Real Assets Quarterly

June quarter, 2021

frontier

Real assets - Should we fear inflation?

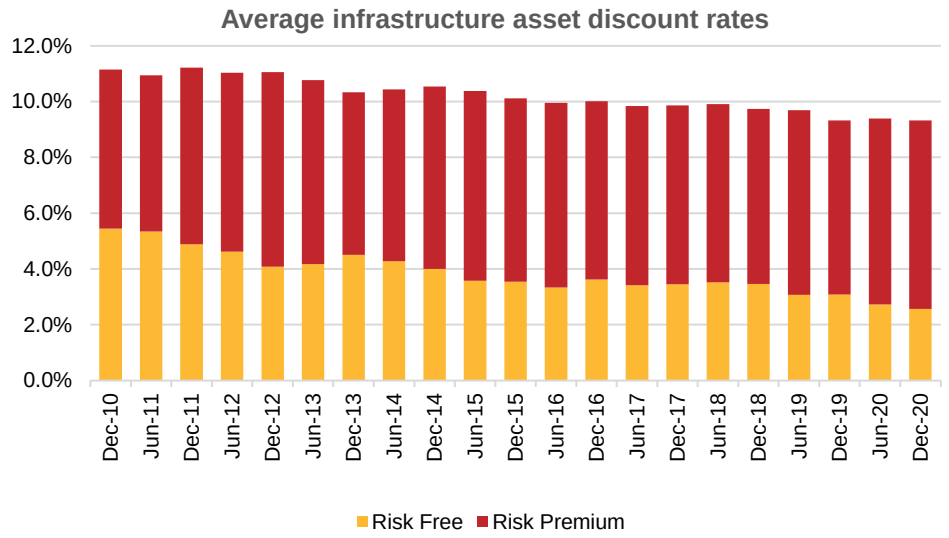
Infrastructure

frontier

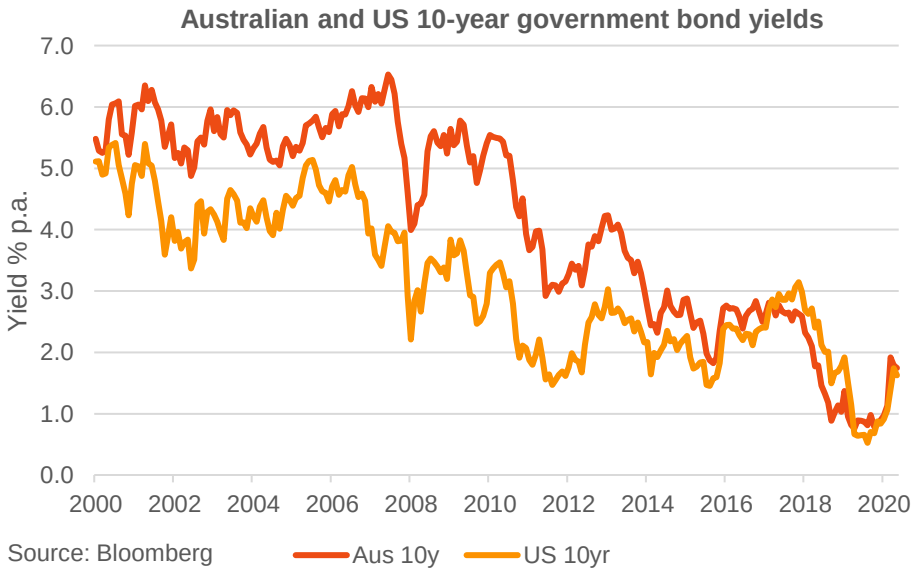
Inflation, interest rates and valuations

With interest rates globally near historic lows and inflation expected to rise as economies recover from the impacts of the COVID-19 pandemic, a key question is what will happen to infrastructure valuations when interest rates rise?

- Infrastructure is one of the longest duration asset classes. Holding all else constant, changing the discount rate has a significant impact on value, suggesting infrastructure assets are highly sensitive to changes in interest rates.
- However, in practice, discount rates and infrastructure valuations are not as sensitive to changes in interest rates as theoretical duration would suggest.
  - Discount rates are built up from a variety of factors and not solely government bond yields. While 10-year government bond yields around the world are below 2%, our RADIAS system shows the average risk-free rate used in valuations is 2.6%. Therefore, as interest rates rise, discount rates are also expected to increase, albeit more slowly since there is some headroom in the assumed risk-free rates to absorb initial increases.
  - Risk premiums are another important component of discount rates. While risk-free rates have been declining over the past 10 years, the average risk premium for core assets was higher in December 2020 compared to December 2010. The average risk premium in RADIAS is broadly in-line with the historical average, and provides a material buffer to offset rising risk-free rates.



