

MAY 2024

Texas ERS

Private Infrastructure Report

Q4 2023



Macro Overview

Key Calls

1

With headline inflation decelerating in some markets, we expect central banks to cut policy rates in major markets bar China and Japan.

Our policy rate forecasts are in line with central bank projections and economic consensus rather than the more aggressive market-implied pricing.

Note that Japan stands in contrast as a market where we expect monetary policy to modestly tighten.

2

We do not expect a recession in any major market. This means that central banks have pulled off a “soft landing”.

That said, growth in manufacturing export countries will continue to be impacted by weak global trade and shipping disruption. China, Korea and Germany are particularly at risk.

By contrast, service sector economies will continue to benefit from tight labour markets and resilient consumer confidence.

3

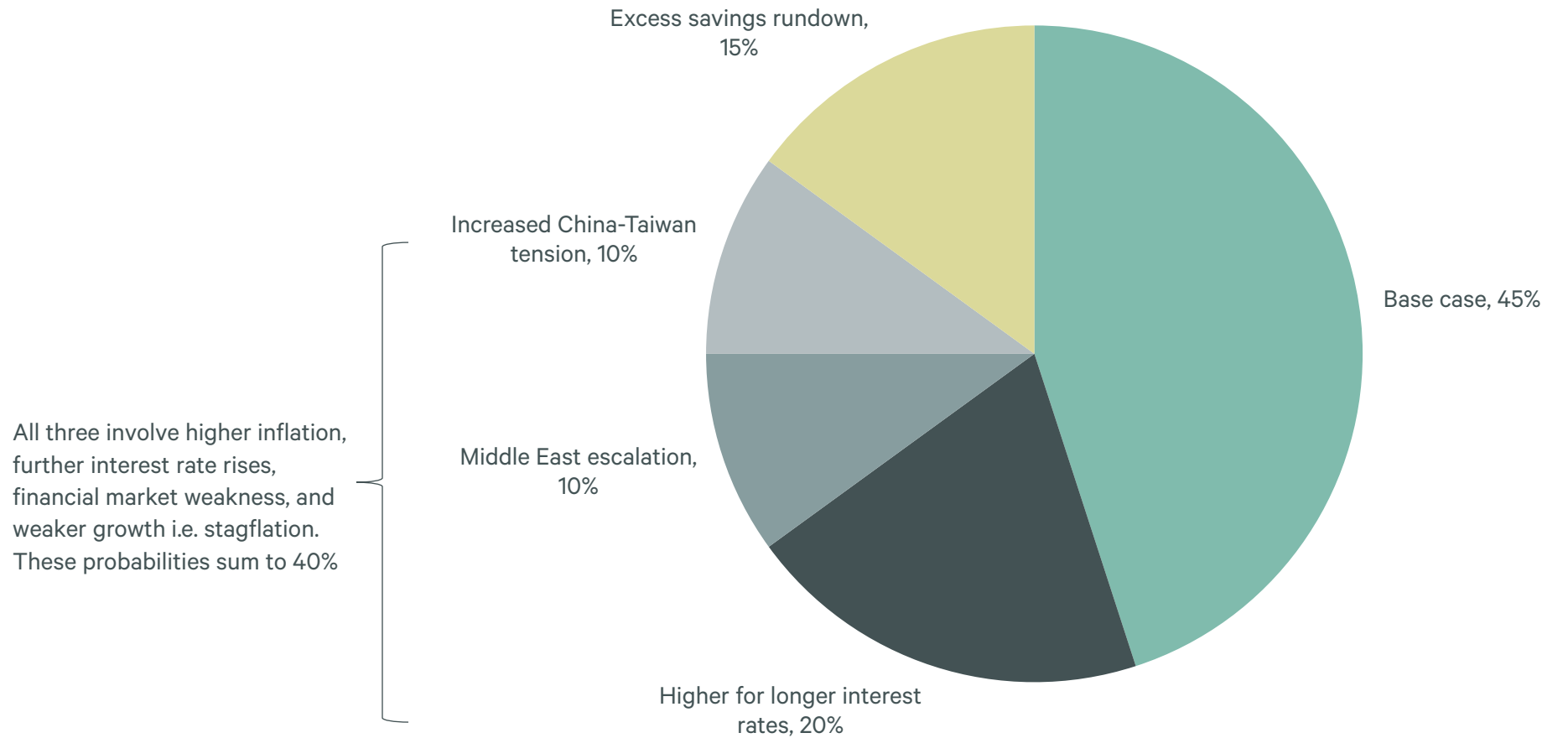
The proximate risk to these forecasts lies in elevated geopolitical tensions, notably in the Middle East, but also between China and Taiwan.

Should trade disruptions increase, the pass-through of higher shipping and energy costs would hit Europe the hardest.

In all markets it would elevate inflation and likely slow or halt the expected policy rate cuts.

Geopolitical and macro volatility remains elevated

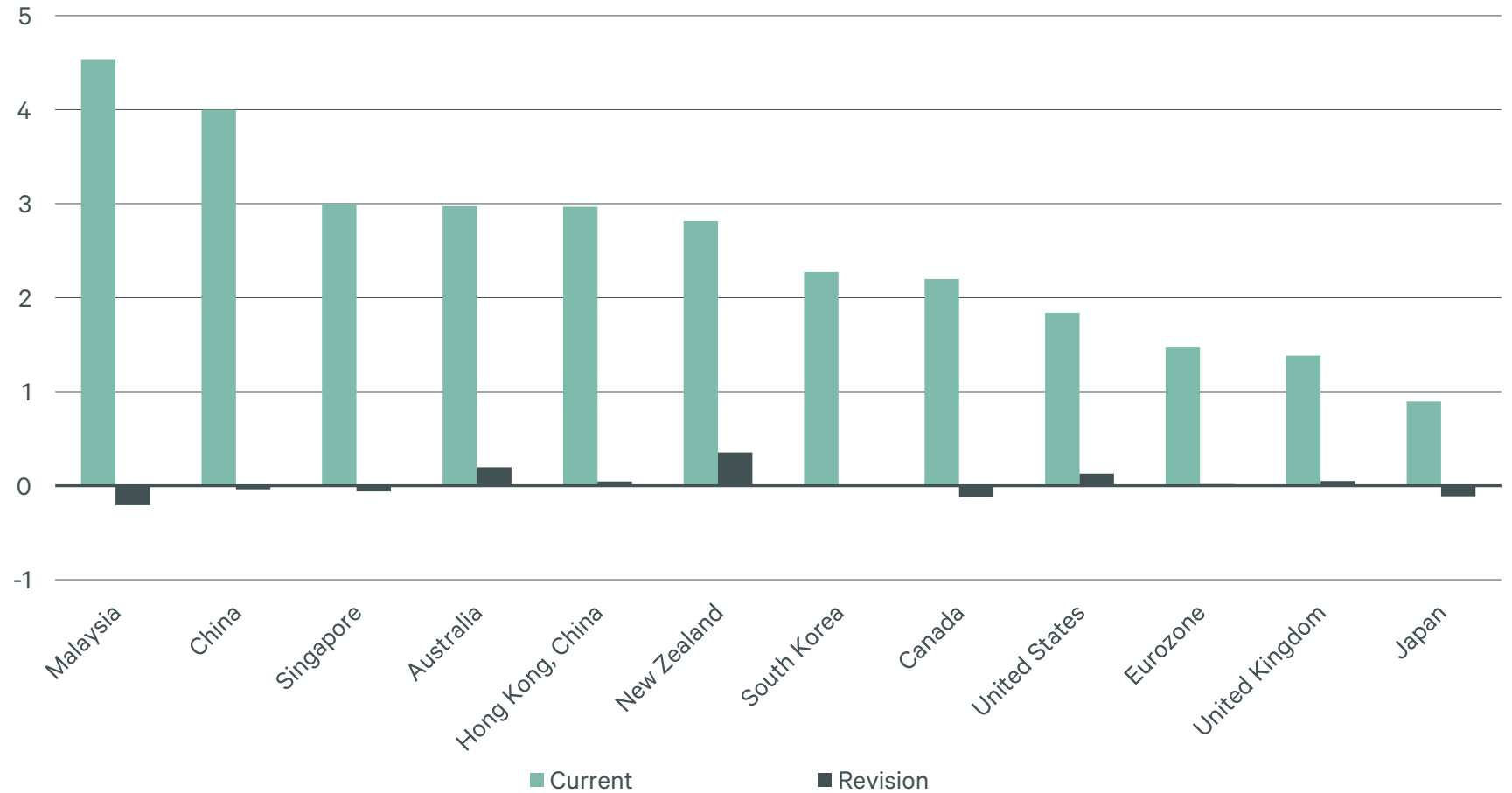
OEF January Macro Scenario Probabilities, %



Sources: Oxford Economic Forecasting & CBRE Investment Management. As of January 2024

