

# Herzlich willkommen zum BAI-Webinar

# "Auswirkungen der Corona-Krise auf die Assetklasse Infrastruktur"

Einführung: Annette Olschinka-Rettig, Geschäftsführerin BAI e.\



## **Anstehende Webinars**

## Auswirkungen der Corona-Krise auf die Assetklasse ...

Montag, **20. April 2020** 

... Aviation (Prime Capital)

Weitere

... Shipping

....Nachhaltige Energien

Mittwoch, **22. April 2020** 

Die wirtschaftlichen Auswirkungen der Corona-Pandemie: Wie geht es weiter? (Prof. Lars Feld)



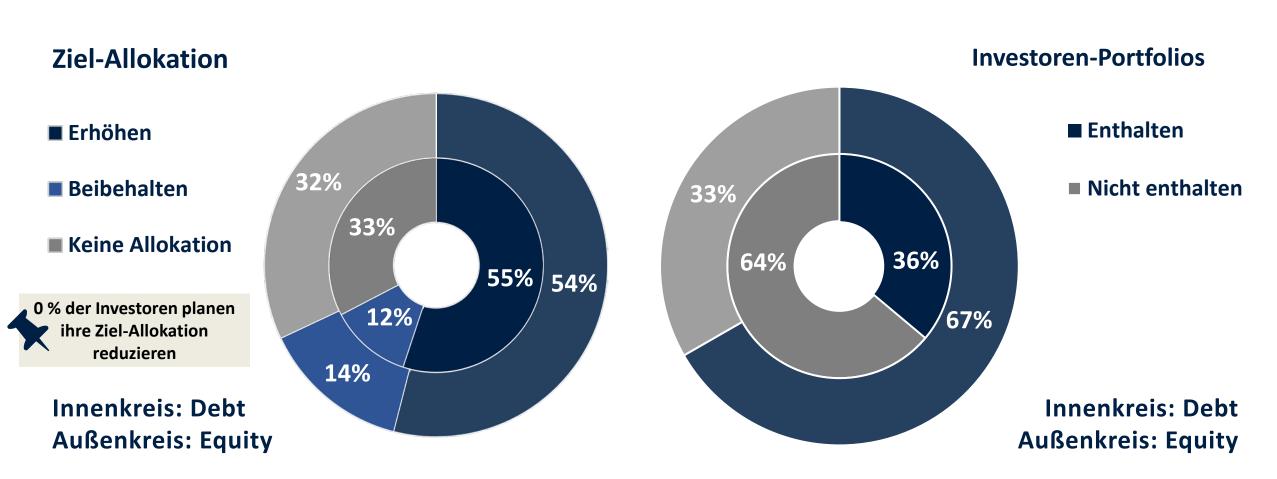
## Infrastruktur: Asset under Management nach Region



Datenquelle: Preqin Pro, AuM by Fund Manager Location, Juni 2019.



## Infrastruktur: Investoren in Deutschland



Quelle: BAI e.V.: "BAI Alternative Investor Survey 2019".



Annette Olschinka-Rettig BA Geschäftsführerin/ **Managing Director** Diplomkauffrau Betriebswirtschaftslehre

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Infrastrukturinvestments – Strategien und Erfahrungen institutioneller Investoren

Dr. Peter Brodehser

16. April 2020

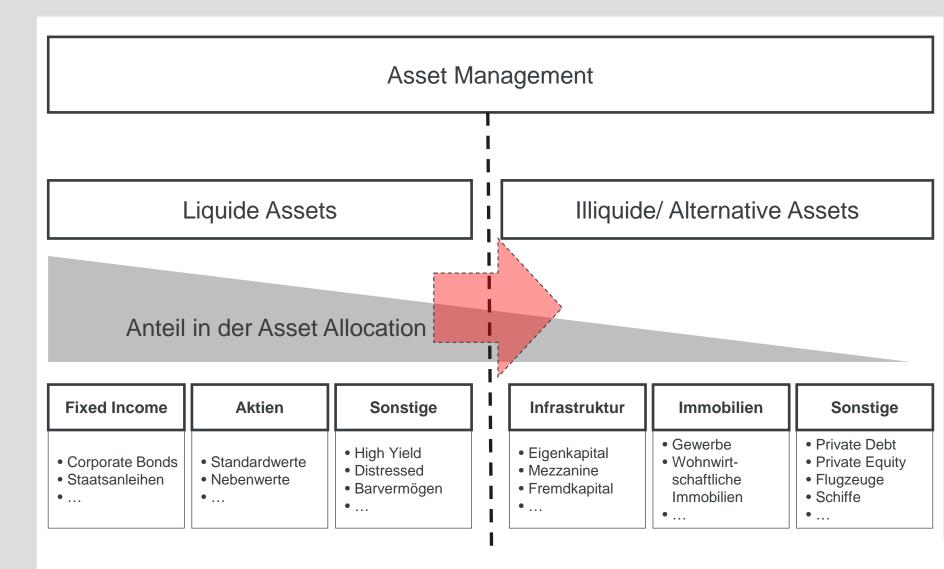
## Agenda



- Die Niedrigzinsphase und ihre Konsequenzen
- Rendite-Hebel und ihre Anwendungsfelder
- III Infrastruktur Umsetzungsstrategien und Erfahrungen
- Wie setzen wir dies um?
- V Résumé