Source: RADIAS



Source: Bloomberg

Impact of inflation on infrastructure assets

Different infrastructure sub-sectors react differently to changes in inflation

Inflation sensitivity depends on the regulatory model applicable to the airport

- Under the light-handed dual-till regulation for most Australian airports, aeronautical charges (including inflation expectation) are negotiated between airports and airlines using the building blocks approach. Other regulatory models include RAB regulation, price caps and CPI-X escalation.
- For aeronautical activities, the allowed return is built up and negotiated between the parties. The allowed return is typically set for a period of five to six years (in Australia) and includes an expected rate of inflation.
- For non-aeronautical activities, commercial charges are an outcome of commercial negotiation between airports and tenants. As such, *short-term inflation expectation is dictated by contractual terms while long-term exposure is dictated by bargaining power.*
- Other factors influencing an airport's ability to pass on price increases include passenger mix, FX rates and passenger volumes.

Valuation sensitivity of toll roads depends on the different pass-through scenarios

- *Full inflation pass-through will lead to limited sensitivity (e.g. some Australian toll roads)*.
- *Partial inflation pass-through will lead to increased sensitivity (e.g. some European toll roads)*.
- When there is a price floor, *valuations benefit where inflation is below the floor (e.g. WestConnex sets tolls at greater of CPI and 4% p.a.)*.
- *Concessions with no inflation linkage (e.g. US 'hot lanes') are more sensitive to traffic volumes* and, therefore, economic conditions. Therefore, a high growth and high inflation scenario is positive, while a low growth and high inflation scenario is likely negative.

Regulation for utilities varies in technical function in different countries

- Regulation ensures owners of utility assets earn a fair return on equity, which implicitly factors in changes to interest rates and inflation. In most OECD jurisdictions, utilities have the right to challenge a regulator's determinations (WACC, inflation, capex, debt assumptions, etc.).
- *If the weighted average cost of capital (WACC) is set in nominal terms (as is seen in the US and parts of Europe)*, the regulatory framework ignores the impact of inflation (until the next determination).*This is positive in low inflation environments but is negative in high inflation environments.*
- *If the WACC is set in real terms (e.g. Australia, the UK, and parts of Europe)* the asset base and cost will be adjusted to reflect inflation. The allowed revenue will then be adjusted by actual inflation and the change will be passed through to customers. *This leads to limited inflationary impact.*

Inflation impact on pipeline assets is dependant upon nature of the underpinning commercial agreement

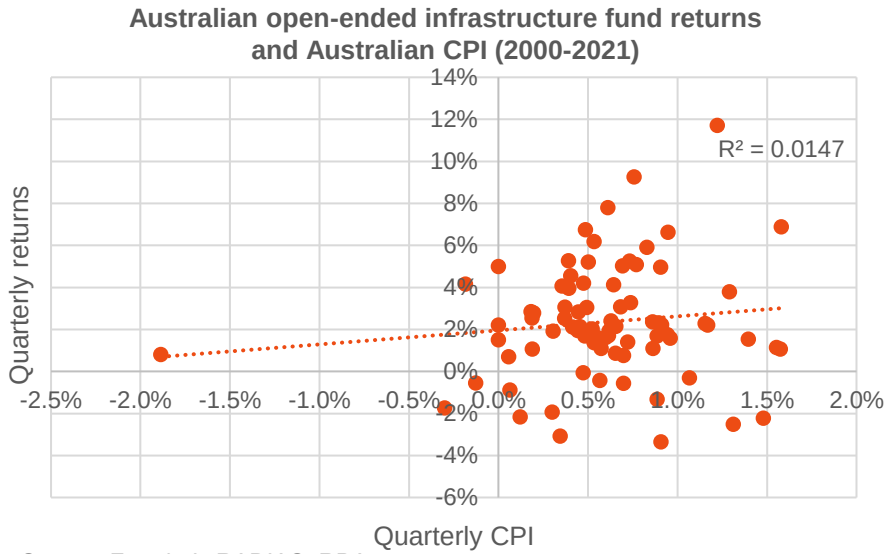
- *Long-haul transmission networks tend to have the highest level of inflation protection as they operate under a cost-of-service methodology*.
- *Midstream assets that work under a fixed-fee, take-or-pay contract are more likely exposed to inflation*, although higher commodity prices can result in higher volumes thus negating the impact of inflation.

