



**CenterSquare**  
INVESTMENT MANAGEMENT

**Entrepreneurial Culture, Institutional Strength.**



## **America's Quiet Infrastructure Boom... and What it Means for Your Portfolio**

**Ted Brooks, CFA, Portfolio Manager**



For institutional investor use only. Not for use with the general public.

[www.centersquare.com](http://www.centersquare.com)

# Firm Overview

- Founded in 1987, focused exclusively on real assets
- \$9.7 billion in assets under management<sup>1</sup>
- Multiple strategies and customized solutions
- Headquartered in Philadelphia with an office in Newport Beach, CA and a local presence in London and Singapore<sup>2</sup>
- 40 investment professionals

Listed Real Estate



U.S. and Global REIT strategies with a focus on relative value



Private Equity Real Estate



Core, core-plus and value-add opportunities in the U.S.



Listed Infrastructure



A real asset approach to capturing value in an emerging asset class



<sup>1</sup> Source: CenterSquare, AUM based on fair value as of September 30, 2016 of client investments determined in accordance with generally accepted accounting principles. Fair value of public real estate and infrastructure securities are based on last sale prices listed on world wide established exchanges. Private equity AUM represents net equity investment values. Private equity values are generally derived based on discounted cash flows of underlying property investments. Debt AUM is equal to the fair value of commercial mortgage loans in a CDO structure for which CenterSquare is the collateral manager.

<sup>2</sup> CenterSquare is represented in London and Singapore by BNY Mellon Investment Management EMEA Limited and BNY Mellon Investment Management Singapore Pte. Limited, respectively.

# Infrastructure: the Backbone of the Global Economy

We invest in listed infrastructure companies that own or develop long-term real assets that facilitate the most efficient flow of energy, people, and trade globally

These Companies:

- Own/develop long-term assets that seek to produce stable, inflation-linked cash flow
- Represent a broad global opportunity set
- Are often characterized by monopolistic competitive landscapes, holding assets that are vital for economic function
- Often exhibit inelasticity of demand, providing essential services that tend to be resistant to economic downturns
- Hold assets that require a high level of capital to develop and maintain



## Electricity

- Electric utilities, transmission



## Oil & Gas

- Gas utilities, pipelines, storage and transportation



## Water

- Water utilities, distribution networks



## Communication

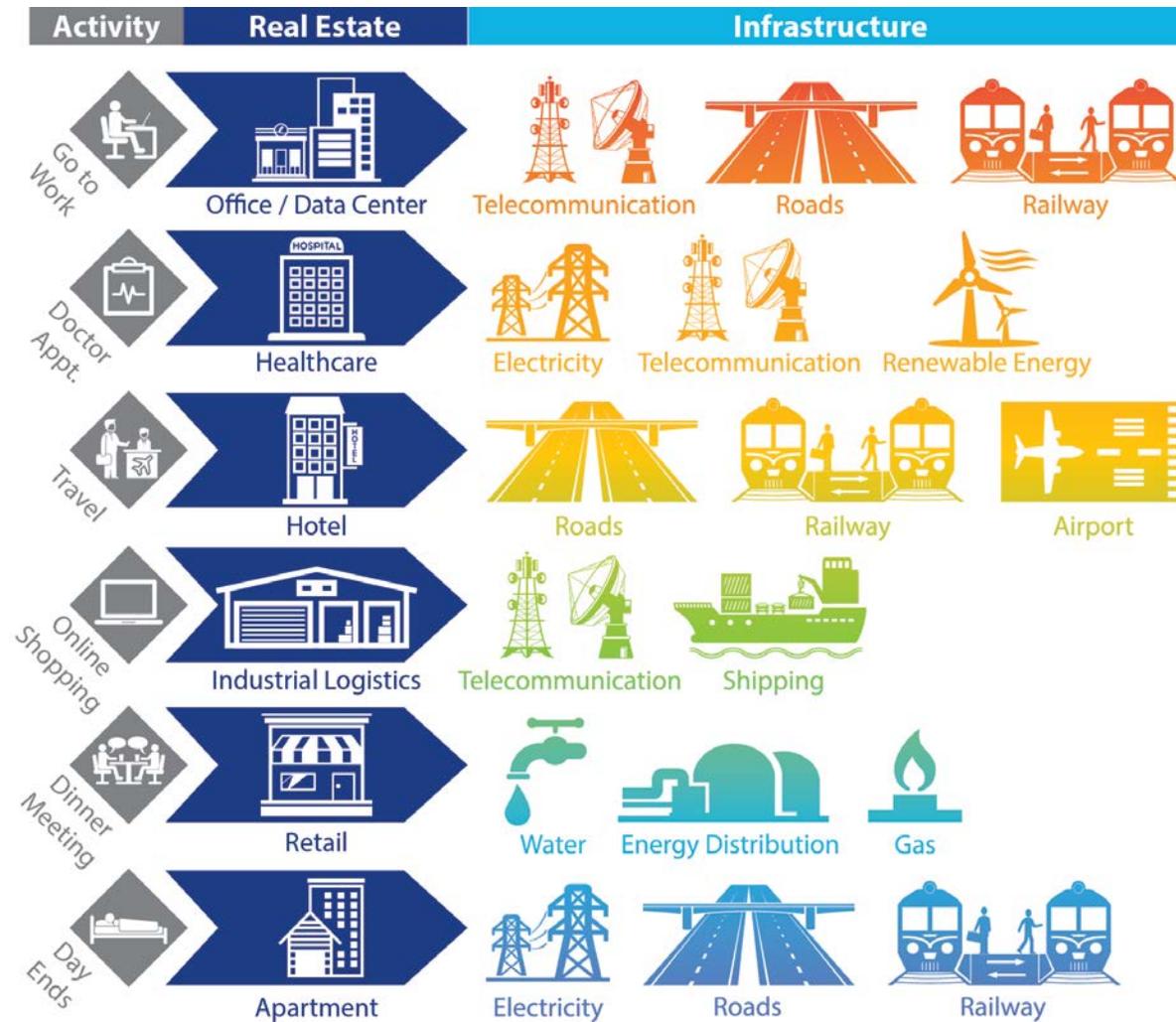
- Mobile towers, telecom service providers



