



## Stones, Structures and Stakeholders:

Comparing Listed Infrastructure Investment Options

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Investors are excited about infrastructure. Globally, government stimulus, policy mandates, and secular forces are aligning to create one of the most compelling investment opportunities for the next decade. When investors buy into popular infrastructure options, however, they might not get what they're expecting. We examine the market, and find the following:

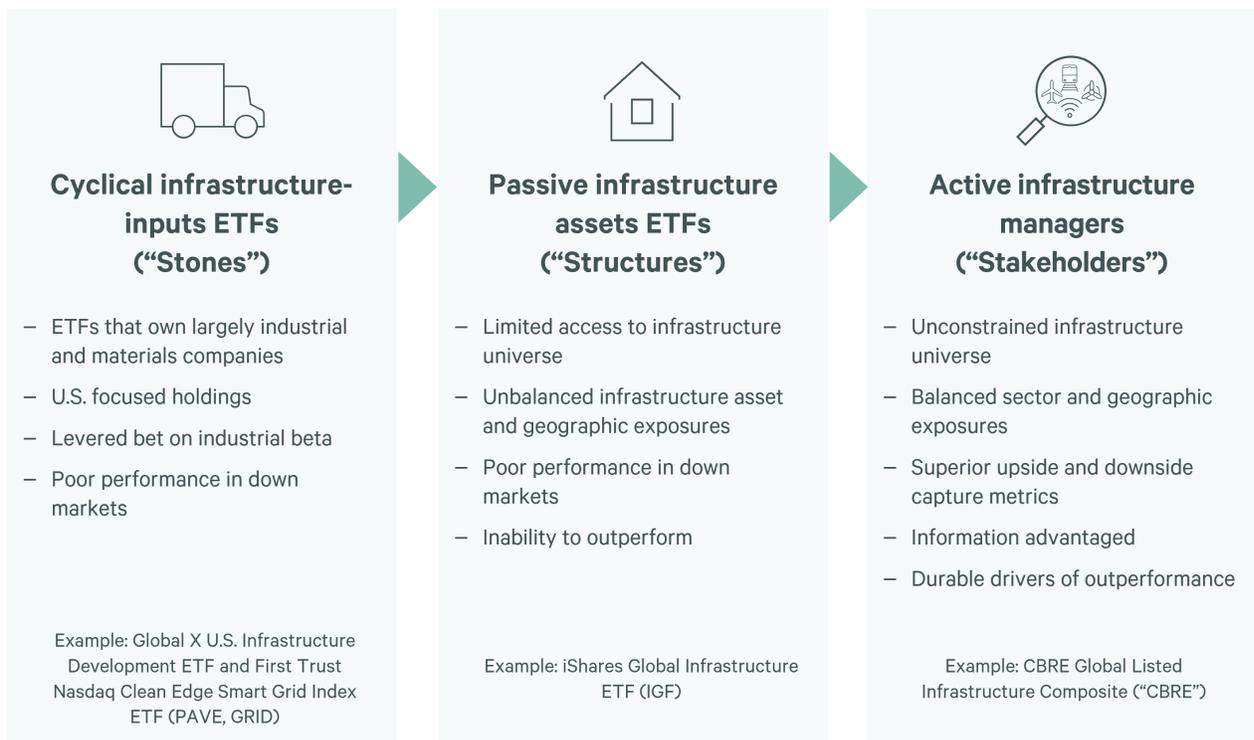
- Investors can buy into listed infrastructure in three ways: ETFs with cyclical infrastructure inputs (the “stones”), ETFs with passive infrastructure assets (the “structures”), or they can invest with active infrastructure managers (the “stakeholders”).
- Infrastructure stones, largely industrial and material companies, tend to be volatile. Meanwhile, passive infrastructure-asset ETFs, which are limited and unbalanced, fail to capitalize on the information advantages that active managers, infrastructure’s “stakeholders,” can possess.
- For investors seeking long-term growth, a balance of assets, and the keys to durable return, the conclusion is clear: drop the stones, skip the structures—and support the stakeholders of infrastructure.