Impact of inflation on infrastructure funds

The relationship between infrastructure returns and inflation is weak over the short-term

Historical inflation sensitivity of unlisted infrastructure funds

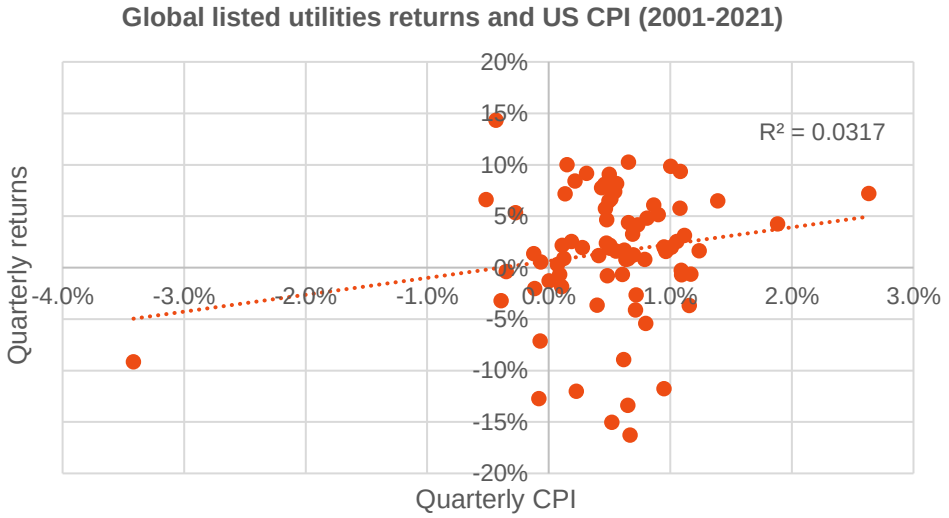
- Looking at the experience in Australia, we can see that there is a positive albeit weak relationship between inflation and fund performance.
  - There is no impact on our findings from lagging return series
- This is likely due to the diversified nature of pooled vehicles, which comprise a broad range of revenue drivers.
- Equally, while a relationship may exist between inflation and revenue over the longer term, there is a lag (up to several years) before this is captured through re-negotiated contracts or regulatory decisions.



Source: Frontier's RADIAS, RBA

Historical inflation sensitivity of listed infrastructure

- Drawing on global listed utilities as an example, we can see that the historical relationship between US inflation and performance has also been weak.
- This may be because the US utilities comprise 50-60% of the global utilities universe, limiting the impact of inflation from any individual country.
- The diverse range of sub-sectors, regulatory regimes and other macro-economic drivers may also be contributing to the weak relationship.
- A similar story emerges when looking at global transportation and telecommunications infrastructure.



Source: MSCI World Infrastructure – Utilities Index, US Bureau of Labor Statistics

Impact of interest rates on the valuation of infrastructure assets

The impact of changes in interest rates on infrastructure valuations is often nuanced and varies from sector to sector and asset to asset

Regulated assets

- Rate of return is determined by the regulator who reviews interest rates and cost of capital as part of its regulatory determination.
- If interest rates rise, in order to facilitate future funding of capital investment, regulators need to increase the allowed return. While such increases do not happen automatically or immediately, there is a framework which allows an update in the cost of capital to reflect changes in interest rates for future regulatory reset periods.
- Different jurisdictions have different methodologies for accounting for changes in interest rates:
  - **Regular reset of prices**: In the UK and Australia, regulators typically conduct a review of the appropriate cost of capital at the time of the reset and use this in the price control determination
  - **Permission to increase rates**: Companies operating in the US or Canada need to apply to the regulator for permission to increase rates. The regulator will assess the cost of capital and utilise this in the price control determination
- In the short term, changes in interest rates will have an impact on valuations of regulated utilities, and the impact will depend on the mechanism and timing by which changes in these variables are reflected in cash flows.
- In the medium to longer term, the underlying valuation of regulated assets is likely to be mostly independent of interest rates, given regulators take changes in interest rates into account and if inflation can be directly or indirectly passed through to customers.

User-pays assets

- User-pays assets have a different return profile compared to regulated assets.
- Typically, these have greater exposure to GDP growth. Cash flows increase if there is a cyclical upswing in growth and/or interest rates, with increasing valuations more than offsetting the impact of a rise in the cost of capital.
- Where long-term cash flows do not respond to changes in interest rates or the cost of capital, then valuations will be negatively impacted by increases in long-term interest rates. The negative impact will be higher the longer the duration of the asset.
- This behaviour depends crucially on whether assets have revenues and charges linked to an inflation index. Under scenarios where growth increases, inflation increases and real rates decline, inflation index-linked assets will demonstrate strong positive returns. Conversely, assets not linked to an inflation index may underperform.