## Transportation

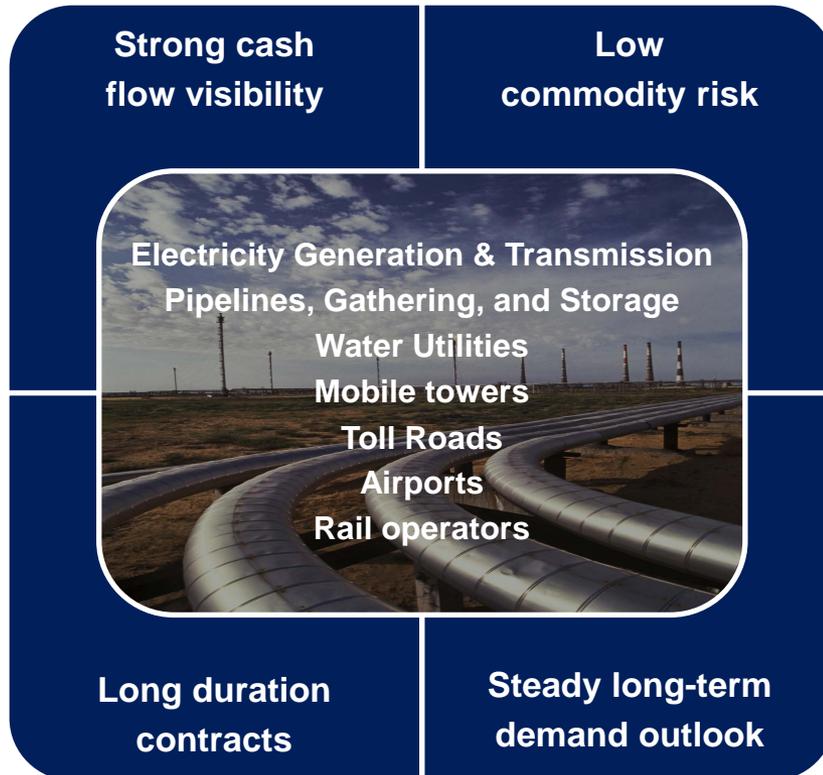
- Toll roads, airports, rail operators, ports, shipping

