invest the same amount of capital and 40% are looking to invest more capital in private equity in the next 12 months than they did during 2016.

A THRIVING FUNDRAISING ENVIRONMENT

Driven by LP demand and liquidity, 2016 was the fourth consecutive year in which private equity fundraising surpassed $300bn. However, there is a clear trend towards greater concentration of capital among fewer funds – 12% fewer funds closed in 2016 than in 2015, resulting in the average fund size increasing to $471mn, an all-time high. Private equity accounted for 57% of all private capital raised in 2016, up from 52% the previous year.

Perhaps the greatest indication of the liquidity LPs currently have, as a result of the wave of distributions they have received over the past few years, is the fact that 76% of private equity funds closed in 2016 met or exceeded their target size. This represents the largest proportion of funds meeting or exceeding their target size in any year over the period 2009-2016, with the proportion failing to meet their target decreasing from 63% in 2009 to 25% in 2016.

STILL A SELLER'S MARKET

While the volume of private equity backed buyouts in 2016 (3,986) is expected to surpass the record number of transactions seen in 2014 (4,006) as more data becomes available, aggregate deal value ($319bn) was 25% lower than in 2015 and reached the lowest level seen since 2013 ($313bn). Venture capital deal flow in 2016 saw the opposite trend: 9,719 deals were recorded during the year, the lowest number since 2013, but the aggregate value of deals reached $134bn, just behind the record amount achieved in 2015 ($140bn).

Fund managers are clearly finding it tough going due to the current high entry prices for assets. They are also clearly seeing more competition for assets: Preqin's latest survey found that 42% of fund managers feel that there is currently more competition for transactions, and 38% of respondents feel that pricing for portfolio companies is higher than it was 12 months ago.

Despite 2016 being the second consecutive year in which both buyout and venture capital exit activity has fallen (see pages 114 and 130), it is still very much a seller's market, and exit activity is higher than all years prior to 2013. Thirty percent of fund managers expect exit activity to increase in 2017, and a further 46% expect it to remain at current levels.

OUTLOOK FOR 2017

The private equity model is working and in a low interest rate environment the asset class will continue to appeal to investors looking for high absolute returns and portfolio diversification.

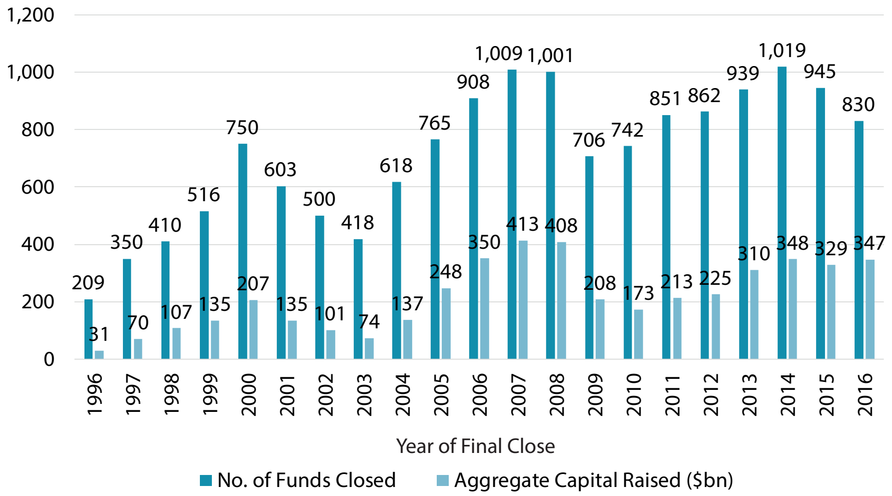
A record number of private equity funds are currently in market: 1,829 funds are seeking an aggregate $620bn. This will bring challenges, particularly for first-time and emerging markets managers, in competing for investor capital as well as in meeting the demands of an increasingly sophisticated investor community. However, with the majority of LPs sitting very liquid as a result of continuing distributions and looking to maintain, if not increase, their exposure to the asset class, fundraising has rarely looked so appealing.

A significant proportion of assets invested prior to the Global Financial Crisis (GFC) are yet to be realized, so should market conditions remain favourable it is likely that the fervent exit activity will continue in 2017. While pricing remains a very real concern, fund managers have record levels of capital available to them and our survey results indicate that many are looking to increase the amount of capital they deploy over the next 12 months.

2016 FUNDRAISING MARKET

An aggregate $347bn was raised by 830 private equity funds closed in 2016, marking the fourth consecutive year in which fundraising has surpassed $300bn (Fig. 4.1). This figure is likely to increase as more data becomes available, and the fundraising total for 2016 is expected to exceed the level seen in 2014 ($348bn), therefore representing the largest amount of capital raised since the GFC. Private equity accounted for 57% of all private capital raised in 2016, up from 52% the previous year. The increased demand has been supported by continued high net distributions (see page 26), which have caused LPs to reinvest capital back into private equity in order to maintain their allocations.

Fig. 4.1: Annual Global Private Equity Fundraising, 1996 - 2016



Source: Preqin Private Equity Online

Alongside the large sums of capital being invested through traditional fund structures, a substantial amount of capital is being invested via alternative structures such as co-investments and separate account mandates. Among LPs profiled on Preqin's **Private Equity Online**, 42% actively make co-investments and a further 12% are considering doing so; 30% make use of separate accounts, with 9% considering this route.

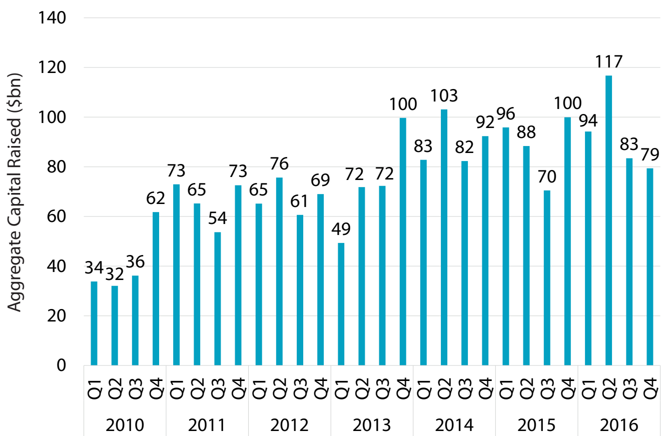
QUARTERLY FUNDRAISING

The flow of capital into private equity funds is presented in Fig. 4.2, which shows the capital raised each quarter via interim and final closes, highlighting the strong fundraising in recent quarters. The methodology to calculate this involves analyzing the capital raised for each close that takes place in each quarter; only fresh capital is counted, with capital that has been raised via previous closes held in an earlier quarter excluded. The second quarter of 2016 was a particularly successful period, with $117bn secured, the largest sum of capital raised in a single quarter since Q2 2008, when $137bn was raised.

CAPITAL CONCENTRATION

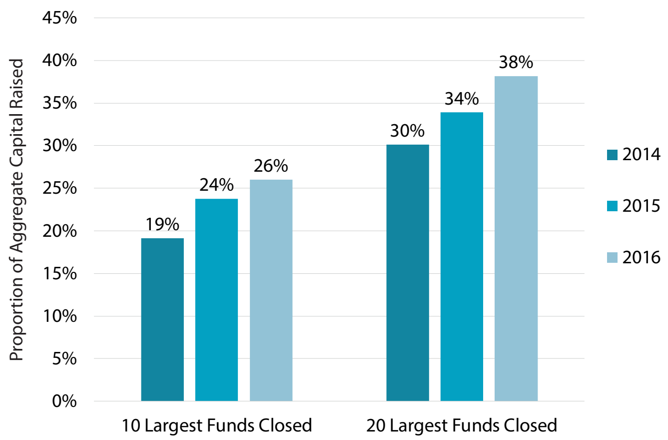
The trend towards greater concentration of capital among fewer funds continued in 2016: 12% fewer funds closed than in 2015, resulting in the average fund size increasing to $471mn, an all-time high. LPs appear to be investing more capital with a smaller number of proven and well-known GPs, with the largest funds accounting for a greater proportion of overall fundraising. The 10 largest private equity funds closed in 2014 accounted for 19% of overall fundraising for that year; in 2016, the figure is 26%. Similarly, the proportion of capital accounted for by

Fig. 4.2: Quarterly Global Private Equity Fundraising (Includes Final and Interim Closes), Q1 2010 - Q4 2016



Source: Preqin Private Equity Online

Fig. 4.3: Proportion of Aggregate Capital Raised by Largest Funds Closed, 2014 - 2016

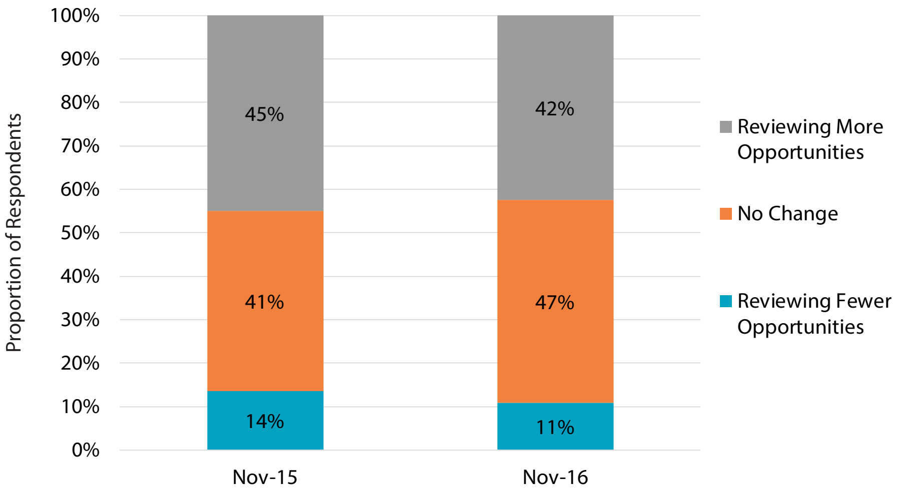


Source: Preqin Private Equity Online

private equity assets over 2016 (Fig. 5.4). Furthermore, GPs were asked about the level of competition in distinct parts of the market:

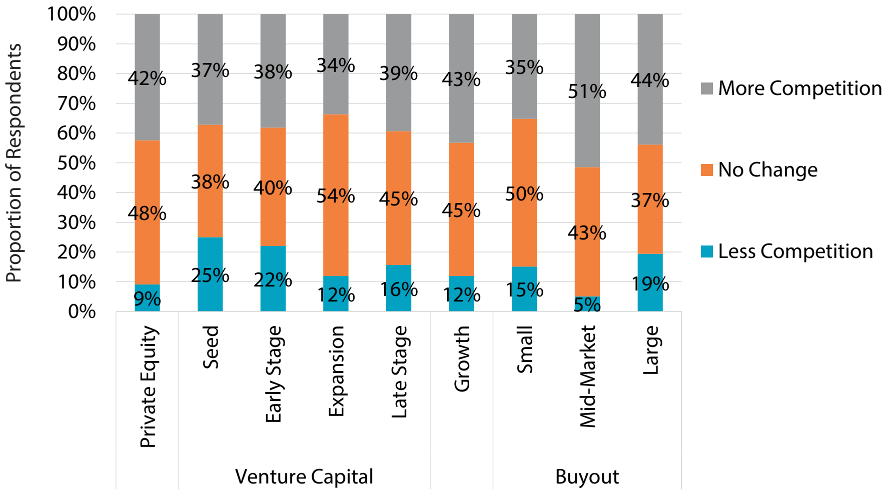
- **Venture Capital:** an average of 37% of surveyed GPs saw an increase in competition across all stages of venture capital investment over 2016, although the largest proportions across every stage had seen no change. Larger proportions of GPs are seeing less competition in earlier stages (seed: 25%; early stage: 22%), a reflection of the large pool of start-up companies these firms look to target.
- **Growth:** more GPs have observed increased competition for growth investments than for venture capital, making growth one of the most competitive markets in private equity; while 45% of respondents saw no change in competition over 2016, 43% witnessed more, behind only mid-market (51%) and large (44%) buyouts.
- **Buyout:** as expected, GPs face the most competition for mid-market opportunities, where surveyed investors see the best opportunities at present (see page 87). More than half of respondents active in the area saw an increase in competition for mid-market assets over 2016. Significant levels of capital secured by the largest private equity firms at the higher end of the market mean that competition for large buyout transactions has intensified.

Fig. 5.3: Fund Manager Views on the Number of Opportunities Reviewed per Investment Compared to 12 Months Ago



Source: Preqin Fund Manager Survey, November 2015 - November 2016

Fig. 5.4: Fund Manager Views on the Level of Competition for Transactions Compared to 12 Months Ago



Source: Preqin Fund Manager Survey, November 2016

The low interest rate environment has reduced the cost of borrowing for GPs: 85% of firms surveyed have seen the terms of debt financing for private equity investments remain the same or improve over 2016. Combined with greater levels of capital raised annually and record levels of dry powder available for investment (see pages 24-26), this has pushed valuations up: 38% of surveyed GPs have seen an increase in pricing over the past 12 months, with only 19% witnessing lower entry prices. This puts pressure on GPs that usually have three- to five-year investment periods before exiting investments. However, respondents are confident in the exit opportunities available in the year ahead: while the largest proportion believe exit activity will remain the same over 2017, more respondents predict exit activity will increase than decrease. Thirty-five percent of fund managers surveyed believe there will be greater activity in the venture capital exit market over 2017, compared with 24% that believe there will be less; for exits in the rest of the private equity market, 30% believe there will be more activity in the year ahead compared to 23% that believe there will be less.

MORE INVESTMENT IN THE YEAR AHEAD

Despite more than half of GPs stating that there has been no change in the level of difficulty in finding attractive opportunities over 2016, the majority of surveyed managers across all regions expect to increase the amount of capital they deploy in private equity assets over the next 12 months (Fig. 5.5). This includes more than a quarter of respondents based in each of North America and Europe,

FUND MANAGER VIEWS ON PRICING FOR PORTFOLIO COMPANIES COMPARED TO 12 MONTHS AGO

FIRST-TIME FUND MANAGERS

The private equity industry continues to grow as new entrants emerge and market their funds to investors. Strong investor appetite for the asset class as well as recent high distributions have encouraged LPs to invest large sums of capital back into the industry in order to meet their target allocations. Despite this demand, there are signs that the market is bifurcating, making it more difficult for emerging managers launching their first fund as many investors seek out established managers with a proven track record. Only 195 first-time funds closed in 2016, the lowest number of emerging funds closed since 2010, raising $25bn in aggregate capital (Fig. 5.11).

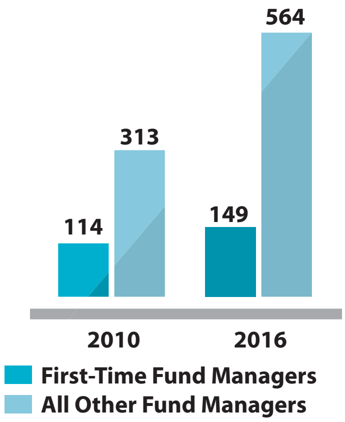
FUNDRAISING

The recent lower levels of first-time funds reaching a final close reflect a broader trend in which fundraising by emerging managers as a proportion of the total private equity industry has decreased. Where first-time funds made up 27% of funds closed in 2009, they represented 23% in 2016 (Fig. 5.12). Although the proportion of capital raised by emerging managers has varied, it has generally followed the same trend, with the 2016 proportion (7%) lower than that of 2009 (12%) and significantly below the recent peak of 20% in 2011.

Furthermore, there is a widening division between the average size of funds raised by first-time and established fund managers. Although historically experienced fund managers have on average been able to raise greater sums of capital than first-time managers, the difference has increased in recent years. The average size of a first-time fund closed in 2010 was $114mn, compared with $313mn for non-first-time funds; for funds closed in 2016 the first-time average has increased to $149mn, whereas the average size for established managers has jumped to $564mn.

There are other advantages to coming to market from an experienced position, as can be seen in the proportion of funds exceeding their target size. In 2016, 54% of closed non-first-time funds exceeded their target size, with 23% coming in under target; by comparison, only 35% of first-time funds exceeded their target size and 30% fell short. Additionally, the need to persuade investors of the benefits of a first-time fund and conduct the necessary due diligence means that first-time funds typically spend longer in market before reaching a final close: first-time funds closed in 2016 had spent an average of 15 months raising capital, compared to 14 months for their established peers.

AVERAGE FUND SIZE ($mn): 2010 vs. 2016

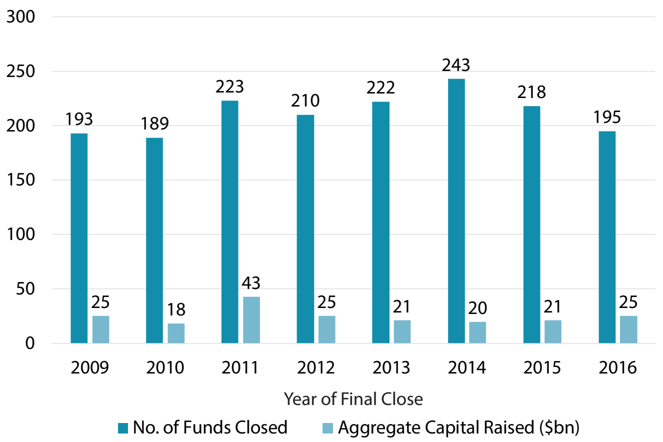


PERFORMANCE

Although emerging manager funds have generally found it more difficult to attract investor capital, they have tended to deliver better returns to investors. Fig. 5.13 shows that first-time funds have higher median net IRRs across most vintages since 2000, with a significant difference (of at least three percentage points) for 2000-2003 vintage and 2010-2012 vintage funds. The outperformance can be seen particularly in terms of quartile rankings: when compared to similar funds, 31% of first-time funds fall in the top quartile, with a further 23% in the second.

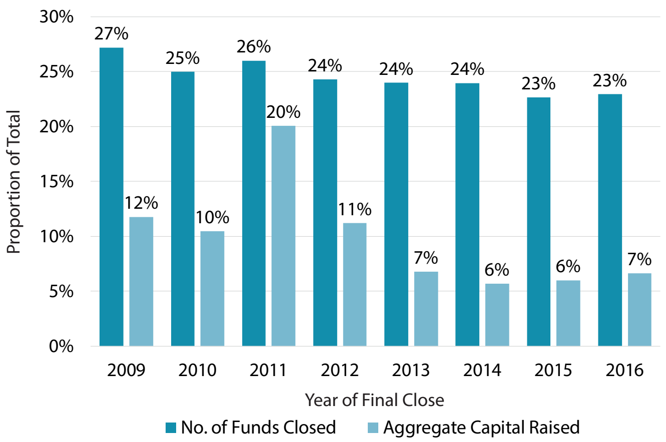
Fund selection remains important, however, as there are considerable

Fig. 5.11: Annual First-Time Private Equity Fundraising, 2009 - 2016



Source: Preqin Private Equity Online

Fig. 5.12: First-Time Fundraising as a Proportion of All Private Equity Fundraising, 2009 - 2016



Source: Preqin Private Equity Online

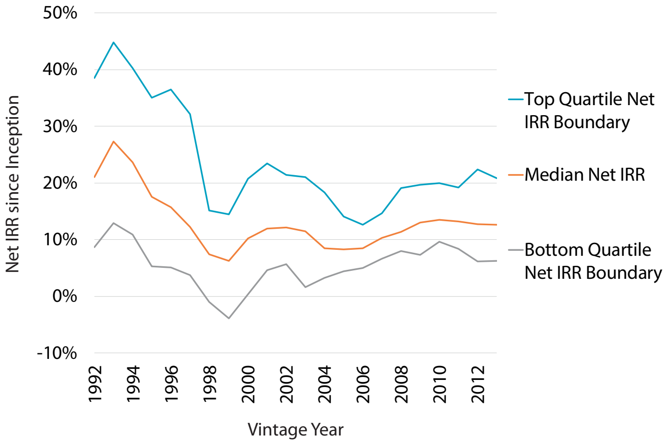
PRIVATE EQUITY PERFORMANCE BENCHMARKS

FUND STRATEGY: All Private Equity **GEOGRAPHIC FOCUS:** All Regions **AS AT:** 30 June 2016

Vintage	No. of Funds	Median Fund			Net Multiple Quartiles (X)			Net IRR Quartiles (%)			Net IRR Max/Min (%)	
		Called (%)	Dist (%) DPI	Value (%) RVPI	Q1	Median	Q3	Q1	Median	Q3	Max	Min
2016	74	9.1	0.0	92.8	1.00	0.93	0.84	n/m	n/m	n/m	n/m	n/m
2015	150	21.0	0.0	96.0	1.07	0.97	0.87	n/m	n/m	n/m	n/m	n/m
2014	154	40.9	0.0	98.7	1.20	1.04	0.95	n/m	n/m	n/m	n/m	n/m
2013	155	59.7	5.2	103.0	1.27	1.16	1.02	20.8	12.6	6.3	74.8	-38.2
2012	148	76.8	11.1	101.3	1.44	1.24	1.05	22.4	12.7	6.2	284.9	-33.6
2011	156	84.0	22.7	104.0	1.60	1.31	1.18	19.2	13.2	8.4	90.1	-32.4
2010	100	93.5	50.0	97.3	1.76	1.49	1.28	20.0	13.5	9.6	80.3	-27.1
2009	81	94.3	55.4	80.4	1.74	1.45	1.24	19.7	13.0	7.3	55.7	-14.4
2008	189	95.0	79.5	71.1	1.82	1.51	1.28	19.1	11.4	8.0	52.1	-31.2
2007	198	96.3	88.6	57.5	1.85	1.55	1.31	14.7	10.3	6.6	53.7	-34.0
2006	213	96.0	106.6	46.0	1.85	1.56	1.28	12.6	8.5	5.0	41.0	-25.1
2005	179	98.1	110.3	29.0	1.81	1.48	1.17	14.1	8.3	4.4	105.5	-22.9
2004	100	98.0	122.1	15.0	2.01	1.56	1.18	18.3	8.5	3.3	89.2	-79.2
2003	89	100.0	139.9	4.0	2.12	1.56	1.08	21.0	11.5	1.6	239.8	-49.9
2002	81	97.7	151.7	0.2	1.97	1.68	1.27	21.4	12.1	5.7	93.0	-47.2
2001	126	100.0	152.5	1.3	2.17	1.66	1.20	23.4	12.0	4.6	64.4	-25.1
2000	184	99.0	141.9	0.0	2.07	1.46	0.94	20.7	10.2	0.4	52.9	-96.0
1999	144	100.0	127.7	0.0	1.81	1.29	0.66	14.5	6.3	-3.9	154.7	-43.4
1998	152	100.0	137.7	0.0	1.84	1.39	0.90	15.1	7.4	-1.0	514.3	-100.0
1997	143	100.0	153.3	0.0	2.36	1.54	1.15	32.1	12.2	3.7	267.8	-30.0
1996	89	100.0	183.2	0.0	2.51	1.87	1.13	36.5	15.7	5.1	188.4	-33.3
1995	86	100.0	190.1	0.0	2.75	1.90	1.21	35.0	17.6	5.3	447.4	-22.0
1994	90	100.0	198.8	0.0	3.23	1.99	1.49	40.2	23.6	10.9	318.0	-22.6
1993	74	100.0	247.4	0.0	3.52	2.48	1.59	44.8	27.3	12.9	105.7	-29.1
1992	65	100.0	197.8	0.0	3.17	1.98	1.35	38.5	21.0	8.7	110.4	-49.9

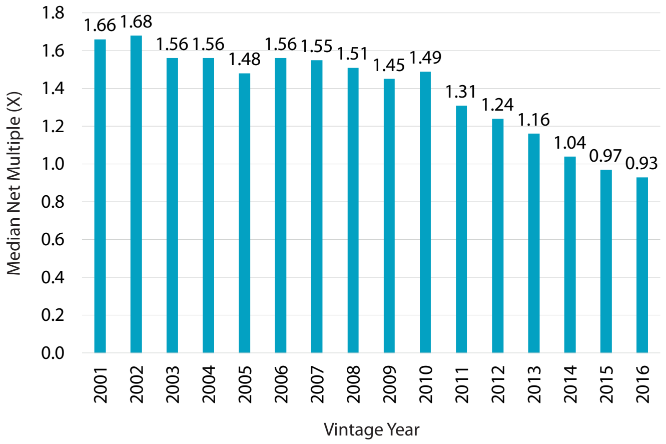
Source: Preqin Private Equity Online

Fig. 7.16: All Private Equity - All Regions: Median Net IRRs and Quartile Boundaries by Vintage Year (As at June 2016)



Source: Preqin Private Equity Online

Fig. 7.17: All Private Equity - All Regions: Median Net Multiples by Vintage Year (As at June 2016)



Source: Preqin Private Equity Online

fallen short of expectations over the past year, while only 16% feel that they have exceeded expectations.

There are signs that the continued strong performance of private equity funds may be making investors more ambitious in their return targets: the proportion of investors targeting returns of 4.1% or more above public markets has increased to 49%, up from 37% two years ago (Fig. 8.12). However, the figure remains down from the 63% of investors that targeted returns of this level in December 2011.

KEY ISSUES FACING INVESTORS

Going into 2017, valuations remain the greatest concern among institutional investors, cited by 70% of respondents (Fig. 8.13). With high company valuations, record levels of dry powder and stiff competition for assets, investors are increasingly concerned about the impact high pricing will have on returns in the future. The proportion of investors concerned about the exit environment is also significant and has jumped from 24% of investors at the end of 2015 to 51% in 2016.

Investors are also concerned about the pipeline of available portfolio companies: 41% see deal flow as a concern, up from 34% at the end of 2015. This may be related to investors' concerns about valuations, as it is becoming harder for GPs to find assets at attractive prices. Nevertheless, the degree to which investors are concerned about performance has lessened slightly compared to the end of 2015, from 40% to 33% in 2016, possibly due to strong returns over the past year.

Although there has been a long-running debate between investors and fund managers over the appropriate level and way to charge fund fees, these issues have attracted particular attention recently, with the SEC launching high-profile investigations of GPs that are believed to have given insufficient disclosure to investors about the fees they charge. This has resulted in many LPs now paying closer attention to their fee arrangements: the proportion of investors citing fees as one of the major issues facing the private equity industry has more than doubled from 19% in 2015 to 39%.