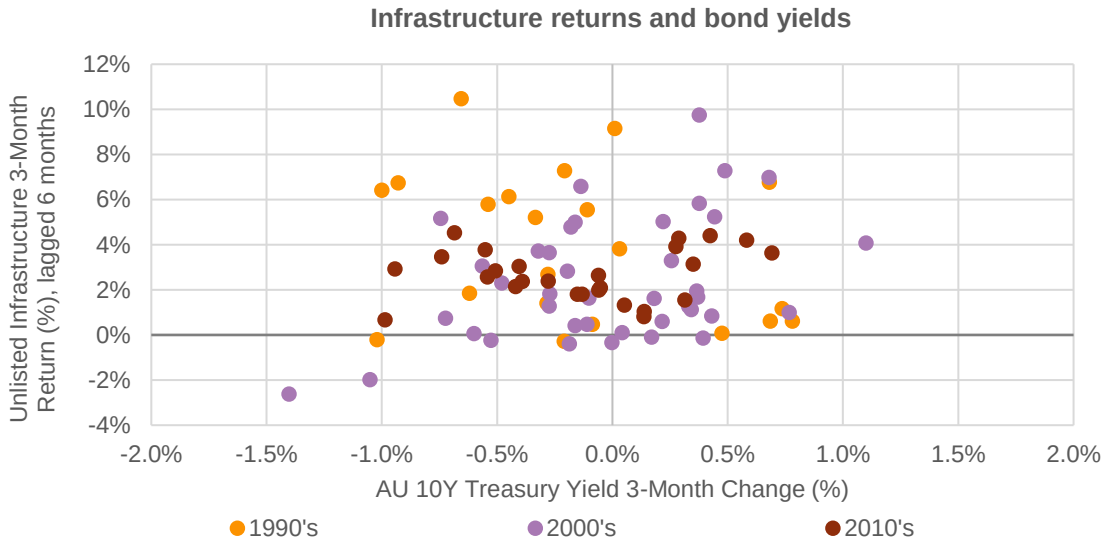
Bond yields and valuations

The historical experience shows a limited relationship

Reviewing the historical experience, the chart below highlights infrastructure performance over different decades (1990s, 2000s and 2010s) and during periods when interest rates were rising.

- **1990s:** The Australian 10-year government bond yield rose noticeably twice – increasing 4.1% over nine months in 1994 and 2.2% over 13 months starting in 1998. However, on average, no negative infrastructure performance was observed
- **2000s:** The Australian 10-year government bond yield rose noticeably only once – increasing 2.2% over 16 months starting in 2008. Again, despite some negative performance during the global financial crisis, infrastructure overall continued to perform strongly
- **2010s:** The Australian 10-year government bond yield increased 0.8% over five months in 2016. Once more, no negative performance in infrastructure was observed

More recently, infrastructure valuations were materially impacted by the COVID-19 pandemic in early 2020, around the same time that global bond yields declined sharply. Bond yields began to rise in mid-late 2020 as the global economic outlook improved, however, unlisted infrastructure asset valuations also began to recover.



Source: RADIAS, Bloomberg

Summary

Inflation, rates and infrastructure

Infrastructure is often able to capture rising inflation, although the method and timeframe in which this occurs differs materially across assets.

- Geography, sector, regulation and the level of competition all influence the ability of infrastructure to capture rising inflation

We find that the statistical relationship between inflation and short-term infrastructure returns is unclear.

Similarly, the short-term relationship between unlisted infrastructure and bond yields is relatively weak.

This may be due to the conservative approach adopted for long-life assets by asset owners and independent valuers, which are typically slow to adjust discount rates for changes in risk free rates.

So what does this mean for investors?

While infrastructure inherently provides a hedge against inflation in the long-term, some subsectors provide greater direct protection than others.

Infrastructure continues to provide a reasonable risk premium relative to historic averages which should provide a buffer if real interest rates begin to rise.

We continue to advocate to investors to construct diversified (sectors, geography, risk, assets, revenue type) infrastructure portfolios to hedge against inflation and interest rates.

Real assets - Should we fear inflation?