Only modest changes
to the real economic
forecasts

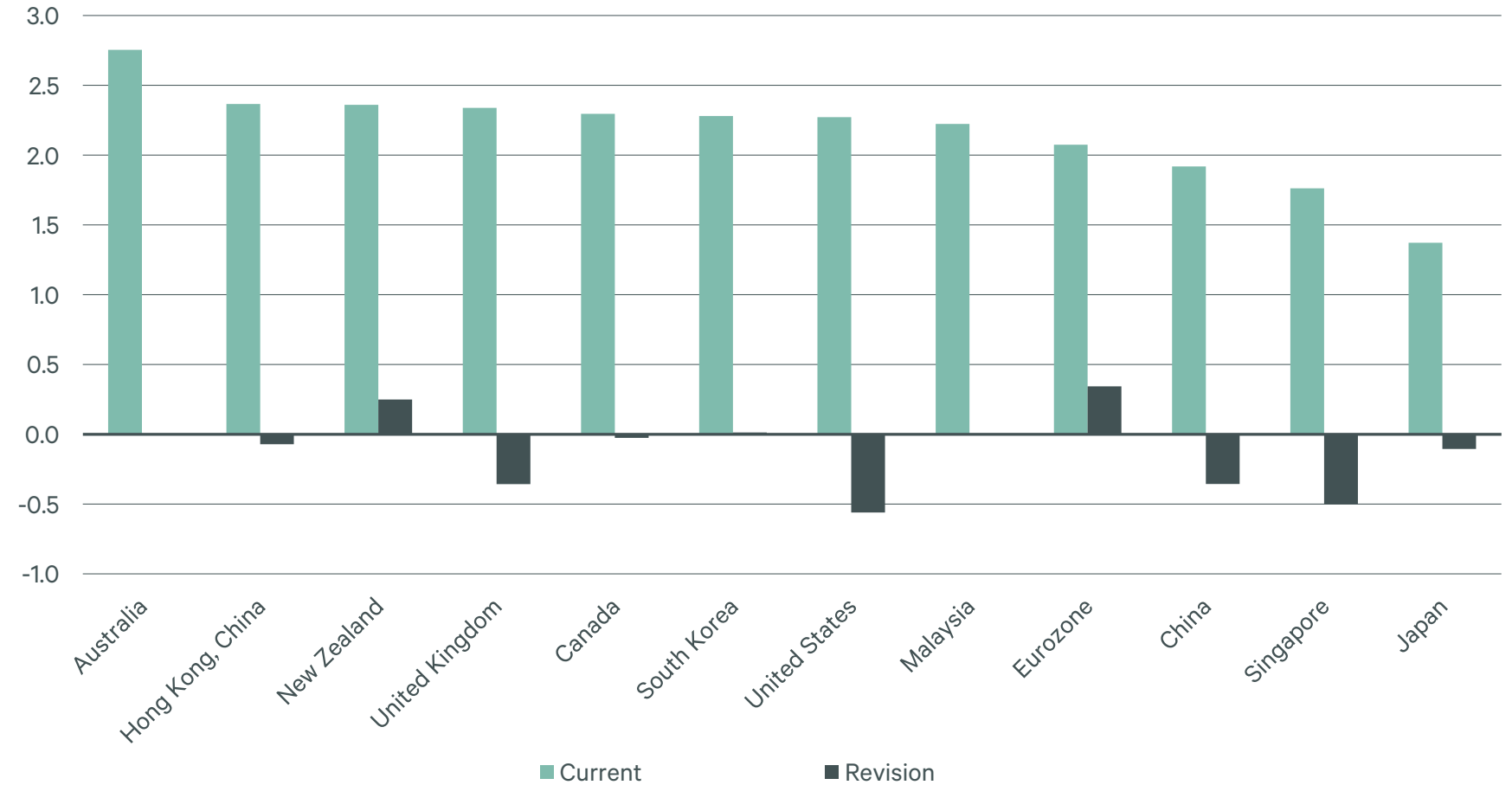
Forecasted GDP growth 2024-2028, % Y/Y



Sources: Oxford Economic Forecasting & CBRE Investment Management. Data as of March 2024

A mixed bag on inflation revisions - marked downgrade in the pace of US disinflation in 2024

Forecasted CPI inflation 2024-2028, % Y/Y

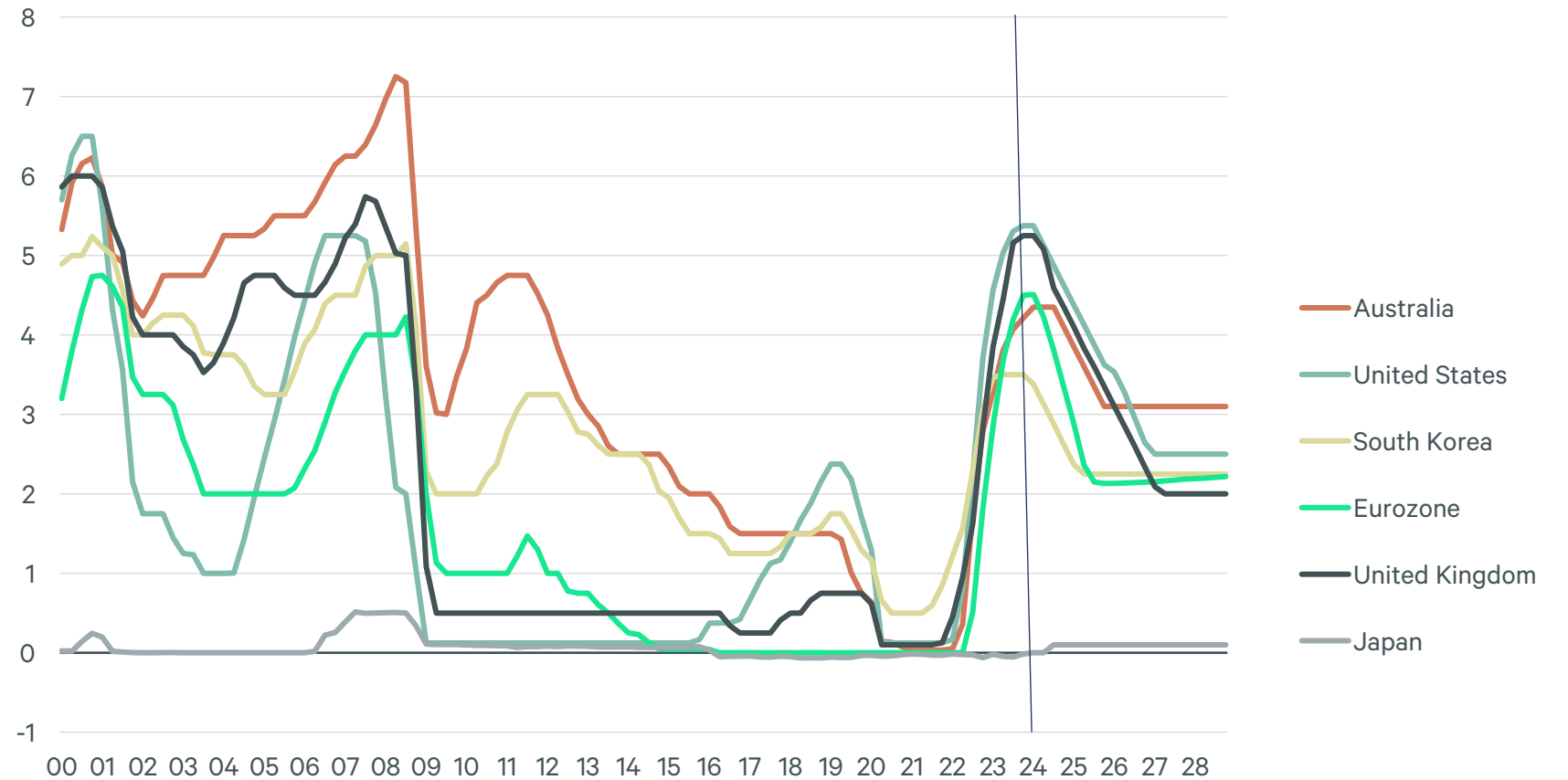


Sources: Oxford Economic Forecasting & CBRE Investment Management. Data as of March 2024

NEW FORECASTS

Policy rates begin to fall in Q2 2024 in Europe and North America and in Q4 in Australia

Central bank policy rates 2000-2023, forecasted central bank policy rates 2024-2028, % Y/Y



Sources: Oxford Economic Forecasting & CBRE Investment Management. Data as of March 2024

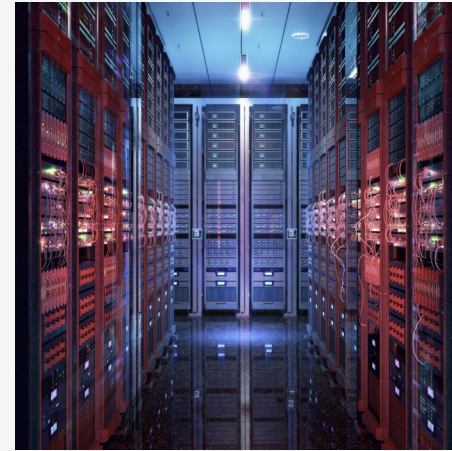


Market Overview

Resilience and growth in a maturing asset class



Evolving industry
landscape is supportive
for mid-market deals



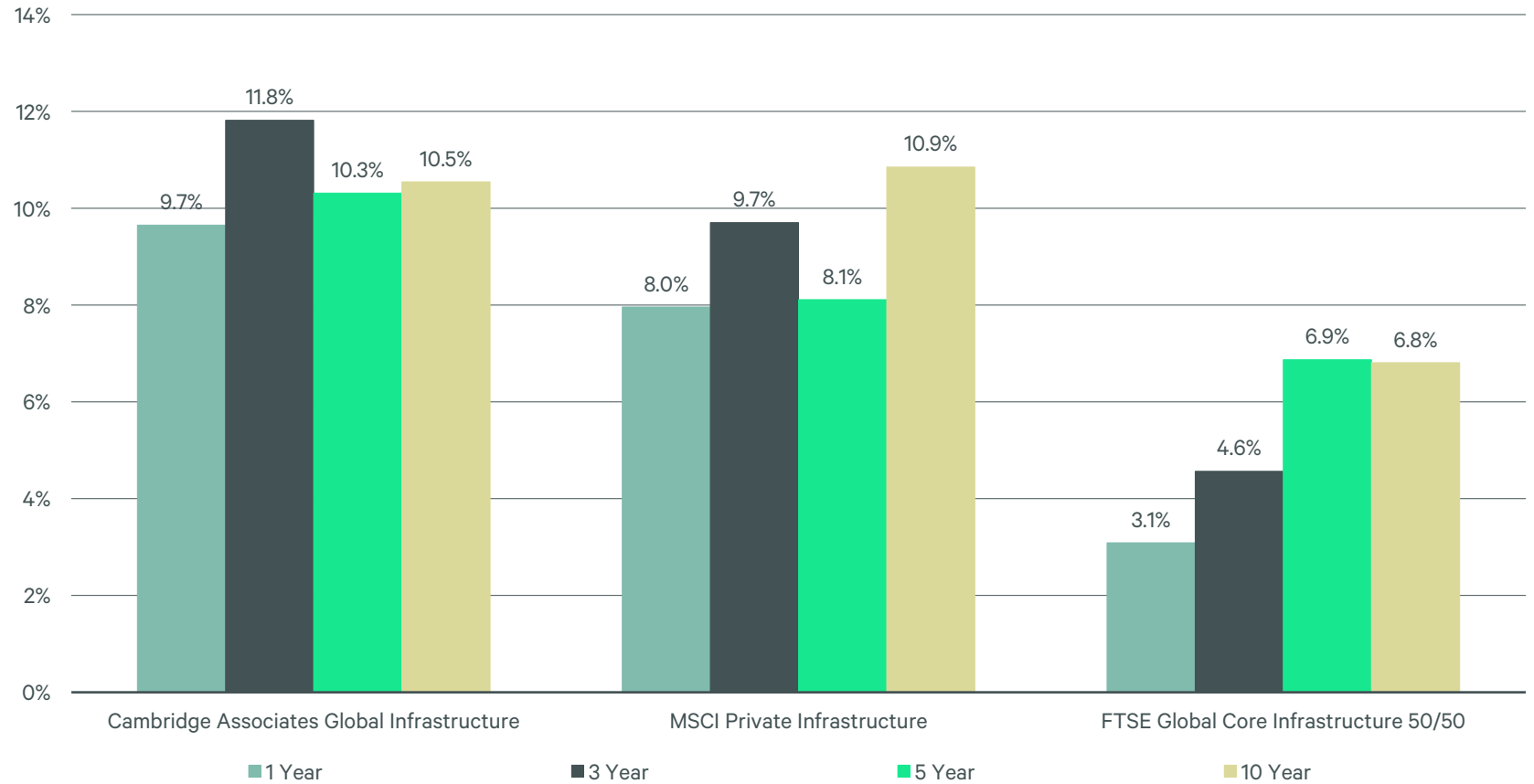
The mega trends
behind data and power
demand are interrelated