> ***"Forty percent of investors surveyed by Preqin intend to invest more capital in private equity over the next 12 months than in the last 12 months***

INVESTORS' INTENTIONS FOR THEIR PRIVATE EQUITY ALLOCATIONS

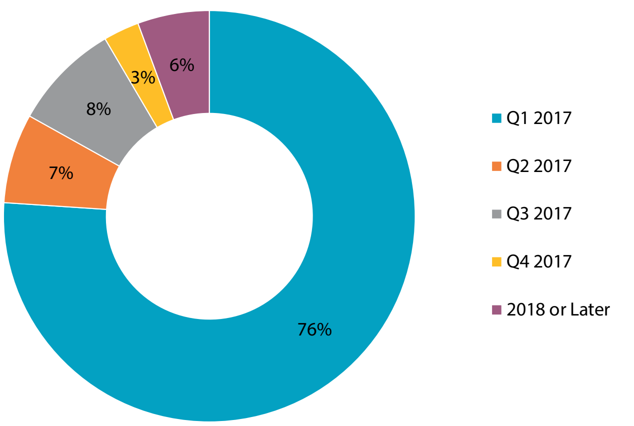
Despite these concerns, investors remain attracted to private equity and continue to plan further investment. Forty percent of investors surveyed by Preqin intend to invest more capital in private equity over the next 12 months than in the past 12 months, compared with only 11% that plan to invest less. When asked about their next commitment to the asset class, 76% stated that they plan to make their next commitment in Q1 2017, while a further 18% will do so later in the year; only 6% plan to wait until 2018 or later for their next commitment (Fig. 8.14).

Almost half (48%) of respondents plan to increase their allocations to private equity over the longer term, while a further 46% will maintain their allocations – these are some of the highest levels seen over the past six years (Fig. 8.15). With net distributions of capital from GPs to LPs over the past year, investors will need to reinvest considerable sums of capital back into the asset class in order to meet these targets. Finding a home for this capital may prove to be a challenge, as the most in-demand managers often find their funds oversubscribed: 45% of investors reported that it is harder to identify attractive investment opportunities in private equity compared to a year ago, while only 5% believe it is easier.

RE-UPS AND NEW RELATIONSHIPS

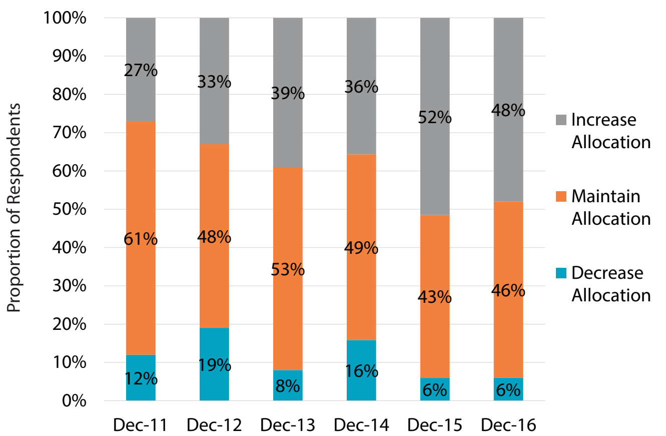
Although there has been some discussion of larger investors looking to reduce the number of managers in their portfolios in recent years, the significant sums of capital being allocated to private equity mean that a much larger proportion of investors are looking to increase the number of fund managers they work with. Forty-one percent of investors expect the number of fund managers in their portfolios to increase over the next two years,

Fig. 8.14: Timeframe for Investors' Next Intended Commitment to a Private Equity Fund



Source: Preqin Investor Interviews, December 2016

Fig. 8.15: Investors' Intentions for Their Private Equity Allocations over the Long Term, 2011 - 2016



Source: Preqin Investor Interviews, December 2011 - December 2016

LARGEST BUYOUT DEALS AND EXITS

Fig. 11.41: 10 Largest Private Equity-Backed Buyout Deals in 2016

Portfolio Company	Investment Type	Deal Date	Deal Size (mn)	Deal Status	Investor(s)	Bought from/ Exiting Company	Location	Industry
ADT Security Services, Inc.	Merger	Feb-16	15,000 USD	Completed	Apollo Global Management, Koch Equity Development LLC, Protection 1 / ASG Security**	-	US	Electronics
Supercell Oy	Buyout	Jun-16	8,600 USD	Announced	AVIC Capital, CITIC Capital, Pagoda Investment, Shanghai Pudong Development Bank, Sino-Rock Investment Management, Tencent**, Zheng Hong Capital	Softbank Capital	Finland	Gaming
MultiPlan, Inc.	Buyout	May-16	7,500 USD	Completed	GIC, Hellman & Friedman, Leonard Green & Partners	Ardian, Partners Group, Starr Investment Holdings	US	Healthcare IT
Team Health Holdings, Inc	Public-to-Private	Oct-16	6,100 USD	Announced	Blackstone Group	-	US	Healthcare
Cabela's Inc	Add-on	Oct-16	5,500 USD	Announced	Bass Pro Shops**, Goldman Sachs Merchant Banking Division, Pamplona Capital Management	-	US	Retail
Playtika Ltd	Buyout	Jul-16	4,400 USD	Announced	CDH Investments, China Minsheng Trust, China Oceanwide Holdings Group, Giant Interactive Group, Hony Capital, YF Capital	Caesars Entertainment Corporation	Israel	Gaming
Rackspace Hosting, Inc.	Public-to-Private	Aug-16	4,300 USD	Completed	Apollo Global Management**, Searchlight Capital Partners	-	US	IT
Ultimate Fighting Championship Ltd	Buyout	Jul-16	4,000 USD	Announced	KKR, MSD Capital, Silver Lake, William Morris Endeavor Entertainment, LLC**	-	US	Media
Vertiv	Buyout	Aug-16	4,000 USD	Completed	Platinum Equity**	Emerson	US	IT Infrastructure
Air Products' Performance Materials Operations	Add-on	May-16	3,800 USD	Announced	CVC Capital Partners, Evonik Industries AG**	Air Products & Chemicals	US	Chemicals

Source: Preqin Private Equity Online

Fig. 11.42: 10 Largest Private Equity-Backed Buyout Exits in 2016

Portfolio Company	Investment Date	Investment Type	Deal Size (mn)	Investor(s)	Exit Date	Exit Type	Exit Value (mn)	Acquiror (Exit)	Location	Industry
MultiPlan, Inc.*	Feb-14	Buyout	4,400 USD	Ardian, Partners Group**, Starr Investment Holdings**	May-16	Sale to GP	7,500 USD	GIC, Hellman & Friedman, Leonard Green & Partners	US	Healthcare IT
Hilton Worldwide*	Jul-07	Public-to-Private	26,000 USD	Blackstone Group**	Oct-16	Trade Sale	6,500 USD	HNA Group**	US	Leisure
Quirónsalud	Jan-11	Buyout	900 EUR	CVC Capital Partners**	Sep-16	Trade Sale	5,760 EUR	Fresenius Medical Care AG**	Spain	Healthcare
Capsugel	Apr-11	Buyout	2,375 USD	KKR**	Dec-16	Trade Sale	5,500 USD	Lonza Group Ltd**	US	Pharmaceuticals
Blue Coat Systems, Inc.	Mar-15	Buyout	2,400 USD	Bain Capital**	Jun-16	Trade Sale	4,650 USD	Symantec Corp**	US	IT Security
The Sun Products Corporation	Jul-08	Buyout	2,600 USD	Vestar Capital Partners	Jun-16	Trade Sale	3,600 USD	Henkel AG**	US	Consumer Products
Epicor Software	Apr-11	Public-to-Private	976 USD	Apax Partners**	Jul-16	Sale to GP	3,300 USD	KKR**	US	Software
Metaldyne Performance Group Inc.	Aug-14	Merger	-	American Securities, Grede Holdings LLC**, Hephaestus Holdings Inc.**, Metaldyne**	Nov-16	Merger	3,300 USD	American Axle & Manufacturing**	US	Manufacturing
Vogue International	Jan-14	Buyout	-	Carlyle Group**	Jun-16	Trade Sale	3,300 USD	Johnson & Johnson**	US	Manufacturing
BATS Global Markets, Inc.	Aug-13	Buyout	-	Spectrum Equity, TA Associates	Sep-16	Trade Sale	3,200 USD	CBOE Holdings, Inc.**	US	Financial Services

*Denotes a partial exit.
**Indicates lead investor(s)/acquiror(s).

Source: Preqin Private Equity Online

VENTURE CAPITAL DEALS

In 2016, 9,719 venture capital deals were announced globally, valued at a total of $134bn (Fig. 12.13). While this represents the lowest number of deals in any year since 2013, 2016 saw the second highest aggregate deal value on record.

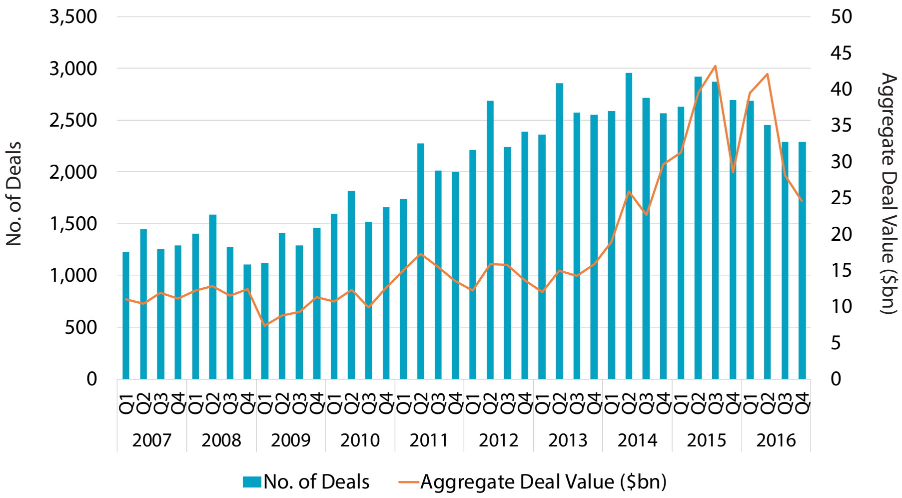
Key Findings:

- The rise in value was driven by a high number of $1bn+ transactions, including six of the top 10 largest deals in the period 2007-2016.
- High valuations have seen average deal size rise nearly 2.5x since 2013 for transactions at Series B and later stages (see pages 128-129).
- Q2 2016 had the second highest aggregate deal value of any single quarter at $42bn, trailing only Q3 2015 ($43bn).

2016 IN CONTEXT

2016 saw a 13% drop in the number of financings from 2015, reversing the upward trend of the previous six years. However, it is important to note that 2015 was a record year for venture capital deal activity with 11,115 financings, and aggregate deal value was only 6% lower in 2016 than in 2015.

Fig. 12.13: Number and Aggregate Value of Venture Capital Deals* Globally, Q1 2007 - Q4 2016



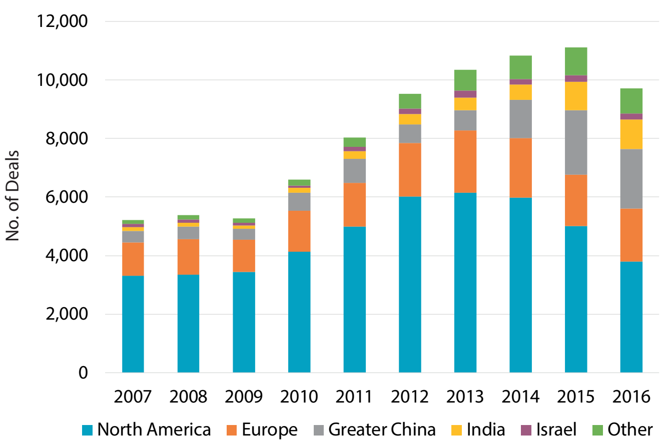
Source: Preqin Private Equity Online

CHINA'S EMERGENCE AND REGIONAL SHIFTS

2016 saw a continuation of the shift in venture capital activity from North America to Greater China, as shown in Figs. 12.14-12.18:

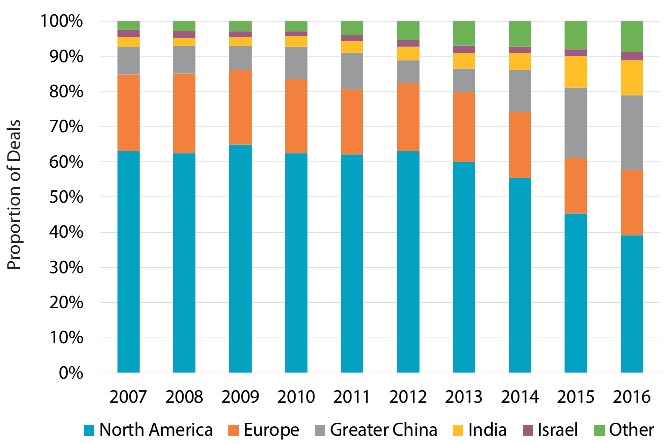
- The number of financings in North America in 2016 (3,793) was substantially lower than the previous year (5,013), causing the region's market share to decline by six percentage points over the period to 39%, substantially off its historical 62% average (2007-2014).
- While there were fewer financings in Greater China in 2016 than in 2015 (2,047 vs. 2,202 respectively), its share of the market increased for the fourth consecutive year to represent 21% of transactions, well above the historical average (8%, 2007-2014).
- Venture capital-backed financings in North America amounted to $61bn in 2016 (down 15% from 2015),

Fig. 12.14: Number of Venture Capital Deals* by Region, 2007 - 2016



Source: Preqin Private Equity Online

Fig. 12.15: Proportion of Number of Venture Capital Deals* by Region, 2007 - 2016



Source: Preqin Private Equity Online

**Figures exclude add-ons, grants, mergers, secondary stock purchases and venture debt.*

alternative assets. intelligent data.

2017 PREQIN GLOBAL HEDGE FUND REPORT

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HEDGE FUND IDENTITY CRISIS RESHAPES ASSET MANAGEMENT

- Basil Williams, **PAAMCO**

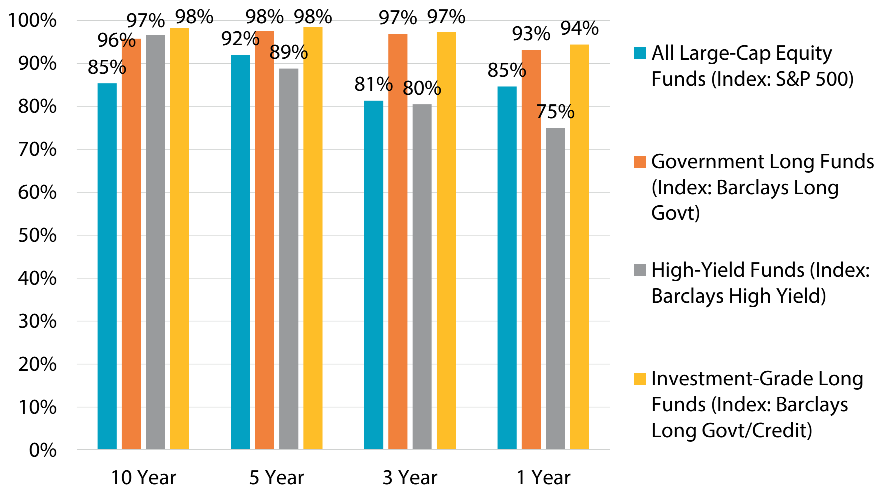
OVERVIEW

A paradigm shift within the asset management industry is at hand. Disappointing performance across both traditional and alternative investment approaches has opened the door for change. The barriers between traditional asset management and alternative asset management are rapidly blurring. New products that marry the investment goals of traditional active investment mandates with the trading strategies utilized by the best alternative managers are emerging, and institutional investors are taking notice. This innovative hybrid approach seeks to solve the return conundrum created by the low return environment brought on by years of easy monetary policy globally.

Active long-only asset management has performed poorly in recent years, rattling investors' confidence in their traditional investment approach. The growth of the hedge fund industry has 'stolen' some of the alpha once captured by active long-only managers. As a result, passive investments have taken significant market share from what was once an active-only world. Nonetheless, for most of 2016, hedge funds and funds of hedge funds have come into the spotlight as their value proposition of either better performance or diversified returns is being challenged. Many managers have failed to deliver the diversifying or 'alternative' performance that they had asserted was possible. In addition, clarity surrounding investment mandates, which is key to successfully measuring a manager's performance, is currently lacking within the industry, creating an identity crisis.

Along with these structural shifts, most institutional investors are failing to achieve their targeted investment returns, creating the opportunity for change. One promising innovation will be investment approaches that integrate hedge fund techniques into more traditional equity or fixed income mandates, thereby redefining the world of active investing. By utilizing investment strategies heretofore used only in the alternative arena, investment managers with the vision, skills and infrastructure to implement this multidisciplinary investment process will be in a position to attract market share from both the active and passive segments of traditional managers.

Percentage of Funds Outperformed by Benchmark



Source: S&P Dow Jones Indices LLC

BACKGROUND

Over the last two decades, a majority of active fixed income and equity managers have failed to beat their benchmarks. In the last 10 years alone, the S&P 500 outperformed 85% of all Large-Cap Equity funds, and that lead widens to over 92% in the last five years.[1] This index outperformance is even more substantial among fixed income funds where 96% of actively managed government long-only funds were outperformed by the Barclays Long Government Index over 10 years and 98% were outperformed in the last five years. For Investment-Grade Long Funds, even the best timeframe for active funds (one year) shows that 94% of funds were outperformed by the index, and for High Yield that same time period shows 75% of funds underperformed their index.[1]

Meanwhile, since the mid-90s, the hedge fund industry has grown rapidly, with AUM increasing by over $2tn. Institutional buyers of alternative strategies are generally looking to create a mixture of investment exposures that either diversify or leverage exposure to their traditional benchmarks. Historically, hedge fund investors have been pleased with the performance of their allocations, but recently many notable managers have seen performance decline, causing some investors to question their allocation to the asset class.

Part of the recent disappointment comes from an identity crisis created by a lack of specific goals for alternative allocations. There is uncertainty around whether or not strategies are supposed to diversify risk away from traditional asset classes, or if they should provide higher performance than these traditional funds. Managers that have diversified their portfolios are often criticized for failing to beat the market, while those that have sought higher returns are then faulted for not being diversified and losing money when the markets fall. Again, clarity in the mandate is essential to understanding whether or not value is being delivered.

We see an opportunity for those alternative investment managers that can successfully create orthogonal, as opposed to leveraged, returns. These managers can integrate their strategies with those of more traditional investment approaches. This allows for active hybrid strategies which have both the market-based exposures pursued by traditional managers in combination with highly diversifying exposures generally reserved for alternative investments.

OPPORTUNITY AND SOLUTION

One of the key opportunities available to those managers able to combine hedge fund strategies with more traditional asset management techniques is the vast difference in available investor dollars. Traditional investment mandates are much larger than alternative mandates: 85-90% versus 10-15% of total portfolio allocations. Given the performance challenges faced by traditional managers and the fee pressure on hedge fund managers, traditional and hedge fund investment approaches are converging, thereby developing active hybrid products. Using hedge fund technology to extract uncorrelated return and long-only traditional techniques to achieve market exposure, better-performing products should evolve. As these products develop, clients stand to benefit from better performance within their traditional mandates and alternative asset managers stand to benefit from more available assets to manage. Given the skillset needed to implement alternative trading strategies and track records which speak to alpha capture, a select subset of alternative managers are well positioned to design these products and compete for traditional asset management mandates.

The creation of such hybrid products will challenge the normal relationship between large allocators and hedge fund managers. The allocators will themselves become active managers and will think less about a hedge fund manager as one who manages a fund and more as someone who delivers specific types of risk and return exposures. Instead of gaining exposure to a fund, investors will aim to gain exposure to specific trading strategies, which can then be pieced together into a customized mandate.

In order to succeed, the hybrid investment approach must be similar in structure to institutional long-only mandates. Separate accounts for each client, rather than commingled funds, which have historically been the default structure for alternative approaches, will be the norm. Separate account structures allow for full ownership of the assets, thereby improving the transparency of individual positions and associated risks. Such structures also give investors the ability to create specific performance benchmarks and/or return profiles for their hybrid portfolios to best suit their needs. For example, hybrid accounts could be benchmarked to beat specific equity, credit or duration indices, or alternatively could be established with the goal of creating an asymmetric return profile to provide enhanced diversification. These new account structures will help managers and investors better define investment goals, creating a more natural alignment of interests and assessment of success.

FEES

Correctly pricing these hybrid investments is critical. Their pricing will naturally carry a higher management fee than a comparable, traditional long-only account, as the strategy implementation is more complex. This may likely be augmented by a performance fee tied to the level of outperformance relative to the mandate. Aligning the interests of the asset manager and the investor to achieve excess return over the benchmark is somewhat novel within the traditional asset management world, but is likely to become more common as investors seek higher returns, and managers that can deliver will want to get compensated based upon successful performance.

CONCLUSION

The goal of this new hybrid approach is to provide better solutions for investors than are offered today. The combination of the hedge fund skillset with long-only risk exposure should allow for improved investment returns and diversification. If executed successfully, such an investment approach could reduce underfunded pension status, provide a reserve against unexpected liabilities and can even allow for the creation of asymmetric return profiles.

Investors seeking innovative approaches to solve their return challenges should embrace this new active hybrid approach. It is a natural development following the low return environment of the past few years and helps in part to resolve the identity crisis surrounding alternative allocations of providing diversifying exposures or simply leveraged returns. Clearly there will be skeptics but also some early movers who are intrigued by the novelty of the approach and will want to be known as thought leaders among their peers.

PAAMCO

PAAMCO is a leading institutional investment firm dedicated to offering alternative investment solutions to the world's preeminent investors. Since its founding in 2000, PAAMCO has focused on investing on behalf of its clients while striving to raise the standard for industry-wide best practices. Headquartered in Irvine, California with a global footprint that extends across North America, South America, Europe and Asia, PAAMCO's clients include large public and private pension funds, sovereign wealth funds, foundations, endowments, insurance companies and financial institutions. The firm is known for its completeAlphaTM approach to hedge fund investing which focuses on delivering performance from early-stage opportunities, controlling costs, and protecting client assets. In addition, it offers long-only active equity investing in select emerging markets through PAAMCO Miren.

BASIL WILLIAMS

Basil Williams is a Managing Director and Co-Head of Portfolio Management. He is also leading the expansion of Horizons, a new division at PAAMCO that offers active fixed income solutions.

www.paamco.com

HEDGE FUNDS: 2016 IN NUMBERS

GROWTH IN ASSETS, NUMBER OF INVESTORS AND NUMBER OF FUNDS IN 2016

$3.22tn Hedge fund industry AUM has increased by $70bn since December 2015 to $3.22tn as of November 2016.

-$102bn Investors withdrew a net $102bn from hedge funds in 2016 (as at November 2016).

5,100+ More than 5,100 institutional investors allocate to hedge funds.

+25 funds 1,006 hedge funds launched in 2016; in contrast, 981 funds closed*.

PERFORMANCE IN 2016

7.40% 2016
2.03% 2015 The Preqin All-Strategies Hedge Fund benchmark returned 7.40% in 2016, over five percentage points higher than 2015.

56% of hedge funds reported positive returns in 2016.

66% of investors believe their performance expectations were not met in 2016.

41% of fund managers believe their performance objectives were not met in 2016.

OUTLOOK FOR 2017

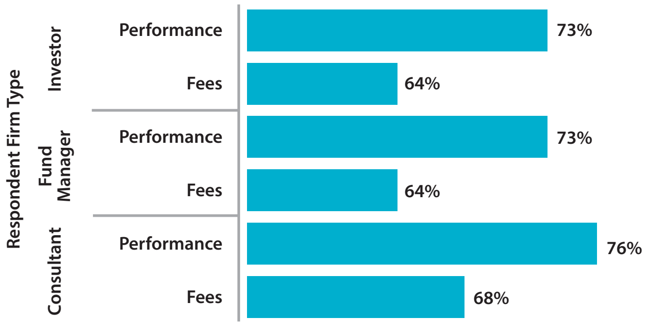
20%
38%
Fundraising will continue to be challenging in 2017; more institutions (38%) plan to invest less capital in hedge funds in the coming year than those that intend to invest more (20%).

37% of fund managers have plans for a new hedge fund launch in 2017.

The numbers of fund launches and liquidations in 2016 are likely to change as more data becomes available.

Investors, fund managers and consultants agree that performance and fees are the leading issues for hedge funds to address in 2017:

VIEWS ON THE KEY ISSUES FACING THE HEDGE FUND INDUSTRY IN 2017 BY FIRM TYPE



DESPITE IMPROVED PERFORMANCE IN 2016, INVESTORS REMAIN CAUTIOUS IN 2017

- Amy Bensted, **Preqin**

2016 could be characterized as a year in which the unexpected happened, with perhaps the Brexit result and Donald Trump's triumph in the US presidential election at the pinnacle of this series of largely unpredicted events. As markets struggled to respond to these surprising outcomes, volatility increased, and hedge funds, following two years of returns below 5%, were able to capture some upside, adding 7.40% over the course of 2016. However, despite hedge fund performance as a whole being well within the targeted range of most investors (see page 110), 2016 may well be remembered by hedge fund managers as a difficult year, with a net $102bn of investor capital being redeemed in the 11 months to November. Even the largest hedge funds were unable to survive the wave of redemption requests which swept through the industry in 2016. For instance, Perry Capital, which had assets of $15bn at its height, was forced to close up shop in September following significant investor withdrawals and poor performance.

It was, perhaps, the announcement of withdrawals from several of the largest investors in hedge funds – New Jersey State Investment Council, NYCERS and Metlife Insurance Company, to name a few – that characterized the reasons behind the wider redemptions in the industry. Many of these large institutions cited performance concerns and the high fees as the leading reasons driving their decisions to reduce their exposure to hedge funds. Our interviews with institutional investors in December 2016 revealed that the return expectations of two out of every three investors had not been met over 2016, and 73% and 64% of investors stated performance and fees respectively as the leading issue in the industry today, the largest proportions by some margin. So, to counter these concerns, 2017 may be a year for managers to continue to build on the solid returns of 2016 in order to demonstrate their worth in terms of performance, as well as to focus on the value they provide investors by re-evaluating the terms and conditions on their funds.

IT WASN'T ALL BAD NEWS IN 2016

However, looking beyond the headline figures, there are some bright spots. Firstly, the industry as a whole grew as a result of performance gains made in 2016. Today, collectively, hedge funds manage assets in excess of $3.2tn – the highest on record. Managed futures had a successful 2016 in regards to fundraising. CTAs built on the $25bn they raised in 2015, and added a further $17bn in fresh capital in 2016, taking the size of the CTA sector to $240bn. In addition, many investors continued to make new investments, or began investing in hedge funds for the first time. Among these was National Pension Service of South Korea, which made its first investment in hedge funds in July 2016, investing over $900mn in the asset class.