## Societal, Secular and Cyclical Forces Aligning for Infrastructure

It’s been a good year for infrastructure. The asset class successfully weathered COVID-19, and cash flow momentum is accelerating. In Europe, the €1 trillion Green Deal is taking flight, and 68% of global economies are committed to Net Zero. We see strong growth for the asset class, with the potential for \$100 trillion in spending to promote decarbonization, modernize assets, and support data consumption. Over the next several years, this secular growth should augment cyclical recoveries in assets such as airports and railroads, as the world finds a new economic rhythm post COVID.

With this backdrop, investors are understandably excited about infrastructure. However, they have several different options from which to choose, with differences in risk and return. We see the market as divided between products representing the cyclical inputs of infrastructure, passive ownership of infrastructure assets, and active infrastructure management itself, as seen in **Figure 1**:

**Figure 1: Today’s Infrastructure Investment Options**



## The Stones of Infrastructure

The inputs of infrastructure, or “stones,” tend to be highly cyclical. They are well represented by the PAVE and GRID ETFs, which collectively have \$5.1 billion in AUM.

These ETFs are high beta products levered to industrial activity. We see companies like Nucor, which forges steel; United Rentals, which loans out scissor lifts and excavators; and Vulcan Materials, which mines gravel and crushed stone—a key component in highways. The companies are correlated to a steepening yield curve and rising inflation—and to the industrials sector in general. They operate in competitive businesses where margins compress and expand with the cycle. As a result, who are these stones best for? Investors who don’t need a dividend, and who want to make a decisive, levered bet on industrial beta and the continued outperformance of cyclical stocks—stocks which have exhibited significant volatility over time.

**Figure 2: Stones: Benefitting from Physical Construction**

Stones of Infrastructure	AUM	Dividend Yield
PAVE and GRID ETFs	5,131	1.16%
Sector Weights:		
Machinery (Equipment and Rental)		23%
Steel, Cement, Chemicals, and Building Materials		22%
Lighting and Automation Products		14%
Freight Rail		10%
Engineering and Construction Services		9%
Aerospace and Electronics		8%
Industrial Distributors		4%
Other		11%
Geography		
Americas		96%
Rest of World		4%

## High Correlation to Industrial Indices

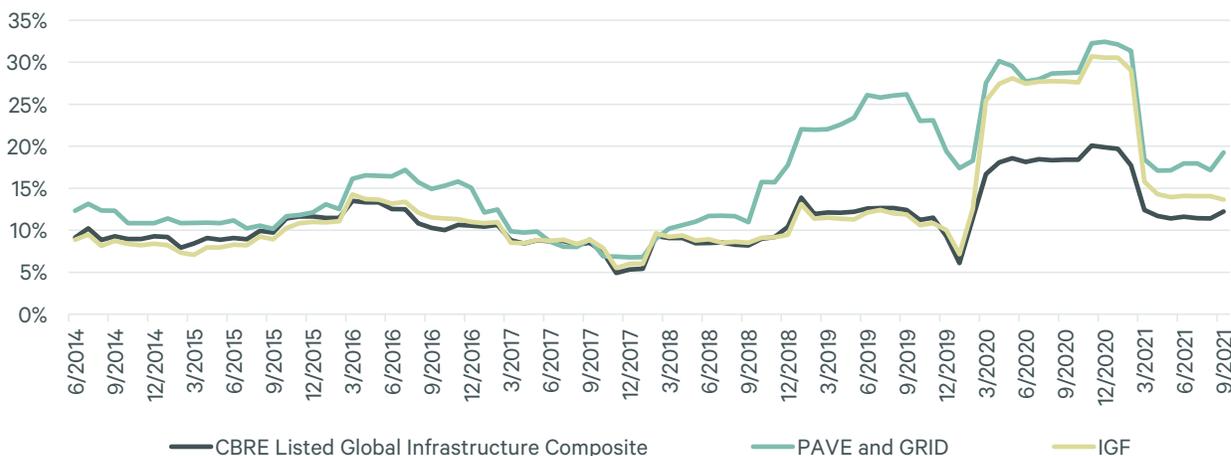
	3-Year Correlation	PAVE-US
PAVE-US	Global X U.S. Infrastructure Development ETF	1.00
GRID-US	First Trust NASDAQ® CIn Edge®StGidlfsETF	0.91
XLI-US	Industrial Select Sector SPDR® ETF	0.97
DJG:DJIAK	Dow Jones Industrial Average - Total Return	0.93

Source: Based on the weighted average holdings of the PAVE and GRID ETFs, per Factset and CBRE Investments as of September 2021. Representative holdings among the top 20 largest positions within the PAVE ETF.

