

2017 PREQIN GLOBAL INFRASTRUCTURE REPORT

SAMPLE PAGES



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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.



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



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, **Pregin**

s 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 Pregin'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.

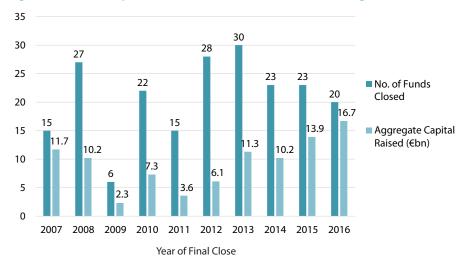


EUROPEAN FUNDRAISING

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 Europefocused funds closed in 2016 are managed by firms based in the UK, Germany or

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



Source: Preqin Infrastructure Online

France, with these funds accounting for 88% of aggregate capital raised.

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 Europefocused 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



€14hn

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 timeintensive 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 midmarket 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.

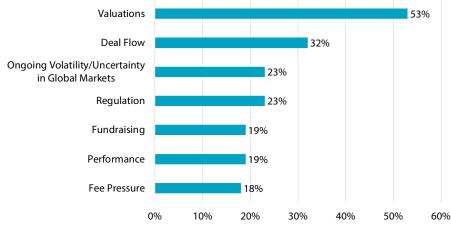
www.ubs.com/ infrastructureandprivateequity

FUND MANAGER OUTLOOK FOR 2017

he 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; Pregin'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.

Valuations

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



Proportion of Respondents

Source: Preain 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.

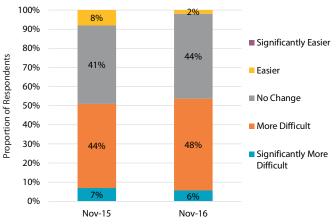
DEAL FLOW

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.

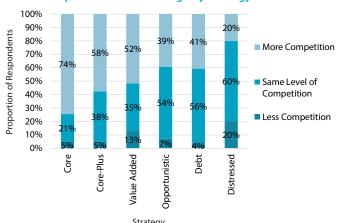
However, this competition has not manifested equally across the asset class as a whole:

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: Pregin 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%

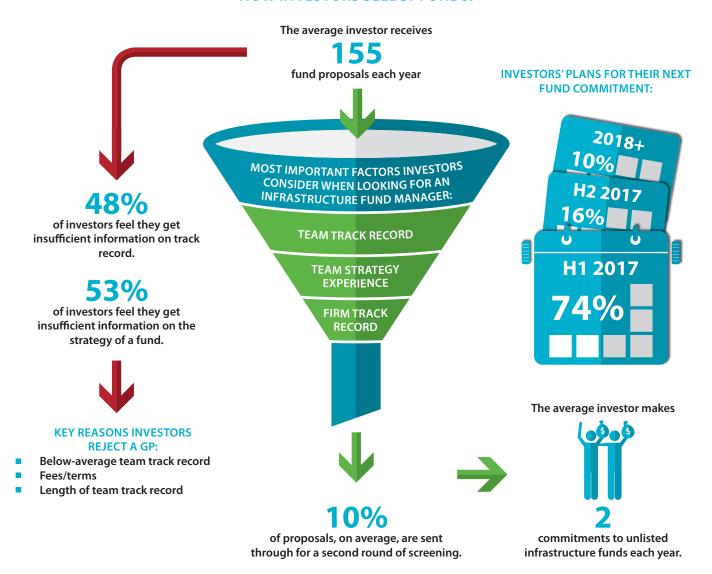
Mix of internal and external recommendations

20%

Mainly approaches from GPs or marketers, some internal recommendations 2%

Solely from external approaches

HOW INVESTORS SELECT FUNDS:



RENEWABLE ENERGY DEALS



25%

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



61%

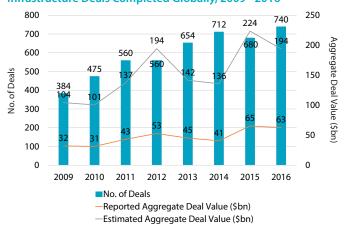
of deals completed in 2009-2016 involved greenfield assets.



85%

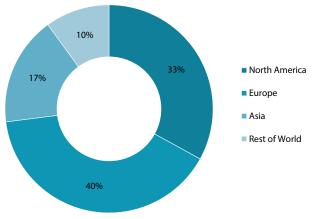
of deals completed in 2016 were valued at less than \$500mn.

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



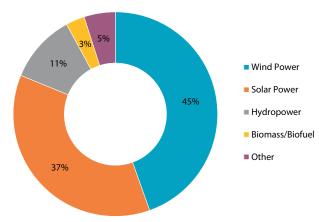
Source: Preqin Infrastructure Online

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



Source: Pregin Infrastructure Online

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



Source: Pregin 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



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