## I. Die Niedrigzinsphase und ihre Konsequenzen



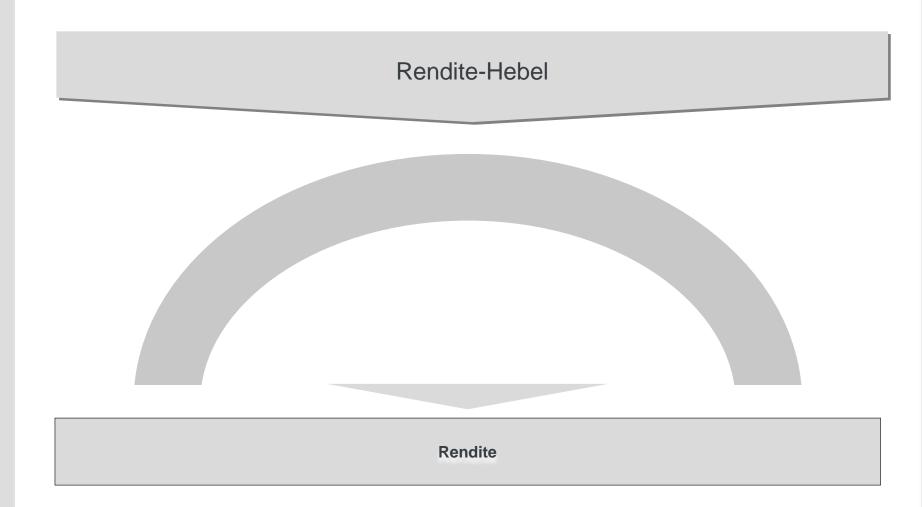


## Agenda

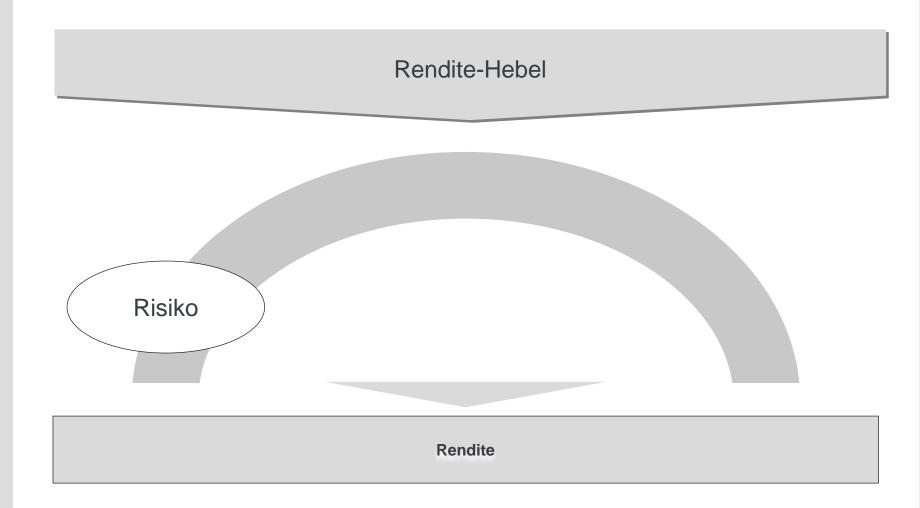


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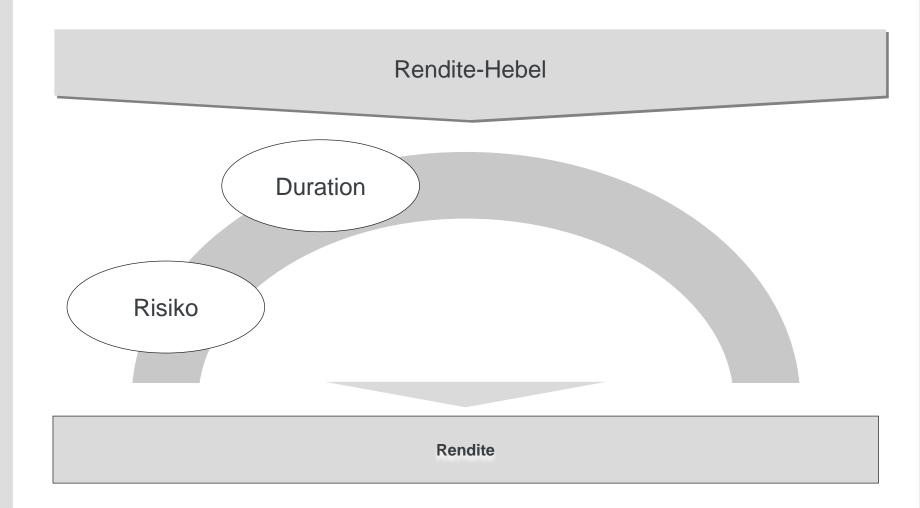




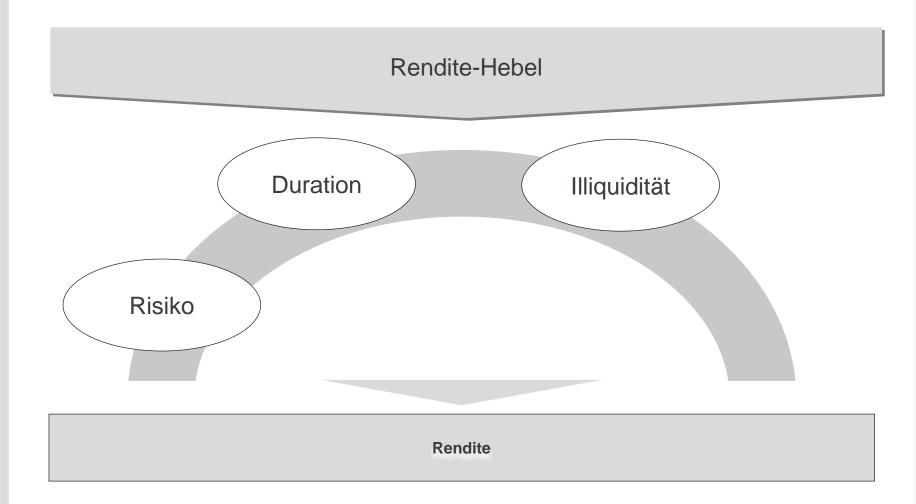




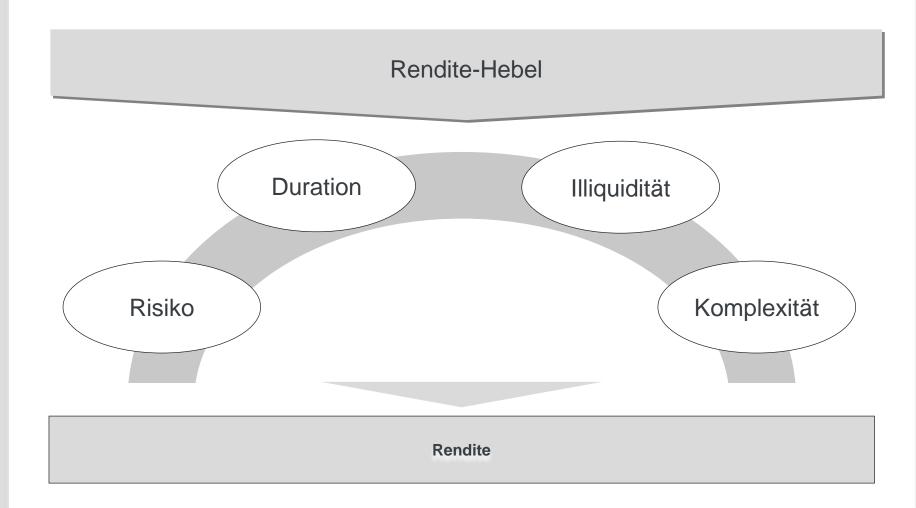














## Die Anlagestrategie bei Alternativen Assetklassen **Duration** Illiquidität Risiko Komplexität Rendite Infrastruktur Beteiligungen/ Private Equity **Immobilien**

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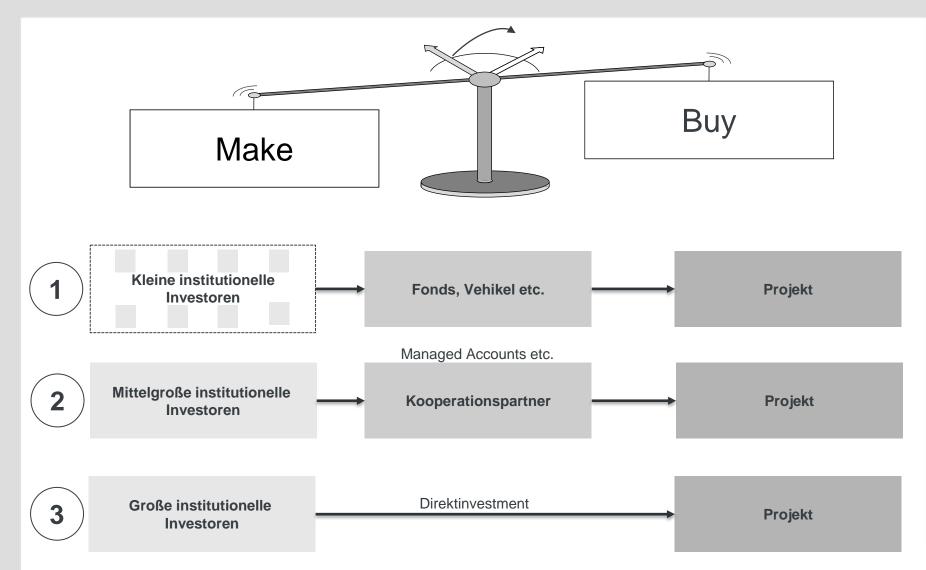


Der Markt für Infrastrukturinvestitionen in Europa ist rund 50 – 100 Mrd. EUR pro Jahr groß.