OUTFLOWS LOOK LIKELY TO CONTINUE

The fundraising challenges of 2016, however, show little sign of abating in 2017. Outflows accelerated throughout 2016, with the largest levels of investor redemptions made in the final quarter of the year (to 30 November, page 48). In our December 2015 interviews with investors, Preqin noted for the first time that more investors planned to reduce their exposure to hedge funds in the next 12 months than increase (32% versus 25%). Our December 2016 interviews (page 112) indicate that we may see continued outflows over 2017. Nearly twice the proportion of investors (38%) plan to reduce their exposure in 2017 than intend to increase (20%), a concern for managers as both retaining capital and fundraising is likely to continue to be a challenge over 2017. However, despite being squeezed on fees, fund managers are seeking to invest more in their marketing, business development and investor relations capabilities in order to combat these difficulties, which they face in retaining capital and gaining fresh inflows (page 63).

ALTERNATIVE ASSET INTELLIGENCE MAY BE MORE IMPORTANT THAN EVER

As markets respond to the unexpected events of 2016, the ramifications of which are far from clear, 2017 could be a time for hedge funds to show their worth to investors if they can continue to build on the solid returns of 2016. Undeniably, many investors have grown cautious when it comes to investing in hedge funds, with a growing proportion looking to cut back on their investments in the near future. However, despite short-term concerns around performance, hedge funds have proved their worth in institutional investors' portfolios on a risk-adjusted basis over the long term (page 34). However, with 14,500 funds open to investment, it is more challenging than ever to find the right fund in terms of strategy, performance and fees. Therefore, intelligence that can help investors cut through the noise and find the funds that meet their needs may be the first step for institutions in creating portfolios of funds that can help them meet their long-term objectives.

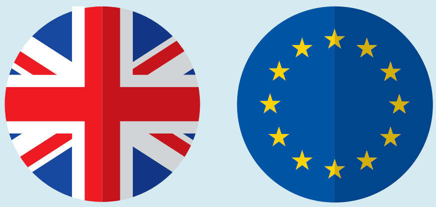
The industry is in a period of change. Investor pressure on performance and fees has grown and there have been large-scale redemptions from hedge funds. In addition, the gap between new fund launches and fund liquidations has narrowed to just 25. If outflows continue in 2017, we may continue to see a shake-out of those funds that have failed to meet investors' return expectations in recent years and a contraction in the size of the industry. Data and intelligence can help fund managers navigate these challenging times, not only in finding those investors looking to allocate fresh capital to hedge funds, but also in understanding the plans and needs of the institutions that currently invest in their funds. In a competitive marketplace, having intelligence on your peers – how are they performing, what fees they charge and who is invested in those funds – may also help managers set themselves apart in 2017.

IN FOCUS: BREXIT

At various points throughout 2016, Preqin surveyed over 500 hedge fund managers and 300 institutional investors active in hedge funds to gauge the impact of the UK's referendum of EU membership on the hedge fund industry. In Preqin's survey before the referendum, 71% of fund managers believed that Britain would vote to stay in the EU; however, this prediction proved incorrect, with 52% of voters backing Brexit. Using the results of these surveys, as well as data from Preqin's **Hedge Fund Online**, we analyze the changing sentiment of the hedge fund industry towards the Brexit vote and how the performance of hedge funds has been affected.

593
of 953 EU-based hedge fund managers are headquartered in the UK.

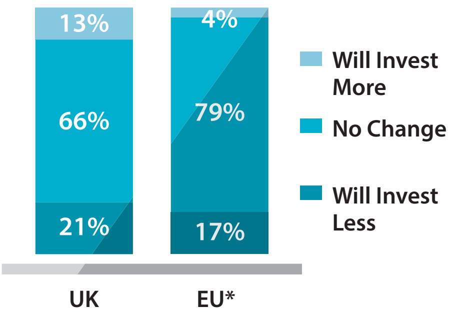
SIZE OF HEDGE FUND INDUSTRIES:



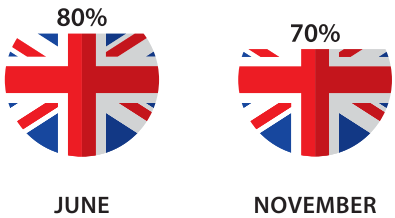
UK	EU*
$466bn	€128bn

409
of 758 EU-based institutional investors in hedge funds are headquartered in the UK.

Investor views on the impact of Brexit on their hedge fund investments in the UK vs. EU* over the next 12 months:

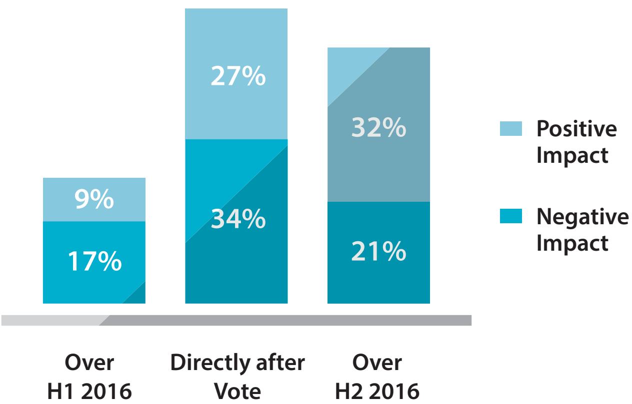


UK-based hedge fund managers that have no plans to move their business operations out of UK:

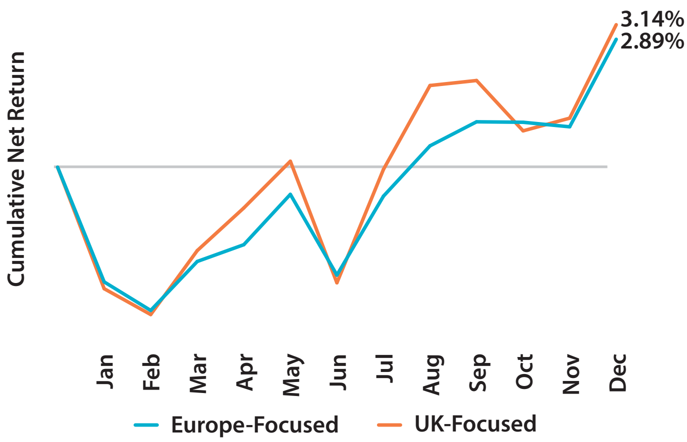


> ***The main impact of Brexit will be to increase volatility which could be either positive or negative. It will require us to be very tight on risk management***
>
> *– Hong Kong-based fund manager*

Hedge fund manager views on the impact of Brexit on performance:



Cumulative returns of UK- and Europe-focused hedge funds in 2016:



*Excluding UK.

PERFORMANCE BENCHMARKS

Fig. 4.1: Summary of Performance Benchmarks, As at December 2016 (Net Returns, %)*

	2016	2015	2014	2-Year Annualized	3-Year Annualized	5-Year Annualized	3-Year Volatility	5-Year Volatility
Hedge Funds	7.40	2.03	4.99	4.74	4.83	7.47	4.01	4.15
HF - Equity Strategies	6.65	1.13	5.44	3.92	4.43	7.86	5.87	5.94
ES - Long/Short Equity	5.49	2.33	4.68	4.00	4.27	7.43	5.19	5.20
ES - Long Bias	9.77	-2.65	6.32	3.38	4.21	9.01	8.70	8.98
ES - Value-Oriented	10.78	-1.09	15.39	4.61	8.13	12.11	8.20	8.03
ES - Sector-Focused	4.94	0.14	8.88	2.52	4.49	7.14	8.57	7.72
ES - North America	10.05	0.14	6.60	4.99	5.55	9.65	6.69	6.41
ES - Europe	-0.12	8.49	2.73	4.16	3.68	7.09	5.16	5.22
ES - Asia-Pacific	0.16	7.87	7.79	4.03	5.31	9.14	7.94	7.72
ES - Emerging Markets	8.62	-0.88	5.87	3.77	4.29	7.21	7.43	7.60
ES - Developed Markets	5.56	5.42	9.08	5.23	6.31	11.87	6.92	7.15
HF - Macro Strategies	7.09	3.26	4.70	5.15	4.99	5.53	2.43	2.51
MS - Macro	7.42	5.03	6.68	6.22	6.37	6.85	2.70	2.67
MS - Commodities	16.57	-7.51	-3.76	3.81	1.22	0.00	6.52	6.78
MS - Foreign Exchange	4.78	1.71	-3.57	3.38	0.70	1.60	3.55	3.31
HF - Event Driven Strategies	12.47	-0.78	2.65	5.74	4.71	8.38	4.76	4.79
ED - Event Driven	12.10	-0.28	3.37	5.89	5.09	9.19	5.11	5.13
ED - Distressed	15.60	-6.42	-1.22	4.26	2.40	7.50	5.47	5.26
ED - Special Situations	16.87	0.00	1.07	8.15	5.74	8.52	5.66	5.63
ED - Risk/Merger Arbitrage	8.54	6.04	3.01	7.28	5.84	5.70	2.46	2.50
HF - Credit Strategies	8.50	2.20	5.98	5.29	5.41	8.16	2.31	2.45
CS - Long/Short Credit	8.26	-0.58	3.12	3.89	3.62	6.73	2.77	2.84
CS - Fixed Income	9.11	2.43	4.87	5.83	5.56	7.02	2.30	2.38
CS - Mortgage-Backed Strategies	7.20	3.97	10.91	5.57	7.25	11.16	2.42	2.79
CS - Asset-Backed Lending Strategies	7.71	7.67	9.99	6.88	7.83	11.19	1.29	1.93
HF - Relative Value Strategies	4.74	5.65	4.87	5.21	5.28	6.78	1.76	1.76
RV - Equity Market Neutral	1.67	7.33	3.63	4.58	4.28	5.73	1.98	1.86
RV - Fixed Income Arbitrage	6.23	2.30	5.78	4.40	4.89	5.47	2.05	2.07
RV - Relative Value Arbitrage	7.85	7.50	6.58	7.02	7.61	9.86	2.55	2.42
RV - Statistical Arbitrage	3.10	4.91	5.43	4.21	4.50	5.62	1.77	2.34
RV - Convertible Arbitrage	7.76	4.42	5.10	6.38	5.48	8.12	3.62	4.06
RV - North America	6.80	5.14	7.20	6.13	6.94	7.52	2.31	1.95
RV - Europe	4.66	1.40	2.35	3.86	3.97	5.00	2.07	1.99
RV - Asia-Pacific	2.11	8.81	3.44	4.40	3.89	6.04	2.12	2.58
RV - Developed Markets	5.03	5.56	7.48	5.21	5.70	6.81	1.90	1.77
HF - Multi-Strategy	7.04	2.97	4.71	5.15	5.05	6.50	2.82	3.01
HF - Niche Strategies								
NS - Insurance-Linked Strategies	5.06	4.72	7.18	4.21	5.50	6.78	1.02	1.11
NS - Niche	11.29	6.81	1.87	9.03	6.59	10.30	3.79	4.79
HF - Trading Styles								
Activist	10.47	3.18	6.32	6.92	6.76	9.95	5.62	6.02
Volatility	8.02	6.81	5.47	6.99	6.41	7.29	2.31	2.16
Discretionary	7.51	2.51	5.16	4.98	5.06	8.87	4.39	4.63
Systematic	4.44	5.46	6.58	5.03	5.51	6.43	2.71	2.63
HF - North America	10.20	0.45	6.55	5.22	5.68	9.17	5.06	4.86
HF - Europe	2.89	5.94	2.85	4.45	3.93	6.96	3.79	3.98
HF - Asia-Pacific	1.68	7.36	6.94	4.45	5.27	8.66	6.37	6.32
HF - Emerging Markets	9.96	2.42	4.74	6.19	5.61	7.47	5.19	5.43
EM - Asia	2.60	2.02	19.59	2.31	7.77	9.72	10.04	10.30
EM - Latin America	20.15	1.74	1.73	10.84	7.82	8.03	5.87	5.22
EM - Africa	0.63	7.78	8.63	4.16	5.63	10.23	3.94	4.02
EM - Russia & Eastern Europe	15.92	1.63	-23.54	7.46	-4.16	-0.72	11.58	11.64
HF - Developed Markets	7.69	4.05	8.06	5.82	6.53	8.84	3.05	3.22
HF - USD	7.22	0.65	4.56	3.93	4.13	7.21	4.41	4.58

	2016	2015	2014	2-Year Annualized	3-Year Annualized	5-Year Annualized	3-Year Volatility	5-Year Volatility
HF - EUR	0.98	2.36	1.29	1.74	1.62	4.13	3.07	3.26
HF - GBP	2.93	2.06	-0.52	2.48	1.45	2.78	2.46	2.72
HF - CHF	-0.64	1.94	2.22	0.72	1.28	4.41	3.58	3.84
HF - JPY	2.36	7.57	6.10	4.83	5.25	10.49	4.52	6.15
HF - BRL	20.22	7.81	6.29	14.02	11.45	10.88	4.25	3.68
HF - AUD	5.00	8.99	6.44	6.83	6.73	10.21	5.37	5.26
HF - CAD	9.22	2.30	5.99	5.71	5.80	6.01	4.71	4.53
HF - ZAR	3.10	14.79	12.47	8.47	9.90	12.64	4.17	3.73
HF - Emerging (Less than $100mn)	8.18	1.74	3.79	4.93	4.58	6.99	4.17	4.40
HF - Small ($100-499mn)	6.40	2.42	4.91	4.42	4.51	7.37	4.03	4.09
HF - Medium ($500-999mn)	5.53	2.76	3.68	4.17	4.12	6.82	3.48	3.64
HF - Large ($1bn or More)	4.63	1.99	6.32	3.54	4.55	7.81	3.25	3.74
Funds of Hedge Funds	**-0.25**	**1.05**	**3.99**	**0.39**	**1.58**	**4.35**	**3.25**	**3.58**
FOHF - Equity Strategies	-0.52	1.42	3.96	0.47	1.62	4.66	4.97	4.75
FOHF - Macro Strategies	1.45	-0.99	4.53	0.33	1.77	1.01	2.77	2.81
FOHF - Event Driven Strategies	3.78	-2.27	0.67	0.30	0.21	3.36	4.63	4.26
FOHF - Credit Strategies	1.34	0.63	12.89	0.45	1.62	3.58	2.72	2.68
FOHF - Relative Value Strategies	-0.78	1.41	1.52	0.27	0.76	2.54	2.10	2.06
FOHF - Multi-Strategy	-0.33	1.13	3.93	0.37	1.55	4.74	2.96	3.96
FOHF - Funds of CTAs	-3.92	-5.43	16.32	-4.87	1.70	-0.72	10.82	9.67
FOHF - North America	1.70	-0.38	5.36	0.62	2.19	5.46	4.39	4.05
FOHF - Europe	-0.28	4.34	4.12	0.92	1.49	3.35	3.24	3.11
FOHF - Asia-Pacific	-1.50	5.25	4.50	1.82	2.70	5.40	5.57	5.30
FOHF - Emerging Markets	0.87	5.29	7.57	1.94	2.96	4.73	3.57	3.49
FOHF - USD	0.38	0.16	3.10	0.28	1.24	4.54	3.48	4.24
FOHF - EUR	-2.83	0.77	1.98	-1.06	-0.02	2.05	3.35	3.26
CTAs	**0.91**	**0.15**	**10.86**	**0.75**	**3.92**	**3.57**	**4.99**	**4.57**
CTA - Discretionary	6.08	1.81	-0.64	3.76	2.37	4.63	4.18	3.95
CTA - Systematic	-0.54	-1.43	12.98	-0.73	3.54	2.74	5.97	5.70
CTA - Trend Following	-0.77	-1.15	15.00	-0.96	4.10	3.13	6.96	6.40
CTA - Macro	1.36	2.59	11.99	1.97	5.21	4.20	4.68	4.43
CTA - Counter Trend	0.54	1.87	8.37	1.20	3.54	2.81	4.74	4.58
CTA - Pattern Recognition	3.84	1.76	11.97	2.80	5.77	4.62	5.00	4.63
CTA - Arbitrage	-0.06	0.99	8.62	0.47	3.11	5.27	2.97	3.09
CTA - Option Writing	5.01	6.83	-0.76	5.92	3.64	4.87	6.09	5.69
CTA - North America	4.17	3.38	10.95	3.76	6.11	5.62	4.02	3.76
CTA - Developed Markets	-3.18	-4.16	8.01	-3.48	0.07	0.95	6.09	6.62
CTA - USD	0.74	-0.36	10.80	0.40	3.64	3.38	5.08	4.70
CTA - EUR	-3.91	3.20	12.76	-0.32	3.83	1.82	6.84	6.51
Alternative Mutual Funds	**2.71**	**-2.86**	**3.07**	**-0.07**	**1.00**	**3.93**	**3.78**	**4.05**
AMF - Equity Strategies	1.87	-1.19	5.81	0.47	2.28	6.21	5.33	5.50
AMF - Macro Strategies	1.43	-7.75	-2.18	-3.34	-3.18	n/a	3.54	n/a
AMF - Event Driven Strategies	5.67	-3.66	-0.66	0.90	0.38	2.85	3.84	3.64
AMF - Credit Strategies	4.08	-3.15	1.48	0.27	0.62	2.65	2.51	2.65
AMF - Relative Value Strategies	-0.96	-0.02	0.32	-0.49	-0.22	n/a	2.76	n/a
AMF - Multi-Strategy	4.75	-4.71	3.65	0.02	1.42	3.75	5.10	5.16
AMF - North America	3.58	-3.76	5.24	-0.03	1.64	5.66	5.24	5.38
UCITS Hedge Funds	**1.05**	**1.10**	**2.36**	**1.08**	**1.53**	**3.53**	**3.53**	**3.57**
UCITS - Equity Strategies	0.42	1.98	2.81	1.23	1.85	5.23	5.02	5.24
UCITS - Macro Strategies	1.86	-0.80	2.70	0.46	1.19	1.60	3.26	3.38
UCITS - Event Driven Strategies	-1.06	0.45	0.25	-0.44	-0.11	1.44	3.19	3.06
UCITS - Credit Strategies	3.43	-0.49	2.69	1.57	1.99	3.84	2.96	2.83
UCITS - Relative Value Strategies	0.16	1.78	0.59	0.97	0.84	1.85	1.84	1.70
UCITS - Multi-Strategy	2.28	1.26	4.41	1.76	2.12	3.26	3.03	3.30
UCITS - Europe	-0.89	5.54	2.87	2.29	2.51	5.09	3.74	3.69
UCITS - Asia-Pacific	0.65	1.32	2.74	1.08	1.88	5.06	6.51	6.28
UCITS - Emerging Markets	5.07	-5.56	0.26	-0.42	-0.04	3.35	8.65	8.34
UCITS - Developed Markets	-0.13	0.42	0.72	0.28	0.56	1.52	2.73	2.40
UCITS - USD	0.71	-0.93	0.75	-0.02	0.27	3.09	4.16	4.42
UCITS - EUR	0.44	2.13	2.52	1.22	1.68	3.51	3.47	3.43
UCITS - GBP	2.23	1.30	2.29	1.71	1.80	3.94	3.19	3.43
UCITS - CHF	-1.48	1.17	3.05	-0.14	0.90	2.63	3.41	3.70

Source: Preqin Hedge Fund Online

**Please note, all performance information includes preliminary data for December 2016 based on net returns reported to Preqin in early January 2017. Although stated trends and comparisons are not expected to alter significantly, final benchmark values are subject to change.*

ASSET FLOWS IN 2016

	MACRO STRATEGIES	EQUITY STRATEGIES	MULTI-STRATEGY	RELATIVE VALUE STRATEGIES
Industry Assets by Strategy	$955bn	$822bn	$425bn	$341bn
Change over 2016	▲ 3.9%	▲ 1.8%	▼ 1.4%	▼ 0.9%

Preqin's **Hedge Fund Online** database holds performance and asset data for over 15,000 hedge funds. Using this extensive coverage, Preqin is able generate estimates of the capital flowing in and out of the industry, and determine which strategies and regions have seen net growth or a decline in assets over the course of 2016 as at 30 November 2016.

NEGATIVE FLOWS, POSITIVE PERFORMANCE

Following a year of strong inflows in 2015, the industry saw net outflows of $102bn in 2016 (Fig. 5.1), with 54% of hedge funds recording net outflows over the course of the year as performance and fee concerns saw some investors pull capital from hedge fund portfolios. Credit and equity strategies recorded the largest net outflows over the year; however, the total assets of equity strategies funds increased by 1.8% over 2016, driven by an annual net return of 6.65%. Investor sentiment towards CTAs, however, is strikingly different to that of hedge funds: CTAs have attracted $17bn in new capital in 2016 as investors look for sources of uncorrelated returns.

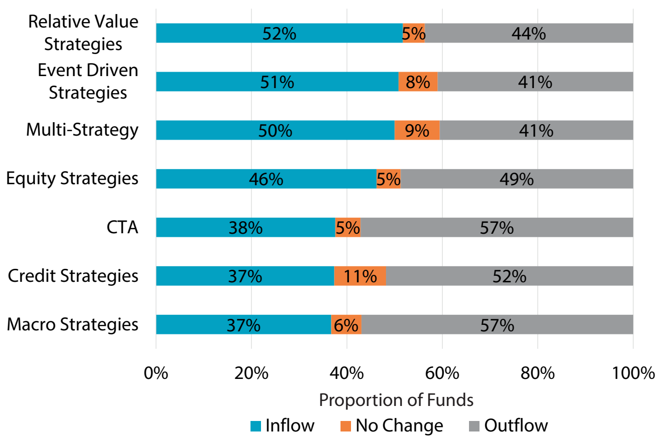
Despite the majority of hedge fund strategies recording net investor

Fig. 5.1: Hedge Fund Asset Flows by Core Strategy

Strategy	2015 ($bn)	Q1 2016 ($bn)	Q2 2016 ($bn)	Q3 2016 ($bn)	Q4 2016 ($bn)*	2016 ($bn)
CTA	24.6	13.7	2.9	10.5	-10.4	16.7
Event Driven Strategies	-1.8	-2.8	3.4	-0.6	3.5	3.6
Niche Strategies	1.3	-1.5	-0.2	0.3	0.3	-1.0
Multi-Strategy	27.5	12.8	-1.6	-25.0	-2.8	-16.5
Macro Strategies	-25.8	-6.4	-4.9	-1.2	-4.4	-16.9
Relative Value Strategies	-18.8	-8.7	10.4	-16.4	-7.2	-21.8
Credit Strategies	4.2	-11.9	-14.3	2.0	1.5	-22.7
Equity Strategies	60.3	-9.7	-15.6	-2.2	-15.5	-42.9
Total Industry	**71.4**	**-14.3**	**-19.9**	**-32.5**	**-34.9**	**-101.6**

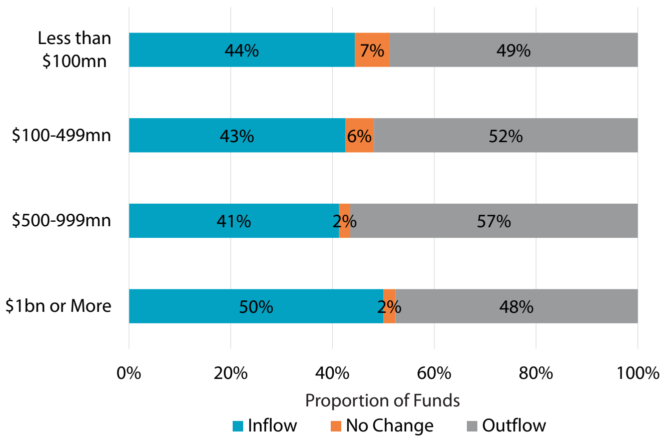
Source: Preqin Hedge Fund Online

Fig. 5.2: Hedge Fund Asset Flows over 2016 by Core Strategy



Source: Preqin Hedge Fund Online

Fig. 5.3: Hedge Fund Asset Flows over 2016 by Fund Size



Source: Preqin Hedge Fund Online

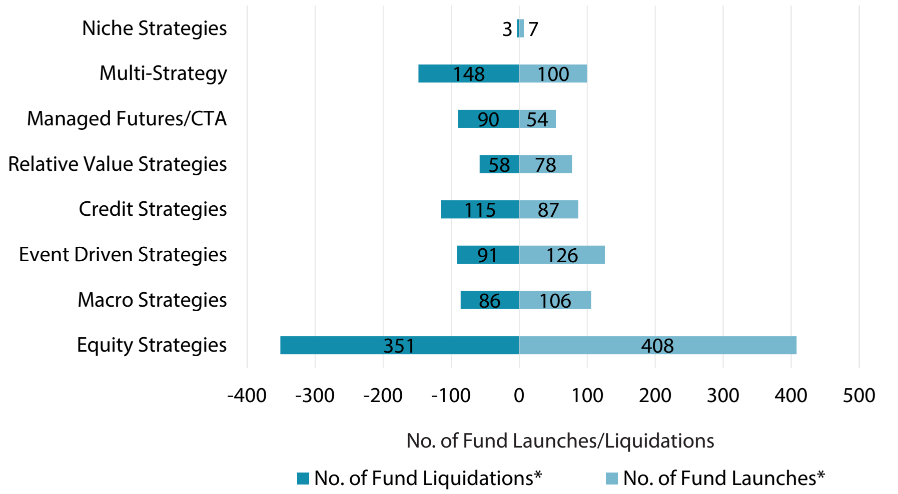
**Q4 2016 asset flows estimated to 30 November 2016.*

> ***This could be an early indication, along with the significantly smaller number of new managers setting up in 2016, that there could be a plateauing or even a contraction of the industry in terms of size in the next couple of years***

in 2016 (see page 142), and in the event driven strategies sector, with 13% of funds launched in 2016 pursuing this strategy, an increase from 10% in 2015. This has been accompanied by net growth in the number of event driven strategies in the market (Fig. 6.10): 35 more event driven strategies came to market than closed over the course of 2016. In contrast to the growth in the event driven strategies sector, there was a contraction in the number of hedge funds pursuing a multi-strategy, CTA or credit strategy in 2016.