Below, we show the rolling volatility of PAVE/GRID vs. IGF and the CBRE Global Listed Infrastructure Composite. PAVE/GRID, as cyclical inputs of infrastructure, are far more volatile than the infrastructure assets in IGF; we can also see that active management in infrastructure can dampen volatility amidst crisis, as when CBRE significantly outperformed IGF during COVID-19.

**Figure 3: Rolling Volatility of PAVE/GRID vs. IGF and CBRE**

**Rolling 1 Year Volatility**



Source: CBRE Investment Management. Compares the rolling volatility of the PAVE, GRID, and IGF ETFs with the CBRE Global Listed Infrastructure Composite. PAVE and GRID results are represented jointly.

**The Assets of Infrastructure (“Structures”)**

Compared to “stones,” the “structures” of infrastructure provide a steadier return to investors, composed of dividends and capital appreciation, which comes from their long-term assets. Whereas Vulcan Materials will make money by selling a ton of rocks to build a highway, toll-road companies like Transurban are the highway; they’ll earn revenues on the roads for decades. Similarly, other assets like utilities, data centers, cell towers, and airports have long-term contracts or regulated returns, which provide stability to earnings. If the bricks of infrastructure act like fast money, with short-term boosts to cash flows and the stocks, then the buildings of infrastructure are slow money—earning off assets over the long-term.

**Figure 4 : Structures: Passive Infra Ownership**

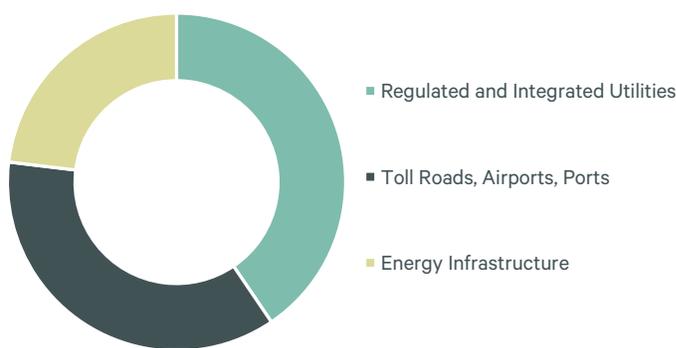
Structures of Infrastructure	
iShares Global Infrastructure (IGF) ETF	
Addressable Market Cap (\$trn):	\$1.5
Number of Companies:	74
Top 10 Weights	40%
Sector Weights	
Regulated and Integrated Utilities	41%
Toll Roads, Airports, Ports	36%
Midstream Energy	23%
Data Centers, Cell Towers, Satellites	0%
Geography	
America	49%
Europe	27%
Asia	16%
EM and Other	8%

Source: CBRE Investment Management. Based on the holdings of the IGF ETF as of September 2021.

Challenges exist, however, to purely passive ownership of infrastructure assets. First, infrastructure benchmarks, which the ETFs track, aren't uniform: they tend to each capture only a portion of the whole universe. In addition, the larger ETFs make sizable bets to cyclical sectors such as midstream energy and transportation. This may lead to poor performance in tough environments, as was the case during COVID-19, which is generally the opposite of what investors are looking for when they invest in the infrastructure asset class.

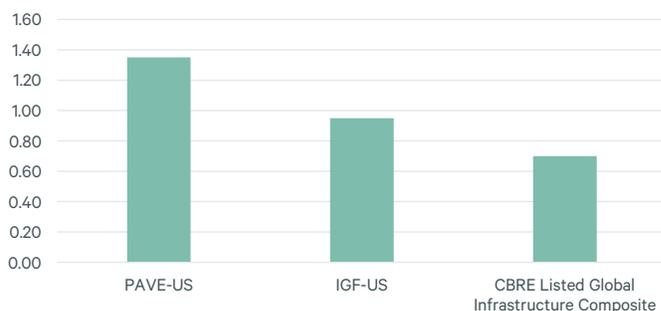
**Figure 5: IGF Exposures and Characteristics**