Property

frontier

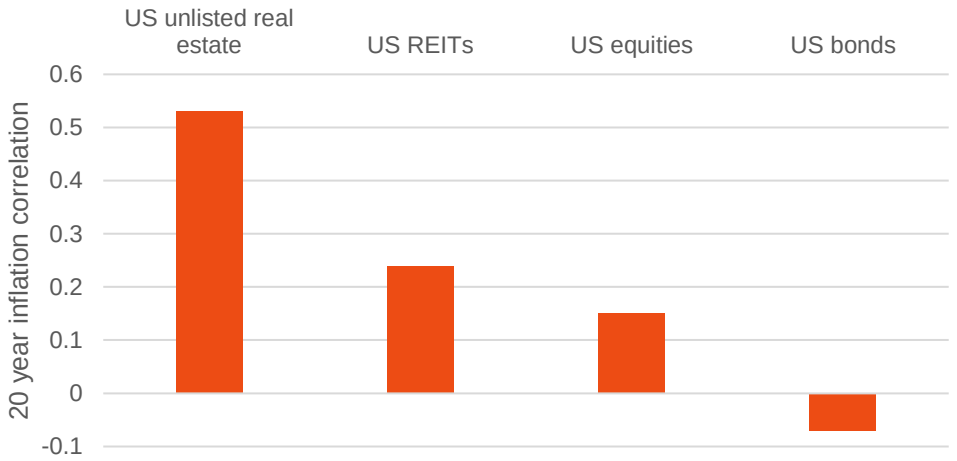
Property and inflation

Can property provide an inflation hedge?

Property has traditionally been viewed as an inflationary hedge.

- This view is supported by the sector's relationship to input costs (i.e. replacement cost) and also the nature of leases within some sectors/geographies which provide inbuilt inflation protection.
- The chart on the right clearly demonstrates this relationship over the longer-term, with real estate providing a much stronger hedge than other sectors.
- Over the shorter-term, a relationship between inflation and real estate performance exists, but it is not strong.

Inflation correlation by asset class (2000 to 2020)

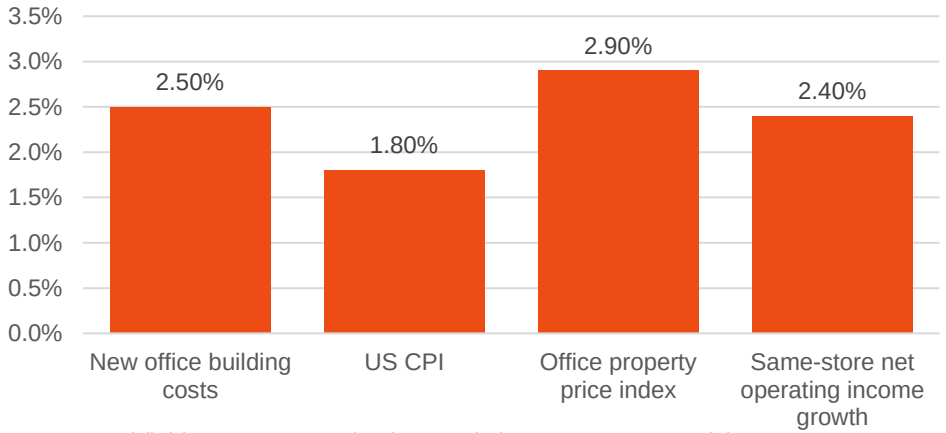


Source: DWS, NCREIF Property Index, FTSE/NAREIT All Equity REIT TR Index, S&P 500 TR Index, Bloomberg Barclays US Aggregate Bond TR Index, US Bureau of Statistics

Over the long-term, real estate values are linked to replacement costs.

- If a developer can construct a new building for less than the value of an existing asset, it will choose to do so to seek a profit.
- As replacement costs (namely labour, materials and land) are a function of inflation, real estate values and inflation are, therefore, correlated.
- In the shorter term, real estate leases can also be tied to inflation (e.g. CPI +), while fixed rent escalation can also provide a buffer.

Inflation and office fundamentals (p.a. 2007 to 2020)



Source: Brookfield, U.S. Bureau of Labor Statistics; Green Street Advisors.

Impact of inflation on property leases

Different property sub-sectors react differently to changes in inflation

Global real estate lease structures

Sector	Inflation linked	Regular re-pricing	Fixed rental escalation
US Multifamily			
US Data Centre			
US Healthcare			
US Hotels			
US Industrial			
US Office			
US Retail			
US Self Storage			
Europe Industrial			
Europe Office			
Europe Residential			
Europe Retail			
UK Diversified			
Australia Office			
Australia Retail			
Australia Industrial			