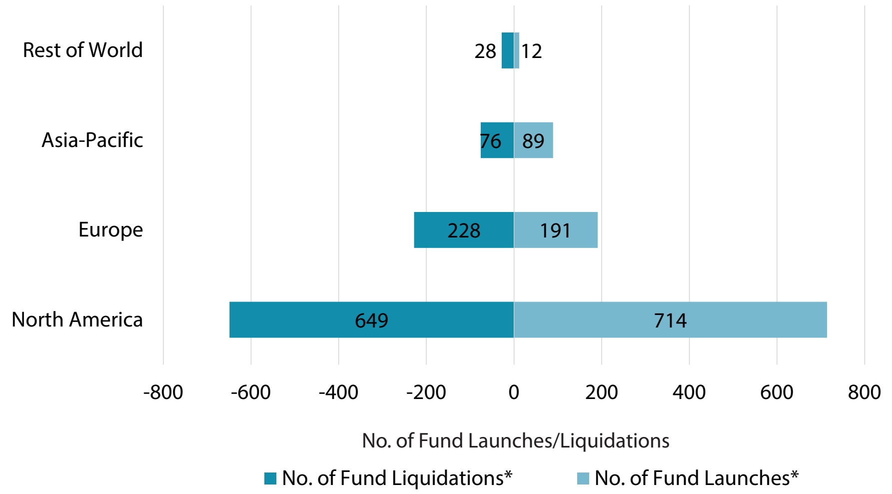
Nearly three-quarters (74%) of funds launched in 2016 are managed by firms based in North America, with the number of active hedge funds based in the region increasing by 65 since the end of 2015. The reverse, however, is seen in Europe, with liquidations outnumbering launches by managers based in the region.

Fig. 6.10: Hedge Fund Launches and Liquidations in 2016 by Top-Level Strategy



Source: Preqin Hedge Fund Online

Fig. 6.11: Hedge Fund Launches and Fund Liquidations in 2016 by Fund Manager Location



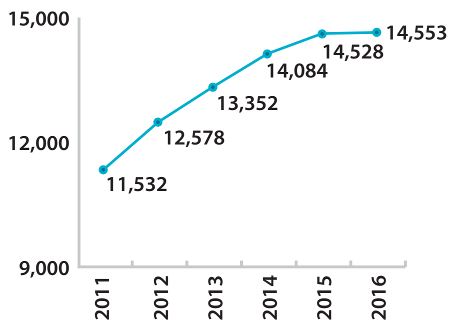
Source: Preqin Hedge Fund Online

EXISTING VS. NEW FUND MANAGERS

Fig. 6.12 shows the annual number of hedge funds launched by existing and new fund managers (defined as fund managers launching their first fund). As the hedge fund industry has matured, both the number of funds launched by first-time fund managers and the proportion of launches these funds account for has declined. At the height of the financial crisis in 2008, 37% of new launches were by first-time fund managers, but by 2015, this had fallen to 25%.

In 2016, first-time fund managers accounted for a larger proportion of niche strategies launches than any other top-level core strategy (Fig. 6.13). In contrast, less than 20% of the event driven strategies funds launched in 2016 were managed by a newly launched firm.

GROWTH OF ACTIVE HEDGE FUNDS



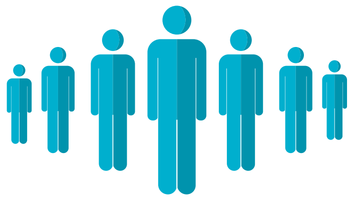
OUTLOOK

At the start of 2016, Preqin predicted that the hedge fund sector may have

> ***Even the largest funds were unable to escape the effects of ebbing investor appetite for hedge funds***

a challenging year as a result of the growing levels of investors expressing dissatisfaction with the asset class and planning to reduce their exposure to these funds. What we could not predict at that time would be the other challenges that might impact the hedge fund sector, particularly the global political events that have led to market movements and growing uncertainty within some jurisdictions and regulatory regimes. Over the course of the year, the outflows predicted by Preqin did occur – the hedge

CREDIT STRATEGIES



2,054 INVESTORS **661** FUND MANAGERS

have a preference for/operate credit strategies funds respectively.

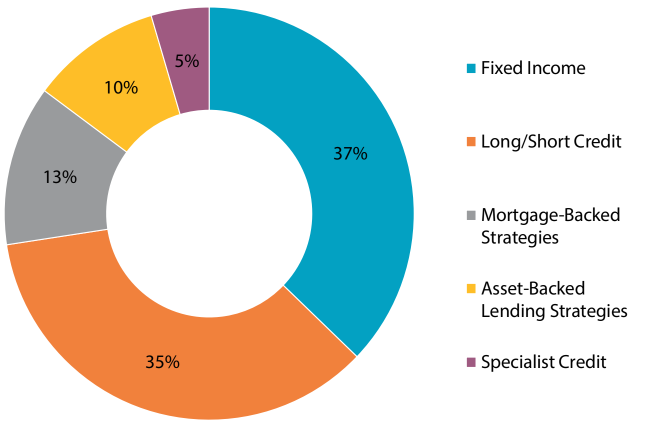
1,642

credit strategies funds are active globally.

$239bn

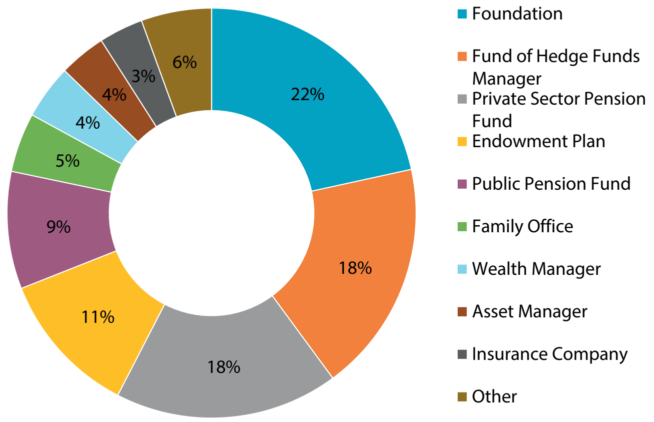
AUM of credit strategies funds.

Fig. 8.28: Credit Strategies Funds by Core Strategy



Source: Preqin Hedge Fund Online

Fig. 8.29: Investors in Credit Strategies Funds by Type



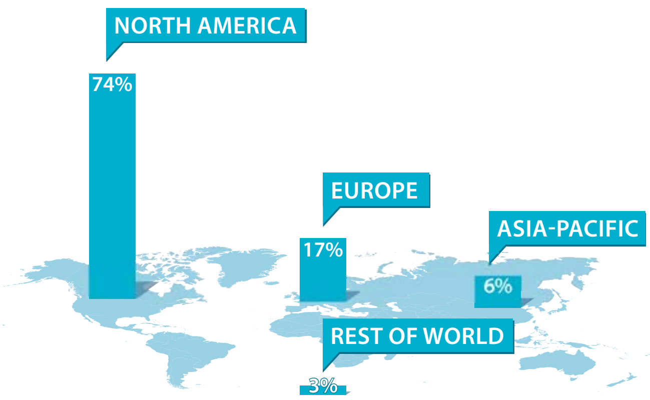
Source: Preqin Hedge Fund Online

Fig. 8.30: Net Returns of Top Performing Credit Strategies Funds in 2016

Fund	Manager	Core Strategy	Net Return in 2016 (%)
Sancus Capital Select Master Fund	Sancus Capital Management	Long/Short Credit	50.82
Cheyne Total Return Credit Fund - December 2017 $ Dis Series 1	Cheyne Capital Management	Specialist Credit	46.49
Avondale Income Fund - Class F	Spartan Fund Management	Fixed Income	45.35
Wasserstein Debt Opportunities Fund, LP - Founder's Class	Wasserstein Debt Opportunities Management	Fixed Income	36.98
Varden Pacific Opportunity Partners Fund I LP	Varden Pacific	Long/Short Credit	33.03
Serica Credit Balanced Fund	Serica Partners Asia	Long/Short Credit	31.19
Hermes Multi-Strategy Credit - Class F - GBP (Acc)	Hermes Investment Management	Fixed Income	30.46
Triada Asia Credit Opportunities Fund Ltd - Class A2	Triada Capital	Long/Short Credit	29.94
BlackGold Insurance Dedicated Fund	BlackGold Capital Management	Fixed Income	29.31
CSS Alpha Fund - Class A GBP	Charles Street Securities Europe	Long/Short Credit	29.10

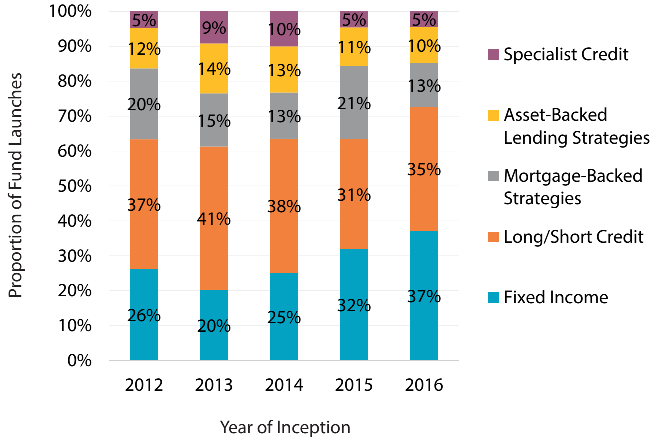
Source: Preqin Hedge Fund Online

Fig. 8.31: Credit Strategies Funds by Fund Manager Location



Source: Preqin Hedge Fund Online

Fig. 8.32: Credit Strategies Fund Launches by Core Strategy and Year of Inception, 2012 - 2016



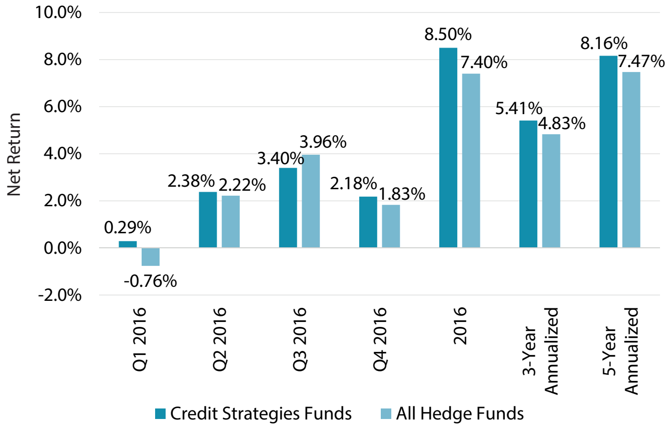
Source: Preqin Hedge Fund Online

Fig. 8.33: Sample Credit Strategies Hedge Funds Launched in 2016

Fund	Inception Date	Core Strategy	Manager Location
Ewing Morris Flexible Fixed Income Fund LP	Feb-16	Fixed Income	Canada
Antecedo Convex Invest	Apr-16	Fixed Income	Germany
EM Credit Opportunities Fund Ltd	Jun-16	Long/Short Credit	US

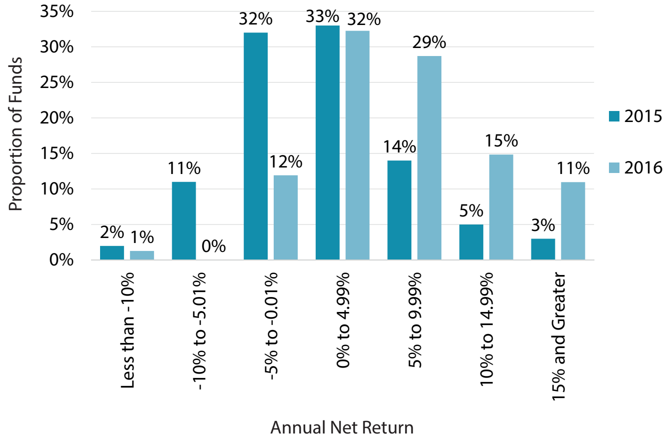
Source: Preqin Hedge Fund Online

Fig. 8.34: Performance of Credit Strategies Funds (As at December 2016)*



Source: Preqin Hedge Fund Online

Fig. 8.35: Distribution of Credit Strategies Fund Returns, 2015 vs. 2016*



Source: Preqin Hedge Fund Online

Fig. 8.36: Credit Strategies Performance by Sub-Strategy (As at December 2016)*

Q1 2016	Q2 2016	Q3 2016	Q4 2016	2016	3-Year Annualized	3-Year Volatility
Fixed Income 1.20%	Fixed Income 3.02%	Long/Short Credit 3.78%	Mortgage-Backed Strategies 2.83%	Fixed Income 9.11%	Asset-Backed Lending Strategies 7.83%	Asset-Backed Lending Strategies 1.29%
Asset-Backed Lending Strategies 1.01%	Long/Short Credit 2.30%	Mortgage-Backed Strategies 3.07%	Long/Short Credit 2.38%	Long/Short Credit 8.26%	Mortgage-Backed Strategies 7.25%	Fixed Income 2.30%
Long/Short Credit -0.42%	Asset-Backed Lending Strategies 2.09%	Fixed Income 2.98%	Asset-Backed Lending Strategies 1.93%	Asset-Backed Lending Strategies 7.71%	Fixed Income 5.56%	Mortgage-Backed Strategies 2.42%
Mortgage-Backed Strategies -1.22%	Mortgage-Backed Strategies 1.63%	Asset-Backed Lending Strategies 2.74%	Fixed Income 1.63%	Mortgage-Backed Strategies 7.20%	Long/Short Credit 3.62%	Long/Short Credit 2.77%

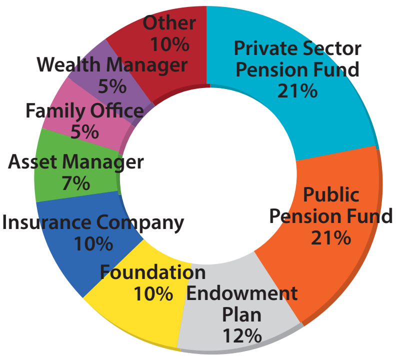
Source: Preqin Hedge Fund Online

**Please note, all performance information includes preliminary data for December 2016 based on net returns reported to Preqin in early January 2017. Although stated trends and comparisons are not expected to alter significantly, final benchmark values are subject to change.*

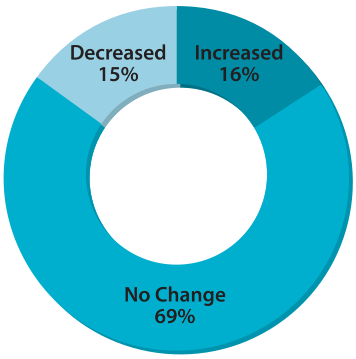
IN FOCUS: PUBLIC PENSION FUNDS

2016 has seen some high-profile public pension funds vote to redeem part of their hedge fund allocation or exit the industry entirely. However, despite these well-known redemptions, many public pension funds have continued to search for new fund manager relationships and adapt or reshape their portfolios. In this section, we detail a selection of public pension funds' mandates tracked on Preqin's **Hedge Fund Online** throughout 2016 and the subsequent commitments of these investors.

Investors in the process of redeeming their entire hedge fund portfolio by type:



Change in public pension fund allocations to hedge funds over 2016 (as a proportion of AUM):



> ***The new initiative sends a message to the hedge fund community that fee structures must be more closely aligned with the interests of beneficiaries***
>
> *- US public pension fund New Jersey State Investment Council, 3 August 2016, regular meeting minutes*, in response to its plan to reduce its exposure to hedge funds*

Investors' investment plans detailed on Preqin's Hedge Fund Online and their subsequent commitments:

Investor	Fund Search Planned in 2016	Allocation
Iowa Public Employees' Retirement System (IPERS)	The $28bn Des Moines-based public pension fund issued an RFP for managers of liquid absolute return strategies to manage a total of $700mn in **Q1 2016**. The investor announced its intention to hire several managers with proposals due in March, representing IPERS' first investment in the hedge fund industry.	It was announced in **December 2016** that IPERS had selected seven fund managers to fill this mandate. IPERS committed $100mn each to Graham Capital Management, FORT and Lynx Asset Management, and planned future allocations to AQR Capital Management, Kaiser Trading Group, Quantmetrics Capital Management and Wadhwani Asset Management.
Texas Municipal Retirement System	It was announced in **February 2016** that Texas Municipal Retirement System intended to commit an undisclosed amount to five or six hedge funds in the next 12 months, seeking funds with global investment exposure.	**March 2016** saw the Austin-based investor allocate to Man Group, PDT Partners, DSAM Partners, East Lodge Capital, River Birch Partners, Field Street Capital and Paro Management, while later in the year the public pension fund allocated to Redmile Group, moving the investor 10bps above its target allocation to hedge funds as of **June 2016**.
Missouri Local Government Employees Retirement System	Also in **February**, Missouri Local Government Employees Retirement System announced plans to expand its exposure to hedge funds, looking to commit $100mn to a portable alpha program.	The Jefferson City-based pension fund hired Wellington Management to run a $100mn global equity absolute return strategy via a separate account in **July 2016**.

Largest public pension funds by current allocation to hedge funds:

NORTH AMERICA 

CPP Investment Board

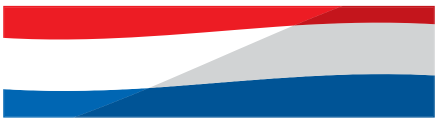
Allocation: **$13.5bn**

Location: **Canada**

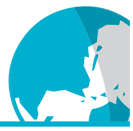
EUROPE 

ABP

Allocation: **$19.5bn**



Location: **Netherlands**

ASIA-PACIFIC 

National Pension Service

Allocation: **$923mn**

Location: **South Korea**

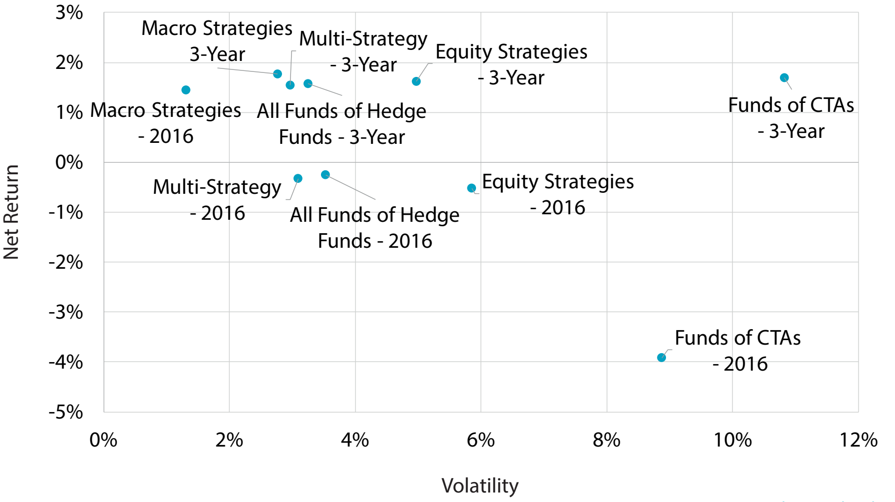
** http://www.nj.gov/treasury/doinvest/pdf/ApprovedMinutes/2016/AgendaItem1MinutesRegularMeeting08032016.pdf* and +0.52% respectively), with the Preqin Multi-Strategy Fund of Hedge Funds benchmark ending 2016 in a similar position (+0.72%). Funds of CTAs exhibited higher levels of volatility than funds of hedge funds over the course of two years, and lost 9.40% over the same period.

> ***With significant levels of funds of hedge funds failing to generate returns above water, investors are finding it increasingly difficult to find attractive investment opportunities***

Emerging markets-focused funds of hedge funds built on their solid returns of 2015, returning 3.92% on a two-year cumulative basis (Fig. 10.9). In contrast, North America-focused funds have had a more challenging 24 months. Improved performance in 2016 erased the losses of the previous year; however, the two-year cumulative figure sits below all other top-level regional benchmarks at 1.23%. In contrast, Europe- and Asia-Pacific-focused funds lost 0.28% and 1.50% in 2016 respectively, eating into the gains made in 2015.

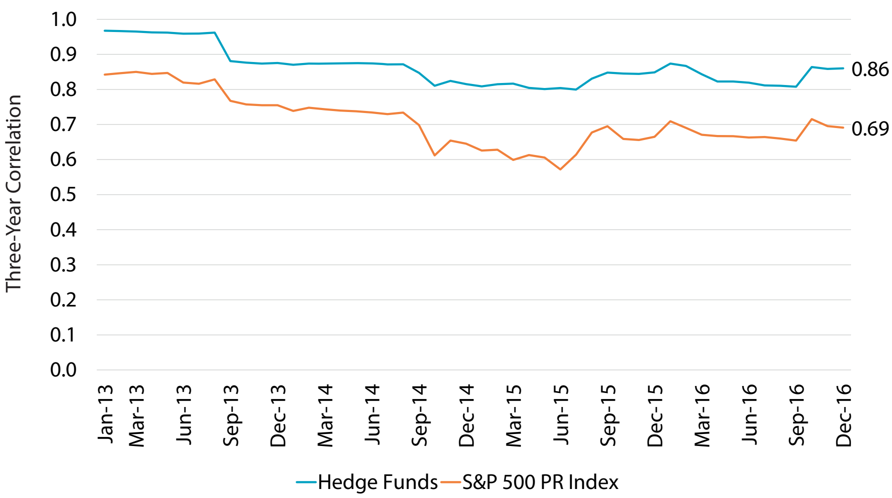
When looking at the distribution of fund of hedge funds returns since 2014, the proportion of funds delivering positive annual returns has decreased (Fig. 10.10). In 2014, four out of every five funds of hedge funds added gains over the year; in contrast, only 49% of funds exhibited positive returns in 2016. Seventeen percent of funds of hedge funds added more than 5% in 2016; the same feat was achieved by 19% and 20% of funds of hedge funds in 2014 and 2015 respectively. With significant levels of funds of hedge funds failing to generate returns above water, investors are finding it increasingly difficult to find attractive investment opportunities.

Fig. 10.11: Risk/Return Profile of Single-Strategy and Multi-Strategy Funds of Hedge Funds in 2016 vs. Three-Year Annualized



Source: Preqin Hedge Fund Online

Fig. 10.12: Rolling Three-Year Correlation of Funds of Hedge Funds to Single-Manager Hedge Funds and S&P 500 PR Index, January 2013 - December 2016



Source: Preqin Hedge Fund Online

The risk/return profile of a fund is one of the central factors investors take into account when evaluating potential investment opportunities. Over the past three years, macro strategies funds have delivered the highest returns (+1.77%) with the lowest volatility (2.77%). In contrast, funds of CTAs delivered the second highest returns (+1.70%), but this was coupled with the highest volatility (10.82%), demonstrating that even though some focused fund of hedge funds strategies can deliver superior returns, this could come with additional risk.

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SAMPLE PAGES

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CONTENTS

REAL ESTATE: 2016 IN NUMBERS

COMPETITIVE FUNDRAISING MARKET

$108bn
Aggregate capital raised by 225 private real estate funds closed in 2016.

525
private real estate funds are in market as of January 2017, a record high, targeting $177bn.

DEAL FLOW SLOWS

$202bn
Aggregate value of the 3,136 PERE deals completed globally in 2016.

16%
Percentage decrease in aggregate deal value in 2016, down from $241bn in 2015.

INVESTOR SATISFACTION

93%
of investors feel the performance of their real estate portfolios met or exceeded expectations in the past year.

50%
of surveyed investors have a positive perception of real estate. Only 7% have a negative perception.

CAPITAL INCREASINGLY CONCENTRATED

36%
of total capital raised in 2016 was secured by the 10 largest funds closed.

$499mn
Average size of private real estate funds closed in 2016.

COMPETITION FOR ASSETS INTENSIFIES

59%
of surveyed fund managers believe it is more difficult to source attractive investment opportunities than a year ago.

52%
of surveyed fund managers have identified asset pricing as their biggest challenge in 2017.

REAL ESTATE HAS DELIVERED STRONG RETURNS

14.9%
Annualized private real estate fund returns in the three years to June 2016.

20
Number of consecutive quarters of the PrEQIn Real Estate Index rising.

2017 - A TURNING POINT FOR PRIVATE REAL ESTATE?

- Andrew Moylan, **Preqin**

INVESTOR APPETITE REMAINS STRONG

Institutional investors have continued to see strong returns from their real estate portfolios, and remain committed to the asset class as a result. In the three years to June 2016, private real estate funds generated an annualized 14.9%, one of the highest returns of any private capital asset class. Given this strong performance, the vast majority of investors feel that real estate is meeting their objectives. Ninety-three percent of investors stated that real estate has met or exceeded their expectations in the past year, while over a three-year period 42% felt their expectations had been exceeded, more than any other alternative asset class. Strong performance has also led to record distributions: $668bn was returned to investors between January 2013 and June 2016 as managers have exited investments – this is over $200bn more than was called up in the same period.

Investors have capital to put to work, but there are concerns among some institutions about the prospects for real estate, and whether there are opportunities to invest today. Asset pricing is clearly a concern for many, with 68% of investors naming it as a key issue affecting the market, and 53% stating it is harder to find attractive opportunities today than it was 12 months ago – just 6% feel it is easier. As a result, some investors are reducing their outlay to real estate in the shorter term, with 24% stating they would invest less capital in 2017 than 2016. A similar proportion (25%) stated they would invest more in 2017, with the remainder investing at the same level as 2016. This suggests we can expect 2017 fundraising to be on a par with the previous year, but significant growth seems unlikely.

There remains significant potential for the private real estate asset class to continue to grow in future years, however. A sizeable 48% of investors are below their target allocation to real estate, while only 22% are over allocated, and 36% are expecting to increase their targets in the longer term, compared with just 10% expecting them to shrink.

A CROWDED FUNDRAISING MARKET

2016 was another relatively strong year for private real estate fundraising, with $108bn raised, just a small decline on the $123bn secured in 2015. While sizeable levels of capital were raised, the number of funds reaching a final close has fallen for four consecutive years, as a few large players increasingly dominate the marketplace. For many, raising capital is a long process; firms that closed funds in 2016 spent an average of 18 months fundraising, compared with just 10 months a decade ago. There is, of course, no guarantee of success and, of the firms currently marketing funds, 39% have already been doing so for more than a year and a half, highlighting how tough it can be to complete a fundraise.

> ***Real estate is the top performing alternative asset class over the past year***

Fund managers are operating in a crowded environment, with an all-time high of 525 funds being marketed as of January 2017. For many fund managers, successfully differentiating themselves from the competition is a challenge, and this is most likely to be the case for mid-sized players. Of firms managing between $1bn and $4.9bn, just 35% reported an increase in investor appetite in the past year, while among both bigger and smaller managers, around 60% stated they had seen increased investor demand for real estate.