**IGF Sector Weights**

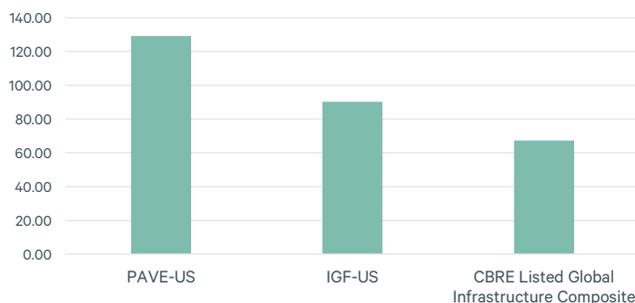


Source: CBRE Investment Management. Holdings analysis of the IGF ETF as of September 2021.

**Comparative Beta 3 Years**



**Comparative Downside Capture 3 Years**



Source: CBRE Investment Management, Factset. Comparison to the MSCI World Index as of September 2021.

IGF has large weights to midstream energy and transports relative to their weights in the CBRE infrastructure universe—which leads to higher beta and poorer performance in down markets.

## The Stakeholders of Infrastructure: Active Infrastructure Management

The stakeholders of infrastructure, as represented by active managers such as CBRE Investment Management, improve upon passive ownership in several ways. First, a full consideration of the listed infrastructure universe—rather than any one benchmark—results in a larger investible pool of assets, with balanced exposures across geographies and sectors. This, in turn, has contributed to superior beta and downside capture metrics as compared to passive ETFs such as the IGF and the benchmark it tracks (see **Figure 5** above). In **Figure 6**, we summarize the key differences between the CBRE Listed Infrastructure Universe and the IGF ETF.

Second, relative to passive infrastructure ETFs such as the IGF, active managers like CBRE may possess a sizable private-public information advantage, as well as specialized knowledge of niche sectors (relative to global equities coverage) that offer opportunities for durable alpha. In infrastructure, private market data is not widely available, so those managers with dedicated resources and on-the-ground knowledge have an edge. Infrastructure sectors are also only 2.5% of general equities indices, and hence tend to attract limited sell-side and buy-side coverage. As a result, infrastructure managers tend to know a lot more about their stocks than the average global equity portfolio manager.

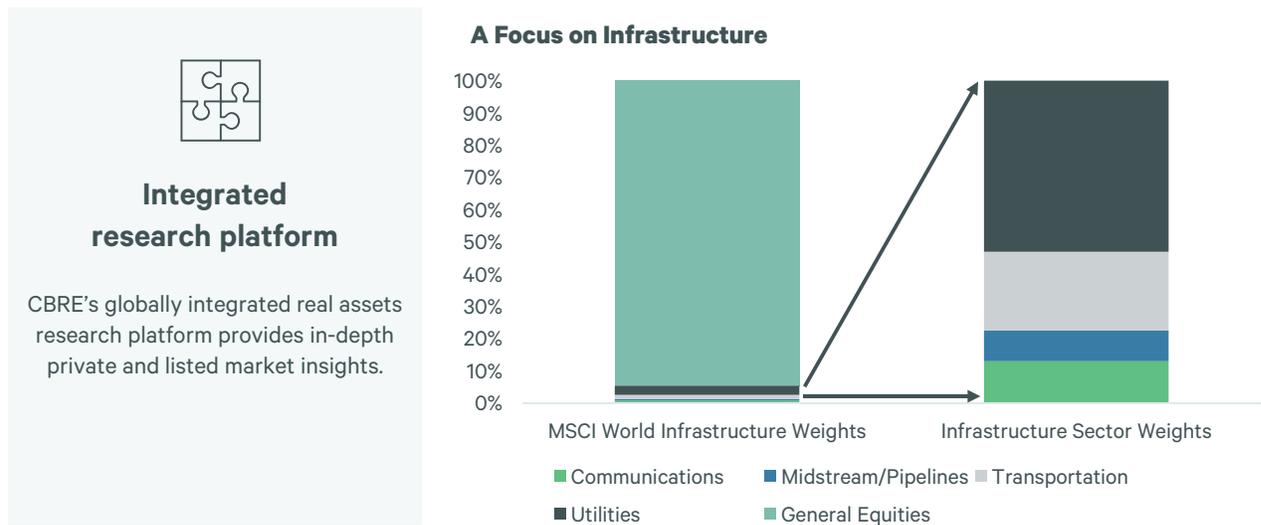
**Figure 6: Comparing the CBRE Listed Infrastructure Universe to the IGF ETF**