Higher-for-longer
interest rates sharpen
the focus on business
models

Appraisal-based indices registered a slowdown in 2023 but not to the extent of the listed markets

Total returns (rolling 1,3,5,10 year, annualized)



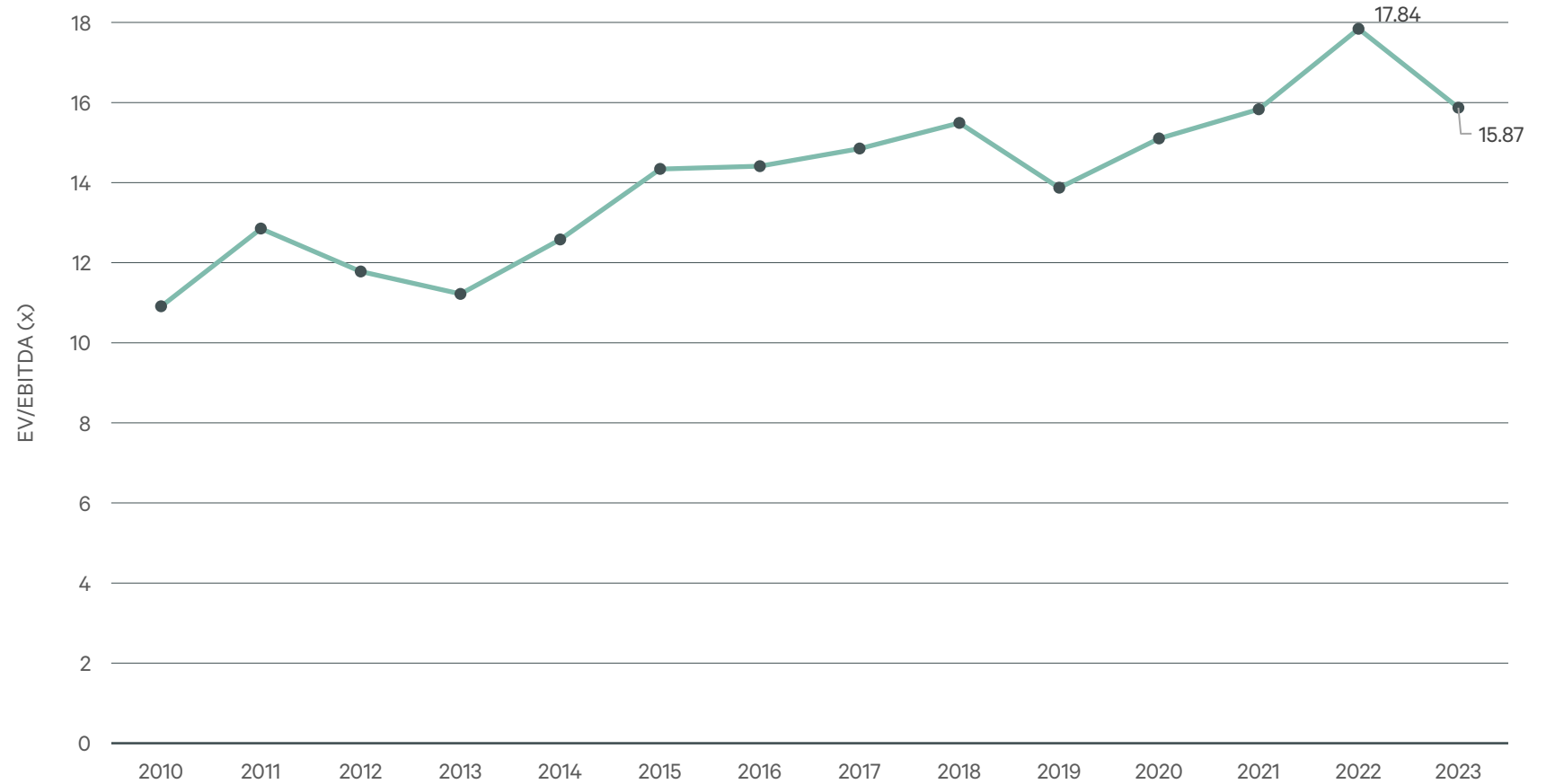
Note: Cambridge Associates & MSCI as of Q3 2023; FTSE as of Q4 2023.

Source: Refinitiv, Factset, MSCI. Cambridge Associates Global Infrastructure Index in USD, net of fees as of Q3 2023. MSCI Private Infrastructure in USD as of Q3 2023. FTSE Global Core Infrastructure 50/50 index in USD as of Q4 2023.

For illustrative purposes only. Current market conditions differ from prior market conditions; including during prior periods of stress and dislocation. There can be no assurance any prior trends will continue.

Transaction multiples may have cooled down in 2023

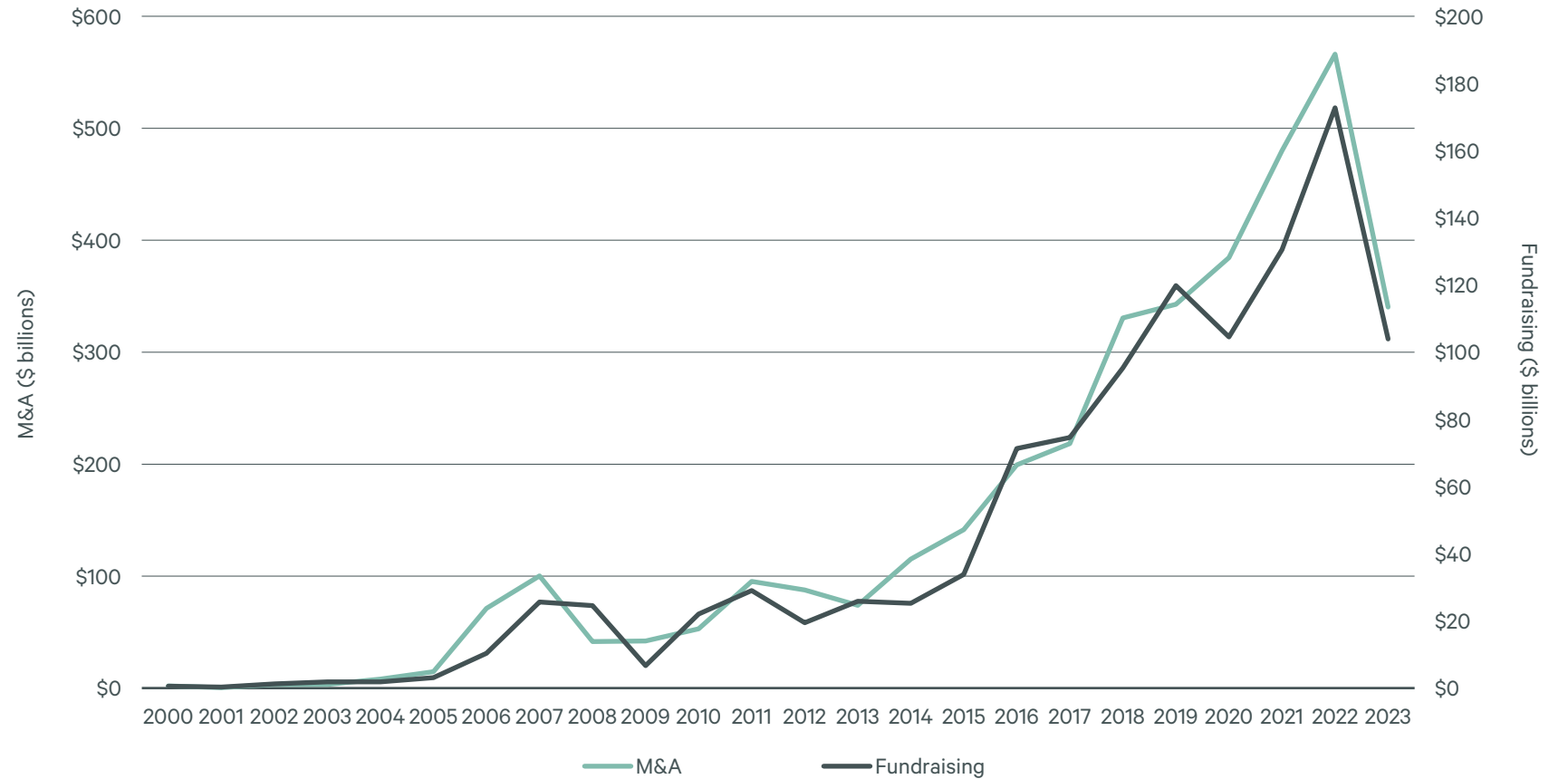
Entry-level transaction multiples dipped in 2023 with the average market-wide multiple sitting closer to the five-year average of 15.6x.