	Die Sektoren auf einen Blick	Assets	Einkommen hängt ab von	Typische Projektbeteiligte	Investierbare Volumina
Sektoren	Transport Infrastruktur	Straße/ Schiene     Hafen/ Flughafen	Verfügbarkeits- zahlungen     Nutzung (bspw. Maut)	Staat     Generalunternehmer (Bau)     Operator (Betrieb)	EUR 20 Mio. bis EUR 1 Mrd.
	Soziale Infrastruktur	Krankenhäuser     Schulen / Universitäten     Öffentliche Gebäude	Im Wesentlichen Verfügbarkeits- zahlungen	Staat     Generalunternehmer (Bau)     Operator (Betrieb)	EUR 20 Mio. bis EUR 500 Mio.
	Ver- und Entsorgung	Erneuerbare Energien     Energie- und     Versorgungsinfrastruktur	Einspeisevergütung     Nutzung (bspw.     Strompreis)	Regulierungsbehörden     Staatliche und private     Versorgungsunternehmen	EUR 10 Mio. bis EUR 2 Mrd.
	Asset Based Finance	Schiene (Zugfahrzeuge, Waggons, Straßenbahnen)     Container	Verfügbarkeits- zahlungen     Nutzung	Staat     Verkehrsunternehmen	EUR 10 Mio. bis EUR 500 Mio.

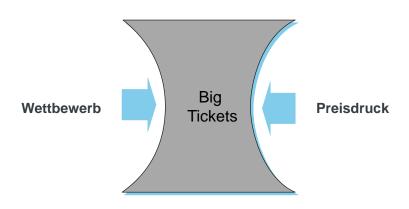
Datenblatt	Fremdkapital-Projekte	Eigenkapital-Projekte
Rendite	1,5% - 4,0% p.a. (Yield-pick-up zu vergl. Corporates rd. 50 – 150 bps)	5,0 – 10,0% p.a. IRR/ > 3,0% p.a. DY
Typische Laufzeiten (durchschnittliche LZ / WAL)	5 - 35 Jahre/ (2,5 - 20 Jahre)	20 – 30 Jahre Kapitalbindung/ (10 – 29 Jahre)
Rating	AAA bis BBB-	n/a – aber überwiegend Investment Grade-Profil







## **Eigenkapital**

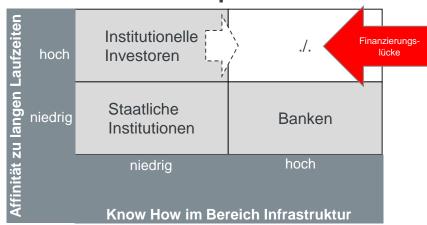


#### Daraus abgeleitete Investment-Strategie:

- Verstärkter Wettbewerb bei Transaktionen ab EUR 300 Mio. immer mehr spürbar
- Bilaterale Transaktionen ohne Bietungsrisiko mit einem Volumen bis zu EUR 300 Mio.

Mid-size is beautiful!!

## **Fremdkapital**



#### **Daraus abgeleitete Investment-Strategie:**

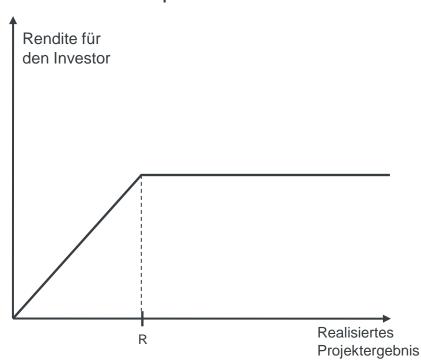
- Reinstoßen in die Finanzierungslücke
- "Size Matters": Große Investmentvolumina verbessern die Verhandlungsposition. D.h. vom "Term Taker" zum "Term Maker"

Big is beautiful!!

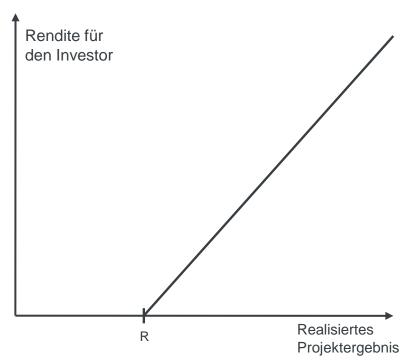


... die Frage nach dem gewünschten Rendite-Profil ist bei Licht betrachtet nicht zuletzt auch eine Frage der Personalausstattung ...

## Die Renditestruktur von Fremdkapital-Investments

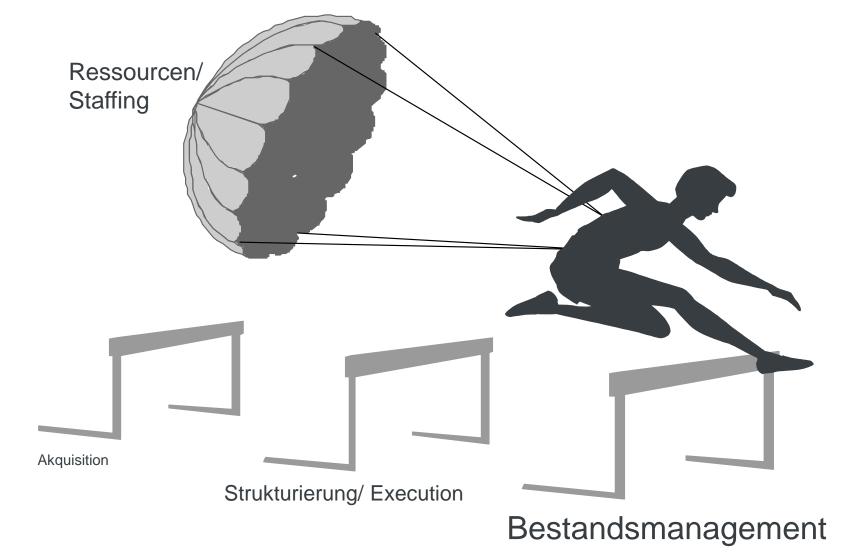


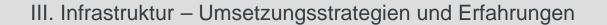
## Die Renditestruktur von Eigenkapital-Investments



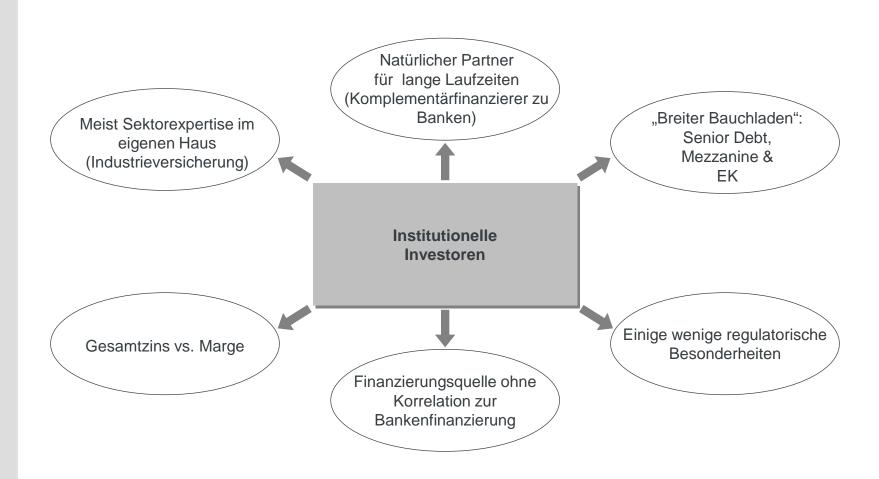
R = vertraglich vereinbarter Rückzahlungsbetrag (Zins und Tilgung)











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#### IV. Wie setzen wir dies um?