# Real Assets Every Day

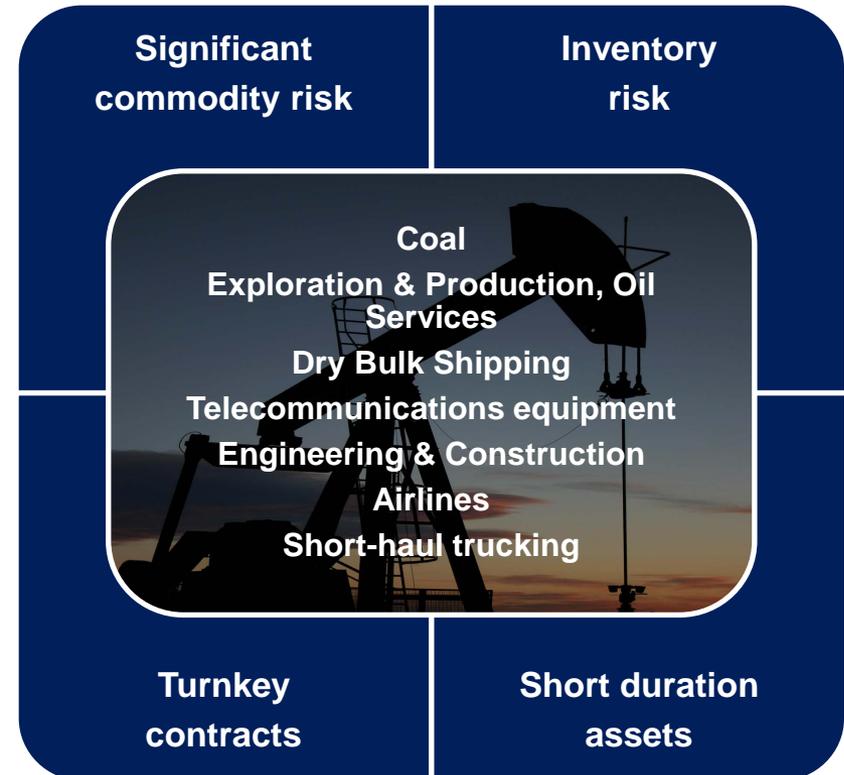


# CenterSquare's Approach

## Focus

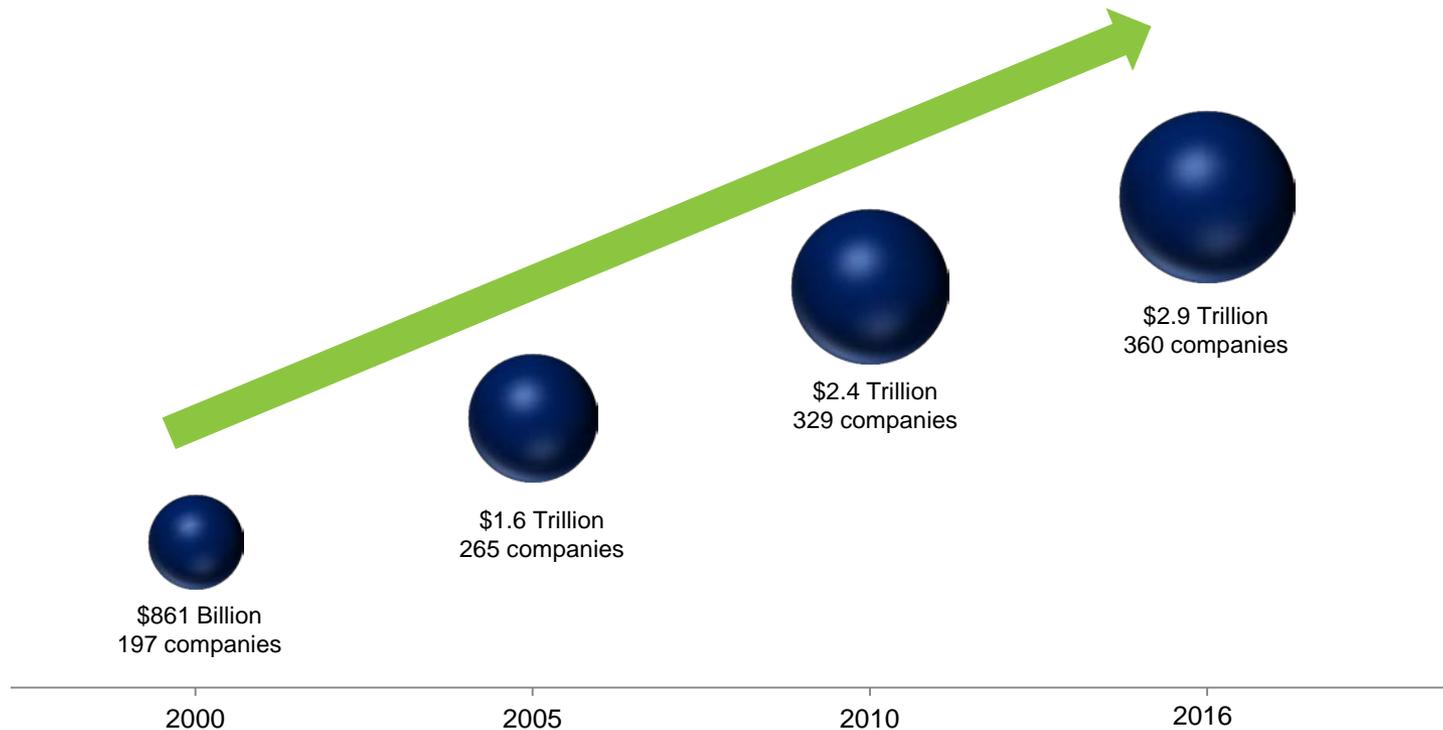


## Avoid



# Rapid Growth in the Global Listed Infrastructure Market

## Global Listed Infrastructure Total Market Capitalization



Sources: Bloomberg, CenterSquare, as of October 31, 2016. Universe is defined as all global infrastructure stocks in the five major asset class indices (UBS Developed Infrastructure & Utility Index, Dow Jones Brookfield Global Infrastructure Index, S&P Global Infrastructure Index, FTSE Global Core Infrastructure Index, Alerian MLP Infrastructure Index), plus stocks that CenterSquare deemed to be within our definition of the asset class, resulting in a proprietary universe of approximately 360 stocks. Please see definition of indices at the end of this document.



# Structural Themes: U.S. Renewable Energy Development

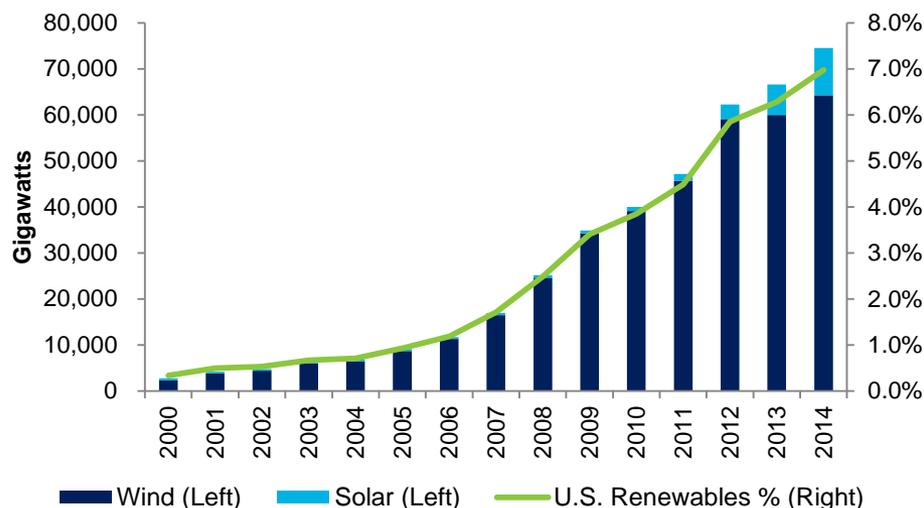
## Environmental Policy Pushes Non-Fossil Generation Growth

- Environmental goals have created a highly favorable renewable generation atmosphere, with 27% CAGR (compound annual growth rate) for installed capacity since 2000. More growth is expected as economics are catching up.