Realfin as of January 30, 2024. Based on 1,084 transactions

2023 was an unusual year for infrastructure fundraising and M&A

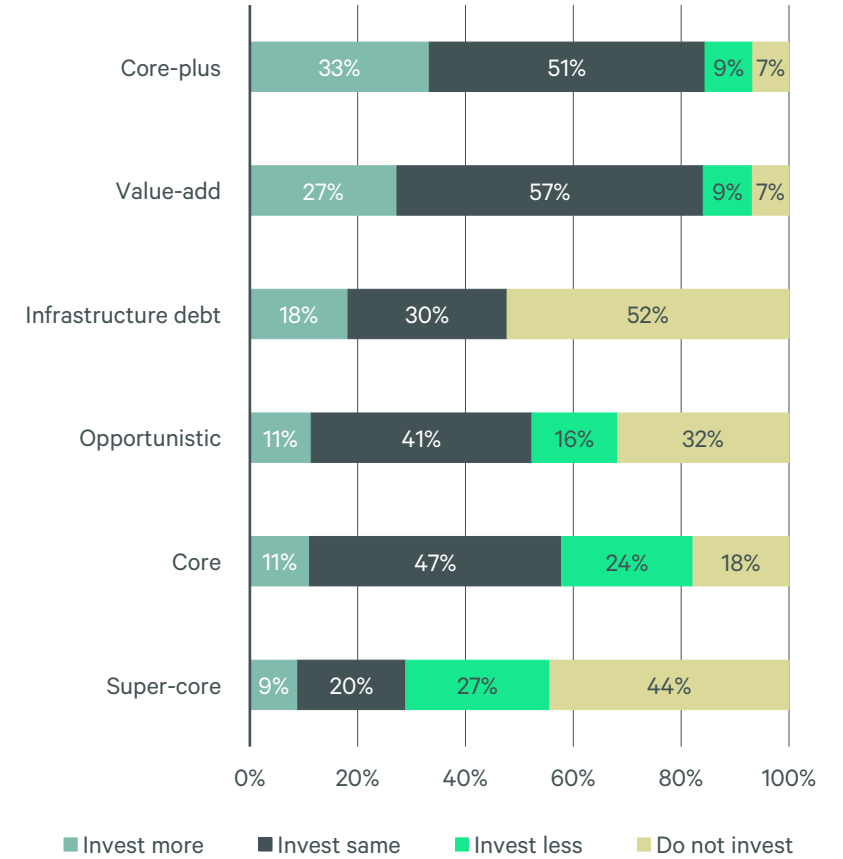
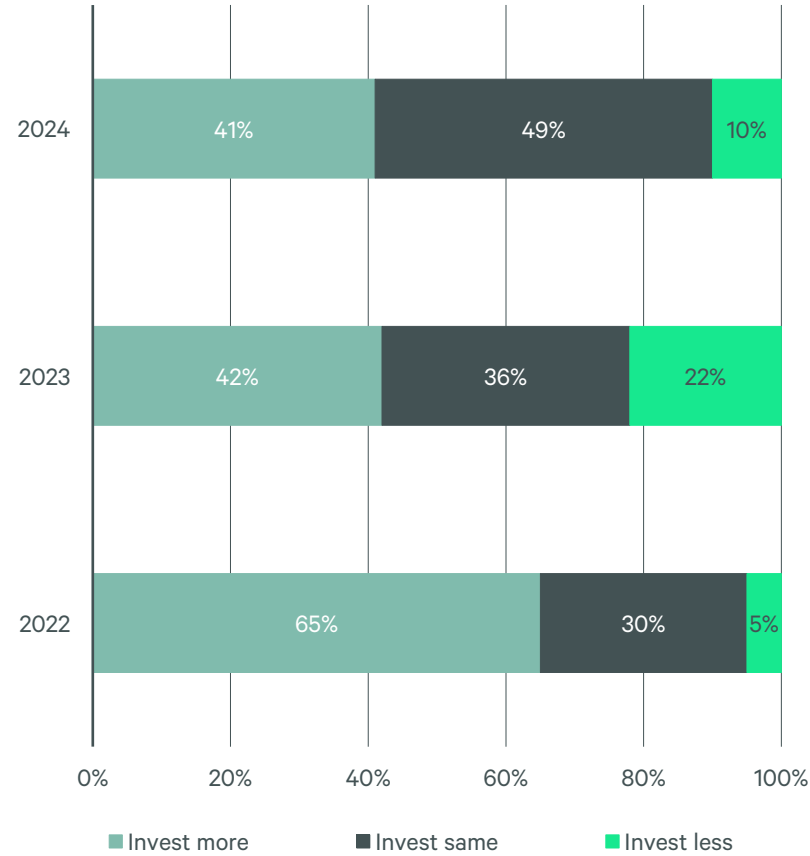
Private infrastructure M&A and fundraising are 99% correlated since the year 2000



Source: Infralogic as of March 25, 2024.

Investors expected to commit more capital to infrastructure in 2024

LP overall & strategic infrastructure investment appetite for 2024



Source: Infrastructure Investor, *Investor Report Full Year 2023*.



Investment Outlook

Marginal increase in return expected due to a more constructive macroeconomic outlook

Unlisted infrastructure entry level return forecast (% , gross of fees) – 2024 - 2033

Infrastructure continues to demonstrate resilient revenues and free cash flows despite high inflation

Interest rates decline within the forecast horizon, but stay higher than in the past decade

Our current forecast is at a similar level as the 10-year annualised index return.



Expected return: internal rate of return (IRR) 10-year exit period, local currency, unhedged, gross of fees. Source: EDHECinfra Valuation metrics accessed March 2024. All median values. the data is based on 9,919 monthly observations for 633 companies over past 6 quarters as of 31-12-2023. EDHECinfra 300, EW, LCU, 10.55%.

For illustrative purposes only. Based on CBRE Investment Management's subjective views and subject to change. There can be no assurance any targets will occur as expected. Forecasts are inherently uncertain and subject to change.

The forecast reflects an equity risk premium staying within the 6%-7% mark

Source: EDHEC expected returns for global infrastructure, median, March 2024. U.S. Treasury yields: Factset.

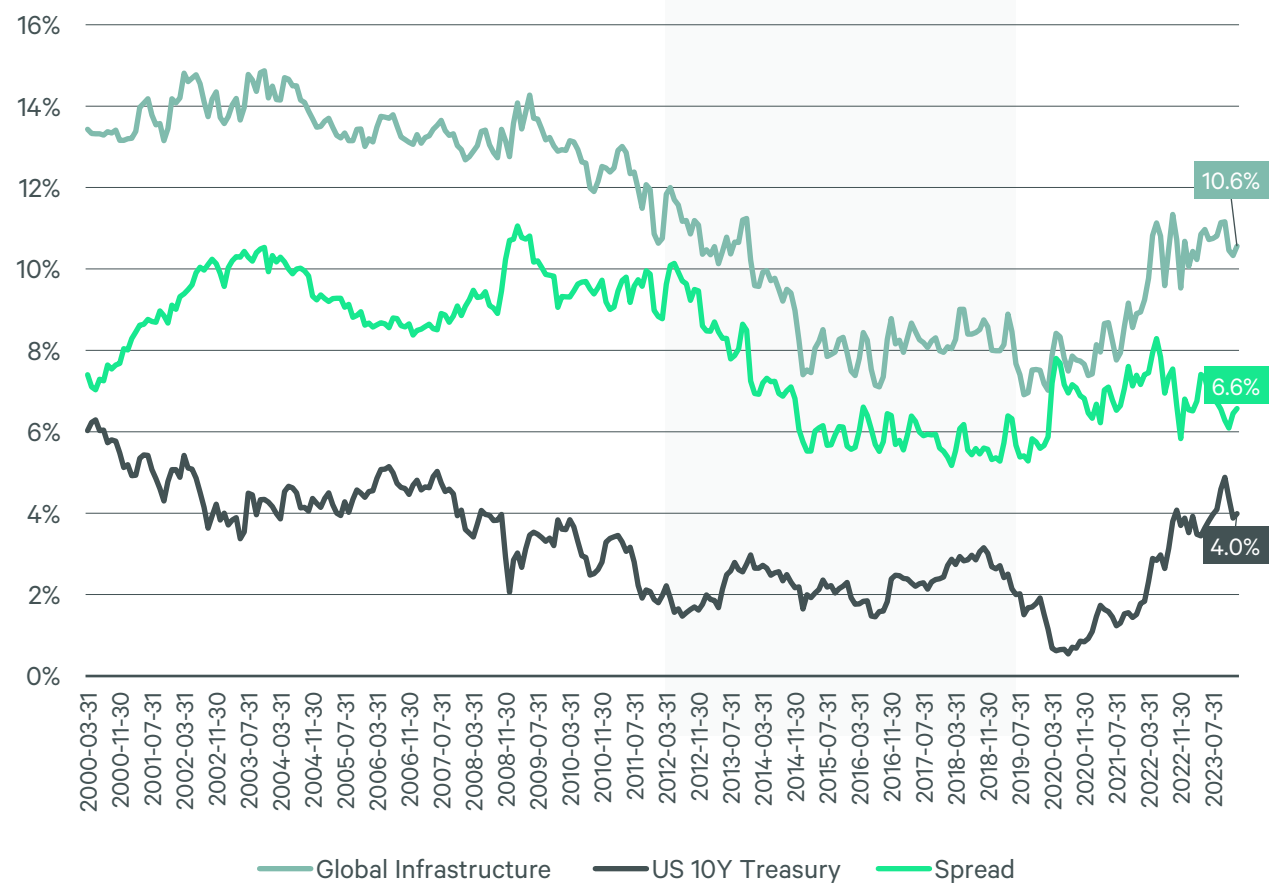
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Global infrastructure expected returns versus the 10-year U.S. Treasury yields (%)

Following the GFC and up to 2015, unlisted infrastructure recorded abnormal returns while still in a buildout phase.

The landscape became more competitive during 2015-2019, leading to spread compression despite ultra-low base interest rates.

After oscillating in the 6-8% range recently, we expect spreads to hover around 6%-7%, mirroring the stabilization in credit spreads.



Forecast assumptions

REVENUES	CASH FLOWS	COST OF DEBT	ENTRY MULTIPLES	DEMAND
After a peak of 11.5% in 2022 and as inflation rapidly declines, revenue growth will moderate. Sharp decline in European power prices and extreme weather-related volatility will impact merchant generation.	The capex super-cycle in clean energy and digital leads to persistently negative free cash flows. To maintain attractive dividend payout, many infrastructure companies will rely on recurrent debt and equity funding.	Stable credit spreads at 170 basis points for investment grade infrastructure. Strong lender appetite but increasing flight to quality as corporate defaults accelerate.	Large-ticket infrastructure deals come at a premium, forcing owners and managers to use levers to achieve target returns. Mid-market infrastructure is better positioned.	Cost-of-living pressures means consumers will focus on value in discretionary travel. Red Sea disruption, overcapacity and subdued global trade impact ports and maritime shipping.

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The ‘sweet spot’ of core-plus and mid-market strategies

Core-plus and mid-market strategies continue to outperform core infrastructure on absolute and risk-adjusted basis

- The biggest compression in capital raised in 2023 was seen at opposite ends of the risk spectrum in core and enhanced risk (value-added and opportunistic) strategies.
- In the new economic realities, core infrastructure needs to reprice by 180 to 190 basis points due to its high rate sensitivity.
- With the steep decline in European commodity and power prices, we expect the returns for enhanced risk strategies to normalise.
- Attractive development yields for data centers and certain types of renewable energy as market rents and PPA prices increased to cover high funding and development costs.

	Expected return		Total return		Sharpe ratio	
	2024-2033	Last 12 months	3-year	3-year	5-year	
Global unlisted infrastructure	10.6%	7.5%	11.0%	0.8	0.9	
Core unlisted infrastructure	9.0%	6.6%	7.6%	0.5	0.6	
Core+ unlisted infrastructure	11.4%	5.7%	10.8%	0.6	0.9	
Enhanced risk unlisted infrastructure	13.8%	16.7%	23.7%	1.9	1.6	
Mid-market unlisted infrastructure	10.7%	9.0%	11.6%	0.9	1.2	

Source: EDHECInfra accessed March 2024. Infra300 is a broad-based market index with market capitalisation of \$324 billion as of 29th of February 2024. Infra100 indices represent the 100 largest unlisted infrastructure companies in each strategy: Core (\$136 billion), Core+ (\$147 billion), Opportunistic (\$116 billion) and Mid-market (\$26 billion). EW, LCU.