DEAL FLOW

Private equity real estate managers reduced their investment activity slightly in 2016, investing $202bn in 3,136 transactions, down from $241bn in 2015, but this was still a greater level of capital than was invested in 2014. Pricing is clearly making deal sourcing a challenging process in the current market, with most firms seeing more competition for deals. Fifty-nine percent of fund managers stated it is more difficult to find attractive investment opportunities than it was 12 months ago, while only 7% are finding it easier. Some firms are reducing their targeted returns as a result, while others are looking elsewhere for value, such as secondary markets or more niche sectors. Fund managers have $227bn in dry powder available and remain confident in their ability to find opportunities, with two-thirds expecting to invest more capital in 2017 than they did in 2016.

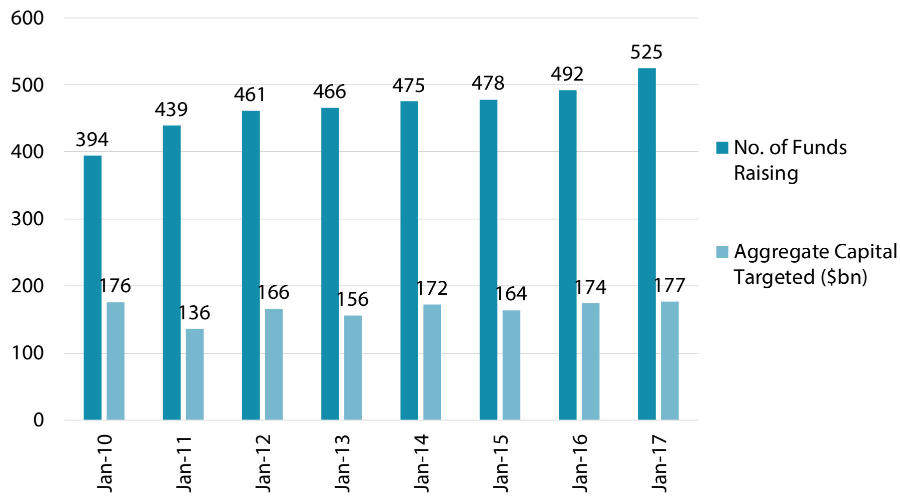
OUTLOOK FOR 2017

In a low-return environment, investors will continue to look to real estate as a key part of their portfolio for diversification, reliable income generation and attractive returns, even if performance in the coming years may not be as strong as the past few. Institutional capital will continue to flow into the asset class at a similar rate to the past year, but with a record number of managers seeking investor commitments and the largest players becoming increasingly dominant, fundraising is going to remain extremely challenging for most. Those looking to buy real estate in 2017 will continue to face a crowded marketplace, with challenging pricing as a result. Fund managers did invest large levels of capital in 2016, and while some are having to look further afield to find the best deals, most expect to be even more active in 2017.

FUNDS IN MARKET

The private real estate fundraising market remains intensely competitive, with an all-time high of 525 funds in market as of January 2017, collectively targeting $177bn in investor capital (Fig. 4.5). Fund managers will continue to find it challenging to stand out from their peers in such a crowded market, despite strong institutional appetite for real estate exposure.

Fig. 4.5: Closed-End Private Real Estate Funds in Market over Time, 2010 - 2017



Source: Preqin Real Estate Online

MOVING UP THE RISK/RETURN SPECTRUM

As shown in Fig. 4.6, the majority (61%) of funds in market are targeting opportunistic and value added strategies, accounting for 60% ($106bn) of total targeted capital – a clear majority when compared to other strategies. Debt and core strategies also make up significant proportions of funds in market, targeting $33bn and $15bn respectively.

FUND MANAGER EXPERIENCE

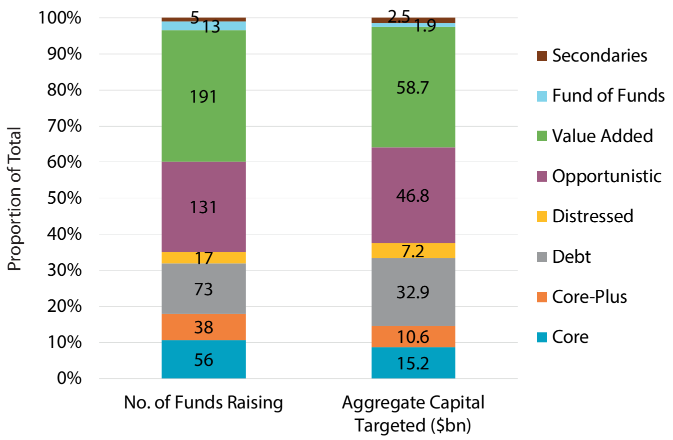
The most experienced fund managers (those that have raised nine or more funds previously) are collectively looking to raise over a third of the aggregate capital targeted (as at January 2017), despite representing only 15% of funds in market (Fig. 4.7). Contrastingly, first-time fund managers account for 26% of funds in market, but are targeting only 14% of aggregate investor capital, reflecting the smaller fundraising targets of new firms. The fundraising market continues to be difficult for new players – see page 57 for more information on first-time managers.

The 10 largest private real estate funds in market are shown in Fig. 4.8, with most utilizing opportunistic, debt or distressed strategies. Blackstone Real Estate Partners Europe V is the largest fund in market, targeting €7bn for opportunistic and distressed opportunities in office, industrial, residential, retail and hotel assets across Europe, while Starwood Capital is targeting $6bn for the eleventh offering in its Opportunity Fund series, which invests in a range of sectors across the US and Europe.

FUNDRAISING MOMENTUM

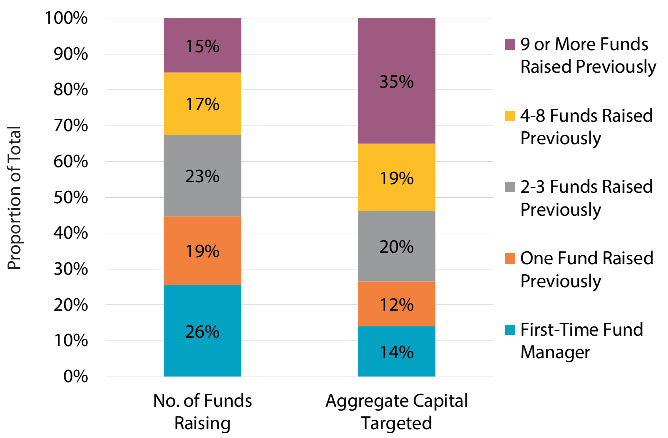
Fundraising is a long process for many firms: the majority (61%) of funds in market have been on the road for over a year, and a fifth of fund managers have spent more than two years marketing their funds (Fig. 4.9). Securing a strong first close in good time is important to build momentum in the fundraising process, as it can demonstrate a fund manager's credibility to potential investors. For funds

Fig. 4.6: Closed-End Private Real Estate Funds Currently in Market by Primary Strategy



Source: Preqin Real Estate Online

Fig. 4.7: Closed-End Private Real Estate Funds Currently in Market by Manager Experience



Source: Preqin Real Estate Online

OUTLOOK FOR GLOBAL REAL ESTATE IN 2017

- Scott Brown, **Barings Real Estate Advisers**

What do you expect to be the key developments in real estate in 2017?
Heading into 2017, as always, we will be closely monitoring a handful of items to help us understand the global real estate markets. Although the global political and policy landscape is punctuated with uncertainty, we continue to believe the space markets are fundamentally sound and supported by favourable supply/demand dynamics in most major US and European urban markets and property sectors.

The potential shifts in US policies as Republicans take control of the presidency and both houses of Congress add an additional layer of uncertainty to the global economy and investment environment, along with the French, Dutch and German elections, may impact global investor sentiment – and potentially global real estate capital flows – going forward. One 'known unknown' is the potential impact of capital flows on relative liquidity and pricing across different countries, regions and segments of the market. Moreover, many cross-border real estate investors are fairly new to some markets, and how they respond to changes in conditions and fundamentals remains to be seen.

Diverging monetary policies may also affect cross-border capital flows, as the US is expected to slowly raise interest rates while we likely see continued easing, and in many cases negative rates, in Asia and Europe. In addition, we expect the increasing influence of sovereign wealth funds and Asian capital on core real estate pricing in the US and Europe to continue. Market expectations for rising rates and higher inflation in the US may lead to the expectation for faster rent growth, particularly given the maturing and extended real estate cycle. Finally, demographic, societal and technology-induced urbanization trends in US and European cities continue to shape investors' focus on asset- and submarket-specific strategies.

The keen pricing for traditional stabilized property sectors in the industrialized markets of the US and Europe, along with urbanization, have increased the acceptance of niche property sectors, effectively increasing the real estate investable universe (e.g. hotels, self-storage, assisted living, medical office, student housing and parking). We also see the supply chain and logistical efficiencies blurring the lines between industrial and retail functions in dense urban areas.

Another significant trend is the growing importance of environmental, social and governance (ESG) issues among real estate investors and managers, and the need to incorporate them into everyday investment processes.

Where do you see the best opportunities in real estate today?
We believe that focused strategies in core-plus, value-add and development, whether via equity or high-yield debt and depending on one's risk appetite, will continue to present attractive risk-adjusted return opportunities to global investors in 2017, particularly in the major US and European cities.

Investors continue to show strong interest in the asset class, as US and Western European core returns moderate towards historical averages after an unprecedented period of double-digit returns. In order to capitalize on the demand for sustainable cash flow and value creation in a competitive, maturing expansion, local expertise and execution capabilities at the asset level, as well as experienced portfolio construction that protects against downside risks, are critical.

In 2017, some of the areas we expect to remain active include:

- Light industrial (e.g. urban) in the US and the UK
- Major market industrial development in the US and major European locales (e.g. France)
- Redevelopment/development of strategically important retail centers in the US and Germany
- Self-storage redevelopment/adaptive reuse in the US
- Medical office and assisted living in the US and UK
- Office, multi-family and, in some cases, student housing development in very selective markets in the US, UK, Germany, Italy and Spain
- Data center development in the US and Europe (e.g. sale-leaseback), to a very limited extent

What are the key macro factors affecting real estate?
There are several key macro factors that are currently affecting, and will likely continue to impact, global real estate markets:

Interest rate growth and expectations, along with political uncertainty – and, potentially, nationalistic sentiment – are certainly some of the most significant.

The acceleration of e-tailing, or selling retail goods on the internet, is another factor to watch, and has already started to blur the lines between the traditional definitions of retail and distribution warehouse property sectors.

Demographics, and particularly the ageing of industrialized economies and growing youth cohorts in southern hemisphere economies, will also likely impact the markets over the next 12 months.

Pension fund commitments and the reality of a low-rate/low-return world is another big factor, as are the advent of a growing pool of wealthy retail investors and defined contribution mutual fund-like structures, both of which require daily valuation and liquidity.

What are the key challenges in the real estate market at present?
For any real estate investment manager, whether inside a large multi-asset-class firm

or a small, single-product entrepreneurial firm, there are factors changing the asset management landscape that cannot be ignored:

- Investors increasingly focused on passive investments
- Fee compression across asset classes
- Investors requiring a smaller number of managers with strategic capabilities across multiple asset classes
- Strong brand awareness
- Focus on cost-effective use of technology to leverage large investment teams
- Big players getting bigger by "hoovering" large proportions of industry capital, along with operators becoming increasingly institutional and disintermediating capital

From an investment markets perspective, we consider political uncertainty to be the primary risk facing real estate investors going into 2017. The uncertainty not only has the potential to cause near-term capital market shocks, but could also have longer-term implications for space market fundamentals, debt and capital market liquidity and foreign capital flows. Ultimately, this is an investment opportunity that local, on-the-ground experts have the greatest chance of capitalizing on, in our view.

We have seen lots of capital focused on real estate and challenging pricing as a result. Are you adapting your strategy in the current market?

The trend of growing capital flows is nothing new, and our investment processes, in which on-the-ground investment experience is combined with top-down data analyses and research, allowed us to anticipate and prepare for the current pricing and yield trends. Further, we continue to closely monitor pricing trends and develop new investment strategies in anticipation of future opportunities. We believe that being one of the few four-quadrant real estate investors that is also active in private and public equity and debt gives us unique insights into trend analyses.

Barings has a large real estate debt business; what do you see as the best opportunities for debt investors?

The best opportunities depend, of course, on a particular investor's investment horizon, return requirements and risk appetite.

Many investors require an "equity-like return" with a "debt-like" structured downside protection. We believe selective execution in US and European high-yield debt can offer investors attractive risk-adjusted returns, with heightened sensitivity to the quality of the sponsorship, asset-specific characteristics and location-specific submarket fundamentals. We are also currently seeing attractive opportunities in European core and value-add strategies and US core strategies, as well as increasing opportunities in public market securities that complement geographic or sector strategies and diversification.

Should investors be looking at public real estate?

Yes, we believe investors should absolutely be looking at public real estate. For one, looking at public market trends can give investors insight into market and pricing trends. Further, although more volatile in the short term, longer-term performance often reflects property market fundamentals, which remain favourable.

As to whether investors should consider investing in public real estate markets now, it really depends on their investment horizon and tolerance for near-term pricing volatility. However, we know that:

- Public and private index returns have a strong positive correlation over the long term, but it is well below one (about 0.60 in developed countries), meaning that the two strategies complement one another and provide additional portfolio diversification and risk-adjusted return benefits for long-term, REIT-dedicated investors.
- The public and private wrapper provides some additional diversification, but REITs and global real estate securities also allow efficient investment in sectors and countries that are more difficult to access via the private direct route for many investors.
- These strategies can enable investors to achieve scalable diversification, as broad exposure to sectors, countries and regions is available via individual shares.
- Sector- or country-specific strategies are typical within listed companies, which allows management teams to specialize.
- Daily liquidity allows investors to rotate among sectors and countries and to adjust and/or fine-tune their overall real estate portfolio to their desired allocation size and focus, without having to buy or sell individual assets.
- Public real estate is now its own asset class within the public markets.
- We believe that there will be an opportunity in the public debt sectors given the risk retention rules, particularly in CMBS tranches and especially B-rated credits.
- A combination of public and private real estate investments provides access to a broad menu of investment opportunities across the risk/return spectrum. These opportunities can be catered to investors' targeted returns, risks and liquidity needs.

In summary, we think that public real estate securities, both equity and debt, can be an asset to an institutional real estate portfolio and, for a true four-quadrant investor, can enhance risk-adjusted portfolio returns.

BARINGS REAL ESTATE ADVISERS

Barings Real Estate Advisers is one of the world's largest, diversified real estate-focused investment advisers with $50.4bn in assets managed or serviced for more than 200 clients globally. Barings Real Estate Advisers is a unit of Barings, a $284bn+ global asset management firm dedicated to meeting the evolving investment and capital needs of its clients.

SCOTT BROWN

Scott Brown is Barings' Global Head of Real Estate. Scott is responsible for implementing corporate policies and strategic initiatives for Barings Real Estate Advisers, and oversees the investment side of the global real estate business. Scott has worked in the industry since 1986 and his experience has encompassed all property sectors and capital structures. Prior to joining the firm in 2014, Scott was Head of the Americas of CBRE Global Investment Partners, where he managed global investment, portfolio management, client service, and product and business development.

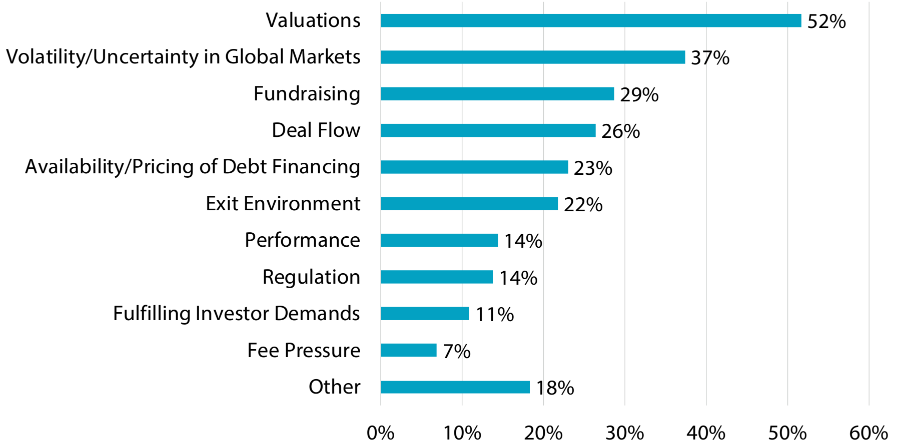
www.barings.com

FUND MANAGER OUTLOOK FOR 2017

In November 2016, Preqin conducted an in-depth study of over 180 real estate fund managers to gain an insight into the issues affecting their business and the wider industry, and to ascertain their plans for further investment and outlook for real estate in 2017.

> *Over half of fund managers surveyed see valuations as the biggest challenge for 2017*

Fig. 5.1: Key Challenges Facing Private Real Estate Managers in 2017



Source: Preqin Fund Manager Survey, November 2016

KEY ISSUES

With managers seeing greater competition and higher valuations in the market, it is unsurprising that over half (52%) of fund managers surveyed see asset pricing as the biggest challenge facing them over the next 12 months (Fig. 5.1). Additionally, 59% of respondents have found that pricing for real estate assets is higher than 12 months ago. With uncertainty in the run up to and aftermath of the US presidential election, Brexit and concerns over a slowdown in China's economy, ongoing volatility in global markets is the second biggest challenge according to 37% of respondents.

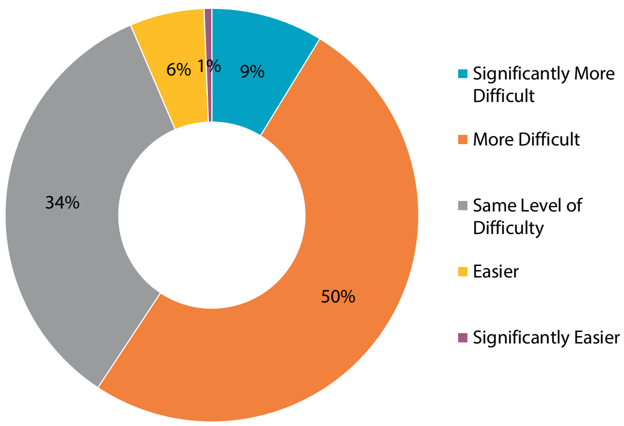
A COMPETITIVE LANDSCAPE

The majority (59%) of private real estate managers surveyed believe it is more difficult to find attractive investment opportunities than 12 months ago (Fig. 5.2), and it is difficult for managers to find value in the current real estate market.

Overall, the majority (54%) of respondents believe there is more competition for assets than 12 months ago (Fig. 5.3). When broken down by strategy, fund managers have seen the biggest increase in competition for lower-risk core assets, which is likely the result of a large number of investors looking to prime real estate for income generation in the current market. Fewer managers have seen an increase in competition for higher-risk opportunistic assets.

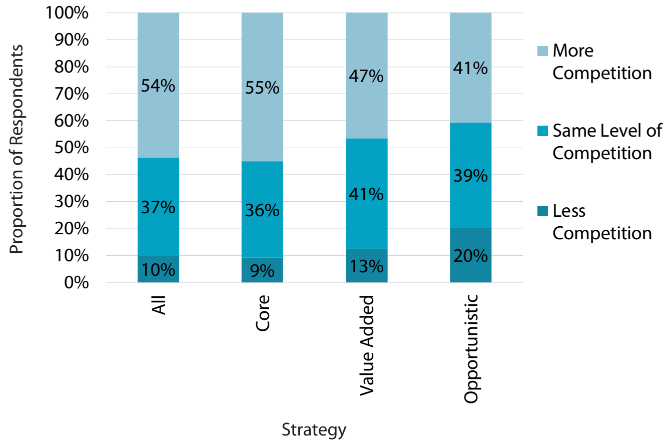
A notable 42% of surveyed managers have said that the level of competition has caused them to alter their investment strategies, with some managers having to change their geographic focus to consider different markets, increase their investments in higher-risk strategies

Fig. 5.2: Fund Manager Views on the Difficulty of Finding Attractive Investment Opportunities Compared to 12 Months Ago



Source: Preqin Fund Manager Survey, November 2016

Fig. 5.3: Fund Manager Views on the Level of Competition for Assets Compared to 12 Months Ago by Strategy

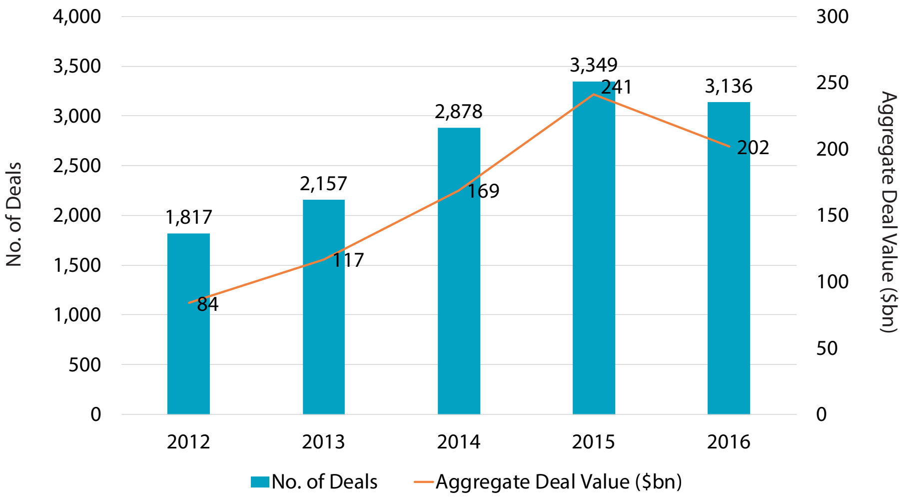


Source: Preqin Fund Manager Survey, November 2016

DEAL FLOW

Private equity real estate (PERE) firms have increased their investment activity rapidly in recent years, with 2015 seeing 184% of the number of acquisitions made by these firms in 2012 and 3x the amount of capital invested. Deal flow slowed in 2016, however, impacted by financial market volatility, Brexit, concerns over the Chinese economy and uncertainty in the run up to the US election. Fund managers are also finding it harder to find attractive opportunities in a crowded market (see page 50), but did still invest more capital in 2016 than they did in 2014 (Fig. 11.1).

Fig. 11.1: Number and Aggregate Value of PERE Deals Completed Globally, 2012 - 2016



Source: Preqin Real Estate Online

Fig. 11.2: 10 Largest PERE Portfolio Deals in 2016

Asset	Buyer(s)	Seller(s)	Deal Size (mn)	Deal Date
OfficeFirst Immobilien	Blackstone Group	IVG Immobilien AG	3,300 EUR	Nov-16
US, Residential Portfolio	Brookfield Property Group	NorthStar Realty Finance	2,040 USD	May-16
US, Multi-Family Portfolio	Blackstone Group	Greystar Real Estate Partners	2,000 USD	Jan-16
China, Operating Company, Portfolio	Unidentified Buyer(s), Vanke	Blackstone Group	12,900 CNY	Sep-16
RioCan Retail Portfolio	Blackstone Group	RioCan Real Estate Investment Trust	1,900 USD	May-16
US, Diversified Portfolio	Blackstone Group	Alecta Pension Fund	1,800 USD	Aug-16
US Logistics Portfolio	Blackstone Group	LBA Realty	1,500 USD	Sep-16
US, Retail Portfolio	CBRE Global Investment Partners, CBRE Global Investors	Merlone Geier Partners	1,500 USD	Nov-16
France, Niche Portfolio	PRIMONIAL REIM	Gecina	1,350 EUR	Jul-16
Potsdamer Platz, Berlin, Mixed-Use Portfolio	Brookfield Property Group, Korea Investment Corporation	Savills Investment Management	1,300 EUR	Jan-16

Source: Preqin Real Estate Online

Fig. 11.3: 10 Largest PERE Single-Asset Deals in 2016

Asset	Buyer(s)	Seller(s)	Deal Size (mn)	Deal Date
787 Seventh Avenue	California Public Employees' Retirement System (CalPERS), CommonWealth Partners	AXA Investment Managers – Real Assets	1,900 USD	Feb-16
UBS Tower	China Life Insurance, RXR Realty, Unidentified Buyer(s)	AXA Investment Managers – Real Assets, JP Morgan Asset Management	1,650 USD	May-16
Fashion Show Mall	TIAA Asset Management	General Growth Properties	1,250 USD	Aug-16
The Shops At Crystals	Invesco Real Estate, Simon Property Group	Unidentified Seller(s)	1,100 USD	Apr-16
Miracle Mile Shops	California Public Employees' Retirement System (CalPERS), Miller Capital Advisory	RFR Realty, Tristar Capital	1,100 USD	Oct-16
1221 Avenue of the Americas	Invesco Real Estate	CPP Investment Board	1,100 USD	Jul-16
Blanchardstown Centre	Blackstone Group	Unidentified Seller(s)	950 EUR	Apr-16
Commerzbank Tower	PATRIZIA Immobilien AG	Commerz Real Investmentgesellschaft	800 EUR	Sep-16
Tour First	AXA Investment Managers – Real Assets	Beacon Capital Partners	800 EUR	Jan-16
1251 State Street	Mirae Asset Global Investments, Transwestern Investment Group	State Farm Insurance	825 USD	Sep-16

Source: Preqin Real Estate Online

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INFRASTRUCTURE: 2016 IN NUMBERS

INFRASTRUCTURE HIGHLIGHTS

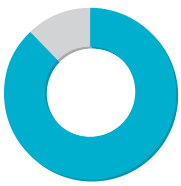
$645bn
Estimated aggregate value of the 1,774 infrastructure deals completed globally in 2016.

$30bn
Total capital distributions in H1 2016.

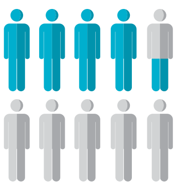
52
unlisted infrastructure funds reached a final close in 2016, securing an aggregate $59bn.

$13bn
The largest deal completed in 2016 was the joint venture to finance the construction of the Tuban Refinery Plant.

INVESTOR SATISFACTION



89%
of investors feel their infrastructure investments have met or exceeded their expectations over the past year.



44%
of surveyed investors have a positive perception of infrastructure; only 17% have a negative perception.

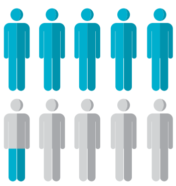
CAPITAL CONCENTRATION

50%
of total capital raised in 2016 was secured by the five largest funds closed.