Structures of Infrastructure		Stakeholders of Infrastructure	
iShares Global Infrastructure (IGF) ETF		CBRE Listed Infrastructure Universe	
Addressable Market Cap (\$trn):	\$15	Addressable Market Cap (\$trn):	\$3.9
Number of Companies:	74	Number of Companies:	372
Top 10 Weights	40%	Top 10 Weights	29%
Sector Weights		Sector Weights	
Regulated and Integrated Utilities	41%	Regulated and Integrated Utilities	53%
Toll Roads, Airports, Ports	36%	Toll Roads, Airports, Ports	22%
Midstream Energy	23%	Midstream Energy	13%
Data Centers, Cell Towers, Satellites	0%	Data Centers, Cell Towers, Satellites	12%
Geography		Geography	
America	49%	America	58%
Europe	27%	Europe	22%
Asia	16%	Asia	9%
EM and Other	8%	EM and Other	11%

Source: Factset and CBRE Investment Management as of September 2021.

**Figure 7: Benefits of Active Infrastructure Managers**

## An Information Edge With Potential for Durable Alpha



Source: CBRE Investment Management.

Source: Weight of Infrastructure Sectors in the MSCI World vs. the CBRE Investment Management Listed Infrastructure Universe as of September 2021.

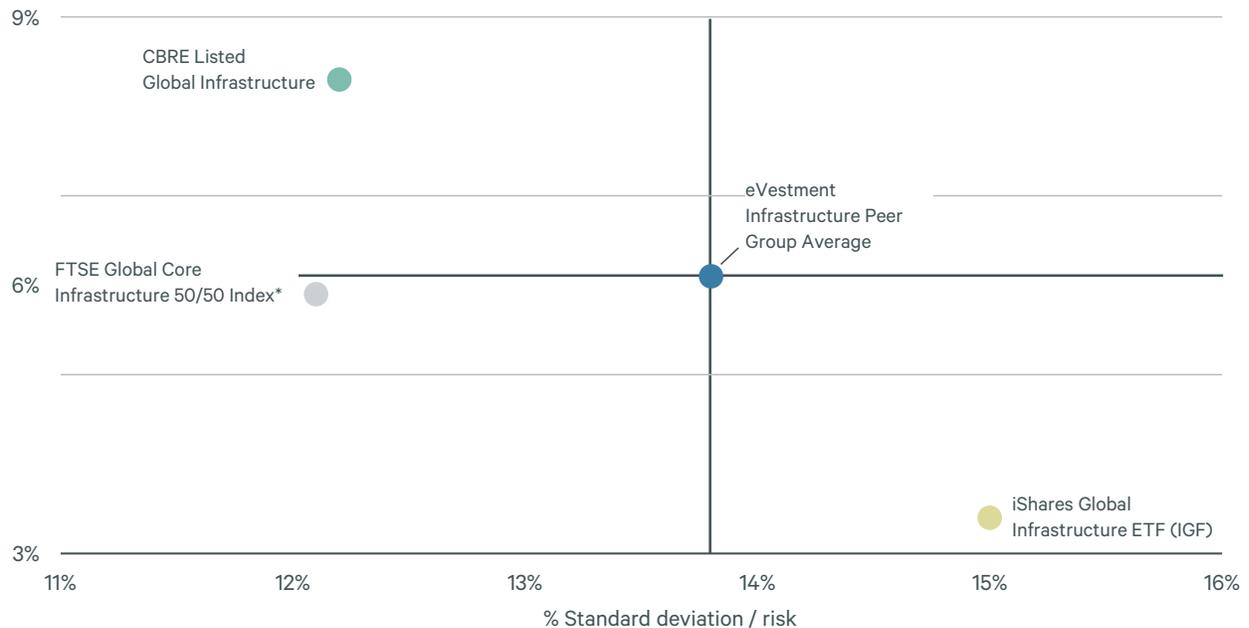
Collectively, these advantages can lead to consistent outperformance and superior risk-adjusted returns over time. In **Figure 8**, we compare the performance of the CBRE Global Listed Infrastructure Composite to its benchmark, the FTSE Global Core Infrastructure 50/50 Index, as well as the IGF ETF. CBRE has generated a compelling and differentiated risk reward skew to IGF. It has offered a higher return, with generally commensurate volatility, to its index. It has also performed handsomely versus peers.