### CenterSquare Investment Sub-themes

- **Tracking Policy:** EPA Clean Power Plan and extension of favorable tax treatment should lead to acceleration of build-out plans.
- **Economics:** Improving costs for wind and solar leading to cost-competitive solutions for first time.

### Renewable Capacity Growth & Market Penetration



Source: U.S. Energy Information Administration, CenterSquare Investment Management, 2016

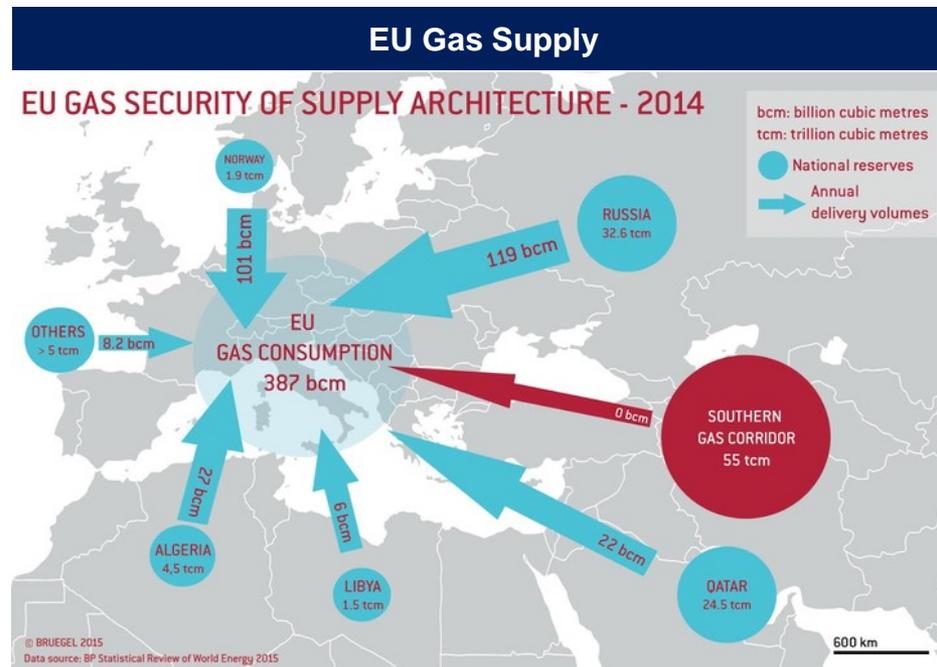
# Structural Themes: EU Gas Markets

## EU Aims to Create a Robust Gas Infrastructure

- The EU is working toward diversifying its sources of natural gas. All-in, the IEA estimates EU investment in gas transmission infrastructure to total over €220bn between now and 2035.

### CenterSquare Investment Sub-themes

- **Security of Supply:** Pipelines from stable partners outside of Europe (rather than inter-EU supply)
- **Bi-directional Pipelines:** Ability to move product in all directions (intra-EU), vs. historical dominance of east to west



Source: Bruegel, "Designing a new EU-Turkey strategic gas partnership," 2015

# Structural Themes: Air Travel

## Air Travel Growth Requires Large Scale Infrastructure Spending

- Since 2000, airports such as Beijing, Jakarta, Dubai and Bangkok have replaced San Francisco and Las Vegas as top 20 airports by passenger volume

### CenterSquare Investment Sub-themes

- Lower Cost of Travel:** Cheaper fares and low cost carriers helping to spur growth
- Emerging Markets:** Economic growth primary driver of air travel, and penetration is increasing

Beijing Airport



Passenger Growth

Rank	City	Airport	Growth	Rank	City	Airport	Growth
1	Atlanta	ATL	18%	11	Istanbul	IST	167%
2	Beijing	PEK	119%	12	Frankfurt	FRA	17%
3	Dubai	DXB	212%	13	Shanghai	PVG	124%
4	Chicago	ORD	1%	14	Amsterdam	AMS	32%
5	Tokyo	HND	19%	15	New York	JFK	36%
6	London	LHR	10%	16	Singapore	SIN	71%
7	Los Angeles	LAX	22%	17	Guangzhou	CAN	111%
8	Hong Kong	HKG	70%	18	Jakarta	CGK	77%
9	Paris	CDG	22%	19	Denver	DEN	24%
10	Dallas	DFW	8%	20	Bangkok	BKK	36%

Source: Airports Council International, September 2016

# Structural Themes: Global Telecommunications

## Growth in Mobile Data Usage Driving Tower Investments

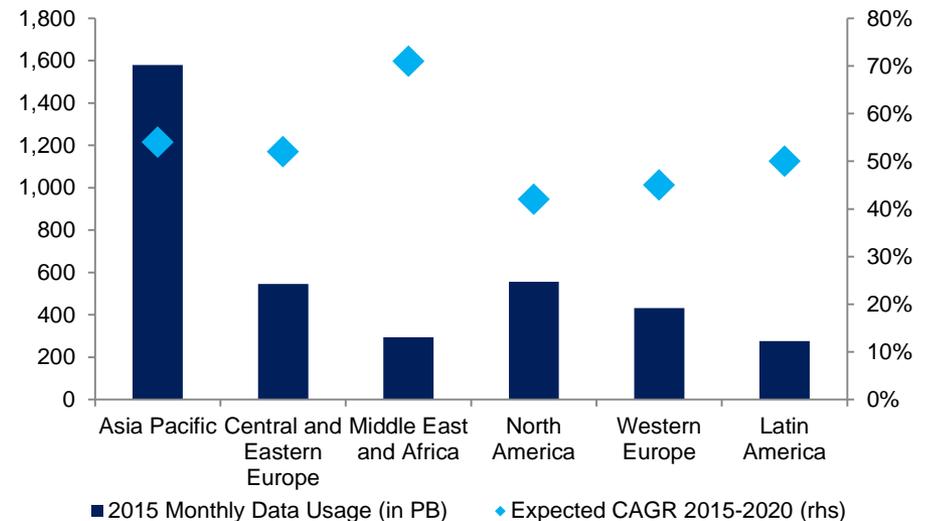
- Forward estimates project a 53% CAGR in global mobile data traffic through 2020.