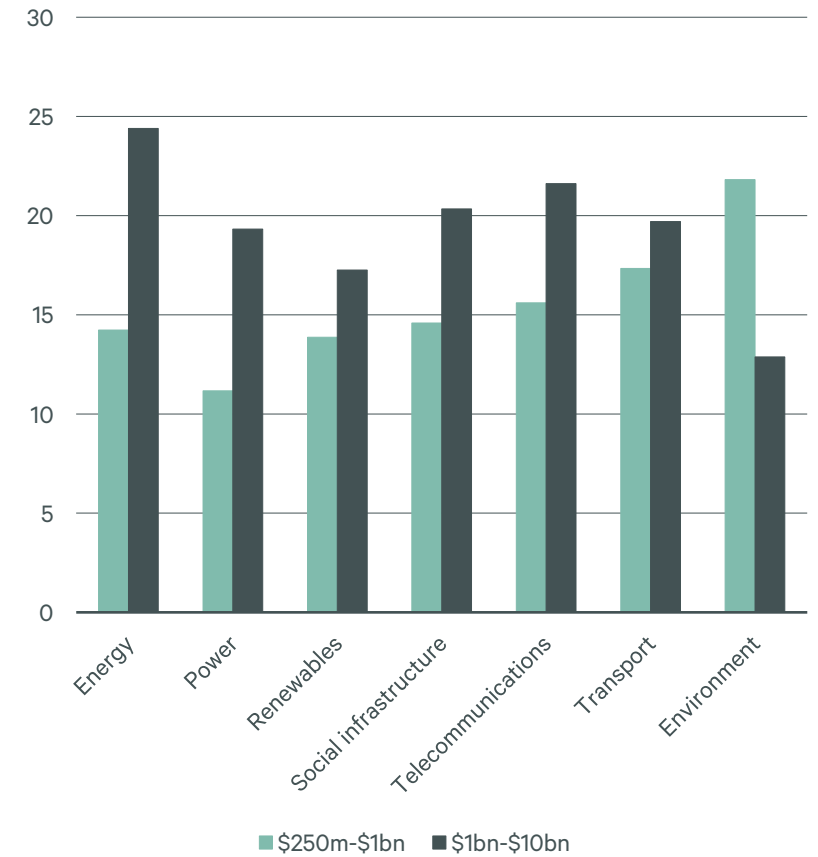
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Entry multiples are more appealing for mid-market infrastructure

Median EV/EBITDA by deal size between 2001-2024



Average EV/EBITDA by sector between 2001-2024

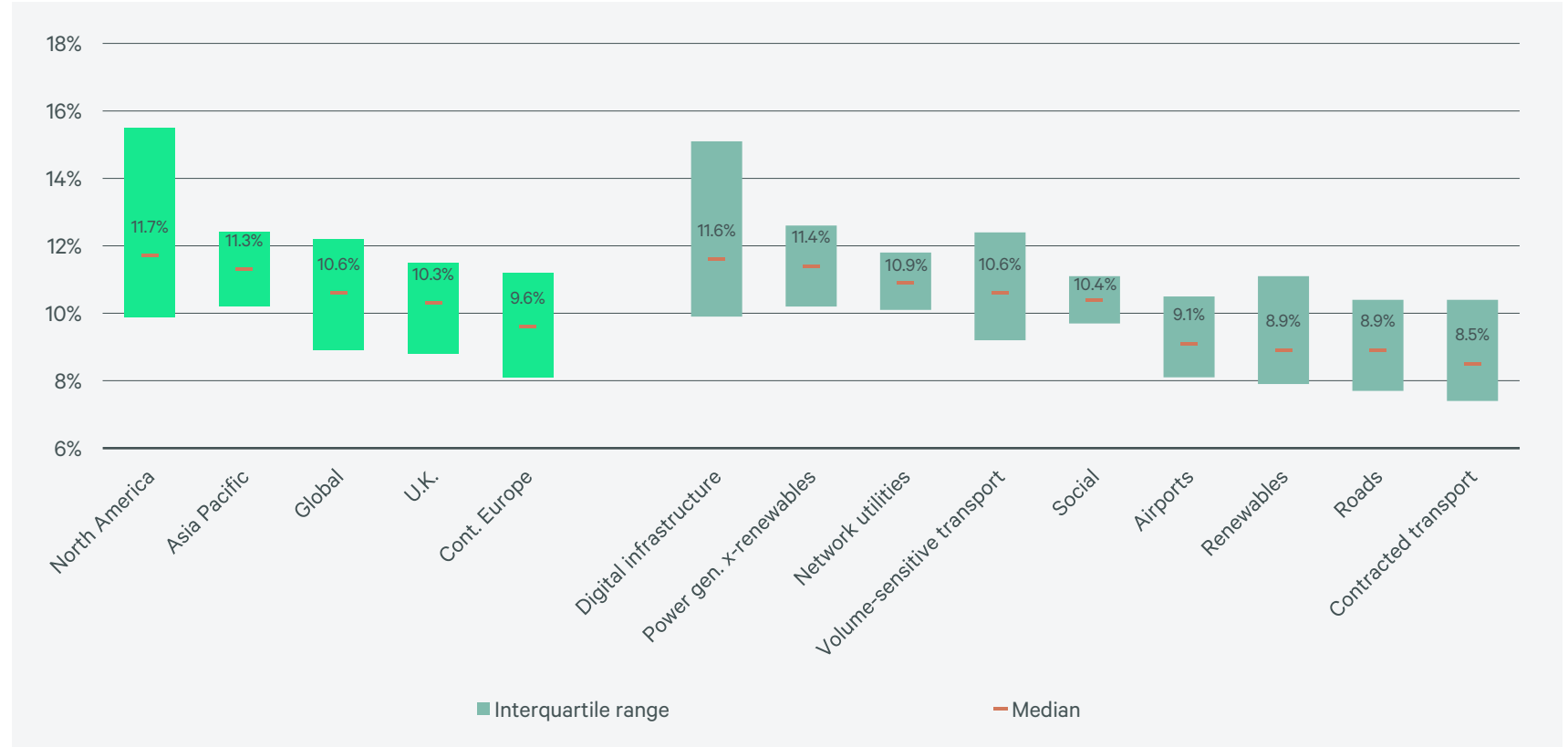


Source: Infralogic as of March 6, 2024. Coverage includes 922 reported transaction multiples, 2001-2024.

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Demand for data fuels investments in data centers, power grids, and renewables

Entry level expected returns, unlisted infrastructure (gross of fees, levered, %)



North American infrastructure has entered a clean energy ‘renaissance’ following the Inflation Reduction Act.

Rising climate risks (wildfires and water scarcity) led to impairments for selected North American utilities.

Declining technology costs will benefit renewable generation from solar and battery storage.

Source: EDHECinfra asset valuation metrics as of March 2024, median IRRs average and CBRE IM’s adjustments. North America infrastructure – Cambridge Associates North American funds.

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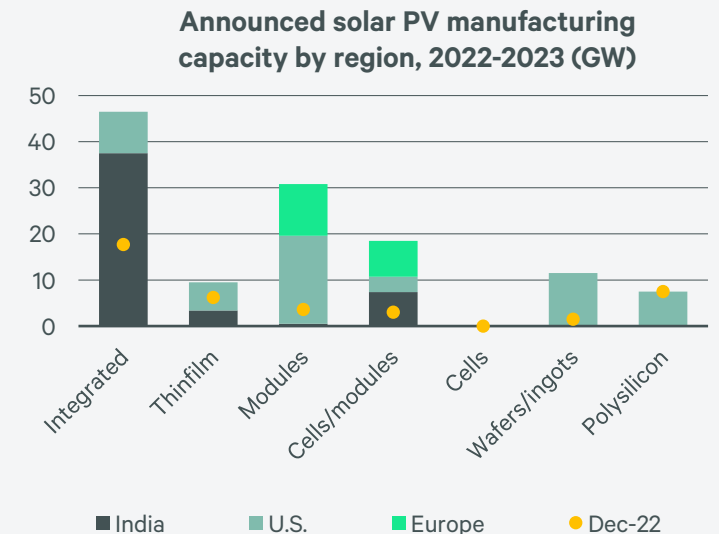
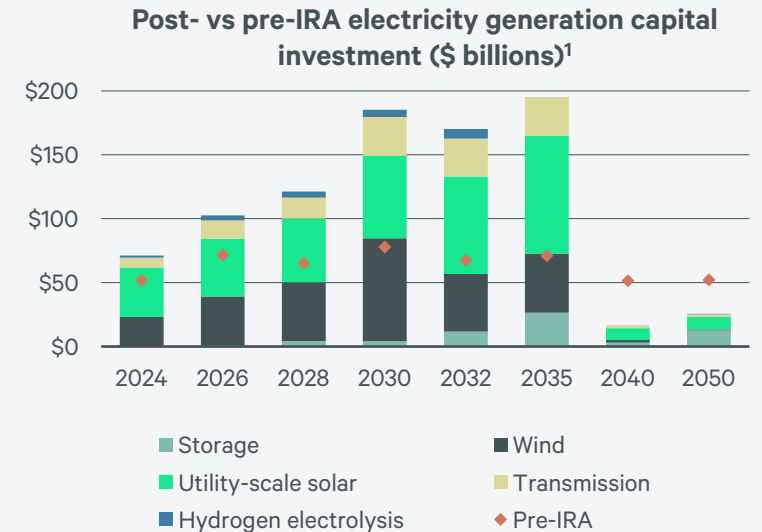
The Inflation Reduction Act benefits are coming in full view

1. Princeton University ZERO Lab, Rapid Energy Policy Evaluation and Analysis Toolkit (REPEAT) project, accessed November 30, 2023. Mid-range IRA impact scenario. Pre-IRA scenario captures the range of existing policies as of January 2021 to serve as a benchmark against which the impacts of recently enacted or proposed policies can be measured.

Source: World Economic Outlook (WEO), International Energy Agency. Level10, Q3 2023 PPA Price Index North America. International Energy Agency (IEA): Renewables Energy Market Update: outlook for 2023 and 2024, June 2023. CapitalIQ: US Treasury clarifies eligibility for clean energy investment tax credit, Nov. 17, 2023. IEA, The State of Clean Technology Manufacturing, June 2023.