Red = not often observed

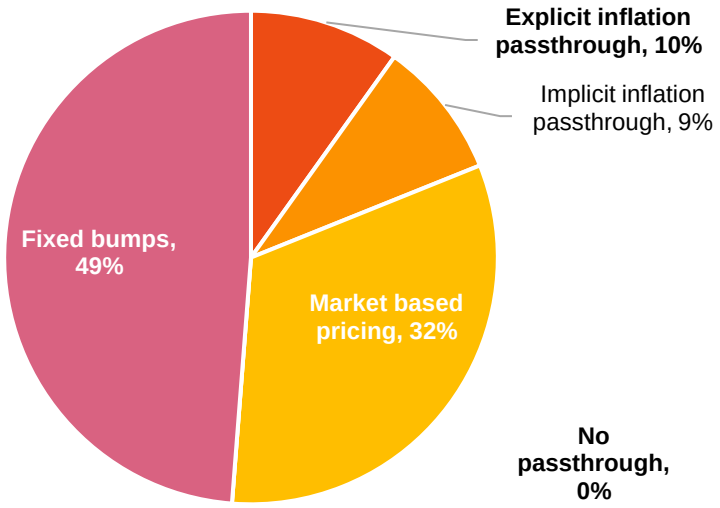
Yellow = sometimes observed

Green = typically observed

Note: colour spectrum used.

Source: Frontier, DWS

Global REIT inflation hedging



Source: DWS

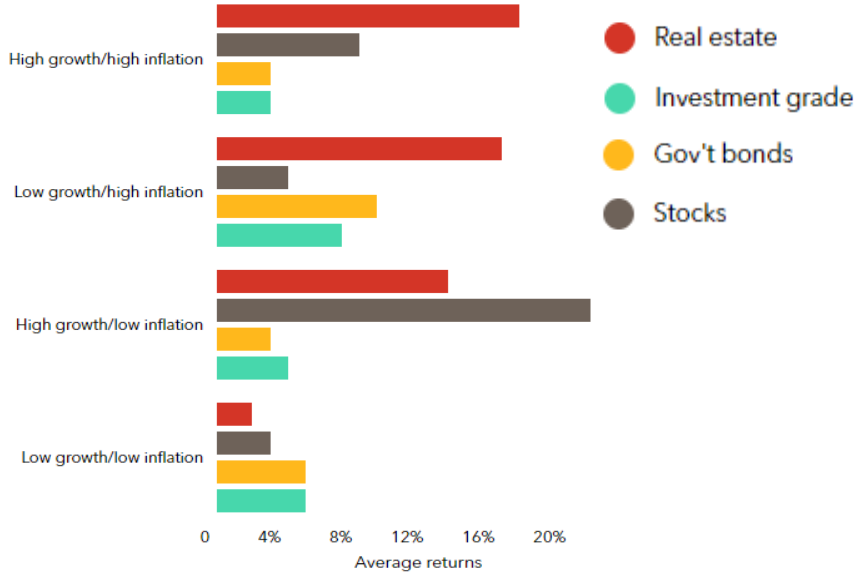
Real estate inflation protection

- The level of direct inflation protection built into leases (e.g. CPI + x% rental escalation) or implicit inflation protection (e.g. regular rental resets or fixed increases) varies based on sector and geography.
- In Australia, some industrial leases are struck on CPI+ terms, while leases in high quality retail and office buildings typically contain fixed annual rental increases meaningfully above recent historical inflation (e.g. 3-4% p.a.) providing a level of built-in protection.
- In the European market, inflation-linked rents are common, providing upside for landlords should inflation accelerate.
- Inflation-linked terms are not common in the US, however, sectors with relatively short lease tenors (e.g. multifamily, hotels) can capture an increase in inflation through regular rental resets.
- Long lease sectors (e.g. life sciences, medical office) typically provide defensive characteristics and usually capture 1-3% p.a. fixed rental increases, although these sectors may underperform should high rates of inflation sustain.

Property performance in various inflationary environments

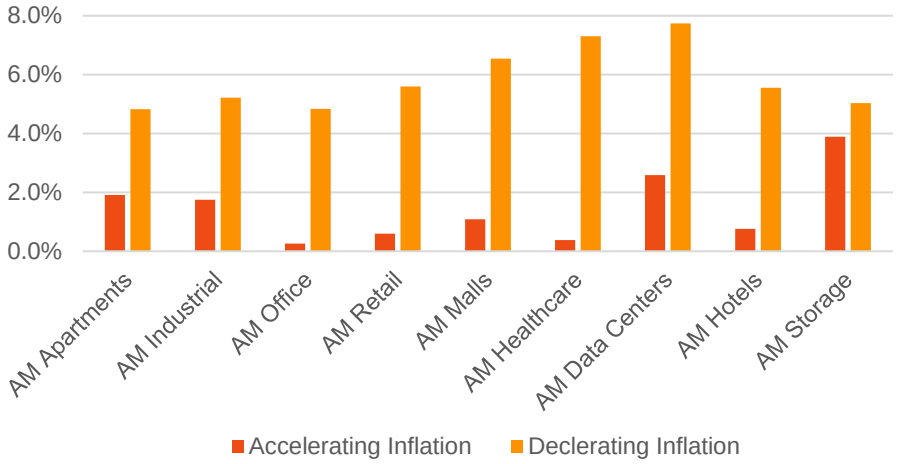
Not all economic environments are equal

US real estate performance in various economic scenarios



Source: BlackRock Investment Institute

US REIT performance in accelerating/deceleration inflation (YoY)