## Investment Universum

- Infrastrukturassets mit stabilen Cashflows
- Energie, Verkehr, soziale Infrastruktur usw.

## Investment Zielsetzung

- Asset-Liability-Management, d. h. Renditen, die den Verbindlichkeiten der Versicherungsunternehmen entsprechen
- Geringe Korrelation mit anderen Anlageklassen

#### Formen des Kapitals

- Eigenkapital
- Fremdkapital
- Mezzanine

#### Geographie

Europa mit Fokus auf Euroland

## Sweet-Spot Ticketgröße<sup>1</sup>

Fremdkapital: €50 Mio. – €300 Mio.
 Mezzanine: €50 Mio. – €150 Mio.
 Eigenkapital: €30 Mio. – €150 Mio.

#### Investment Horizont

- Buy-and-Hold-Ansatz, kein vorgegebener Exit
- Min: 2 3 Jahre
   Max: 30+ Jahre



Assets mit langen Laufzeiten und rentenähnlichen Ausschüttungsstrukturen

#### IV. Wie setzen wir dies um?



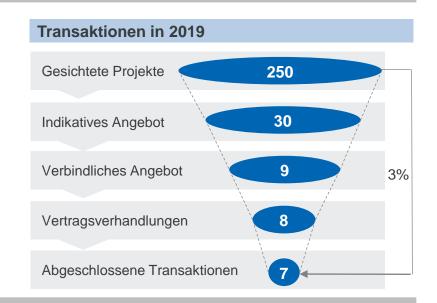


#### **Eine frühzeitige Selektion ist entscheidend!!!**

#### Fokus auf Qualität der Transaktion

#### Auswahlkriterien

- Investment Guidelines, d.h. Regionen, Sektoren
- · Rentabilität im Alternativenvergleich
- Wettbewerbsintensität (Bietungsrisiko vs. Exklusivität)
- Ticketgröße
- Transaktionspartner





#### Erfolgreicher Bestandsaufbau mit stetigem Wachstum



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#### V. Résumé



- Der Anteil Alternativer Assetklassen wird steigen. Kapitalanlage wird hierdurch tendenziell teurer.
- Diese höheren Kosten können durch Einsparungen in anderen Bereichen (bspw. in Form von Digitalisierung, Automatisierung und Einsatz von KI) teilweise kompensiert werden
- 3 Infrastruktur ist auch in Krisenzeiten ein Safe Haven
- 4 Die Wahl der richtigen und institutsspezifischen(!) Investment-Strategie ist entscheidend
- Diese Investment-Strategie ist schlüssig in eine Aufbau-und Ablauforga und eine hinreichende Personalausstattung zu überführen
  - Die Investment-Strategie sollte einen Planungshorizont von 5+ Jahren haben

#### Der Referent





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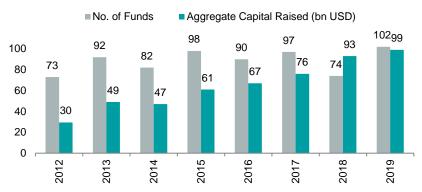
### EUROPEAN INFRASTRUCTURE MARKET OVERVIEW



### Fundraising, transaction volume and pipeline overview

#### INFRASTRUCTURE AGGREGATE CAPITAL RAISED

bn. EUR, 2012 – 2019, Global



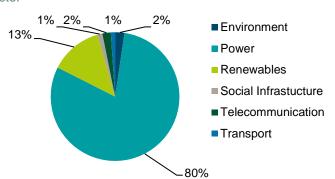
#### **PREQIN INVESTOR SURVEY 2019**

Percentage of investors

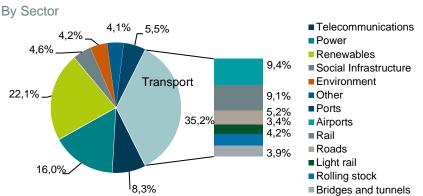


#### **U.S. INFRASTRUCTURE PIPELINE**

By Sector



#### **EUROPEAN INFRASTRUCTURE PIPELINE**



Sources: DWS, Infrastructure Journal, InfraNews, November 2019, including Preqin data as at 2018. Notes: E=expected. Historical transactions include transactions listed in the Infrastructure Journal database that reached financial close. Pipeline includes selection of transactions listed in the InfraDeals database, excluding transactions listed as financial close. Past performance is not indicative of future results. No assurance can be given that any forecast or target will be achieved. Forecasts are not a reliable indicator of future returns. Forecasts are based on assumptions, estimates, views and hypothetical models or analyses, which might prove inaccurate or incorrect.

## PRIVATE INFRASTRUCTURE PERFORMANCE



## **Europe and North America are two different markets Europe proved historically less volatile**

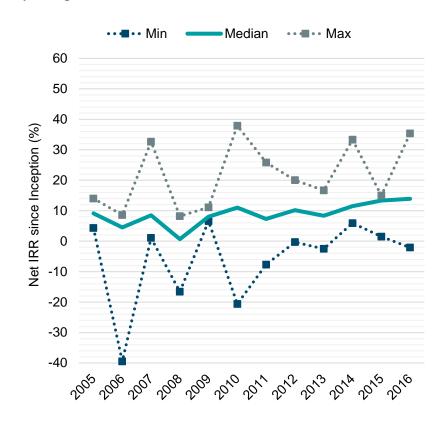
#### **EUROPE NET IRRS - PRIVATE INFRASTRUCTURE FUNDS**

By Vintage Year, 2005-2016, Europe

## Median • Min ··• Max 60 50 40 Net IRR since Inception (%) 30 20 10 -20 -30 -40

#### NORTH AMERICA NET IRRS - PRIVATE INFRASTRUCTURE FUNDS

By Vintage Year, 2005-2016, North America

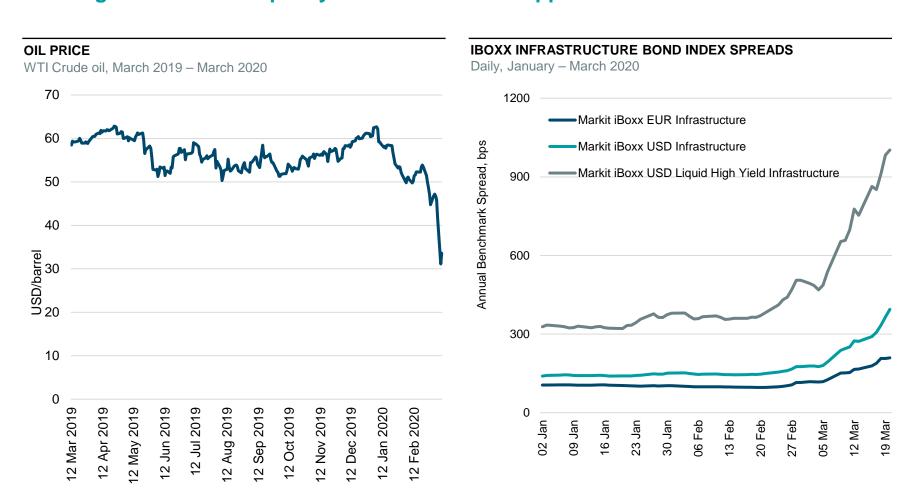


Source: DWS, Preqin, as at November 2019. For illustrative purposes only. Past performance is not indicative of future results. Opinions and forecasts may never materialise.