- The \$369 billion incentives under the Inflation Reduction Act (IRA) are a **game changer** for the clean energy industry in the United States.
- Transferrable investment tax and production tax credits will provide *'unprecedented certainty for renewable energy projects until 2032'* according to the IEA.

- IRA policies will also enhance the **diversity and security of renewable energy supply chains**. Announcements for solar PV projects in the United States have doubled since December 2022.
- If all the conditions are met to receive the maximum available tax credits, the levelized cost to consumers of new solar PV and wind in the United States is expected **to be lower than anywhere else in the world**.



Strategic and tactical allocation for unlisted infrastructure

	Strategic band MIDPOINT RELATIVE TO MARKET WEIGHT	Tactical allocation TARGET POSITION RELATIVE TO MID-POINT	Rationale for tactical allocation
Transport	↑	↑	Traffic levels remain robust for road light-vehicles and leisure airlines while passenger rail in some countries has suffered a permanent loss since the pandemic. Ports are exposed to slowing global trade and re-routing of traffic given nearshoring practices and the Red Sea disruption.
Renewables	↑	↑	Policy support underpins a growing investment pipeline and provides powerful investment incentives. Supply chains dislocation has eased for solar and onshore wind while offshore wind is still plagued by immature infrastructure. Falling power prices in Europe and extreme market volatility will impact merchant renewable projects.
Utilities	↑	↔	Increasing need for investments in electric networks to accommodate higher renewable electricity and data center load. The ability to pass through inflation has been mixed; rising physical climate impact is a risk.
Social infrastructure	↔	↔	Resilient and attractive sectors in terms of inflation links but opportunities for private capital are limited. Socio-demographic trends to spur increased investment in healthcare and education; governments struggle with the right public-private model.
Energy	↔	↔	Increased market appetite for gas midstream assets but uncertain length of gas as a transition fuel. Energy security and the need for back-up capacity supports the case for extending the life of gas assets and “green gas” capex in the 2030s.
Digital infra	↑	↑	Fast growing demand for data, migration to the cloud and Generative AI boost the need for data centers and mobile towers. Data centers face a supply imbalance which leads to higher rental growth. The prospects for fiber-to-the-home vary depending on regulation, level of competition and the roll-out rate.

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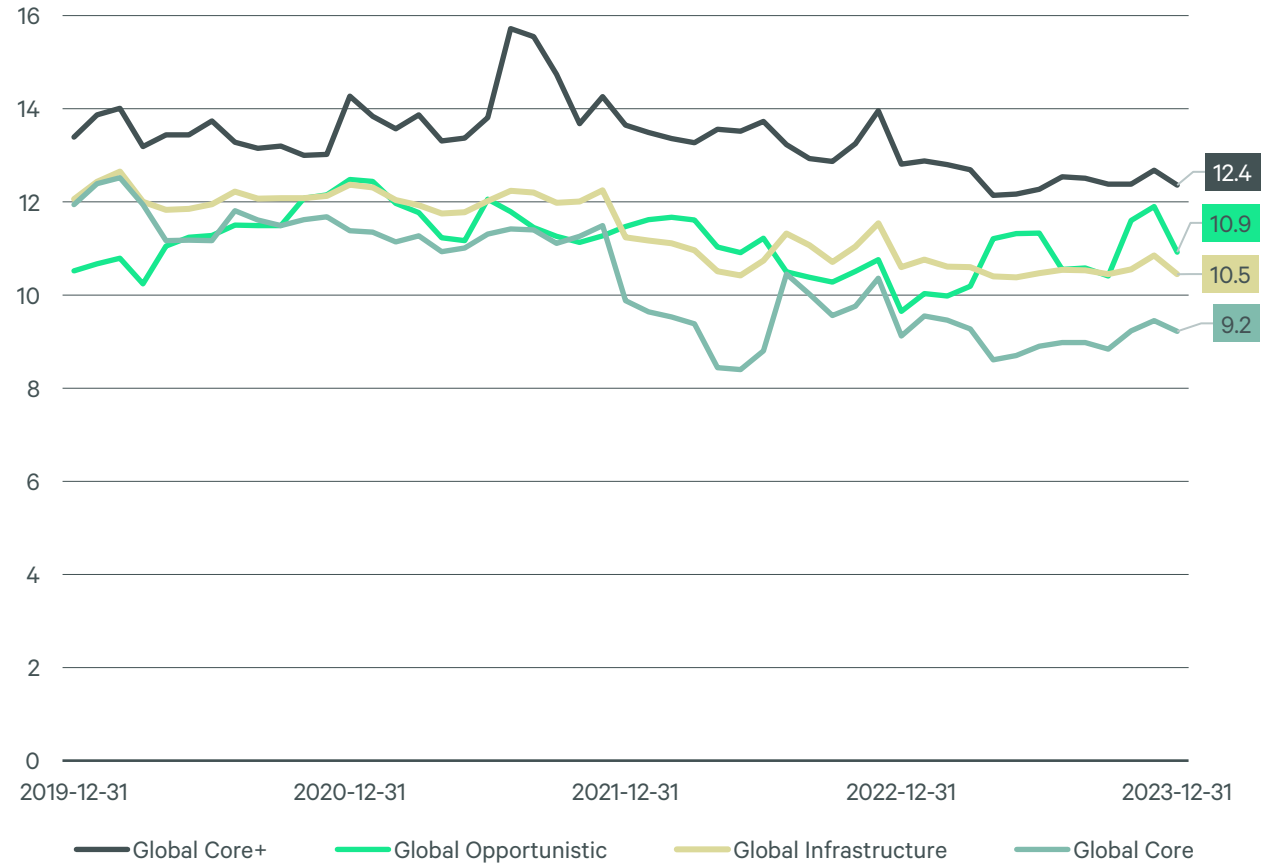


Valuations

Entry multiples largely staying flat

Unlisted infrastructure entry multiples by strategy (EV/EBITDA multiple)

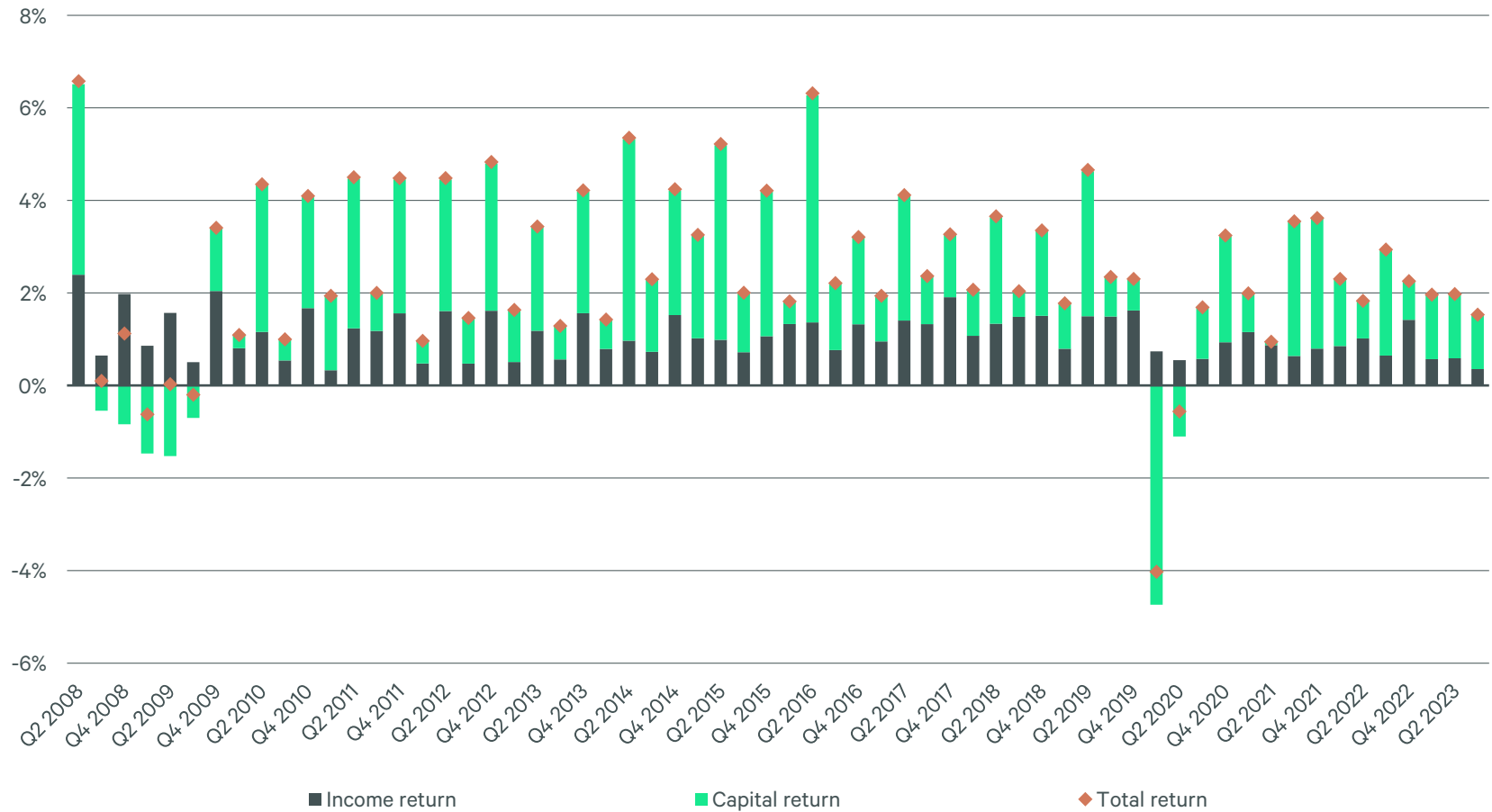
- Global infrastructure multiples in terms of EV/EBITDA have slightly decreased since interest rates started to climb, from the recent peak of 11.5x (November 2022) to 10.5x most recently, according to EDHEC.



Source: EDHECInfra Valuation Analytics, EV/EBITDA multiples monthly timeseries as of January 29, 2024. Data as of December 31, 2023. Median values.