Source: DWS

- Consideration of the broader macro economic environment is important when assessing performance.
- Historically, periods of above average growth and above average inflation resulted in strong outcomes for US property investors.
  - Intuitively this was possible since landlords captured the benefits of increasing economic activity through increased tenant space requirements (e.g. increased occupancy), and higher market rents (thus capturing the impact of rising inflation)
- In contrast, periods of low growth and inflation have been less positive for US property.
  - Separately, Japan has demonstrated that markets with robust property fundamentals and cheap debt can provide attractive returns in such environments.
- The rate of change in inflation is also an important consideration, with periods of decelerating inflation typically resulting in stronger returns for REITs.
  - This may be driven by market expectations that interest rates and bond yields will rise when inflation is increasing

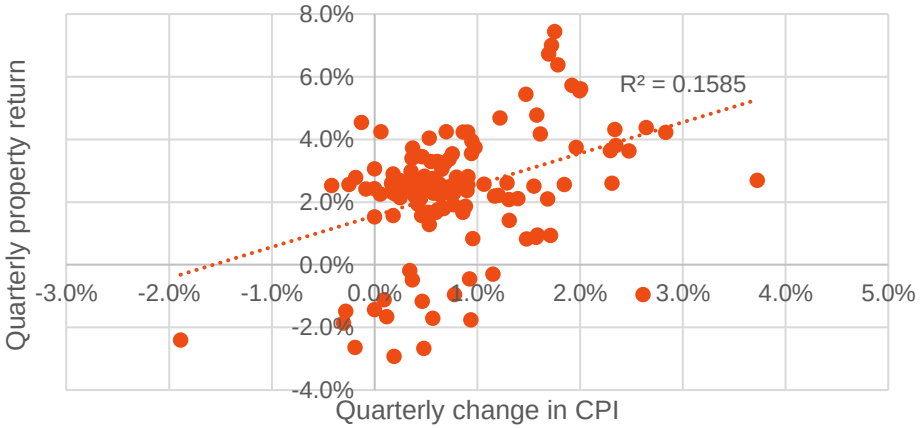
Statistical relationship between property and inflation in Australia

While a relationship between inflation and property exists, other factors should also be considered

While the theory supporting the relationship between inflation and property values is clear, the statistical relationship between the two is less so

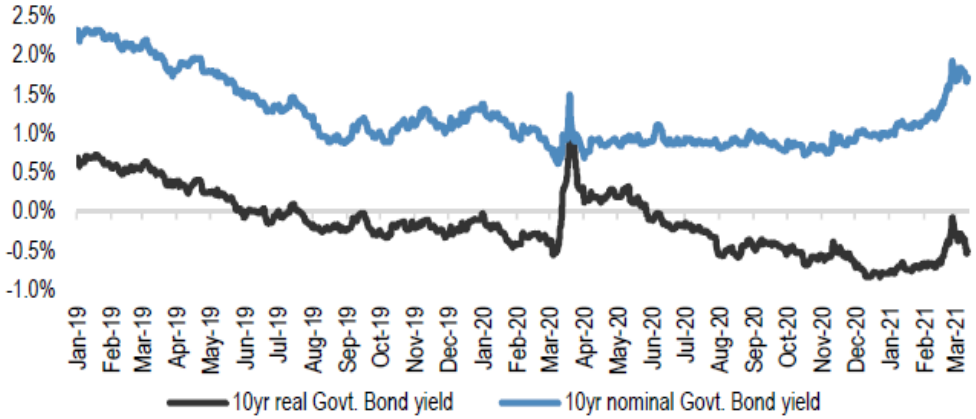
- Looking at the chart to the right, we observe a positive (albeit relatively weak) relationship between Australian consumer price inflation and quarterly property performance ($r^2 = 0.16$), noting that this is a relatively short time period.
- A similar (weak) relationship between Australian REITs and breakeven inflation is also observed ($r^2 = 0.18$), suggesting that other factors may be more correlated with property performance.
- In the chart below, when comparing performance to the *real* bond yield (nominal bond yields minus 10-year breakeven inflation), there is a much stronger inverse relationship ($r^2 = 0.53$).
- This suggests that investors should not look at either inflation or bond yields in isolation.