## OIL PRICE AND INFRASTRUCTURE DEBT SPREADS



The sharp drop in oil prices increased credit risk for the U.S. high yield energy sector Funding conditions for quality IG infrastructure supportive



Source: DWS, Oxford Economics, Bloomberg, IHS Markit, March 2020. There is no guarantee the forecast shown will materialise. Forecasts are based on assumptions, estimates, views and hypothetical models or analyses, which might prove inaccurate or incorrect. Past performance is not indicative of future results.

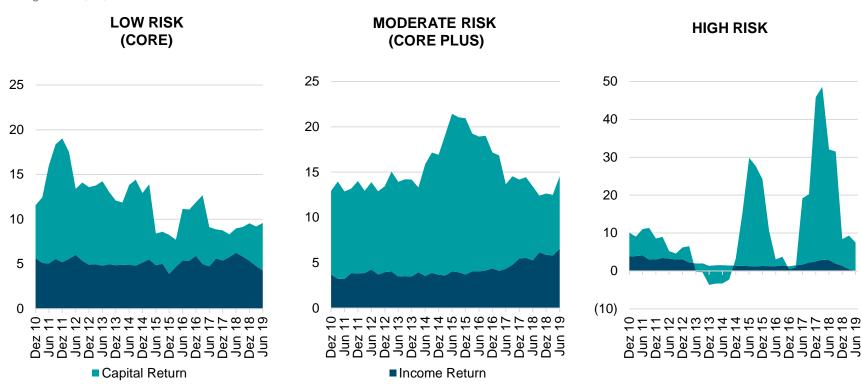
## INFRASTRUCTURE RETURN BY STRATEGY



Private infrastructure demonstrated income return stability across strategies, but core plus provided stronger capital appreciation potential

#### MSCI GLOBAL INFRA. ASSET INDEX TOTAL RETURN BY SECTOR

Rolling Annual, %, December 2010 - June 2019



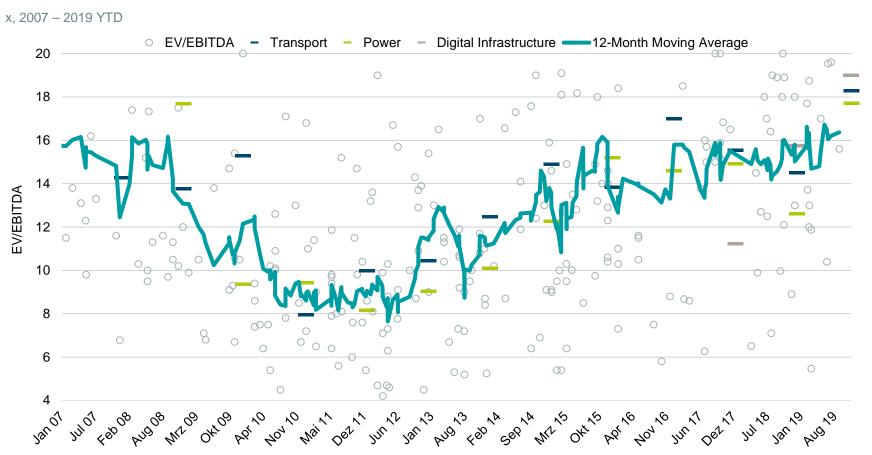
Source: DWS, MSCI Global, November 2019. Total Returns based on MSCI Global Quarterly Infrastructure Asset Index, as at June 2019, Local. Core Infra = 'Low Risk' in MSCI Infrastructure Investment Style Matrix, includes brownfield assets in geographically mature markets, with significant component of income yield, predictable and regulated revenues, long-term investment horizon, and an investment grade rating profile. Core/Core+ = 'Moderate Risk', includes brownfield assets with some development risk, in mature markets, with relatively predictable revenues and income and capital, generally contributing equally to total return. 'Opportunistic' = High Risk includes high risk brownfield or greenfield assets, located in mature and maturing markets, with a sub-investment grade profile, with potentially volatile income streams and with the capital return component representing the primary driver of total return. Past performance is not guide for future results.

## PRIVATE INFRASTRUCTURE TRANSACTIONS



## **Historical overview of transaction multiples**

#### **UNLISTED INFRASTRUCTURE TRANSACTIONS EV/EBITDA MULTIPLES**



Source: DWS's proprietary database, based on publicly available transaction data, November 2019. Past performance is not indicative of future results.

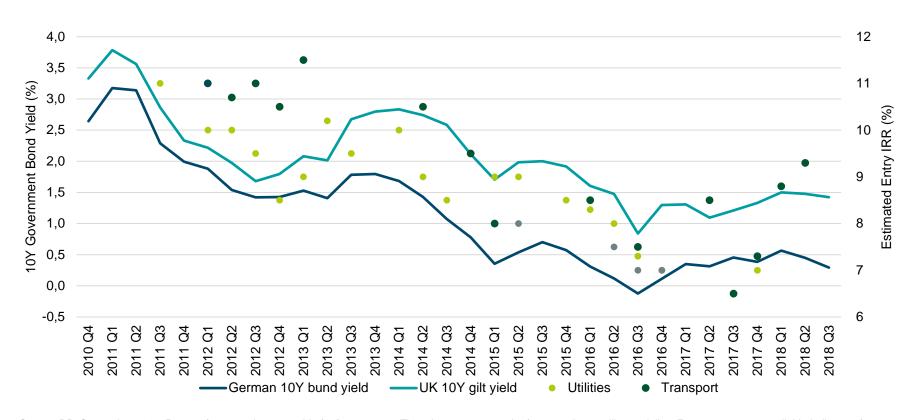
### INFRASTRUCTURE RETURN ANALYSIS



### Core infrastructure entry IRRs historically correlated to government bond yields

#### CORE INFRASTRUCTURE ENTRY IRR ASSUMPTIONS AND BOND YIELDS

%, 2010-Q3 2018



Source: DB, September 2019. Past performance is not a guide for future return. There is no guarantee the forecast shown will materialise. Forecasts are not a reliable indicator of future returns. Forecasts are based on assumptions, estimates, views and hypothetical models or analyses, which might prove inaccurate or incorrect.

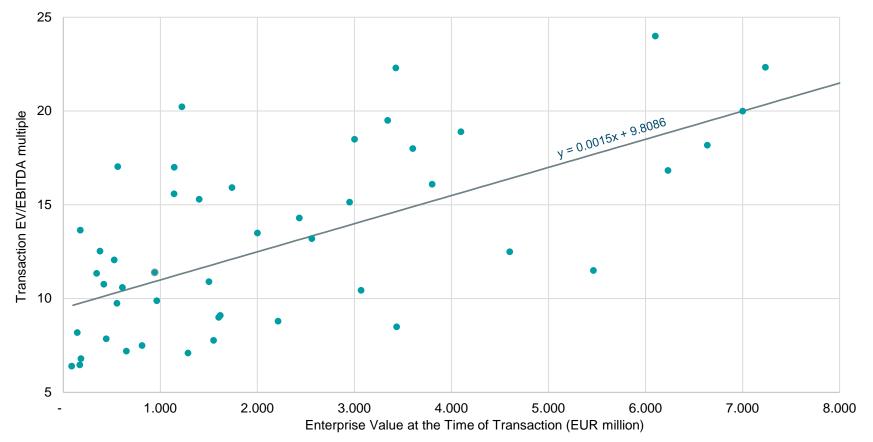
## INFRASTRUCTURE "TRANSACTIONS SIZE EFFECT"



## Transaction multiples increase by 0.15x every additional EUR 100 million of EV

#### PRIVATE INFRASTRUCTURE TRANSACTIONS

2009 - YTD 2019



Source: DWS, InfraNews, June 2019. For illustrative purposes only. Past performance is not indicative of future results. The information herein reflects our current views only, are subject to change, and are not intended to be promissory or relied upon by the reader. There can be no certainty that events will turn out as we have opined herein.