## Supporting the Stakeholders of Infrastructure

When we examine the outlook for infrastructure today, we find a compelling multi-decade investment opportunity. Investors, however, must choose wisely. Infrastructure inputs, the “stones,” have already gained handsomely with powerful U.S. exposures, a steepening yield curve, and a recovery in the U.S. industrial economy. Infrastructure structures boast long-term cash flows that provide stability for growing dividend yields, but they are often limited in scope and unbalanced across sectors. It is the stakeholders in infrastructure, the active managers like CBRE who have an information edge, who have demonstrated durable, consistent, and compelling outperformance over time.

**Figure 8: Compelling Risk Reward vs. Passive Ownership Since Inception: CBRE vs. Benchmark and IGF**

### 7-year risk / return profile



Source: CBRE Investment Management and eVestment as of 06/30/2021. The eVestment Infrastructure Universe consists of separate account vehicles only, gross of fees unhedged. The CBRE Investment Management Global Listed Infrastructure Composite seeks a high total return through investment in global listed infrastructure securities that demonstrate stable cash flows and consistent cash flow growth. 7-year trailing performance is annualized and based in USD. Gross returns do not reflect the deduction of advisory fees, but are net of transaction costs and include the reinvestment of dividends, capital gains, and other earnings. Actual investment returns will be reduced by the advisory fees, consistent with the fees described in the client’s investment management agreement or Part 2A of the CBRE Investment Management Form ADV, plus any other cost a client may incur directly, such as custody fees. Net of fees (including performance fees) returns are calculated by deducting the annualized equivalent of the stated annual management fee for the CBRE Investment Management Global Listed Infrastructure strategy from each constituent account’s gross of fees return on a monthly basis. An index is unmanaged and not available for direct investment. Past performance is no guarantee of future results.

\*Benchmark Performance from March 1, 2012 through February 28, 2015, the Composite’s benchmark was the UBS Global Infrastructure & Utilities 50/50 Index – net of withholding tax; beginning March 1, 2015, the Composite’s benchmark is the FTSE Global Core Infrastructure 50/50 Index – net of withholding tax.

**If you would like to discuss the contents of this paper with our Infrastructure team, or would like more information about investing in Infrastructure, please contact:**

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## About CBRE Investment Management

CBRE Investment Management is a leading global real assets investment management firm with \$133.1 billion in assets under management\* as of September 30, 2021, operating in more than 30 offices and 20 countries around the world. Through its investor-operator culture, the firm seeks to deliver sustainable investment solutions across real assets categories, geographies, risk profiles and execution formats so that its clients, people and communities thrive.

CBRE Investment Management is an independently operated affiliate of CBRE Group, Inc. (NYSE:CBRE), the world's largest commercial real estate services and investment firm (based on 2020 revenue). CBRE has more than 100,000 employees serving clients in more than 100 countries. CBRE Investment Management harnesses CBRE's data and market insights, investment sourcing and other resources for the benefit of its clients. For more information, please visit [www.cbreim.com](http://www.cbreim.com).

\*Assets under management (AUM) refers to the assets under management, fair market value of real assets-related investments with respect to which CBRE Investment Management provides, on a global basis, oversight, investment management services and other advice and which generally consist of investments in real assets; equity in funds and joint ventures; securities portfolios; operating companies and real assets-related loans. This AUM is intended principally to reflect the extent of CBRE Investment Management's presence in the global real assets market, and its calculation of AUM may differ from the calculations of other asset managers and from its calculation of regulatory assets under management for purposes of certain regulatory filings.