### CenterSquare Investment Sub-themes

- Transmission Capacity:** Driven by mobile data growth
- Cell Density:** Additional towers required to improve quality of service



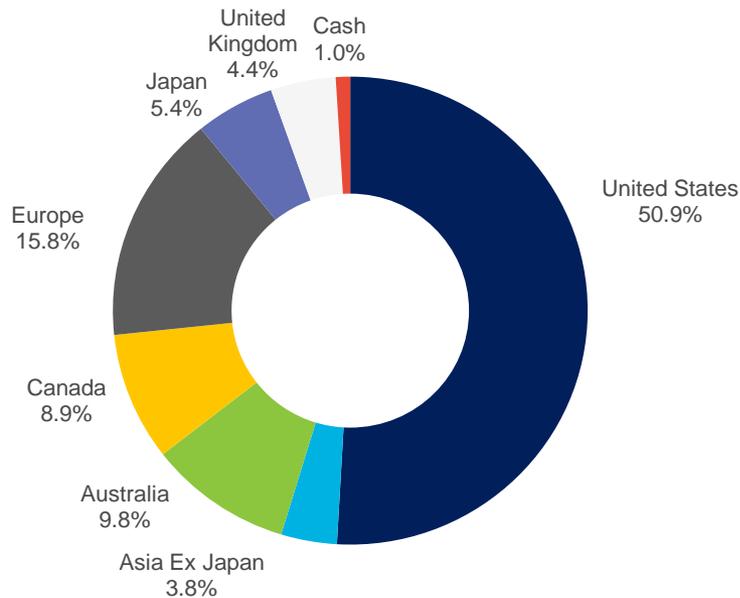
### Mobile Data Usage & Growth



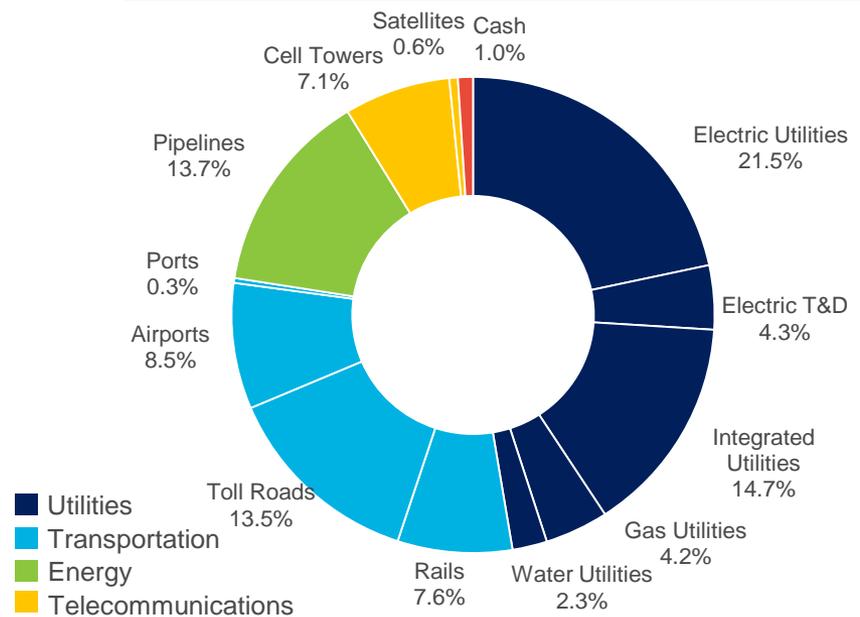
Source: Cisco VNI, 2016. A petabyte (PB) is a unit of digital information storage used to denote the size of data. It is equivalent to 1024 terabytes.

# CenterSquare Global Listed Infrastructure Portfolio Exposures (as of 09/30/16)

## Geographical Exposure



## Sector Exposure



Source: CenterSquare, as of September 30, 2016. Geography and sector exposures are based on a representative account of the CenterSquare Global Infrastructure Total Return Composite. There are no assurances that future portfolios will contain similar holdings and exposures.