Private infrastructure has retained steady income & capital growth

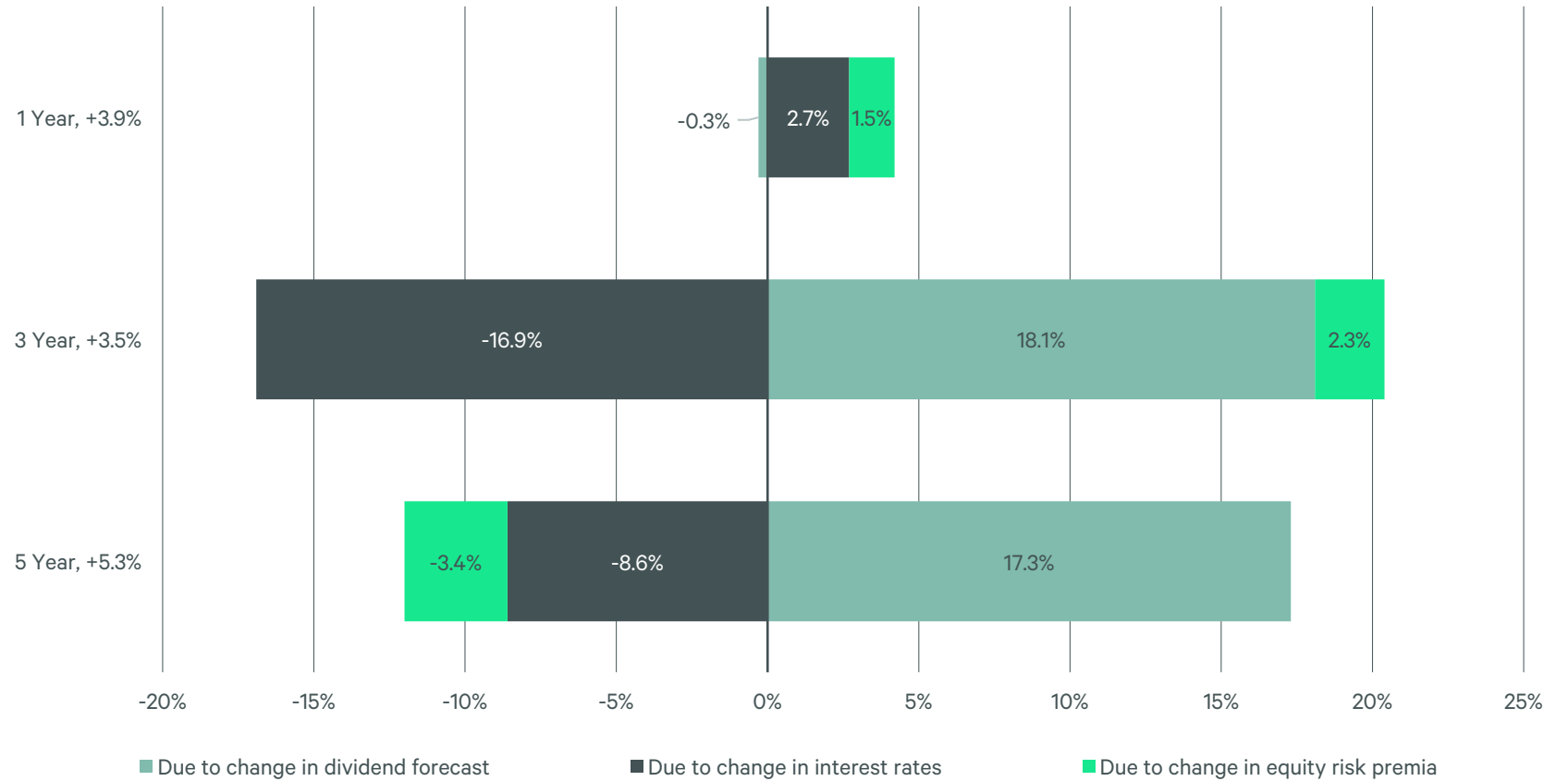
MSCI Private Infrastructure index quarterly returns



Source: MSCI. MSCI Private Infrastructure index, gross of fees in USD (186 constituent assets, market capitalization of \$130 billion). Returns as of Q3 2023.

Recent valuations were largely supported by the expected end of interest rate hikes

Change in Net Asset Value (NAV) of global unlisted infrastructure due to changes in Discount Cash Flow (DCF) components, last 1-, 3- and 5-year averages

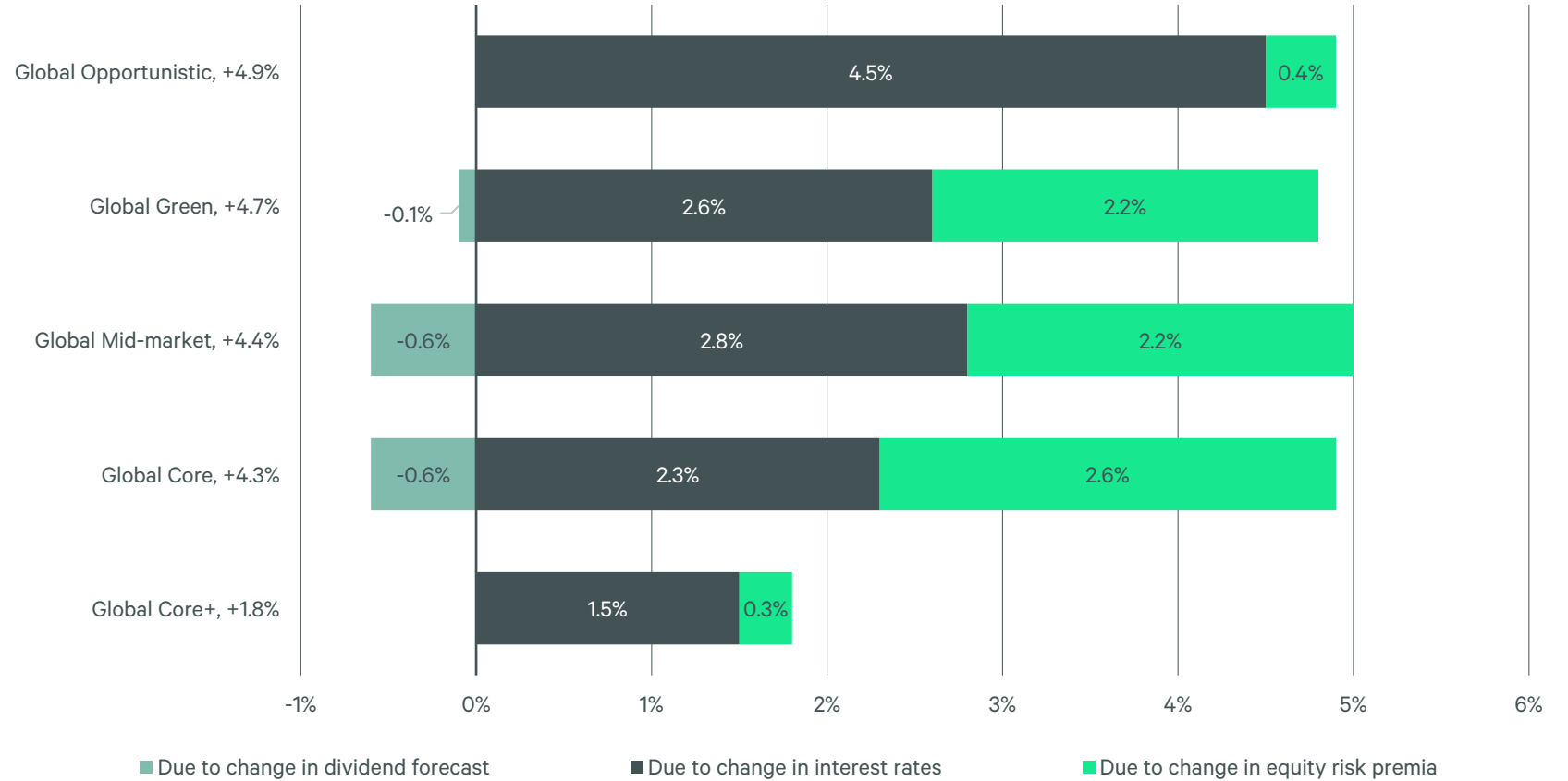


Source: EDHECInfra Valuation Analytics as of January 29, 2024. Data as of December 31, 2023.

For illustrative purposes only. Current market conditions differ from prior market conditions; including during prior periods of stress and dislocation. There can be no assurance any prior trends will continue.

Similar story for strategy valuations, particularly for riskier opportunistic assets

Change in Net Asset Value (NAV) of global unlisted infrastructure strategies due to changes in Discount Cash Flow (DCF) components, last 1-year average



Source: EDHECInfra Valuation Analytics as of January 29, 2024. Data as of December 31, 2023.

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ERS Portfolio Review

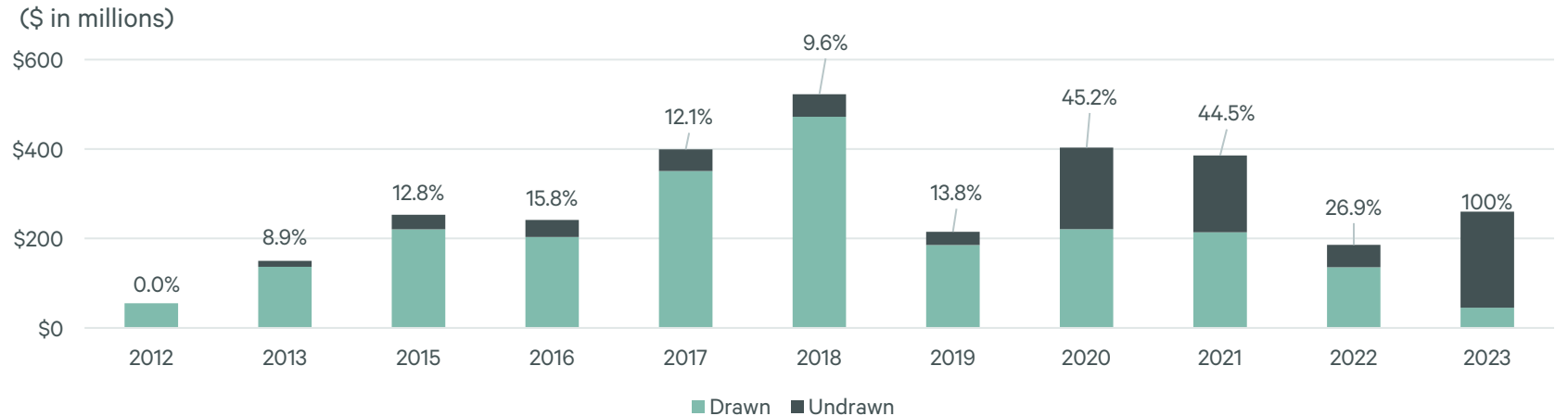
Since 2012, \$3,140.5 million has been committed of which \$830.9 million was undrawn as at December 31, 2023

Portfolio Overview

Investment Type	No.	Total Commitment	Undrawn	Drawn
Active				
Fund	29	\$2,127.3	\$693.4	\$1,433.9
Co-Investment	22	943.2	137.5	805.7
Subtotal	51	3,070.5	830.9	2,239.6
Liquidated				
	1	70.0	-	70.0
TOTAL INVESTMENTS	52	\$3,140.5	\$830.9	\$2,309.6