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## Schedule of investment performance: CBRE Listed Global Infrastructure Composite

	Annual returns			3 year annualized standard deviation						
	Composite (gross)	Composite (net) <sup>2</sup>	UBS global 50/50 infrastructure & utilities net index linked to FTSE global core infrastructure 50/50 net index <sup>3,4</sup>	Composite (gross)	UBS global 50/50 infrastructure & utilities net index linked to FTSE global core infrastructure 50/50 net index <sup>3,4</sup>	Number of accounts	Dispersion	Composite assets (millions)	% Of firm assets	Firm assets (millions) <sup>5</sup>
2012 <sup>1</sup>	8.51%	7.77%	6.53%	N/A	N/A	<5	N/A	\$1.3	<5%	\$23,647.6
2013	21.35%	20.52%	16.98%	N/A	N/A	<5	N/A	\$51.4	<5%	\$22,755.9
2014	16.01%	15.21%	12.76%	N/A	N/A	<5	N/A	\$55.1	<5%	\$24,776.3
2015	-3.82%	-4.50%	-6.19%	11.08%	10.80%	<5	N/A	\$38.8	<5%	\$20,754.9
2016	11.16%	10.38%	10.87%	10.79%	10.06%	<5	N/A	\$51.1	<5%	\$17,473.9
2017	21.82%	20.98%	18.39%	9.97%	9.60%	<5	N/A	\$105.2	<5%	\$14,666.2
2018	-6.12%	-6.77%	-3.99%	9.60%	8.98%	<5	N/A	\$135.8	<5%	\$10,279.4
2019	30.00%	29.14%	25.13%	9.53%	8.30%	<5	N/A	\$401.6	5%	\$7,923.8
2020	2.23%	1.44%	-4.06%	14.56%	14.85%	6	N/A	\$866.5	11%	\$7,615.9

<sup>1</sup> Composite inception date was March 2, 2012. Performance presented is from the inception date of March 2, 2012 through year end. Performance results of periods less than one year are not annualized.

<sup>2</sup> Net of fee returns are not subject to examination; only gross of fee returns are examined in the verification engagement.

<sup>3</sup> From March 2, 2012 through February 28, 2015, the Composite's benchmark was the UBS Global 50/50 Infrastructure & Utilities Net Index; beginning March 2, 2015, the Composite's benchmark is the FTSE Global Core Infrastructure 50/50 Net Index.

<sup>4</sup> The FTSE Global Core Infrastructure 50/50 Net Index has been taken from a published source and has not been verified by the independent accountants. The FTSE Global Core Infrastructure 50/50 Net Index is gross of Investment advisory fees, if any.

<sup>5</sup> Firm assets are defined as assets of all investment advisory accounts of CBRE Investment Management Listed Real Assets LLC.

Please see additional disclosures on the following page.

## Schedule of investment performance continued

### Compliance Statement

CBRE Investment Management Listed Real Assets LLC (CBREIM Listed Real Assets) claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. CBREIM Listed Real Assets has been independently verified for the periods of March 2, 2012 through December 31, 2020.

A firm that claims compliance with the GIPS standards must establish policies and procedures for complying with all the applicable requirements of the GIPS standards. Verification provides assurance on whether the firm's policies and procedures related to composite and pooled fund maintenance, as well as the calculation, presentation, and distribution of performance, have been designed in compliance with the GIPS standards and have been implemented on a firm-wide basis. The CBRE Listed Global Infrastructure Composite (the Composite) has been examined for the periods from March 2, 2012 through December 31, 2020. The verification and performance examination reports as well as a complete list and description of CBREIM Listed Real Assets composites are available upon request.

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### Definition of the Firm

CBREIM Listed Real Assets is an investment adviser registered with the U.S. Securities and Exchange Commission and specializes in the management of real estate and infrastructure securities. CBREIM Listed Real Assets includes four wholly owned subsidiaries and has offices located in Radnor, PA, USA; London, England; Tokyo, Japan; and Sydney, Australia. Total firm assets as of December 31, 2020 were U.S. \$7.6 billion.

### Composite Definition

The CBRE Listed Global Infrastructure Composite seeks a high total return through investment in global listed infrastructure securities that demonstrate stable cash flows and consistent cash flow growth. CBREIM Listed Real Assets uses systemic, top-down research to evaluate market conditions and trends to judge which regions and sectors offer potential attractive risk-adjusted returns. Then, CBREIM Listed Real Assets uses proprietary bottom-up analytical techniques to identify the securities which it believes will provide stable cash flows and consistent growth. Performance presented is based on returns in U.S. dollars. The composite creation and inception date is March 1, 2012. The Listed Global Infrastructure Composite's performance represents the performance for clients where CBREIM Listed Real Assets has sole investment authority. The Composite includes all non-restricted, discretionary, fee-paying accounts with market value greater than \$1 million, managed according to the Composite's investment objective including those no longer under management.