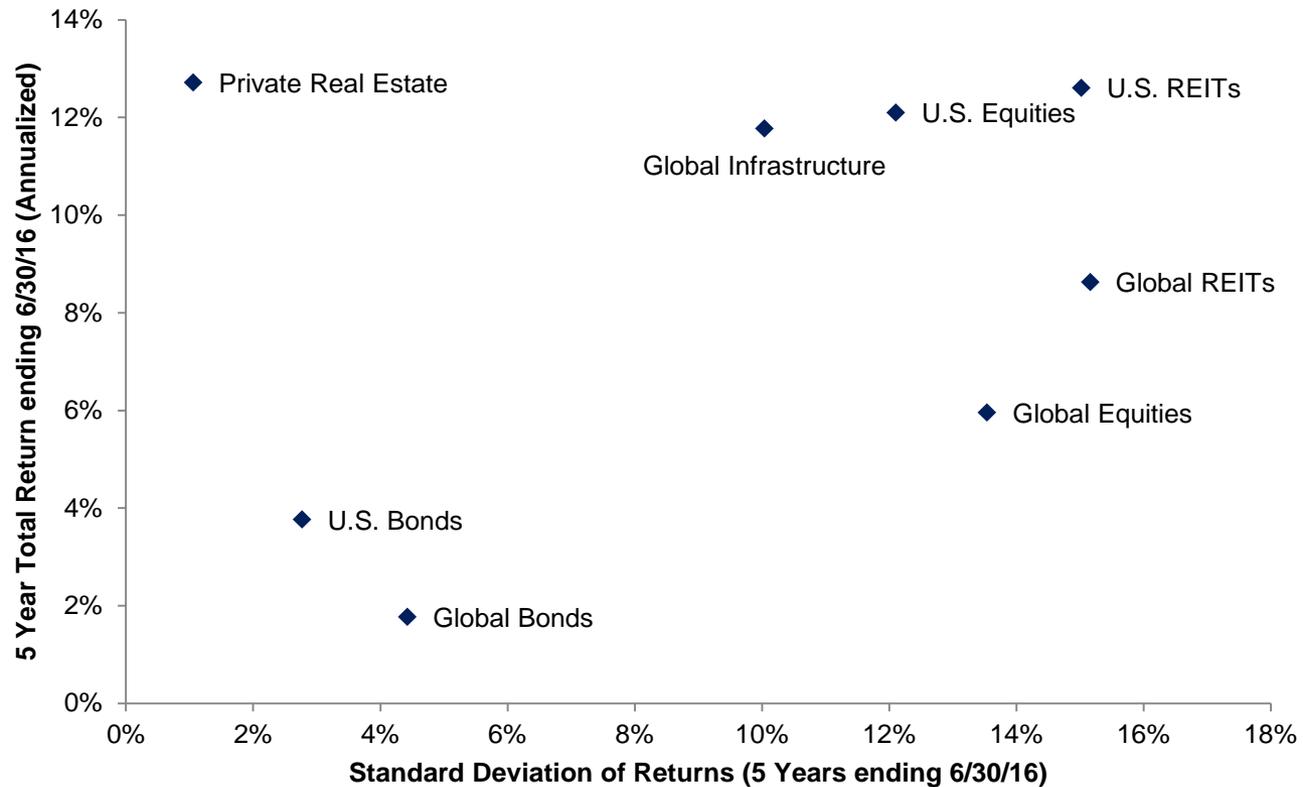
# Asset Class Returns

## Index Annualized Total Returns for period noted through September 30, 2016:

Period	Global Infrastructure	Global REITs	U.S. Equities	Global Equities	Government Bonds	Investment Grade Bonds
1 Year	14.55%	15.84%	15.39%	12.58%	6.05%	5.98%
3 Year	7.09%	8.54%	11.15%	5.77%	3.41%	4.04%
5 Year	9.83%	13.11%	16.35%	11.26%	3.31%	3.72%
7 Year	7.80%	10.73%	13.16%	8.38%	3.66%	4.48%
10 Year	7.27%	4.14%	7.23%	4.94%	4.82%	5.29%
15 Year	9.81%	8.43%	5.53%	5.35%	4.74%	5.14%
20 Year	7.27%	6.14%	7.71%	5.94%	5.41%	5.73%

Source: Bloomberg, as of September 30, 2016. Asset class returns were calculated using established indices as proxies. A full list of these indices and their definitions is provided in the disclosure statements at the end of this presentation. Past performance is not indicative of future results.

# Real Assets Risk and Return



Source: Bloomberg, eVestment Alliance, CenterSquare, as of June 30, 2016. Asset class returns were calculated using established indices as proxies. A full list of these indices and their definitions is provided in the disclosure statements at the end of this presentation. Past performance is not indicative of future results.

# Disclosure Statements

Material in this publication is for general information only and is not intended to provide specific investment advice or recommendations for any purchase or sale of any specific security or commodity. Due to, among other things, the volatile nature of the markets and the investment areas discussed herein, investments may only be suitable for certain investors. Parties should independently investigate any investment area or manager, and should consult with qualified investment, legal, and tax professionals before making any investment. Some information contained herein has been obtained from third party sources and has not been independently verified by CenterSquare Investment Management, Inc. ("CenterSquare"). CenterSquare makes no representations as to the accuracy or the completeness of any of the information herein. Accordingly, this material is not to be reproduced in whole or in part or used for any other purpose.

Investment products (other than deposit products) referenced in this material are not insured by the FDIC (or any other state or federal agency), are not deposits of or guaranteed by BNY Mellon or any bank or non-subsidiary thereof, and are subject to investment risk, including the loss of principal amount invested.

## Performance

*Past performance is no guarantee of future results.*

Many factors affect portfolio performance including changes in market conditions and interest rates and in response to other economic, political, or financial developments. No investment strategy or risk management technique can guarantee returns or eliminate risk in any market environment. Past performance is not a guide to or indicative of future results. Future returns are not guaranteed and a loss of principal may occur. In addition foreign investments may be less liquid, more volatile and less subject to governmental supervision than in the United States. The values of foreign securities can be affected by changes in currency rates, application of foreign tax laws, changes in governmental administration and economic and monetary policy.