$1.3bn
Average size of an unlisted infrastructure fund closed in 2016, a record high.

COMPETITION FOR ASSETS

$137bn
Amount of dry powder held by infrastructure firms.



53%
of surveyed fund managers believe that asset pricing will be their biggest challenge in 2017.

DEAL FLOW

$364mn
Average deal size reached an all-time high in 2016.

740
renewable energy deals were completed in 2016, the highest number of any sector.

RECORD FUNDRAISING AND RISING VALUATIONS IN INFRASTRUCTURE

- Tom Carr, **Preqin**

As we move into 2017, a number of key themes are present in the infrastructure industry, namely increasing capital concentration, rising valuations, record fundraising and continued investor demand for the asset class.

A RECORD YEAR FOR FUNDRAISING

2016 saw a number of records set in the unlisted infrastructure fundraising industry: a record $59bn was raised by funds reaching a final close and the largest ever unlisted infrastructure fund, Brookfield Infrastructure Fund III, held a final close on $14bn in July 2016. Furthermore, as we move into 2017, there are a record 181 funds in market seeking capital. However, this is set against a backdrop of a decline in the number of funds managing to reach a final close annually: only 52 funds held a final close in 2016, the lowest number since 2010. In 2016, 50% of capital secured was raised by just five funds, indicating an ongoing trend of capital concentration, with investors placing their faith in the deal-sourcing capabilities of the largest managers.

The fundraising environment remains extremely competitive; with fewer funds typically reaching a final close each year, managers must be willing to spend a significant amount of time fundraising and making sure their offering is attractive to investors.

DEAL FLOW

In 2016, 1,774 infrastructure deals were completed, totalling an estimated $645bn; the number of deals completed has remained similar to recent years, while aggregate capital invested in 2016 increased. Record fundraising levels coupled with record levels of dry powder ($137bn as of December 2016), the increased availability of debt financing and a number of investors looking to invest directly in infrastructure have led to increased competition, which in turn, has driven up the price of infrastructure assets. Fifty-four percent of fund managers believe it is now more difficult to find attractive investment opportunities than it was 12 months ago, and the average deal size of an infrastructure asset has risen to a record $364mn.

> ***2016 saw a number of records set in the unlisted fundraising industry***

With strong competition for core assets in developed markets, managers are increasingly looking outside the traditional developed markets of Europe and North America when looking to put capital to work. 2016 saw 31% of deals completed in Asia, the joint largest proportion of any region.

There has also been an increase in the number of renewable energy deals in the past year; a global push to alternative sources of energy continues to drive deal flow. In 2016, 42% of infrastructure deals were renewable energy deals, accounting for the greatest proportion of any sector.

INVESTOR APPETITE REMAINS STRONG

Institutional investors continue to see strong risk-adjusted returns from their infrastructure portfolios and remain committed to the asset class. Eighty-nine percent of respondents to Preqin's latest survey of institutional investors stated that the performance of infrastructure had either met or exceeded their expectations in the past 12 months. With a record $60bn of capital distributed back to investors in 2015, nearly double the previous record of $31bn from 2014, it is unsurprising that investors are looking to ramp up their infrastructure allocations in 2017, with 88% expecting to commit either the same amount or more capital to the asset class in 2017 compared to 2016. Despite positive sentiment and rising appetite for the asset class, investors have concerns that managers looking to successfully raise capital need to be aware of and allay. Over half (54%) of investors interviewed stated that asset pricing is a key issue for the industry in 2017, with high prices paid for assets eating into the eventual returns investors will see from their infrastructure portfolio.

OUTLOOK FOR 2017

In the current financial environment dominated by low returns from traditional investments, investors are looking to assets such as infrastructure that can produce strong risk-adjusted returns, while at the same time providing downside protection and portfolio diversification. Institutional capital will continue to flow into the asset class in 2017, but with a record number of managers targeting investor capital and the largest managers becoming increasingly dominant, fundraising will remain extremely challenging for most.

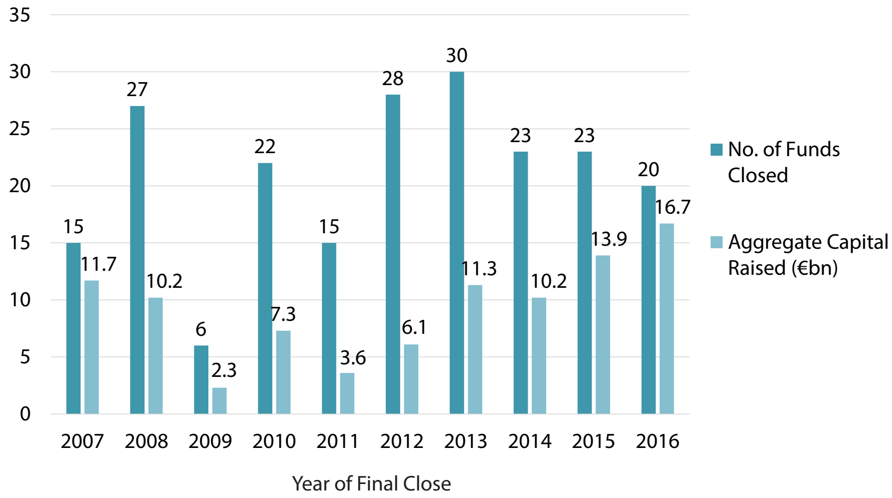
Despite strong returns in recent years, there are concerns from all players in the infrastructure industry about competition for assets pushing up pricing and eating into eventual returns. However, the pipeline of infrastructure deals going forward looks strong, with countries looking to add and improve existing infrastructure as well as address challenges such as meeting Paris Agreement obligations. With a large number of countries having significant budget deficits, they will likely look to private capital to fund a number of these projects. A significant 73% of managers are expecting to deploy more capital to infrastructure assets in 2017 compared to 2016.

EUROPEAN FUNDRAISING

The relative economic and political stability in Europe makes it an attractive region for infrastructure firms looking to put capital to work; however, the funds focused on the region were not able to surpass the amount of capital secured by North America-focused funds closed in 2016. The amount of capital raised by Europe-focused unlisted infrastructure funds in 2016 accounted for 31% of aggregate capital secured globally, compared to 35% in 2015.

In 2016, 20 Europe-focused funds reached a final close, raising €16.7bn in institutional capital. This represents a €2.8bn increase in capital secured compared with funds closed in 2015 (Fig. 4.15). With the amount of capital raised annually increasing each year since 2013, but the number of funds closed decreasing, capital has become increasingly concentrated among a smaller group of managers. This has resulted in the average fund size increasing from €0.7bn in 2015 to €1.0bn in 2016. Sixty percent of Europe-focused funds closed in 2016 are managed by firms based in the UK, Germany or France, with these funds accounting for 88% of aggregate capital raised.

Fig. 4.15: Annual Europe-Focused Unlisted Infrastructure Fundraising, 2007 - 2016



Source: Preqin Infrastructure Online

NOTABLE FUNDS

UK-headquartered Macquarie European Infrastructure Fund V, which secured €4bn at its final close in September, was the largest fund to close in 2016 (Fig. 4.16).

FUNDS IN MARKET

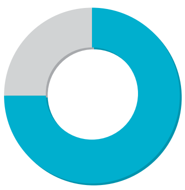
As of January 2017, there are 72 Europe-focused unlisted infrastructure funds in market, seeking €30bn in institutional investor capital, slightly more than in January 2016, when 68 funds sought €28bn. The largest fund in market is EQT Infrastructure III, which is targeting €2.9bn.

Fig. 4.16: Five Largest Europe-Focused Unlisted Infrastructure Funds Closed in 2016

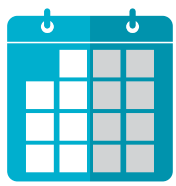
Fund	Firm	Headquarters	Fund Size (mn)	Final Close Date
Macquarie European Infrastructure Fund V	Macquarie Infrastructure and Real Assets (MIRA)	UK	4,000 EUR	Sep-16
Antin Infrastructure Partners III	Antin Infrastructure Partners	France	3,000 EUR	Dec-16
Ardian Infrastructure Fund IV	Ardian	France	2,650 EUR	Jan-16
Meridiam Infrastructure Europe III	Meridiam	France	1,300 EUR	Apr-16
Mirova Core Infrastructure Fund	Mirova	France	700 EUR	Jul-16

Source: Preqin Infrastructure Online

€14bn
The Macquarie European Infrastructure Fund Series has now raised just over €14bn in the last 12 years.



75%
of all Europe-focused funds closed in 2016 target brownfield opportunities.



15 Months
Europe-focused funds closed in 2016 took an average of 15 months to reach a final close.

GROWING APPETITE FOR INFRASTRUCTURE DEBT

- Tommaso Albanese, UBS Asset Management

Are you seeing increased interest from investors for infrastructure debt?
Absolutely; in the current low-yield environment, seeking alternatives to traditional fixed income investments is a topic which is gaining attention across the investor universe.

This has been an increasing focus over the last few years. We have found that, for many investors, infrastructure debt is a new asset class and so they need to take time to educate themselves on the risk/return proposition and how it fits with their portfolio requirements.

When they do analyze the infrastructure part of the private debt market, the combination of the typically investment-grade risk profile, coupled with returns above comparable corporate benchmarks, offers an interesting investment opportunity.

In terms of the type of investors, we have definitely seen a move by insurance companies to allocate to the sector, following the favourable capital treatment it now attracts under Solvency II. For other investors without a risk capital approach to portfolio construction, there has been slower movement as allocations generally need to come from alternatives where return targets are much higher.

Having recently closed an infrastructure debt fund, how did you find the fundraising environment?
We were pleased with the final size of our fundraising; however, as a first-time fund, fundraising was a reasonably time-intensive process.

We definitely found investors receptive to private debt as an asset class and to putting in the intellectual effort to understand the value proposition given the requirements to find alternatives to their traditional fixed income assets.

Your most recent fund is targeting the mid-market; what opportunities do you see in this space?
We see the mid-market as a natural home for funds such as ours. The large trophy deals, or those with very large equity sponsors, are still able to attract bank or public bond financings; however, the mid-market is the area that needs alternatives. Borrowers here have traditionally been offered financing by banks and this is less available so there is a need for new sources of funding.

To operate in this part of the market investors need skills to structure and negotiate transactions, and to analyze and mitigate the credit risks. In essence, there is the need to replace the role that banks have historically played. In exchange for this, returns are more interesting and offer, we think, a more attractive risk/reward proposition. We have found that by targeting this part of the market, with the right team in place, we are able to deploy capital for our investors at pace; by final closing we already had 40% of our capital deployed.

Do you feel any particular regions are offering the most attractive opportunities for infrastructure debt investments?
We continue to see the best opportunities for our investors in Europe. It is a market which has historically been mostly reliant on bank financings and the move towards institutional investment is now beginning. This offers good opportunities to access less commoditized deals.

Do you expect to see the role of unlisted debt funds as a source of financing for infrastructure projects become more important going forward?
Yes, we see increasing investor appetite in allocating to the sector, and borrowers getting more familiar with their requirements. For these long-term investments, institutional investors are a more natural funding 'home', and for many of these investors that do not have the scale or want to invest in teams to source the deals directly, investing via a fund is a sensible option.

How do you go about structuring an infrastructure debt deal?
Within infrastructure debt, our strategy focuses primarily on mid-size direct lending in Western Europe, requiring more in-depth credit analysis and structuring expertise, but offering more attractive returns. As an example, we recently financed a portfolio of social infrastructure assets in Belgium providing care to elderly people. It was a new and complex financing that took months to assess and structure. This is our added value. We extensively stress test our investments and insert various covenants to mitigate the risks for our investors.

How do you typically source infrastructure debt transactions?
The network of a large organization like ours is certainly a great advantage in sourcing debt transactions. In addition to that, as an experienced team with backgrounds focused on European infrastructure we have a good network for sourcing. We also target a specific part of the market, and increasingly, as we are making a name for ourselves there, we are finding that transactions come to us more and more.

UBS ASSET MANAGEMENT
UBS announced the successful final close of its inaugural infrastructure debt fund in September 2016, which raised €570mn ($640mn) from 17 institutional investors.

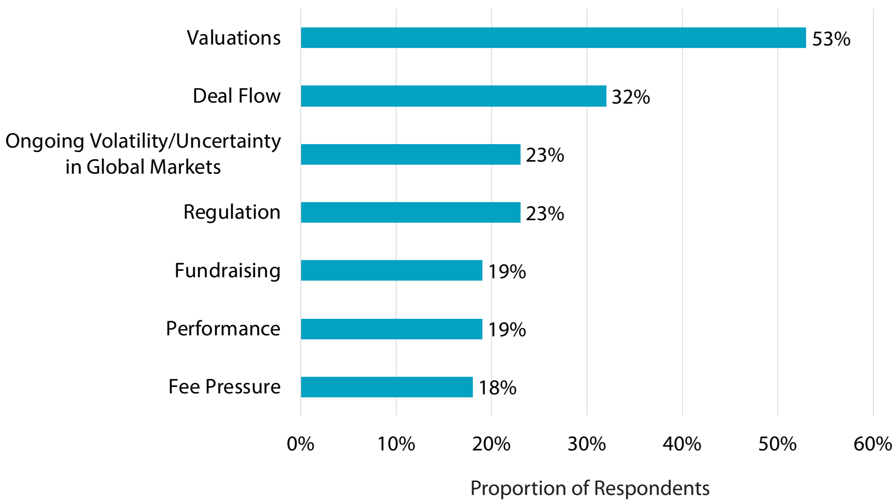
TOMMASO ALBANESE
Tommaso started the infrastructure debt effort at UBS Asset Management in 2013 and is Head of Infrastructure Debt and CIO. Based in London, he spearheaded the establishment of an infrastructure debt investment strategy, the fund capital raising effort and the portfolio build-up.

www.ubs.com/infrastructureandprivateequity

FUND MANAGER OUTLOOK FOR 2017

The growth of the infrastructure industry in recent years has been bolstered by substantial demand from institutional investors that wish to capture the inflation-hedging characteristics and predictable cash flows over the longer term that infrastructure funds can provide. As a result, the number of active fund managers continues to grow; Preqin's **Infrastructure Online** profiles 519 infrastructure fund managers worldwide, with approximately $373bn in aggregate AUM. In November 2016, Preqin conducted a detailed survey of over 60 infrastructure fund managers to gain an insight into the key issues affecting their businesses, deal flow and financing, as well as their outlook for the coming year.

Fig. 5.1: Key Challenges Facing Unlisted Infrastructure Managers in 2017



Source: Preqin Fund Manager Survey, November 2016

KEY ISSUES

A set of interrelated issues are at the forefront of infrastructure firms' minds: valuations and deal flow were cited as the key issues facing fund managers in 2017, both of which affect fundraising and the eventual performance of infrastructure funds, which were also concerns of a large proportion of surveyed firms (Fig. 5.1). Uncertainty surrounding the UK's secession from the EU could have a significant impact on the legal and regulatory environment in Europe; as such, regulation ranks highly as a concern for fund managers going into 2017.

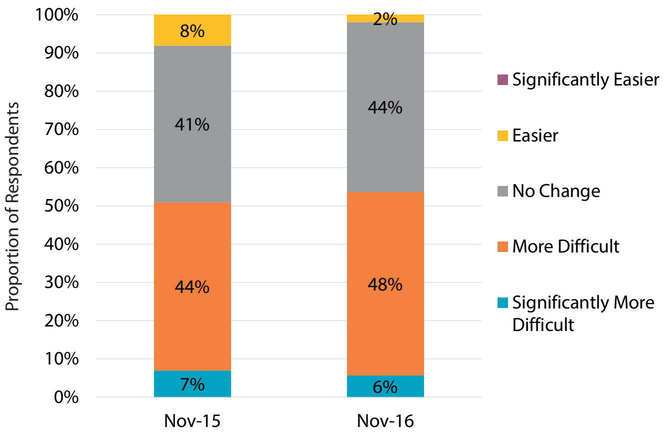
Unsurprisingly after a year that has seen Brexit, US elections and commodity price fluctuations, 23% of respondents believe the ongoing volatility and uncertainty in global markets to be a key issue for the year ahead.

DEAL FLOW

With strong fundraising in recent years, infrastructure firms have a record amount ($137bn) of dry powder at their disposal. Additionally, growing participation among other groups such as corporate buyers and institutional investors has led to a substantial rise in competition for infrastructure assets: 54% of fund managers are finding it more difficult to find attractive investment opportunities compared to 12 months ago, slightly higher than the corresponding proportion at the end of 2015 (51%, Fig. 5.2). Consequently, surveyed fund managers are having to review more investment opportunities in order to source assets: 52% of respondents are reviewing more opportunities than a year ago.

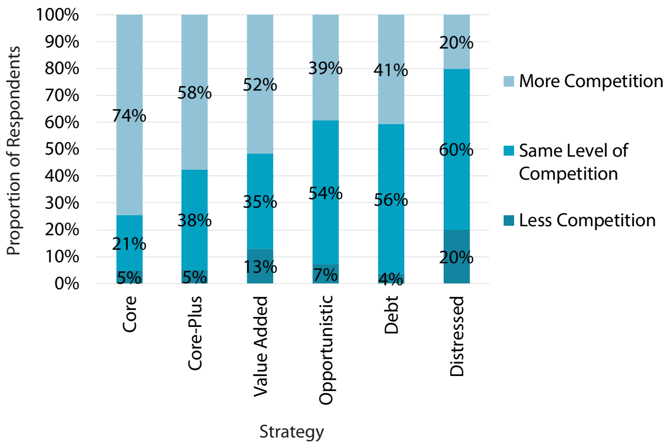
However, this competition has not manifested equally across the asset class as a whole:

Fig. 5.2: Fund Manager Views on the Difficulty of Finding Attractive Investment Opportunities Compared to 12 Months Ago



Source: Preqin Fund Manager Survey, November 2015 - 2016

Fig. 5.3: Fund Manager Views on the Level of Competition for Assets Compared to 12 Months Ago by Strategy



Source: Preqin Fund Manager Survey, November 2016

HOW INVESTORS SOURCE AND SELECT FUNDS

46%
of investors are finding it harder to source attractive investment opportunities.

48%
of investors believe marketing documents fail to meet their needs.

HOW INVESTORS SOURCE FUNDS:

11%
Through internal investment team

31%
Mainly internal or consultant recommendations, some external approaches

36%
Mix of internal and external recommendations

20%
Mainly approaches from GPs or marketers, some internal recommendations

2%
Solely from external approaches

HOW INVESTORS SELECT FUNDS:

The average investor receives
155
fund proposals each year

MOST IMPORTANT FACTORS INVESTORS CONSIDER WHEN LOOKING FOR AN INFRASTRUCTURE FUND MANAGER:

TEAM TRACK RECORD

TEAM STRATEGY EXPERIENCE

FIRM TRACK RECORD

48%
of investors feel they get insufficient information on track record.

53%
of investors feel they get insufficient information on the strategy of a fund.

KEY REASONS INVESTORS REJECT A GP:

- Below-average team track record
- Fees/terms
- Length of team track record

10%
of proposals, on average, are sent through for a second round of screening.

INVESTORS' PLANS FOR THEIR NEXT FUND COMMITMENT:

2018+
10%

H2 2017
16%

H1 2017
74%

The average investor makes
2
commitments to unlisted infrastructure funds each year.

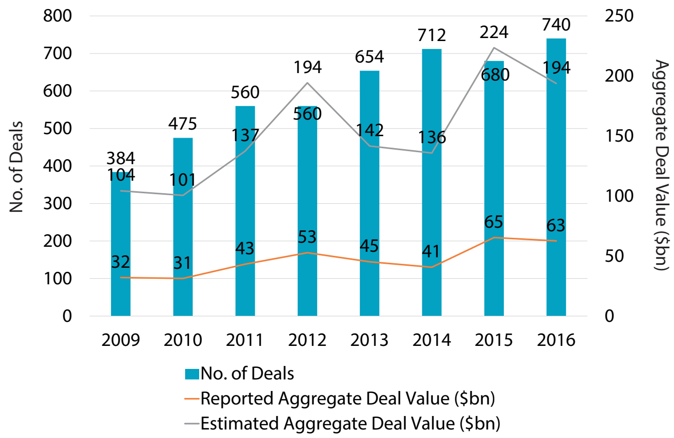
RENEWABLE ENERGY DEALS

25%
of deals completed in 2016 were based in the US, the largest proportion of any single country.

61%
of deals completed in 2009-2016 involved greenfield assets.

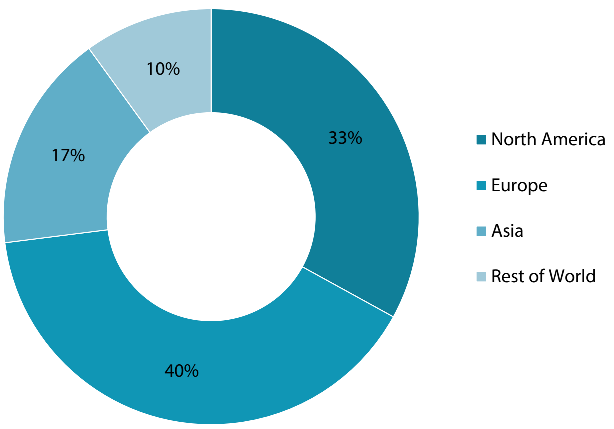
85%
of deals completed in 2016 were valued at less than $500mn.

Fig. 11.8: Number and Aggregate Value of Renewable Energy Infrastructure Deals Completed Globally, 2009 - 2016



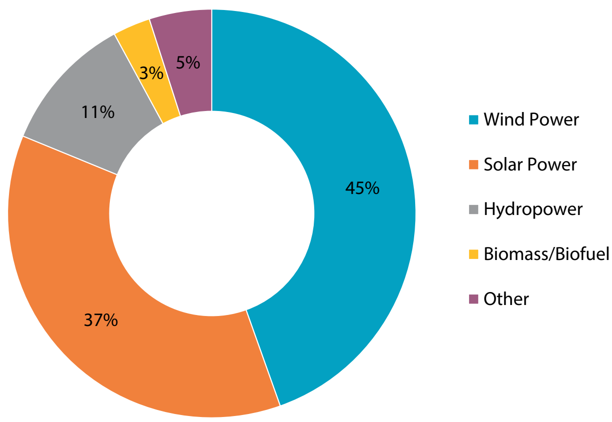
Source: Preqin Infrastructure Online

Fig. 11.9: Completed Renewable Energy Infrastructure Deals by Region, 2009 - 2016



Source: Preqin Infrastructure Online

Fig. 11.10: Completed Renewable Energy Infrastructure Deals by Industry, 2009 - 2016



Source: Preqin Infrastructure Online

Fig. 11.11: Five Notable Renewable Energy Infrastructure Deals Completed in 2016

Asset	Location	Industry	Investor(s)	Deal Size (mn)	Stake (%)	Date
Diga di Rogun Dam Project	Tajikistan	Hydropower	Impregilo	3,900 USD	100	Jul-16
Baltic Srodkowy III Offshore Wind Farm	Poland	Wind Power	Kulczyk Investments	2,576 USD	100	Aug-16
Isagen	Colombia	Hydropower	Brookfield Renewable Energy Partners, Unidentified Investor(s)	2,200 USD	58	Jan-16
Merkur Wind Project	Germany	Wind Power	ADEME, Deme Group, General Electric, InfraRed Capital Partners, Partners Group	1,600 EUR	100	Aug-16
Tees Renewable Energy Plant	UK	Biomass/Biofuel Facility	Macquarie Bank, PKA AIP	900 GBP	100	Aug-16

Source: Preqin Infrastructure Online

alternative assets. intelligent data.

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PRIVATE DEBT: 2016 IN NUMBERS

SIZE OF THE INDUSTRY

$595bn
Private debt assets under management as at June 2016.

$224bn
Dry powder held by private debt funds as at June 2016.

FUNDRAISING SUCCESS

$93bn
Aggregate capital raised by the 131 private debt funds closed in 2016.

107%
Average proportion of target size achieved by private debt funds closed in 2016.

CAPITAL CONCENTRATION

CLOSED

$710mn
Average size of private debt funds closed in 2016.

47%
of aggregate capital raised in 2016 was secured by the 10 largest funds closed.

KEY ISSUES

40%
of investors consider valuations as one of the key issues facing the private debt asset class in 2017.

31%
of fund managers believe it is more difficult to find attractive investment opportunities than 12 months ago.

PERFORMANCE EXPECTATIONS

93%
of investors believe that their private debt portfolios have met or exceeded performance expectations over the past 12 months.

$58bn
Total capital distributions in H1 2016.

INVESTOR SENTIMENT

68%
of investors have a positive perception of private debt.

62%
of investors plan to increase their allocation to private debt over the longer term.

ASSETS UNDER MANAGEMENT AND DRY POWDER

Assets under management (AUM) in the private debt industry, defined as the uncalled capital commitments (dry powder) plus the unrealized value of portfolio assets, have quadrupled since 2006, reaching $595bn as at the end of June 2016 (Fig. 3.1). This marks the tenth consecutive year of growth for the asset class, which notably did not see a contraction in 2008/2009, as many other asset classes did. Between December 2015 and June 2016, AUM grew 7.1%, likely due to a combination of factors, namely strong fundraising, increased deal activity and investment performance bolstering the unrealized value portion of assets.

AUM BY VINTAGE YEAR

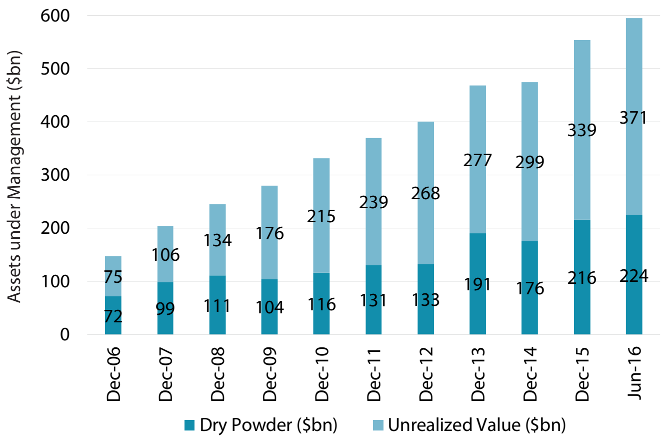
As seen in Fig. 3.2, viewing industry AUM by vintage year of the underlying funds relays a somewhat different picture. More than half of total dry powder is held in funds of vintages 2015-2016, with that figure growing to 74% when including vintage year 2014.