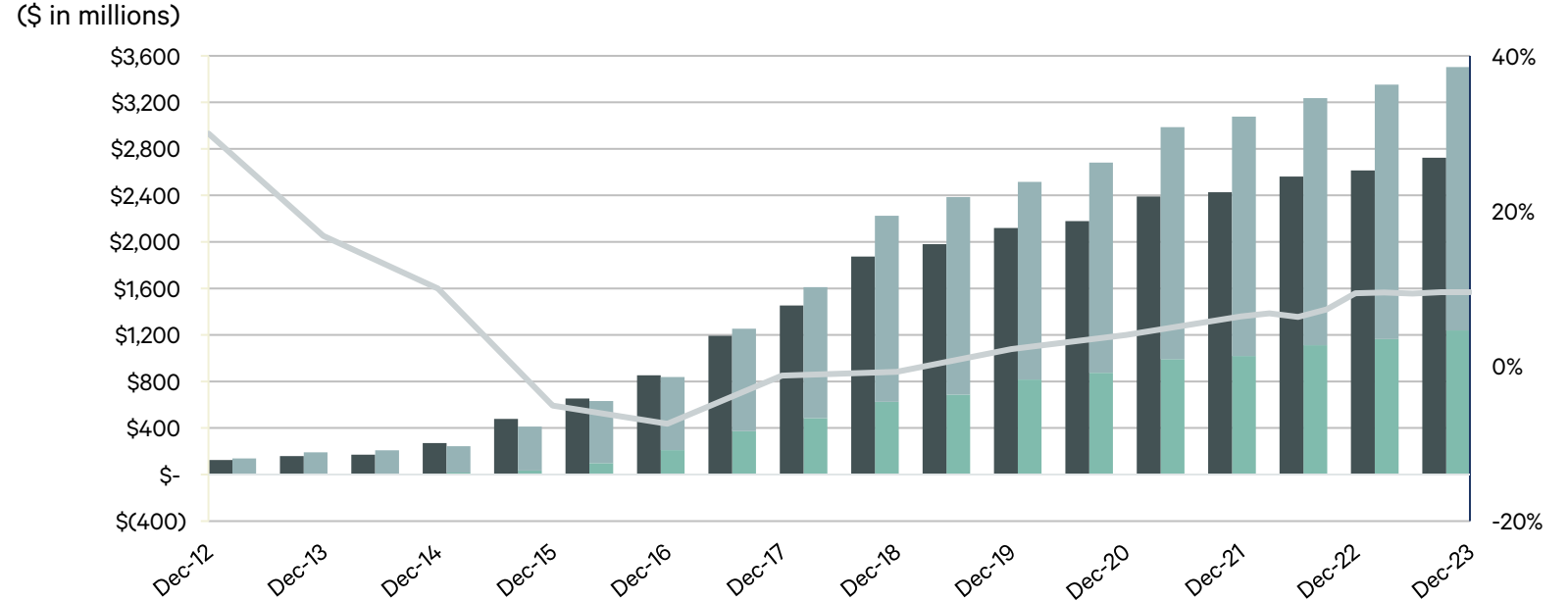
Undrawn by Vintage



Data as at December 31, 2023

The net asset value of the total portfolio was \$2,302.3 million, a quarter-over-quarter increase of 5.0% or \$115.8 million.

Portfolio performance progression



Legend: Distributions (teal), Contributions (dark grey), NAV (light blue), Net IRR (grey line)



Data as at December 31, 2023

The portfolio had a net IRR of 10.0% and a MOIC of 1.3x excluding legacy investments, driven by gains in ISQ Growth Market and Actis Long Life Fund

Performance attribution by Strategy

Investment Type	No.	Distributions	Net Asset		Net Multiple	Net IRR
			Value	Total Value		
Active						
Fund	29	\$781.4	\$1,473.1	\$2,254.5	1.3x	10.5%
Co-Investment	22	457.0	829.2	1,286.2	1.5x	7.0%
Subtotal	51	1,238.4	2,302.3	3,540.7	1.3x	10.0%
Liquidated	1	-	-	-	N/A	N/A
TOTAL INVESTMENTS	52	\$1,238.4	\$2,302.3	\$3,540.7	1.3X	8.4%

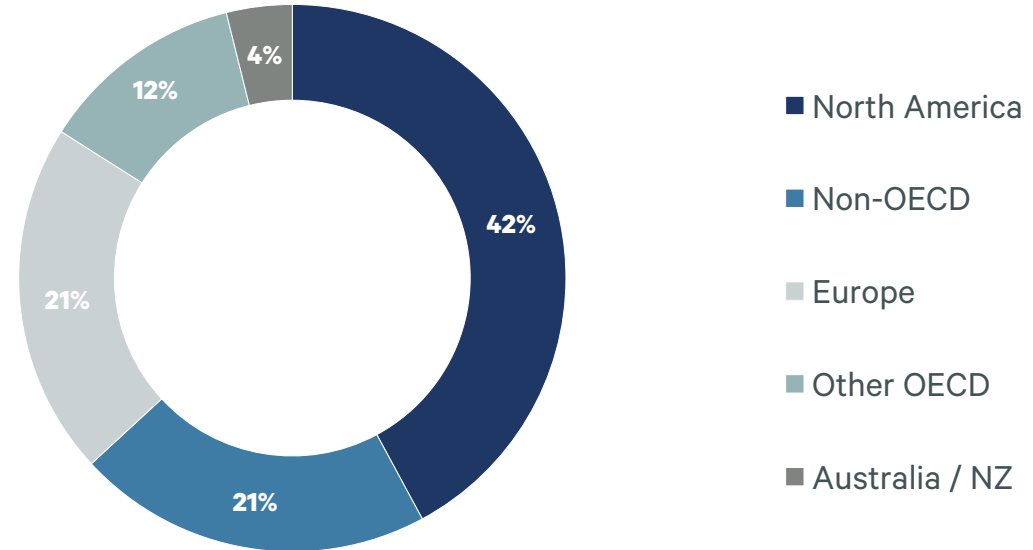
Performance Attribution by Vintage

Investment Type	No.	Distributions	Net Asset		Net Multiple	Net IRR
			Value	Total Value		
Active						
2012	1	\$37	\$2.1	\$39.1	0.7x	(3.1%)
2013	3	180.3	9.2	189.5	1.2x	4.0%
2015	5	347.3	208.0	555.3	1.7x	14.5%
2016	7	255.8	126.1	381.9	1.4x	11.9%
2017	5	148.6	439.0	587.6	1.5x	12.6%
2018	6	117.4	623.0	740.4	1.3x	11.2%
2019	4	83.5	226.7	310.2	1.3x	11.8%
2020	5	28.7	247.5	276.2	1.1x	7.5%
2021	7	39.1	238.2	277.3	1.2x	13.9%
2022	4	0.9	149.4	150.3	1.1x	9.1%
2023	4	(0.2) ¹	33.1	32.9	NM	NM
Subtotal	51	1,238.4	2,302.3	3,540.7	1.3x	10.0%
Liquidated (2017)	1	-	-	-	N/A	N/A
TOTAL INVESTMENTS	52	\$1,238.4	\$2,302.3	\$3,540.7	1.3X	8.4%

Data as at December 31, 2023

1. Includes sub close interest

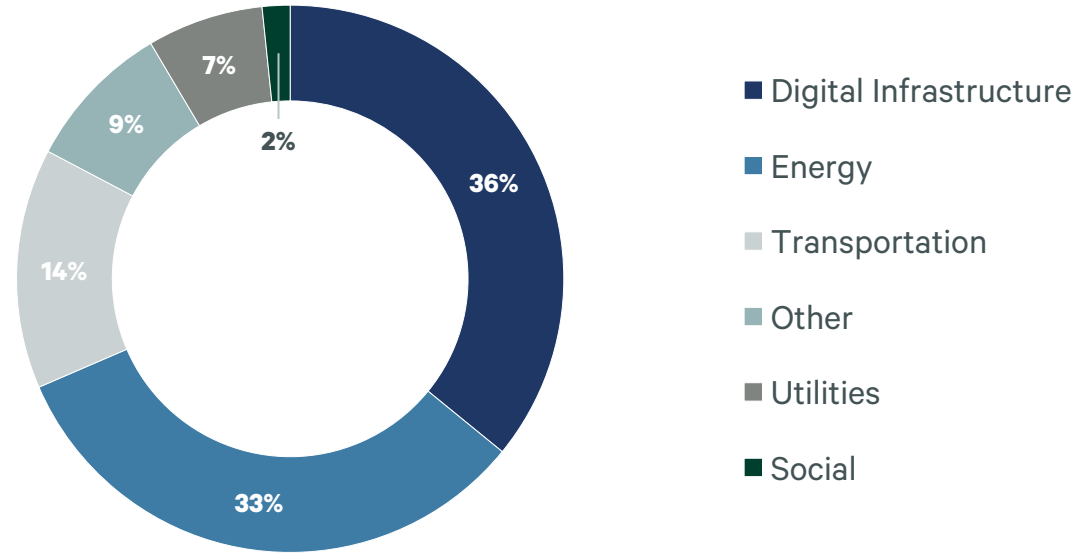
Diversification & Performance by Geography



	Realized		Unrealized		Total	
	Gain/(Loss)	Gross Multiple	Gain/(Loss)	Gross Multiple	Gain/(Loss)	Gross Multiple
North America	63.2	1.3x	328.5	1.4x	391.8	1.4x
Europe	31.5	1.5x	187.8	1.6x	219.3	1.6x
Australia / NZ	-	-	30.3	1.5x	30.3	1.5x
Other OECD	22.5	1.5x	151.3	1.6x	173.8	1.6x
Non-OECD	75.7	1.5x	189.8	1.4x	265.5	1.4x
TOTAL	193.0	1.4x	887.8	1.5x	1,080.7	1.4x

Data as at December 31, 2023

Diversification & Performance by Sector



	Realized		Unrealized		Total	
	Gain/(Loss)	Gross Multiple	Gain/(Loss)	Gross Multiple	Gain/(Loss)	Gross Multiple
Energy	92.5	1.3x	296.4	1.4x	388.8	1.4x
Utilities	20.0	2.0x	114.4	1.9x	134.4	1.9x
Transportation	25.7	1.3x	136.3	1.4x	162.0	1.4x
Social	1.3	2.3x	9.2	1.3x	10.5	1.3x
Other	53.5	1.9x	331.5	1.4x	384.9	1.5x
TOTAL	193.0	1.4x	887.8	1.5x	1,080.7	1.4x

Data as at December 31, 2023

Thank you

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