## Portfolio Holdings

The portfolio weights disclosed in this presentation are based on the market value of the security as a percentage of the total composite market values, as of the period noted. The portfolio relative weights disclosed in this presentation are based on actual holdings within the representative account versus benchmark weights, as of the period noted. This portfolio data should not be relied upon as a complete listing of the Portfolio's holdings (or top holdings) as information on particular holdings may be withheld if it is in the client's best interest to do so. Portfolio holdings are subject to change without notice and may not represent current or future portfolio composition. The portfolio date is "as of" the date indicated. The information provided in this

document should not be considered a recommendation to purchase or sell any particular security. There is no assurance that any securities discussed herein will remain in an account's portfolio at the time you receive this report or that securities sold have not been repurchased. The securities discussed do not represent an account's entire portfolio and in the aggregate may represent only a small percentage of an account's portfolio holdings. It should not be assumed that any of the securities transactions or holdings discussed were or will prove to be profitable, or that CenterSquare investment recommendations or decisions made in the future will be profitable or will equal the investment performance of the securities discussed herein.

## Strategy Allocation

The strategy allocation percentages set forth herein are as of the dates indicated and may vary from time-to-time. The types of investments presented herein will not always have the same comparable risks and returns. Please note that the portfolio may elect to invest assets in different investment sectors from those depicted herein, which may entail additional and/or different risks. The actual performance of the portfolio will depend on CenterSquare's ability to identify and access appropriate investments, and balance assets to maximize return to the portfolio while minimizing its risk. The actual investments in a portfolio may or may not be the same or in the same proportion as those shown herein.

Within this presentation, asset class risk and returns are presented using established indices as proxies. A full list of these indices is below:

U.S. REITs: FTSE NAREIT Equity REITs Index

Global REITs: FTSE EPRA/NAREIT Developed Index

U.S. Equities: S&P 500

Global Equities: MSCI ACWI Index

Government Bonds: Citi U.S. Treasury Bond Index

Investment Grade Bonds: Citi U.S. Broad Investment Grade Bond Index

U.S. Bonds: Barclays US Aggregate

Global Bonds: Barclays Global Aggregate Unhedged

Private Real Estate: NCREIF ODCE Index

Global Infrastructure: FTSE Developed Core Infrastructure 50/50 Index

# Definition of Indices

## *FTSE Global Core Infrastructure Index*

The FTSE Global Core Infrastructure Index is a subset of the FTSE Infrastructure Index Series, a comprehensive set of nine cap-weighted indices, diversified across six FTSE-defined infrastructure sub-sectors, to reflect the performance of infrastructure and infrastructure-related listed securities worldwide. The FTSE Global Core Infrastructure Indices are comprised of companies from the core sectors which generate a minimum of 65% of their revenue from infrastructure. FTSE defines core infrastructure as companies which own, operate, manage or maintain physical structures or networks used to process or move goods, services, information, people, energy and/or life essentials.

## *FTSE Global Core 50/50 Infrastructure Index and FTSE Developed Core Infrastructure 50/50 Index*

The FTSE Global Core Infrastructure 50/50 Index and FTSE Developed Core Infrastructure 50/50 Index give participants an industry-defined interpretation of infrastructure and adjust the exposure to certain infrastructure sub-sectors. The constituent weights for these indices are adjusted as part of the semi-annual review according to three broad industry sectors – 50% Utilities, 30% Transportation including capping of 7.5% for railroads/railways and a 20% mix of other sectors including pipelines, satellites and telecommunication towers.

## *S&P Global Infrastructure Index*

The S&P Global Infrastructure Index provides liquid and tradable exposure to 75 companies from around the world that represent the listed infrastructure universe. To create diversified exposure, the index includes three distinct infrastructure clusters: utilities, transportation, and energy.

## *Alerian MLP Infrastructure Index*

The index is designed to give investors exposure to the infrastructure component of the Master Limited Partnership asset class. Constituents each earn at least 50% of EBITDA from assets that are not directly exposed to changes in commodity prices. The index is disseminated by the New York Stock Exchange and is a composite of 25 energy infrastructure MLPs.

## *UBS Developed Infrastructure & Utility Index*

UBS in conjunction with Standard & Poor's (S&P) launched the UBS Infrastructure and Utilities Index. The UBS Infrastructure & Utilities (UBS IU) Indexes are calculated based on companies' free-float market capitalization, as defined by S&P. The Index was started in 2006 and has a back-filled history to 1990. Price

and total return index data is calculated daily by S&P.

## *Dow Jones Brookfield Global Infrastructure Index*

The Dow Jones Brookfield Global Infrastructure Index measures the stock performance of companies that exhibit strong infrastructure characteristics. The index intends to measure all sectors of the infrastructure market and is weighted by float-adjusted market capitalization. The Dow Jones Brookfield Global Infrastructure Index was first calculated on July 14, 2008.

Brookfield Global Infrastructure Index was first calculated on July 14, 2008.

## *S&P 500*

The S&P 500 is an index that is considered to be a gauge of the U.S. equities market. The index includes 500 leading companies spread across the major sectors of the U.S. economy. The index focuses on the larger cap segment of the U.S. market and represents approximately 75% of the market capitalization of U.S. securities. The index is the most notable of the many indices owned and maintained by Standard & Poor's, a division of McGraw-Hill Companies.

## *Credit Suisse Commodity Index*

The Credit Suisse Commodity Benchmark Total Return Index is designed to provide monthly rebalanced, long-only diversified exposure to commodities through notional investments in rolling futures contracts on physical commodities. The commodities included in the Index are determined annually based on worldwide production and global exchange market liquidity. The Index seeks to incorporate as many physical commodity futures as possible while maintaining the liquidity standards of the Index.