### IMPACT OF COVID-19 ON INFRASTRUCTURE



# Short-term effects on private infrastructure by sector Medium-term trends remain supportive

#### **TRANSPORT**

**Airports:** significant drop in global PAX up to -20% YoY in 2020, but concentrated in areas more impacted by virus, followed by v-shaped recovery.

Ports/Rail: freight less affected than people movement.

Road: reduction in passenger/ freight proved more resilient so far.

### DIGITAL INFRASTRUCTURE

**Unaffected:** Digital infrastructure, including fibre optics and datacentres remain largely unaffected by the spread of coronavirus.

Increase in data traffic volume for fibre networks due to upsurge in remote working and video calls

#### POWER

**U.S. Shale:** drop in energy prices may impact HY brownfield projects and trigger defaults across.

**Greenfield renewables:** delay in essential components may trigger 'force majeure clauses.

Merchant Power: Lower industrial production reducing power demand and prices. Co2 prices down.

**Regulated Networks:** (RAB-based) protected from volume declines

### PRIVATE INFRASTRUCTURE

**Essential services:** Infrastructure provides essential services with resilient performance characteristics, demonstrated during previous economic downturns.

**Higher Counterparty and Country Risk possible.** 

**Diversified:** Core/core plus infra funds generally have a diversified pool of brownfield investments by sector, contract, geography, limiting the impact of a downturn **Liquidity:** Liquidity conditions for asset financing remain supportive for high quality assets.

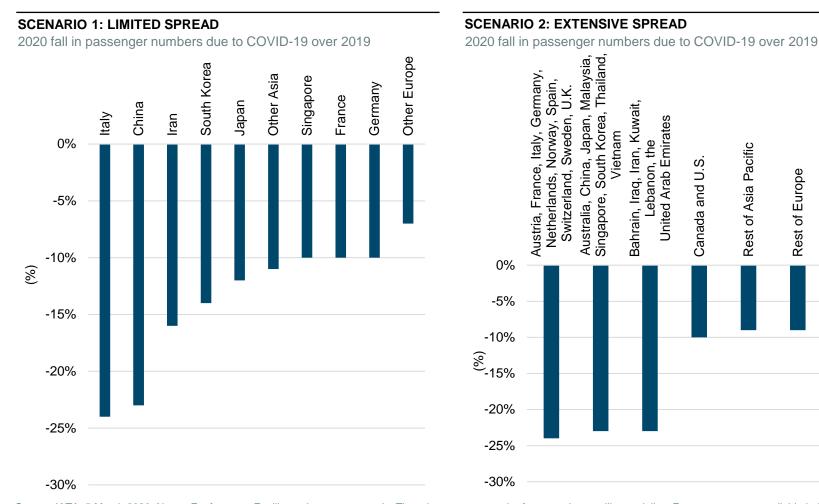
Source: DWS, Bloomberg, IATA, InfraNews, 10 March 2020. Past performance is not a guide for future returns. Due to various risks, uncertainties and assumptions made in our analysis, actual events or results or the actual performance of the markets covered may differ materially from those described.

### IMPACT OF COVID-19 ON AVIATION



Rest of Middle East

PAX expected to slowdown substantially across the world. Airports expected to put in place a number of initiatives to mitigate impact on financial performance



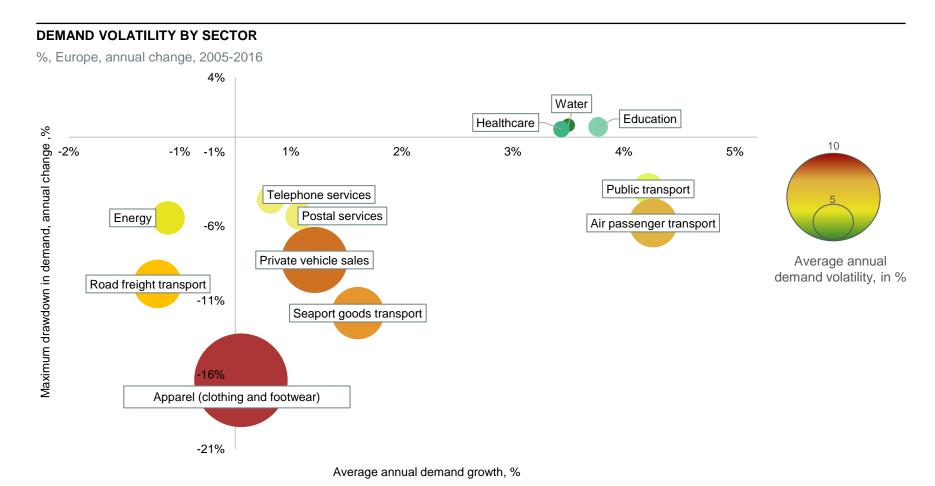
Source: IATA, 5 March 2020. Notes: F = forecast. For illustrative purposes only. There is no guarantee the forecast shown will materialise. Forecasts are not a reliable indicator of future returns. Forecasts are based on assumptions, estimates, views and hypothetical models or analyses, which might prove inaccurate or incorrect.

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### INFRASTRUCTURE AND ECONOMIC DOWNTURNS



Comparatively defensive demand fundamentals, but resilience changes by sector. Long-term growth fundamentals remain supportive for air passenger transport



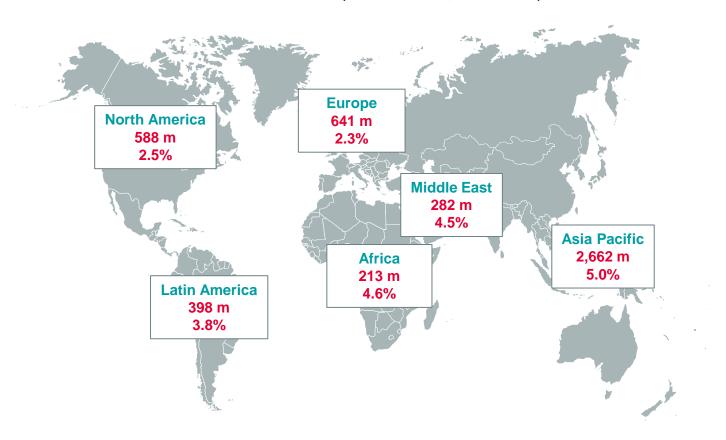
Source: DWS, Oxford Economics, Eurostat, 29 January 2019. \* = Based on private consumption data. Past performance is not a reliable indicator of future returns. For illustrative purpose only. Past performance is not indicative of future results.

## AIRPORTS INDUSTRY LONG-TERM TRENDS



## European airports expected to benefit from expected Asia Pacific passenger growth

#### **GROWTH AND CHANGE IN PASSENGER JOURNEYS BY REGION (% AND MILLION, 2018 – 2038F)**



Source: IATA, Oxford Economics, as at November 2019, F=forecast,

There is no guarantee that the forecast highlighted will materialize. Forecasts are not a reliable indicator of future returns. Forecasts are based on assumptions, estimates, views and hypothetical models or analyses, which might prove inaccurate or incorrect.