Alternatively, 61% of unrealized value is held in funds from vintage years 2006-2012. This represents an estimated $222bn still at large for funds potentially as much as a decade old.

AUM BY FUND TYPE

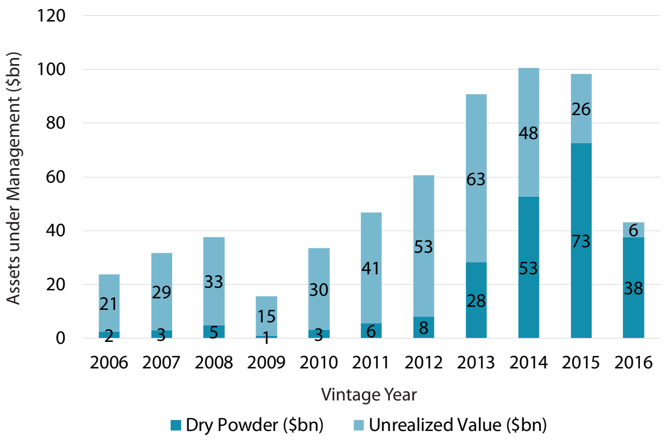
The average lifespan of private debt funds differs by strategy employed. Fig. 3.3 shows the proportion of total unrealized value held across the five main private debt fund types by vintage year. Direct lending funds have a far smaller proportion (12%) of capital tied up in vintage 2006-2010 funds than the other strategies, which each hold between 35% and 45%. Direct lending funds have 88% of unrealized value held in 2011-2016 vintage funds, owing to the nature of the strategy, which typically sees capital distributions earlier relative to traditional alternative strategies.

Fig. 3.1: Private Debt Assets under Management, 2006 - 2016



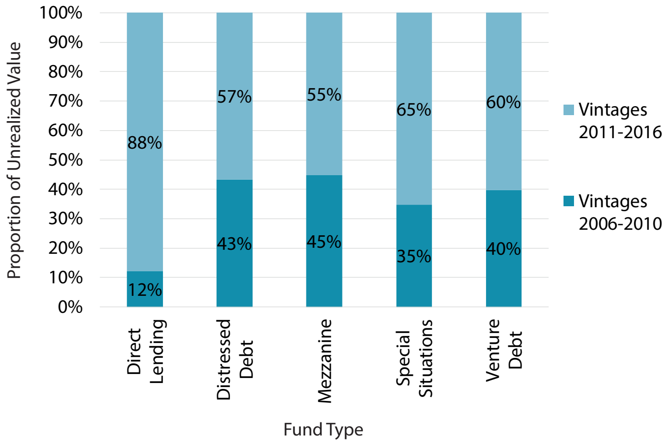
Source: Preqin Private Debt Online

Fig. 3.2: Private Debt Assets under Management by Vintage Year (As at June 2016)



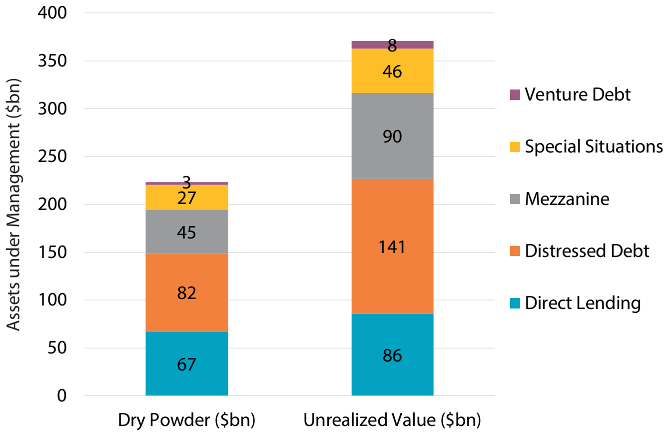
Source: Preqin Private Debt Online

Fig. 3.3: Unrealized Value by Fund Type and Vintage Year Grouping (As at June 2016)



Source: Preqin Private Debt Online

Fig. 3.4: Private Debt Assets under Management by Fund Type (As at June 2016)



Source: Preqin Private Debt Online

2016 FUNDRAISING MARKET

An aggregate $93bn was raised across 131 private debt funds closed in 2016, marking the second consecutive year, and third overall, in which fundraising totals have surpassed $90bn (Fig. 4.1). This figure is likely to increase as more data becomes available, and the fundraising total for 2016 is expected to meet or exceed the level seen in 2015 ($97bn).

> ***"The 10 largest funds closed in 2016 accounted for 47% of overall fundraising, compared with 25% in 2014***

CAPITAL CONCENTRATION

The trend towards a greater concentration of capital among fewer funds continued in 2016: 16% fewer funds closed than in 2015, resulting in the average fund size increasing to $710mn. Investors have committed larger amounts of capital annually, but placed this with roughly the same number of or fewer fund managers. The 10 largest funds closed in 2016 accounted for 47% of overall fundraising, compared with 25% in 2014.

FUNDRAISING SUCCESS AND TIME ON THE ROAD

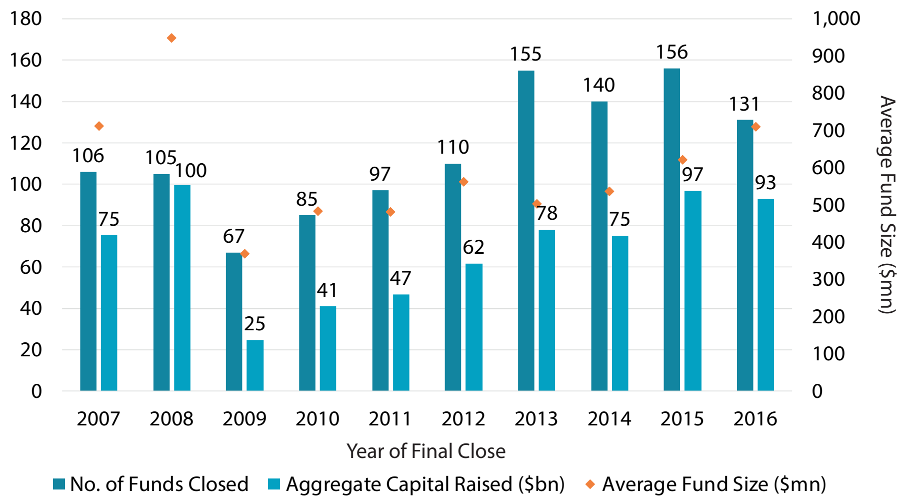
Many of the funds that did reach a final close in 2016 were successful relative to their original fundraising targets: 74% of funds closed in 2016 were able to meet or exceed their target size. On average, funds closed in 2016 took longer to reach a final close than in years past: the average time spent in market was 21 months, the highest figure over the period 2007-2016, surpassing the average of 19 months spent on the road by funds closed in 2012 (Fig. 4.2).

Among private debt strategies, mezzanine funds reached a final close the quickest in 2016, averaging 19 months in market. Mezzanine funds, on average, also had the most fundraising success, closing at 120% of target. Direct lending funds spent an average of 20 months in market to reach 106% of their initial target, while distressed debt funds took 21 months to close, raising just 89% of their initial target.

FUND TYPES

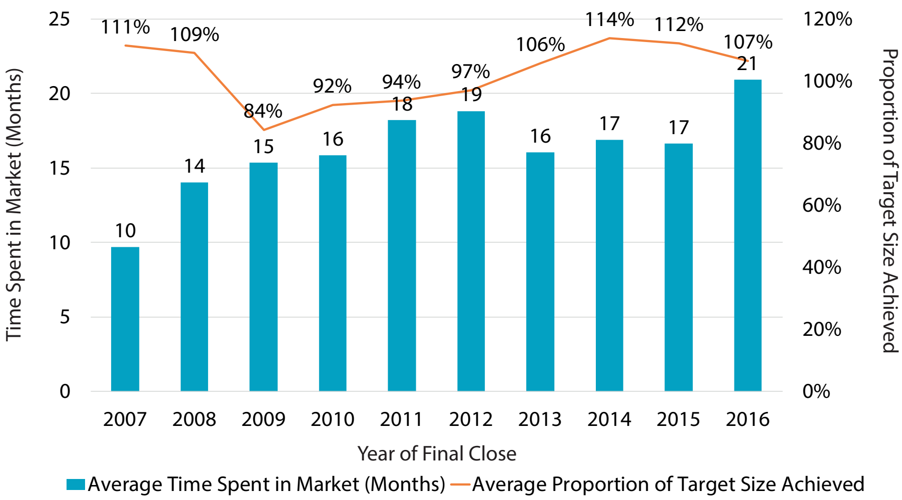
Distressed debt commitments to funds closed in 2016 grew by 14% from the previous year to reach $32bn across 18 funds (Fig. 4.4). This is the strategy's largest annual fundraising total since 2008 ($45bn) and represents the greatest proportion (34%) of capital committed to private debt funds in 2016 (Fig. 4.5).

Fig. 4.1: Annual Private Debt Fundraising, 2007 - 2016



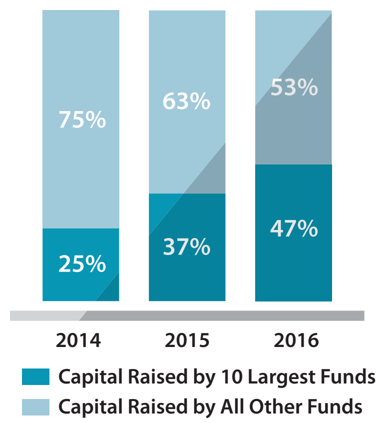
Source: Preqin Private Debt Online

Fig. 4.2: Private Debt Fundraising Momentum, 2007 - 2016



Source: Preqin Private Debt Online

AGGREGATE CAPITAL RAISED BY LARGEST FUNDS CLOSED, 2014 - 2016



DISTRESSED DEBT FUNDRAISING

Distressed debt funds closed in 2016 raised an aggregate $32bn, the most of any private debt strategy, and the highest annual total for the strategy since 2008 (Fig. 4.21). This 14% year-on-year increase in capital commitments was achieved by just 18 funds, five fewer than in 2015. As a result, the average distressed debt fund size increased by 46% over the same time period from $1.2bn to $1.8bn, twice the average size of mezzanine funds.

Annual North America-focused distressed debt fundraising increased by $6.6bn from 2015 to 2016, while Europe-focused fundraising remained steady at $7.0bn; commitments to funds targeting opportunities in Asia & Rest of World decreased significantly from $3.0bn to $300mn (Fig. 4.22).

North America-focused funds accounted for 77% of the capital secured by distressed debt funds closed in 2016, securing $24bn across 13 vehicles, while the $7.0bn secured by Europe-focused vehicles was raised by four funds, one fewer than the previous year.

OUTLOOK

Overall, there are 39 distressed debt funds in market (as at the end of February 2017) targeting an aggregate $30bn, compared to 31 funds targeting $44bn at the same time in 2016. The average target size of distressed funds raising capital, at $758mn, is just over half of what it was 12 months ago ($1.4bn). However, the three largest private debt funds currently in market are all distressed debt focused, targeting $3.5bn each, and together account for 36% of aggregate capital targeted by the strategy. Additionally, fund managers may face challenges in securing capital in 2017 as investors view distressed debt less favourably than both direct lending and mezzanine.

AVERAGE SIZE OF PRIVATE DEBT FUNDS CLOSED IN 2016 ($mn)

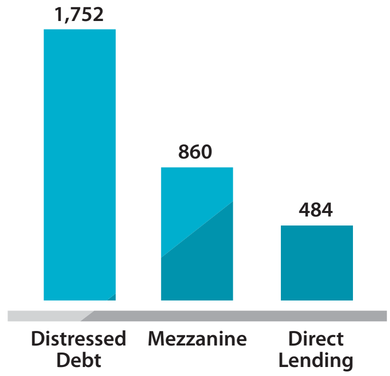
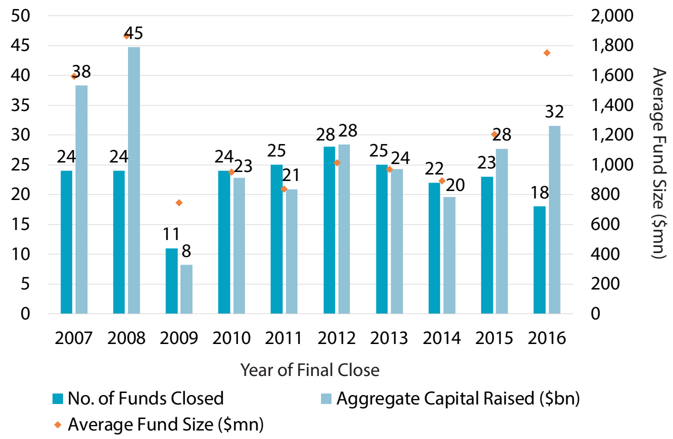
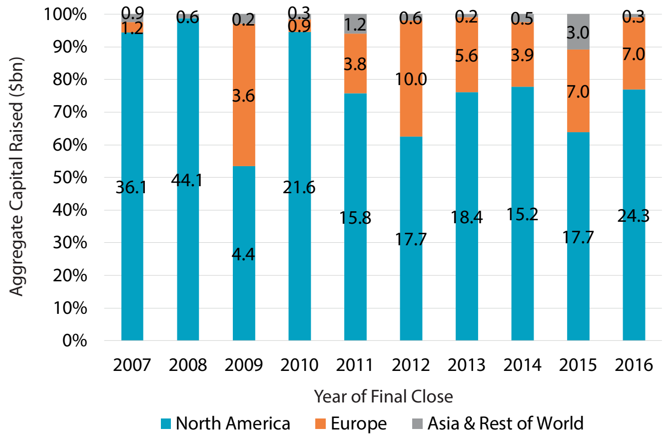


Fig. 4.21: Annual Distressed Debt Fundraising, 2007 - 2016



Source: Preqin Private Debt Online

Fig. 4.22: Annual Distressed Debt Fundraising by Primary Geographic Focus, 2007 - 2016



Source: Preqin Private Debt Online

The three largest private debt funds in market are all targeting distressed debt opportunities:

Apollo European Principal Finance Fund III

Firm: Apollo Global Management

Primary Geographic Focus: Europe

Target Size: $3.5bn

Centerbridge Special Credit Partners III-Flex

Firm: Centerbridge Capital Partners

Primary Geographic Focus: US

Target Size: $3.5bn

Cerberus Institutional Partners VI

Firm: Cerberus Capital Management

Primary Geographic Focus: US

Target Size: $3.5bn

EVOLUTION OF THE INVESTOR UNIVERSE

The private credit space has continued to evolve in the past decade as institutional investors are increasingly taking advantage of the fund opportunities that have arisen globally since 2007. Preqin's **Private Debt Online** contains detailed information on more than 2,400 institutional investors that are either actively investing in private debt opportunities or looking to make their maiden commitment. This marks an increase of more than 500 individual investors over 2016, showing heightened interest in the asset class.

LOCATION OF ACTIVE INVESTORS

While 83% of private debt investors are located in either North America or Europe, this represents a decrease of five percentage points from the previous year, indicating that investors in Asia & Rest of World are increasing their exposure to the asset class (Fig. 7.1).

Three of the 10 largest global investors (by current allocation to private debt) are among the 17% of investors based in Asia & Rest of World: South Korea's KB Insurance allocates nearly a quarter (24%) of its $23bn in AUM to the asset class, and Ivory Coast-based African Development Bank allocates 15% of $35bn.

MAKE-UP OF ACTIVE INVESTORS

Institutional investors continue to outnumber private wealth investors in private debt: 85% of investors are institutions, while 15% manage private wealth. Public and private sector pension funds represent the largest proportions of investors in the asset class, 14% and 16% respectively, followed by foundations (13%).

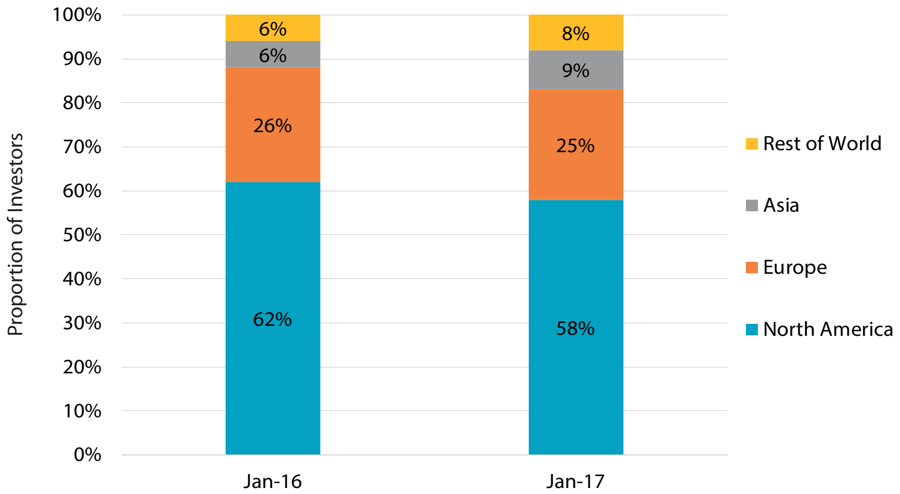
While foundations account for the third largest proportion of active private debt investors by type, they contribute the third smallest amount of aggregate capital. Comparatively, pension funds tend to account for larger proportions of invested capital as a result of typically larger AUM; public and private sector pension funds contribute the largest proportions of aggregate capital at 32% and 24% respectively (Fig. 7.3).

AVERAGE ALLOCATIONS

The average current and target allocations of a private debt investor currently stand at 4.7% and 9.2% respectively. However, there is significant variation among investor types, typically associated with the amount of AUM and years of experience in the asset class. Total capital commitments to private debt will likely continue to grow, as average target allocations exceed average current allocations for all investor types.

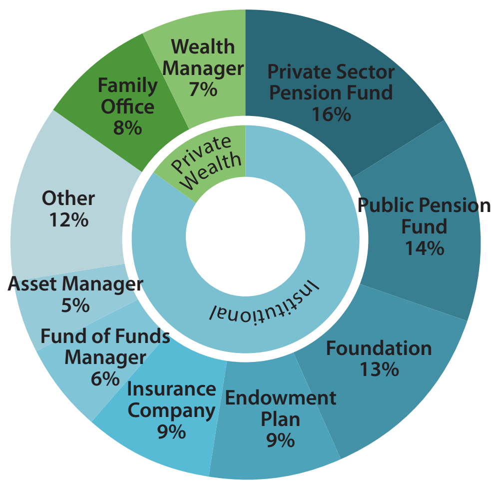
Family offices continue to have both the highest current allocation (10.7%) and the highest target allocation (20.7%) as a proportion of AUM (Fig. 7.4). This can be attributed to fewer restrictions, increased flexibility and their appetite for higher returns compared to other asset classes. Specifically, two New York-based single-family offices are looking to make new

Fig. 7.1: Institutional Private Debt Investors by Location, 2016 vs. 2017



Source: Preqin Private Debt Online

Fig. 7.2: Institutional Private Debt Investors by Type



Source: Preqin Private Debt Online

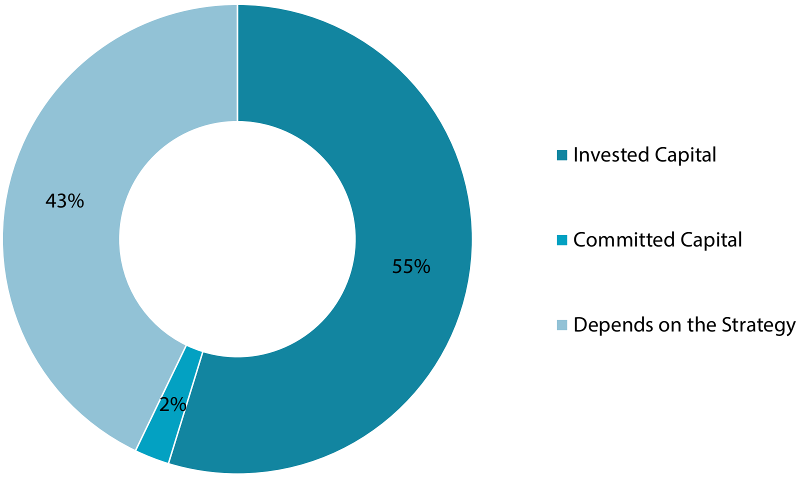
INVESTOR ATTITUDES TOWARDS FUND TERMS AND CONDITIONS

MANAGEMENT FEES

Preqin interviewed a selection of institutional investors in December 2016 regarding their attitudes towards fund terms and conditions. When asked about the structure of management fees paid to their private debt managers, the majority (55%) of investors expect to pay fees only on the capital that has been put to work by a manager, but almost half (43%) would expect the fee structure to vary based on the strategy of the fund (Fig. 9.3).

Investors' opinions on the fees charged by their direct lending investments fall along similar lines, with 64% of investors expecting to pay management fees on invested capital for direct lending funds, compared to just 3% that expect to be charged based on committed capital (Fig. 9.4). Direct lending funds generally carry no equity component, which is one of many reasons they may be less costly for a manager to maintain. In this case, investors can expect to pay less in management fees, despite seeing returns that, on a risk-adjusted basis, can be quite attractive to them.

Fig. 9.3: Private Debt Investors' Expectations of How Management Fees Should Be Charged

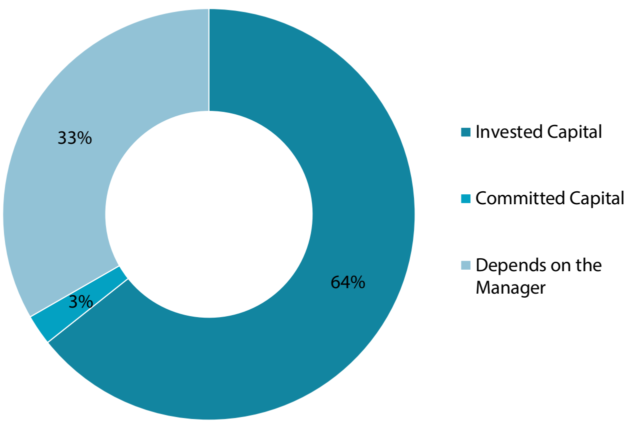


Source: Preqin Investor Interviews, December 2016

ALIGNMENT OF INTERESTS

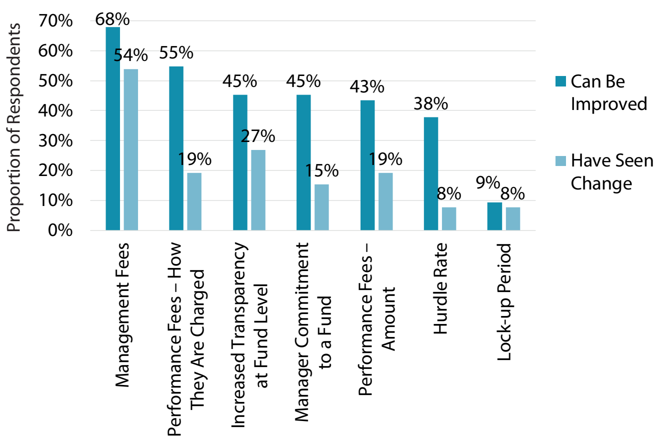
Overall, 63% of private debt investors believe that their interests are aligned with those of their fund managers, while 37% believe that interests are not aligned. Management fees were cited by the largest proportions of investors as an area of fund terms that can be improved (68%), and where changes have been seen in the past 12 months (54%, Fig. 9.5). Fee structure can be the basis for a fruitful manager-investor relationship, and in some cases, investors appreciate the potential trade-off between higher fees and improved portfolio performance, and are therefore satisfied with compensating managers for incremental portfolio gains. Other key areas with potential for improved alignment as cited by investors include how performance fees are charged (55%), the manager commitment to a fund (45%), greater transparency at fund level (45%) and the amount of performance fees (43%).

Fig. 9.4: Direct Lending Investors' Expectations of How Management Fees Should Be Charged



Source: Preqin Investor Interviews, December 2016

Fig. 9.5: Areas in Which Investors Have Seen a Change in Prevailing Terms and Conditions in the Last 12 Months and Where They Can Be Improved



Source: Preqin Investor Interviews, December 2016 preqin

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KEYNOTE ADDRESS
- Steve Standbridge, **Capstone Partners**

Over the last several years, we have seen the natural resources fundraising environment evolve. After a tumultuous 2015, we were happy to see a re-emergence of interest in the natural resources space. Many investors spent 2015 asking and answering questions about their existing portfolios with little ability to focus on new opportunities. Fortunately, commodity prices, especially WTI and certain metals like gold and silver, improved over the course of 2016 and there was at least a feeling among investors that we had seen the worst and had reached some level of price stability with upside potential. As a result, we saw LPs that had gone offline for the prior 12 months begin to leg back into the market, albeit with an increased level of caution. More specifically, we witnessed increased interest in upstream and midstream energy opportunities, especially in the US.

In the upstream energy space, investors were very focused on finding groups that survived the price meltdown because they had low-cost production in the most delineated basins and were prudent with their use of leverage. This situation is similar to the Global Financial Crisis when there was a bifurcation among buyout groups with some managers experiencing pressure through the downturn but ultimately performing well, while others with overleveraged portfolios lacked the flexibility to manage through the crisis and were left behind. In 2016, we also saw an increase in the number of upstream funds launched by owner-operators. Historically, these groups acted as management teams for traditional finance-oriented energy private equity funds for which they received a promote based on the performance of the portfolio company. By going directly to institutional limited partners, their argument is that investors can avoid a double fee structure and partner with the managers that are closest to the assets. Several of these groups have successfully raised funds, although there is always some scepticism regarding an operator's ability to allocate capital judiciously as a principal investor. In other words, some investors still take comfort in having a finance-oriented governor with less attachment to specific assets and a keener focus on capital efficiency.

In the midstream energy sector, we also saw LPs re-engage, although there is quite a bit of dry powder in the space as many greenfield development projects where GPs had originally committed capital were scaled back or abandoned. As a result, we have seen the focus of many GPs shift from development to acquisition of non-core assets being shed by MLPs that are still under pressure to generate cash to deleverage their balance sheets. In general, LPs considering midstream managers are spending a significant amount of time understanding the deployment plans of the current fund before they are willing to commit to a follow-on fund. Investors are heavily focused on managers' abilities to get capital invested, not just committed, quickly and prudently.