## *MSCI ACWI Index, MSCI ACWI ex US Index, MSCI EAFE Index, MSCI EM Index*

The MSCI ACWI Index is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed and emerging markets. The MSCI ACWI consists of 46 country indexes comprising 23 developed and 23 emerging market country indexes. The MSCI ACWI ex-US Index includes all of these countries excluding the US. The MSCI EAFE Index (Europe, Australasia, Far East) is a free float-adjusted market capitalization index that is designed to measure the equity market performance of developed markets, excluding the US & Canada. The MSCI EM (Emerging Markets) Europe, Middle East and Africa Index is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of the emerging market countries of Europe, the Middle East & Africa.

# Definition of Indices

## Citi U.S. Broad Investment Grade Bond Index and Citi U.S. Treasury Bond Index

The US Broad Investment-Grade Bond Index (USBIG) tracks the performance of US Dollar-denominated bonds issued in the US investment-grade bond market. Introduced in 1985, the index includes US Treasury, government-sponsored, collateralized, and corporate debt and provides a reliable representation of the US investment-grade bond market. The index provides exposure to a broad array of asset classes and sub-indices are available in any combination of asset class, maturity, and rating. The Citi U.S. Treasury Bond Index is a sub-index that includes only U.S. Treasuries that meet the criteria above.

## Barclays U.S. Aggregate Index

The Barclays US Aggregate Bond Index is a broad-based flagship benchmark that measures the investment grade, US dollar-denominated, fixed-rate taxable bond market. The index includes Treasuries, government-related and corporate securities, MBS (agency fixed-rate and hybrid ARM pass-throughs), ABS and CMBS (agency and non-agency).

## Barclays Global Aggregate Index

The Barclays Global Aggregate Index is a flagship measure of global investment grade debt from twenty-four local currency markets. This multi-currency benchmark includes treasury, government-related, corporate and securitized fixed-rate bonds from both developed and emerging markets issuers. There are four regional aggregate benchmarks that largely comprise the Global Aggregate Index: the US Aggregate (USD300mn), the Pan-European Aggregate, the Asian-Pacific Aggregate, and the Canadian Aggregate Indices. The Global Aggregate Index also includes Eurodollar, Euro-Yen, and 144A Index-eligible securities, and debt from five local currency markets not tracked by the regional aggregate benchmarks (CLP, MXN, ZAR, ILS and TRY). A component of the Multiverse Index, the Global Aggregate Index was created in 2000, with index history backfilled to January 1, 1990.

## NCREIF ODCE Index

The NFI-ODCE, short for NCREIF Fund Index - Open End Diversified Core Equity, is the first of the NCREIF Fund Database products and is an index of investment returns reporting on both a historical and current basis the results of 33 open-end commingled funds pursuing a core investment strategy, some of which have performance histories dating back to the 1970s. The NFI-ODCE Index is capitalization-weighted and is reported gross of fees. Measurement is time-weighted. NCREIF will calculate the overall aggregated Index return.

*These benchmarks are broad-based indices which are used for illustrative purposes only and have been selected as they are well known and are easily recognizable by*

*investors. However, the investment activities and performance of an actual portfolio may be considerably more volatile than these indices and may have material differences from the performance of any of the referenced indices. Unlike these benchmarks, actual portfolios are actively managed. Furthermore, actual portfolios may invest in substantially fewer securities than the number of securities comprising each of these benchmarks. There is no guarantee that any of the securities invested in by actual portfolios comprise these benchmarks. Also, performance results for benchmarks may not reflect payment of investment management/incentive fees and other expenses. Because of these differences, benchmarks should not be relied upon as an accurate measure of comparison.*

FTSE Data disclosure: Source: FTSE International Limited ("FTSE") © FTSE 2014. FTSE® is a trade mark of the London Stock Exchange Group companies and is used by FTSE under licence. All rights in the FTSE indices and / or FTSE ratings vest in FTSE and/or its licensors. Neither FTSE nor its licensors accept any liability for any errors or omissions in the FTSE indices and / or FTSE ratings or underlying data. No further distribution of FTSE Data is permitted without FTSE's express written consent.

"FTSE®" is a trade mark of the London Stock Exchange Group companies, "NAREIT®" is a trade mark of the National Association of Real Estate Investment Trusts ("NAREIT") and "EPRA®" is a trade mark of the European Public Real Estate Association ("EPRA") and all are used by FTSE International Limited ("FTSE") under licence).

The FTSE EPRA/NAREIT Developed Index is calculated by FTSE. Neither FTSE, Euronext N.V., NAREIT nor EPRA sponsor, endorse or promote this product and are not in any way connected to it and do not accept any liability.

"FTSE®" is a trade mark of the London Stock Exchange Group companies and is used by FTSE International Limited ("FTSE") under licence. "NAREIT®" is a trade mark of the National Association of Real Estate Investment Trusts ("NAREIT").

The FTSE NAREIT Equity REITs Index is calculated by FTSE. Neither FTSE nor NAREIT sponsor, endorse or promote this product and are not in any way connected to it and do not accept any liability.

MSCI Data disclosure: Any use of or access to products, services or information of MSCI requires a license from MSCI. MSCI, Barra, RiskMetrics, ISS, CFRA, FEA, and other MSCI brands and product names are the trademarks, service marks, or registered trademarks or service marks of MSCI or its subsidiaries in the United States and other jurisdictions.