## INFRASTRUCTURE AND MACRO ENVIRONMENT



# Operational flexibility has historically contributed to the stabilization of dividend payments during periods of macroeconomic downturn

Panel regressions on changes in GDP, CPI and interest rates	EBITDA Margin	Capital Expenditure	Leverage (Net Debt/EBITDA)	Free Cash Flow (FCF)	
Networks	Resilient	Resilient	Neutral	Resilient	
Subsidised Renewables	Resilient	Neutral	Neutral	Resilient	
Water	Resilient	Neutral	Neutral	Neutral	
Airports	Neutral	Neutral	Neutral	Resilient	
Telecom Infrastructure	Resilient	Exposed	Neutral	Neutral	
Private Healthcare	Neutral	Neutral	Neutral	Neutral	
Rolling Stock Leasing	Neutral	Neutral	Neutral	Neutral	
Waste Management	Exposed	Neutral	Neutral	Neutral	
Toll Roads	Exposed	Exposed	Resilient	Neutral	
Ports and Port Services	Exposed	Neutral	Exposed	Neutral*	
Integrated Utilities	Exposed	Neutral	Exposed	Neutral	
Rail Freight	Exposed	Exposed	Exposed	Neutral	

Notes: \*FCF for "Ports and port services" exposed to changes to exports/ imports. Source: DWS's proprietary database, Bloomberg, Oxford Economics, April 2019. Based on DWS proprietary methodology. Relative ranking based on panel regressions of data between 2005 and 2017 of fundamental macroeconomic variables (inflation, GDP, interest rates = 10 year government bond rates) with a database of financial indicators for listed infrastructure companies. Resilient = financial indicator resilient to change in macro variables, Neutral = no statistical relationship between macro variables and financial indicator, Exposed = positive relationship between financial indicator and macro variables. Dividends/Payouts are not guaranteed. The amount of dividend payments can change or be completely canceled. Past performance is not indicative of future results. Forecasts are not a reliable indicator of future returns. Forecasts are based on assumptions, estimates, views and hypothetical models or analyses, which might prove inaccurate or incorrect.

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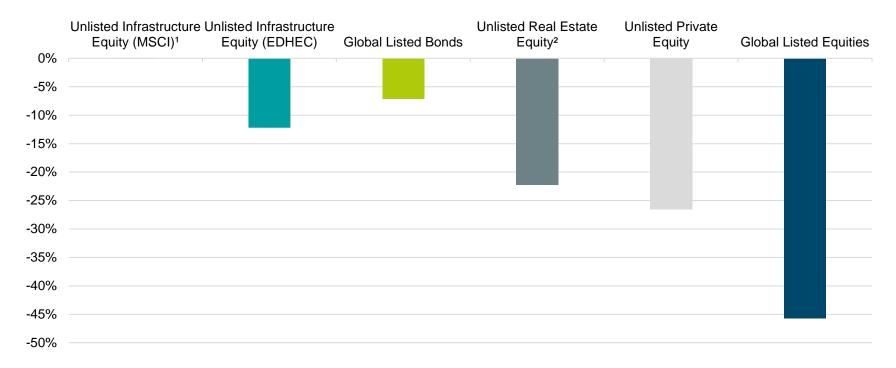
### INFRASTRUCTURE AND ECONOMIC DOWNTURNS



# Looking at total returns, private infrastructure has historically exhibited resilience compared to other asset classes during periods of distress

#### HISTORICAL MAXIMUM DRAWDOWN COMPARISON\*

March 2003 - June 2019, Based on quarterly data



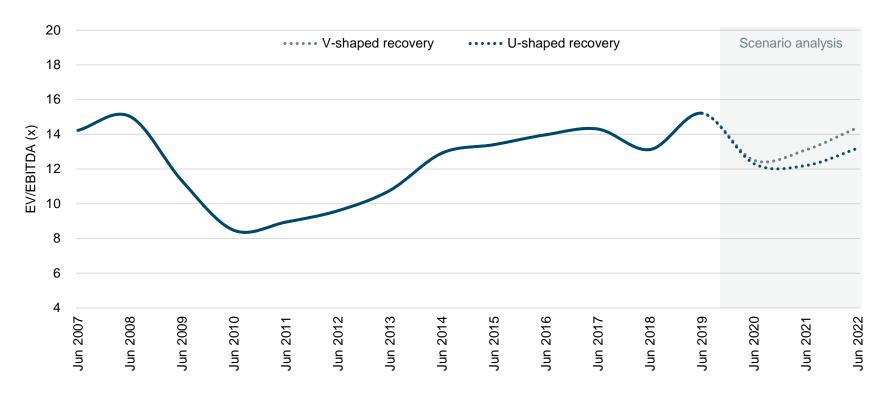
Notes: \* the maximum drawdown represents the maximum observed loss from a peak to a trough. 1. Contraction of -0.07%. Index is available from March 2008 only. 2. Index is available from December 2007 only. Source: DWS, Bloomberg, MSCI, Dow Jones Brookfield, EDHEC, Preqin, as at June 2019. Quarterly data refers to the end of each calendar quarter. Listed Global Equities: MSCI AC World Index, Local; Unlisted Infrastructure Equity (MSCI): MSCI Global Infrastructure Direct Asset Index, Local; Unlisted Private Equity: PrEQIn Private Equity Quarterly Index; Unlisted Infrastructure Equity (EDHEC): EDHEC Global Unlisted Infrastructure Equity, Value-weighted, Local; Global Listed Bonds: Bloomberg Barclays Global Aggregate Total Return Index, USD; Unlisted Real Estate Equity Assets (MSCI): MSCI Global Property Fund Index Digest. Opinions and forecasts may never materialise. For illustrative purpose only. Past performance is not a guide for future results.

# EUROPEAN PRIVATE INFRASTRUCTURE ENTRY MULTIPLES://DWS

Average private infrastructure valuations may adjust over the course of 2020

#### SCENARIO ANALYSIS: EUROPEAN PRIVATE INFRASTRUCTURE EV/EBITDA MULTIPLES

Annual historical average for 2007-2019, scenario analysis for 2020-2022



Source: DWS proprietary database of European unlisted infrastructure transactions, based on publicly available transaction information from various sources, including Infrastructure Journal, InfraNews, Reuters, 23 March 2020. For illustrative purpose only. V-shaped recovery assumes a recovery of economic conditions towards the end of 2020. U-shaped recovery assumes a prolonged economic downturn spilling into 2021. Opinions and forecasts may never materialise. Past performance is not a guide for future results. There is no guarantee the forecast shown will materialise. Forecasts are based on assumptions, estimates, views and hypothetical models or analyses, which might prove inaccurate or incorrect.

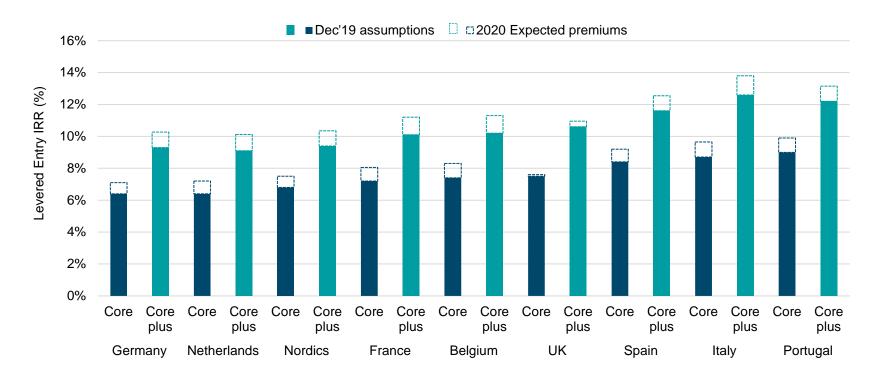
### PRIVATE INFRASTRUCTURE ENTRY RETURNS



# Widening in entry returns expected, but long-term return profile remains largely unchanged

### SCENARIO V-SHAPED RECOVERY: ENTRY IRR RETURN ASSUMPTIONS

(%, 2020, Estimate by Strategy and by Country, Levered, Average)



Source: DWS proprietary database, based on DWS proprietary methodology for ranking unlisted infrastructure sectors as at 23 March 2020. Valuations for 2020 are based on a tenyear dividend discount model and a terminal value at exit. Dividend yields, leverage, growth, exit assumptions and discount rate vary by country and sector as at 23 March 2020. Dividends for core plus in 2020 are assumed to be reduced. There is no guarantee the forecast shown will materialise. Past performance is not a guide for future returns.