As it relates to metals & mining, we continued to see funds raised, but as in most sectors, there were the haves and the have nots. Four to five years ago, there was a great deal of optimism that there was a unique private equity opportunity for a value play through investments in thinly traded public mining companies that were starved for capital. Unfortunately, metal prices continued to decline and many of the funds raised in 2013 and 2014 significantly underperformed expectations; as a result, investors started to question whether the return premium offset the illiquidity associated with private equity-style structures. In 2016, LPs that were inclined to invest in metals & mining seemed to gain confidence in the knowledge that prices had at least stabilized, and we saw increased velocity of commitments, although there was clearly a flight to quality as groups that overleveraged their assets or underestimated capital needs continued to struggle. Provided valuations for mining assets continue to increase over the next year, portfolio performance should improve, which may increase investors' overall interest in the sector.

The fundraising market in 2017 continues to be strong, but there is clearly a feeling of uncertainty in the US surrounding the current administration and its potential impact on the global economy and by association real asset/commodity markets. The potential impact of renegotiated or abandoned trade deals, increased tensions with China and/or Russia over territorial aggression, the ever present concern over North Korea and the Middle East, OPEC deciding to abandon its production limitations, or an unforeseen impact relating to Brexit, while not new concerns, can certainly be seen as continued threats to an improving commodity market. We expect investors to remain relatively cautious, stick to quality, and seek defensive positions where possible. However, as long as the fundamentals of the global economy remain strong, we suspect investors will continue to allocate capital to real asset strategies.

CAPSTONE PARTNERS
Founded in 2001, Capstone Partners is a leading independent placement agent focused on raising capital for private equity, credit, real assets and infrastructure firms from around the world.

STEVE STANDBRIDGE
Steve Standbridge is a Managing Partner responsible for North American client origination and distribution in the Northeastern United States.

www.csplp.com

NATURAL RESOURCES: 2016 IN NUMBERS

NATURAL RESOURCES HIGHLIGHTS

$60bn

Aggregate capital raised by 74 unlisted natural resources funds closed in 2016.

$33bn

Total capital distributions in H1 2016.

252

unlisted natural resources funds are in market as at February 2017, targeting $105bn.

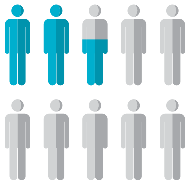
$455bn

AUM of the unlisted natural resources industry as at June 2016, a record high.

INVESTOR SATISFACTION

47%

of surveyed investors feel their natural resources investments have met or exceeded their expectations over the past year.



26%

of surveyed investors plan to allocate more capital to natural resources in 2017 than they did in 2016, with 52% planning to invest the same amount.

CAPITAL CONCENTRATION

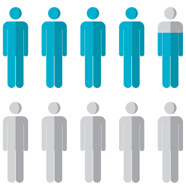
48%

of total capital raised in 2016 was secured by the five largest funds closed.

$900mn

Average size of an unlisted natural resources fund closed in 2016.

COMPETITION FOR ASSETS



47%

of surveyed fund managers believe that competition for transactions has increased over the past 12 months.

$187bn

Amount of dry powder held by natural resources funds as at June 2016, a record high.

PERFORMANCE

116.4

As at June 2016, the PrEQIn Natural Resources Index stood at 116.4 index points.

1.34x

Median net multiple of 2010 vintage funds, the highest among vintage years 2006-2013.

NATURAL RESOURCES: AT A CROSSROADS?

- Tom Carr, **Preqin**

2016 was a year of contrasts for the natural resources asset class; AUM rose to an all-time high and fundraising was generally strong, although it did not reach the record levels reached in 2015. This was against a backdrop of concerns over uncertainty in global markets and investors' general unhappiness with the performance of their natural resources investments.

However, the outlook for the asset class is promising: investors remain committed to natural resources and tailwinds in terms of commodity price rises in H2 2016 and macro events such as OPEC's commitment to cutting oil production may well help the asset class in 2017 and beyond.

RECORD LEVELS OF CAPITAL

Capital in the industry has risen year-on-year and as of June 2016 stands at a record $455bn, with dry powder rising to $187bn as managers struggled to put capital to work in a challenging and competitive deal environment. Fundraising has remained relatively strong with $60bn raised in 2016; however, this is below the record $75bn raised in 2015. It is important to note that fundraising in North America only saw a minor drop-off from 2015 (2015: $55bn vs. 2016: $48bn – a 12% drop), whereas in Europe this was more pronounced (2015: $10bn vs. 2016: $6.9bn – a 32% drop), with uncertainty around events such as Brexit affecting managers' and investors' attitudes towards the asset class.

Capital continues to be concentrated among a smaller number of managers that have successfully raised larger funds – a trend seen across all alternative asset classes. The 74 funds closed in 2016 represent the lowest total since 2009, despite total capital raised being the third highest on record. This implies that in the current environment investors are placing their faith in the track record and experience of the largest managers. Those managers on the road currently looking to raise capital can expect a challenging environment – 252 funds are looking to raise $105bn in capital as at February 2017. The fact that there are over 3x the number of funds closed in 2016 looking to secure 1.7x the capital raised indicates that there are a significant number of smaller funds in market.

> ***"Capital in the industry stands at a record $455bn***

INVESTOR CONCERNS

Fifty-four percent of respondents to Preqin's latest survey of institutional investors stated that their investments in natural resources fell short of their expectations in 2016; more investors were dissatisfied with their natural resources investments than were dissatisfied with their portfolios of any of the other private capital asset classes. While this is a significant worry for managers on the road looking to raise capital, it is reassuring to see that sentiment for the asset class is improving, with 80% of investors interviewed viewing the asset class positively or neutrally, compared with 67% at the end of 2015.

Furthermore, despite concerns over performance, it seems investors are bullish on the asset class going into 2017: 35% expect the asset class will perform better than it did in 2016, compared with 21% that believe it will perform worse.

Importantly for the continued growth of the asset class, investors are willing to back their positive sentiment towards natural resources with fresh capital commitments: 26% expect to allocate more capital to the asset class in the coming year, compared to 22% that will be allocating less. This is a dramatic improvement from the end of 2015 when 41% were looking to allocate less capital in the coming year.

OUTLOOK FOR 2017 AND THE LONGER TERM

It is undeniable that there are concerns from all players in the natural resources space, with volatility in global markets and performance at the forefront of these concerns. However, with investors continuing to struggle to find yield in a low-interest environment, real assets such as natural resources remain attractive. An uptick in commodity prices over the second half of 2016 will potentially help managers generate alpha and unlock new opportunities to put capital to work in the asset class. However, there is still significant uncertainty over commodity price volatility, and so managers will need to search for assets that will deliver returns even if commodity prices continue to fluctuate.

With a significant number of funds on the road looking to secure capital commitments, the fundraising environment will remain extremely competitive, with demand likely outstripping supply of investor capital. With this is mind, managers need to address concerns over volatility and performance, and demonstrate how they can deliver alpha in uncertain times.

NORTH AMERICAN FUNDRAISING

North America-focused fundraising continued to account for the largest proportion of unlisted natural resources fundraising globally in 2016, due to the large number of institutional investors and fund managers located in the region and the comparatively stable legal and regulatory framework inherent in a developed market.

Forty-two North America-focused funds reached a final close in 2016, raising $48bn (Fig. 4.12). Although both the number of funds closed and aggregate capital raised declined from 2015, the region accounted for a larger proportion of natural resources capital raised globally: 79% of all unlisted natural resources fundraising in 2016 was North America focused, up from 72% in 2015. When placed in a historical context, 2016 fundraising is in line with the average amount raised annually since 2013, and far above levels seen in the period 2007-2012.

With the relatively high amount of capital secured and the number of funds closed falling for the second consecutive year, the average fund size has reached a record $1.3bn, highlighting the trend of more capital being placed with a smaller pool of managers.

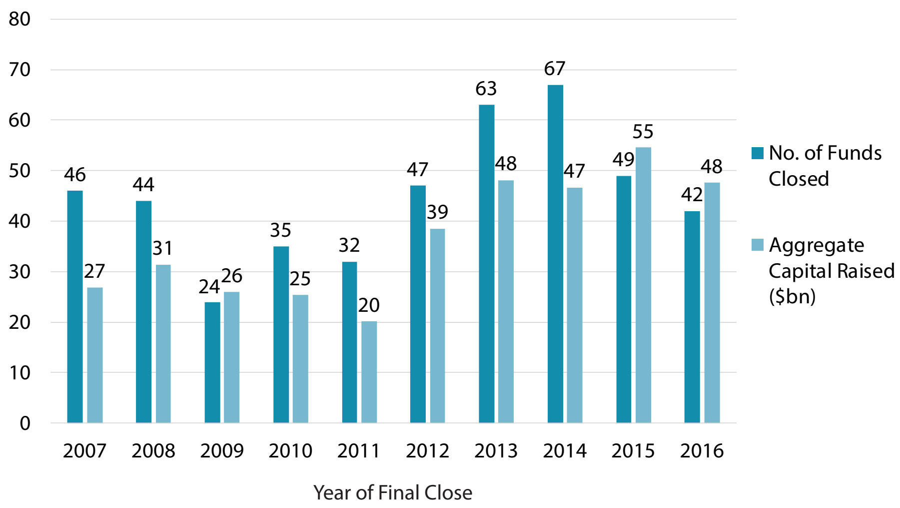
2016 Key Findings:

- Thirty-three energy funds reached a final close in 2016 securing $6bn, 95% of North America-focused capital raised. Of the remainder, four agriculture/farmland funds raised $1.3bn, two timberland funds raised $553mn and three funds with a diversified natural resources remit secured $300mn.
- Funds closed in 2016 spent, on average, 16 months on the road, indicating that even in a developed market, fundraising remains a lengthy process for some fund managers.
- Sixty-nine percent of North America-funds closed in 2016 met or surpassed their initial target size.

FUNDS IN MARKET

There were 114 unlisted North America-focused natural resources funds in market as at February 2017, targeting $57bn in institutional capital commitments, 44 of which have held an interim close, raising $14bn towards their fundraising target. Energy funds continue to dominate the landscape, representing 64% of funds in market and targeting 71% of total North America-focused capital being sought.

Fig. 4.12: Annual North America-Focused Unlisted Natural Resources Fundraising, 2007 - 2016



Source: Preqin Natural Resources Online

CAPITAL RAISED IN 2016 BY NORTH AMERICA-FOCUSED FUNDS

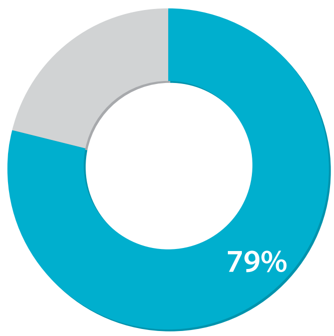
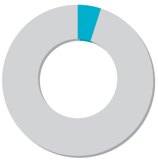


Fig. 4.13: Five Largest North America-Focused Unlisted Natural Resources Funds Closed in 2016

Fund	Firm	Fund Size (mn)	Strategy	Geographic Focus
Riverstone Global Energy and Power Fund VI	Riverstone Holdings	5,089 USD	Energy	North America, Global
North Haven Infrastructure Partners II	Morgan Stanley Infrastructure	3,600 USD	Energy	North America, Global
Stonepeak Infrastructure Partners II	Stonepeak Infrastructure Partners	3,500 USD	Energy, Water	North America
Carlyle Energy Mezzanine Opportunities Fund II	Carlyle Group	2,800 USD	Energy	North America, Global
AMP Capital Global Infrastructure Fund	AMP Capital Investors	2,400 USD	Energy	Europe, North America, OECD

Source: Preqin Natural Resources Online

AGRICULTURE/FARMLAND FUNDRAISING

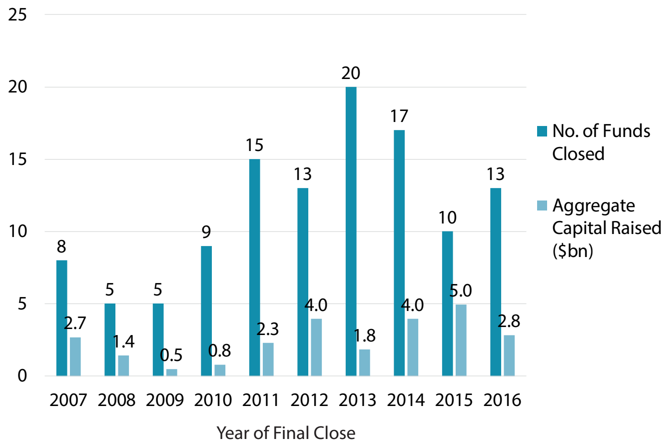


5%
of unlisted natural resources capital was secured by agriculture/farmland funds in 2016.

$12bn
Amount targeted by the 51 unlisted agriculture/farmland funds in market as at February 2017.

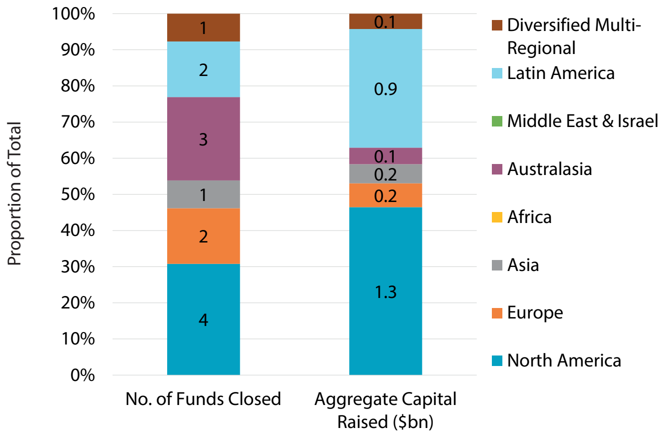
213
agriculture/farmland fund managers are profiled on **Natural Resources Online**.

Fig. 4.24: Annual Unlisted Agriculture/Farmland Fundraising, 2007 - 2016



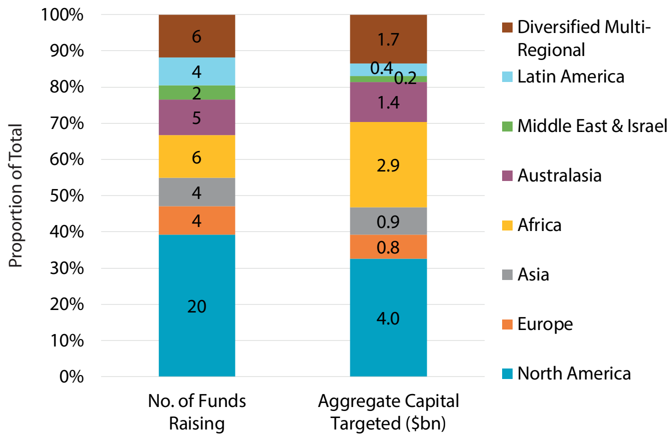
Source: Preqin Natural Resources Online

Fig. 4.25: Unlisted Agriculture/Farmland Fundraising in 2016 by Primary Geographic Focus



Source: Preqin Natural Resources Online

Fig. 4.26: Unlisted Agriculture/Farmland Funds in Market by Primary Geographic Focus (As at February 2017)



Source: Preqin Natural Resources Online

Fig. 4.27 Five Largest Unlisted Agriculture/Farmland Funds Closed in 2016

Fund	Firm	Fund Size (mn)	Geographic Focus
AMERRA Agri Fund III	AMERRA	820 USD	Latin America, North America
Brookfield Agricultural Fund II	Brookfield Asset Management	500 USD	Brazil
Blue Road Capital I	Blue Road Capital	433 USD	Latin America
Homestead Capital USA Farmland Fund II	Homestead Capital	400 USD	US
India Agri Business Fund II	Rabo Equity Advisors	150 USD	India

Source: Preqin Natural Resources Online

FUND MANAGER OUTLOOK FOR 2017

Preqin's **Natural Resources Online** currently tracks over 900 natural resources fund managers globally, with approximately $455bn in AUM. In November 2016, Preqin surveyed natural resources fund managers to understand their views on the major issues and challenges facing the industry at present and the prospects for 2017.

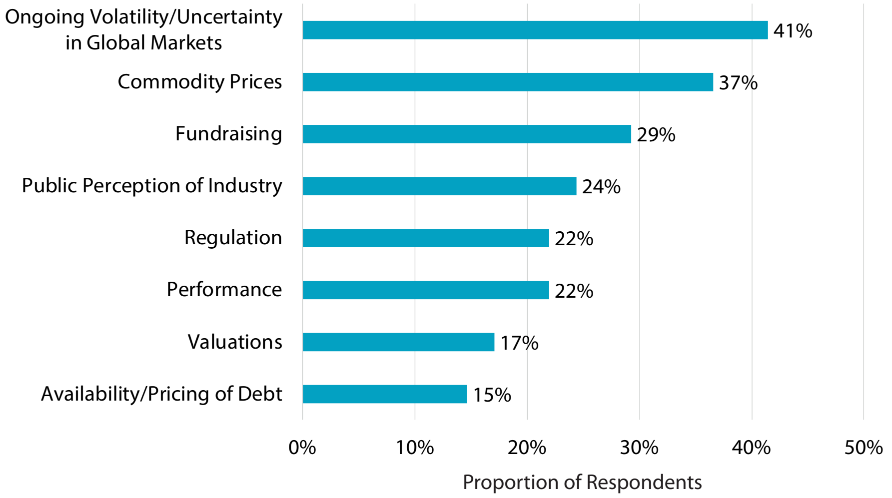
KEY ISSUES

Following a difficult few years for natural resources funds, fund managers foresee several different challenges in 2017 (Fig. 5.1). Prices for a number of commodities have increased from the lows seen in early 2016, but ongoing volatility and uncertainty in global markets and the impact on commodity prices remain high on fund managers' list of concerns, cited by 41% and 37% of respondents respectively.

While fundraising for natural resources vehicles has remained strong in recent years, it was identified by 29% of fund managers as a challenge they face in 2017. Although fund managers have generally reported increased investor appetite from a year ago, they also felt that competition from other managers for investor capital has grown over this period (see page 38).

In contrast to all other private capital asset classes, for which they were the leading concern, valuations were seen as less of a challenge by natural resources managers, with only 17% stating this as a key issue facing the industry. The pressure on commodity prices and an increase in available opportunities following price-driven sales of assets by natural resources companies may have played some role in ensuring that valuations have not been driven up as high as for other asset classes. Fund managers were split on how pricing for natural resources assets has changed over the past 12 months: 44% believe that

Fig. 5.1: Key Challenges Facing Natural Resources Fund Managers in 2017



Source: Preqin Fund Manager Survey, November 2016

FUND MANAGER VIEWS ON PRICING FOR NATURAL RESOURCES ASSETS COMPARED TO 12 MONTHS AGO

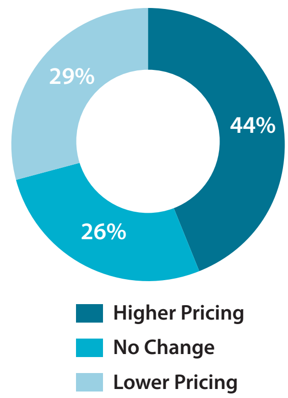
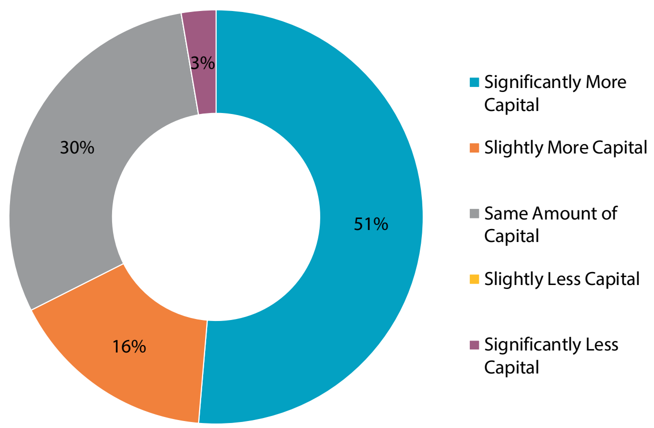
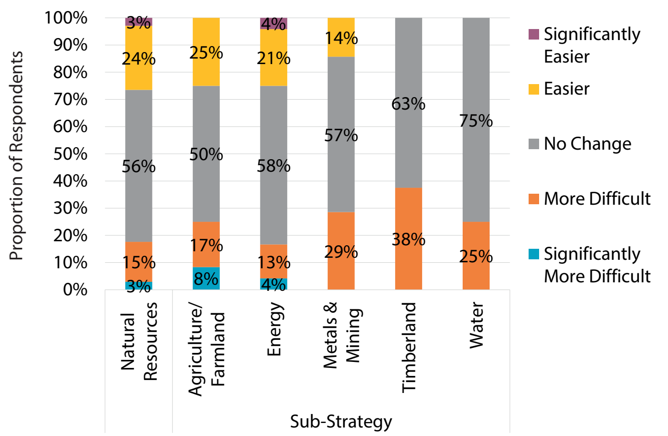


Fig. 5.2: Amount of Capital Fund Managers Plan to Deploy in Natural Resources Assets in 2017 Compared to 2016



Source: Preqin Fund Manager Survey, November 2016

Fig. 5.3: Fund Manager Views on the Difficulty of Finding Attractive Investment Opportunities Compared to 12 Months Ago



Source: Preqin Fund Manager Survey, November 2016

INVESTOR ATTITUDES TOWARDS FUND TERMS AND CONDITIONS

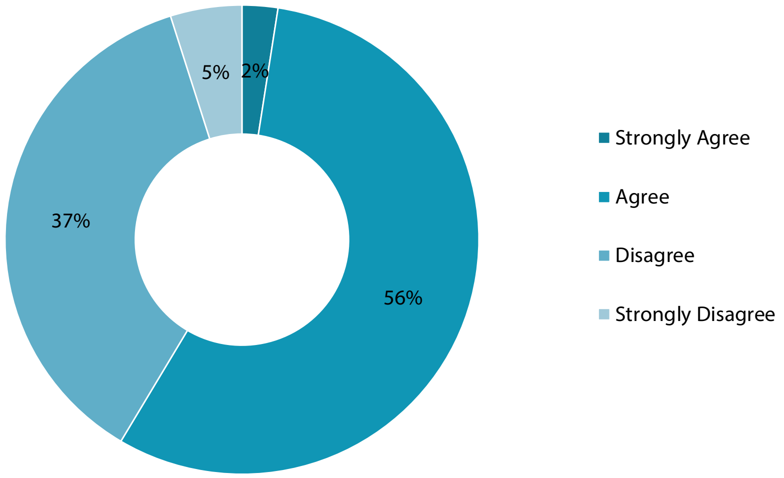
ALIGNMENT OF INTERESTS

Fund terms and conditions are a key consideration for investors looking to put capital to work; they affect the net returns investors receive and act as a means for ensuring fund manager and investor interests are properly aligned. It is particularly important in a competitive fundraising environment that fund managers ensure their fee structures are appropriate, as this can affect the success of their fundraise. The majority (58%) of investors interviewed by Preqin in December 2016 stated that fund manager and investor interests were properly aligned (Fig. 10.4). However, a significant proportion (42%) of investors interviewed did not believe fund manager interests were properly aligned with their own.

DEVELOPMENTS IN PREVAILING TERMS

Although the majority (63%) of investors surveyed have seen no changes in prevailing fund terms over the last year, encouragingly, 27% of institutions have seen a change in fund terms that favours investors compared with 9% that have witnessed changes in favour of fund managers, perhaps due to a competitive fundraising environment.

Fig. 10.4: Extent to Which Investors Believe that Fund Manager and Investor Interests Are Aligned



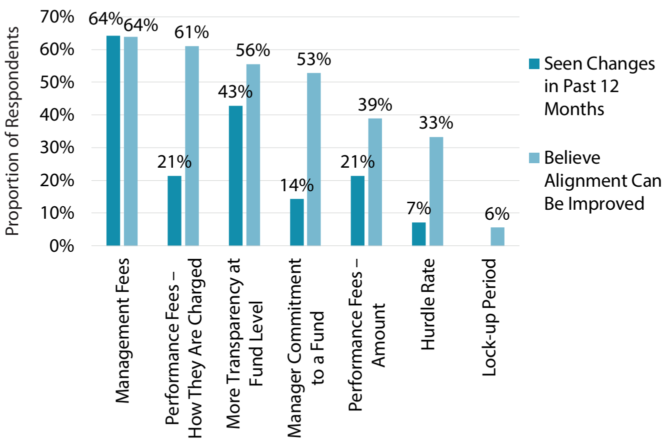
Source: Preqin Investor Interviews, December 2016

As seen in Fig. 10.5, management fees, how performance fees are charged, transparency and higher commitments from fund managers were each mentioned by more than half of surveyed investors as areas in which they would like to see improvement. However, 64% and 43% of institutions have seen changes to management fees and transparency in the past 12 months respectively, indicating that fund managers have taken action to evolve their fund term offerings.

OUTLOOK

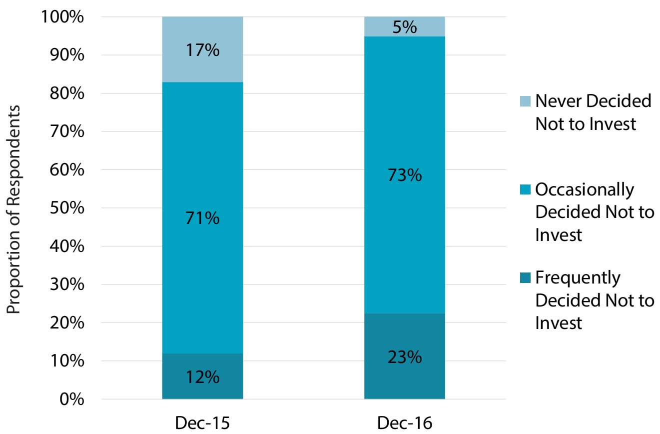
With 42% of investors reporting that they do not consider fund manager interests to be aligned with their own, it is perhaps unsurprising to see the rise in the proportion of institutions that have frequently decided not to invest due to the proposed fund terms and conditions (Fig. 10.6). This highlights the need for fund managers to ensure terms and conditions are in line with investors' interests in order to establish a positive relationship.

Fig. 10.5: Areas in Which Investors Have Seen a Change in Prevailing Terms and Conditions over the Past 12 Months and Where They Believe Alignment Can Be Improved



Source: Preqin Investor Interviews, December 2016

Fig. 10.6: Frequency with Which Investors Have Decided Not to Invest in a Fund Due to the Proposed Terms and Conditions, 2015 vs. 2016



Source: Preqin Investor Interviews, December 2015 - December 2016

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