### Performance Results

The monthly rate of return for an eligible account uses a time-weighted, daily linked rate of return formula to calculate each account's monthly return. Monthly composite returns are calculated by asset weighting each account's monthly return based on the beginning-of-month market values. The annual returns are computed by compounding the monthly rates of return. Performance results are net of execution costs and dividend withholding taxes and assume the reinvestment of all interest, dividends, and capital gains. Dividend income is recorded on the ex-dividend date. Gross performance results do not reflect the deduction of management and custody fees, which will reduce the rates of return.

### Significant Cash Flow Policy

An account will be temporarily removed from the Composite if it experiences a "significant cash flow" that is a cumulative cash flow more than 30% of the portfolio's market value during the month.

### 3 Year Standard Deviation, Internal Composite Dispersion

The three-year annualized standard deviation measures the variability of the monthly composite returns over the preceding 36-month period. The internal composite dispersion of annual returns is measured by the standard deviation across equal-weighted monthly portfolio returns represented within the composite for a full year. Portfolios are only included in the internal composite dispersion calculation if they were in the composite for a full year. Internal composite dispersion is not reported if a composite has less than 5 accounts at any point during the year as this is not considered statistically meaningful.

### Treatment of New or Terminated Accounts

New accounts included have been under management for at least one full month. Terminated accounts are included in the composite through the last full month they are invested.

### Policies and Reports

CBREIM Listed Real Assets's policies for investment valuation, calculation of returns, significant cash flows, and preparing compliant presentations are available upon request. Additionally, a complete list of and description of CBREIM Listed Real Assets's composites, a copy of the verification report, and a list of affiliated entities is also available upon request. Please direct requests to the CBREIM Listed Real Assets Compliance Department at +1 (610) 995-2500.

### Composite Benchmark

Effective March 1, 2015, the Composite is benchmarked to the FTSE Global Core Infrastructure 50/50 Index (USD, net of withholding taxes) (FTSE 50/50). The constituents of the FTSE 50/50 are selected from the FTSE Global All Cap Index using FTSE's definition of infrastructure (50% Utilities, 30% Transportation, and 20% mix of other sectors including pipelines, satellites, and telecommunication towers).

Prior to March 1, 2015, the Composite was benchmarked to the UBS Global 50/50 Infrastructure & Utilities Index (UBS 50/50) (USD, net of withholding taxes). The UBS 50/50 is an unmanaged market-weighted index which consists of infrastructure and utility companies from developed markets whose floats are larger than US \$500 million and earn more than 50% of EBITDA from infrastructure or utilities business. The change in the benchmark resulted from the cessation of the UBS 50/50 and the subsequent change in benchmark for the underlying constituent accounts in the Composite. The benchmarks are linked to present a continuous comparison to the Composite. From March 1, 2012 through February 28, 2015, the Composite's benchmark was the UBS 50/50; beginning March 1, 2015, the Composite's benchmark is the FTSE 50/50.

The benchmark is used for comparative purposes only and generally reflects the risk or investment style of the investments underlying the returns presented on the Schedule of Investment Performance. The composition of an index may not reflect the manner in which an account is constructed in relation to expected or achieved returns, portfolio guidelines, restrictions, volatility or tracking error targets, all of which may change over time. Accordingly, investment results and volatility of individual accounts will differ from those of the benchmark. Investors cannot invest directly in an index.

### Fees

Fees are described in the client's investment management agreement or Part 2A of the CBREIM Listed Real Assets Form ADV. The management fee for the strategy is generally tiered with an average rate of .50% per annum, billed quarterly in arrears, for an initial investment of US \$50 million. Fees are negotiable depending on the size of the account, and may include a performance component. Management fees do not include custody fees. Net of fees returns are calculated by deducting the annualized equivalent of the annual management fee for each constituent account from the gross of fees return for the constituent on a monthly basis. Net performance additionally reflects the reduction of performance fees if applicable. Net of fee returns are not subject to examination; only gross of fee returns are examined in the verification engagement.

### Additional Disclosures

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