## **DWS ALTERNATIVES**





### Michael Straka

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### **Tim Becker**

Director, Alternatives Coverage Specialist tim.becker@dws.com

## INDEX PERFORMANCE



## **Calendar annual performance**

Index	2013	2014	2015	2016	2017	2018	YTD June 2019
Broad MSCI Global Infrastructure Direct Asset Index, Local, Total Return	13.17%	15.64%	18.34%	16.17%	13.13%	11.83%	7.20%
iBoxx Infrastructure Index, USD	-3.29%	9.99%	-3.86%	10.31%	7.60%	-3.34%	10.86%
EDHEC Global Unlisted Infrastructure Equity, Value-weighted (USD)	13.61%	5.55%	0.89%	2.75%	19.14%	2.79%	4.50%
MSCI AC World Daily TR Index	22.80%	4.16%	-2.36%	7.86%	23.97%	-9.41%	16.23%
MSCI Global Property Fund Index Digest	9.71%	11.38%	12.69%	8.79%	8.07%	8.68%	3.40%
JP Morgan GBI Global 7-10 Years, Local	-0.83%	10.93%	1.64%	2.61%	1.56%	1.31%	5.54%
Bloomberg Barclays Global-Aggregate Total Return Index Value USD	-2.60%	0.59%	-3.15%	2.09%	7.39%	-1.20%	5.57%
Dow Jones Brookfield Global Infrastructure Index	15.89%	16.34%	-14.40%	12.52%	15.79%	-7.87%	20.73%
PrEQIn Private Equity Quarterly Index	19.60%	11.79%	10.48%	10.56%	19.20%	10.88%	7.15%
iBoxx Infrastructure Index, EUR	3.08%	10.29%	-0.51%	4.90%	2.31%	-1.25%	6.29%
IBoxx Infrastructure Index, USD Liquid High Yield	3.94%	5.81%	-5.59%	20.95%	8.97%	-0.70%	11.01%
MSCI Global Infrastructure Direct Asset Index - Low Risk, Total Return	12.33%	13.23%	8.38%	12.16%	8.86%	9.73%	4.55%
MSCI Global Infrastructure Direct Asset Index - Low Risk, Capital Return	7.21%	7.76%	4.35%	5.96%	3.34%	4.18%	2.29%
MSCI Global Infrastructure Direct Asset Index - Low Risk, Income Return	4.87%	5.17%	3.90%	5.93%	5.39%	5.38%	2.24%
MSCI Global Infrastructure Direct Asset Index - Moderate Risk, Total Return	14.43%	17.27%	21.41%	17.59%	14.53%	12.96%	8.32%
MSCI Global Infrastructure Direct Asset Index - Moderate Risk, Capital Return	10.68%	13.24%	17.24%	12.79%	8.69%	6.76%	5.67%
MSCI Global Infrastructure Direct Asset Index - Moderate Risk, Income Return	3.50%	3.67%	3.72%	4.39%	5.48%	5.88%	2.60%
MSCI Global Infrastructure Direct Asset Index - High Risk, Total Return	-3.74%	3.23%	24.46%	0.42%	46.73%	8.44%	9.94%
MSCI Global Infrastructure Direct Asset Index - High Risk, Capital Return	-5.00%	1.81%	22.93%	-0.77%	43.32%	7.02%	9.89%
MSCI Global Infrastructure Direct Asset Index - High Risk, Income Return	1.30%	1.40%	1.30%	1.19%	2.55%	1.37%	0.04%

Source: DWS, Bloomberg, MSCI, IHS Markit, Preqin, Dow Jones Brookfield, as at June 2019. Past performance is not indicative of future results.

## INDEX PERFORMANCE



## Rolling annual performance

Index	Jun-2014	Jun-2015	Jun-2016	Jun-2017	Jun-2018	Jun-2019
Broad MSCI Global Infrastructure Direct Asset Index, Local, Total Return	14.52%	18.65%	16.04%	12.55%	12.49%	13.25%
iBoxx Infrastructure Index, USD	9.36%	0.59%	8.88%	3.21%	-1.05%	11.56%
EDHEC Global Unlisted Infrastructure Equity, Value-weighted (USD)	19.55%	-6.15%	13.07%	4.07%	14.55%	1.89%
MSCI AC World Daily TR Index	22.95%	0.71%	-3.73%	18.78%	10.73%	5.74%
MSCI Global Property Fund Index Digest	11.03%	12.11%	11.46%	7.74%	8.68%	7.62%
JP Morgan GBI Global 7-10 Years, Local	6.47%	3.92%	8.83%	-2.61%	0.58%	7.24%
Bloomberg Barclays Global-Aggregate Total Return Index Value USD	7.39%	-7.09%	8.87%	-2.18%	1.36%	5.85%
Dow Jones Brookfield Global Infrastructure Index	28.30%	-3.66%	3.22%	8.00%	2.48%	12.69%
PrEQIn Private Equity Quarterly Index	21.57%	11.74%	5.48%	17.57%	16.57%	10.74%
iBoxx Infrastructure Index, EUR	8.45%	2.44%	6.10%	0.64%	1.04%	5.65%
IBoxx Infrastructure Index, USD Liquid High Yield	12.16%	2.61%	4.43%	9.98%	4.16%	10.61%
MSCI Global Infrastructure Direct Asset Index - Low Risk, Total Return	14.12%	8.56%	11.40%	9.29%	9.12%	9.76%
MSCI Global Infrastructure Direct Asset Index - Low Risk, Capital Return	8.88%	3.55%	5.78%	4.39%	2.72%	5.30%
MSCI Global Infrastructure Direct Asset Index - Low Risk, Income Return	4.95%	4.87%	5.39%	4.74%	6.27%	4.30%
MSCI Global Infrastructure Direct Asset Index - Moderate Risk, Total Return	16.19%	21.94%	19.36%	13.96%	13.75%	14.96%
MSCI Global Infrastructure Direct Asset Index - Moderate Risk, Capital Return	12.33%	17.38%	14.88%	9.33%	8.16%	8.01%
MSCI Global Infrastructure Direct Asset Index - Moderate Risk, Income Return	3.55%	4.05%	4.04%	4.34%	5.26%	6.56%
MSCI Global Infrastructure Direct Asset Index - High Risk, Total Return	-3.37%	30.10%	3.07%	19.39%	32.73%	7.50%
MSCI Global Infrastructure Direct Asset Index - High Risk, Capital Return	-4.78%	28.59%	1.77%	17.48%	29.19%	7.45%
MSCI Global Infrastructure Direct Asset Index - High Risk, Income Return	1.47%	1.25%	1.28%	1.70%	2.89%	0.04%

Source: DWS, Bloomberg, MSCI, IHS Markit, Preqin, Dow Jones Brookfield, as at June 2019. Past performance is not indicative of future results.

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