Australian unlisted property performance vs CPI (1985 to 2021, quarterly)



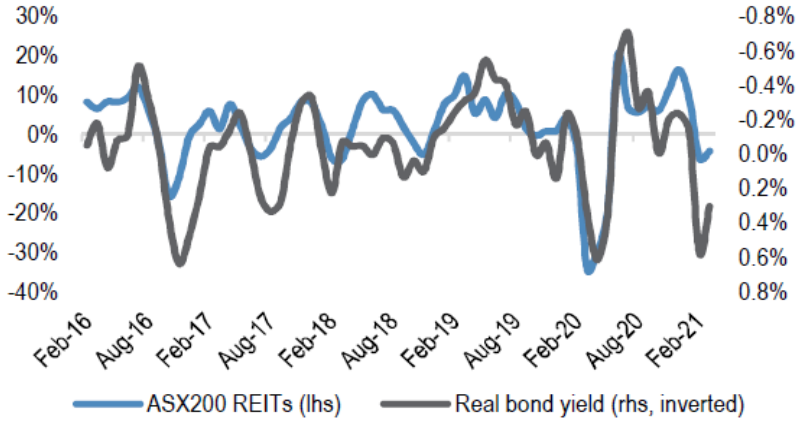
Source: Frontier, PCA/IPD All Property Index, RBA

Australian real bond yields vs nominal bond yields



Source: JP Morgan

A-REIT performance vs change in 10 year real bond yield (quarterly)



Source: JP Morgan

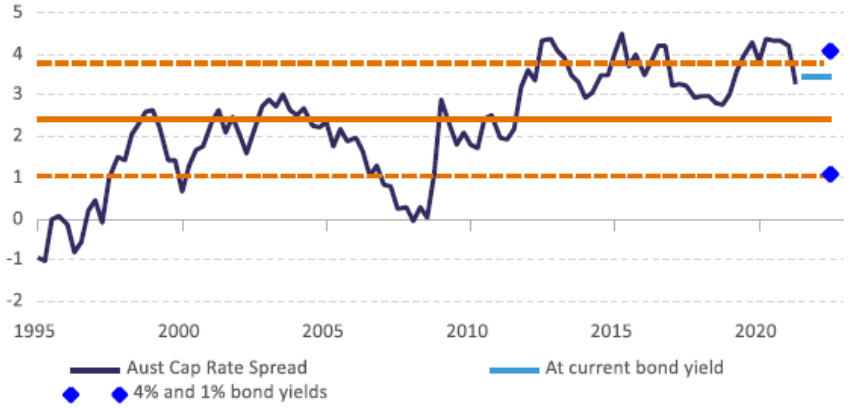
Property valuations

The property sector continues to look attractive relative to bonds

Property remains reasonably priced relative to bonds

- Australian unlisted property continues to trade well above the historic average spread to government bond yields.
- This suggests that the sector should provide compelling value relative to government bonds, even if bond yields begin to normalise.

Australian unlisted property market yield spread to nominal bond yields

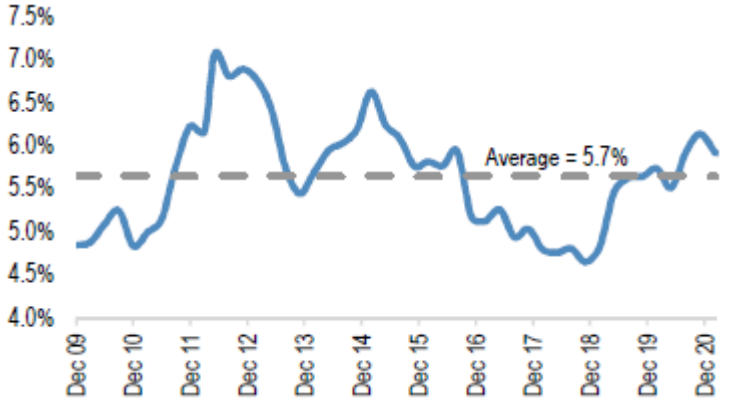


Source: Frontier, MSCI, Bloomberg

Despite a strong rebound in REIT prices, the listed sector remains reasonably priced

- In line with the broader listed equities market, REITs experienced significant volatility over 2020.
- Despite the rebound in listed valuations, the sector continues to provide an attractive yield relative to government bonds.
- If inflation increases and central banks continue to anchor bond yields, the sector could look increasingly appealing when considering real yields.

Australian REIT prime property market yield spread to real bond yield



Source: JP Morgan, Bloomberg

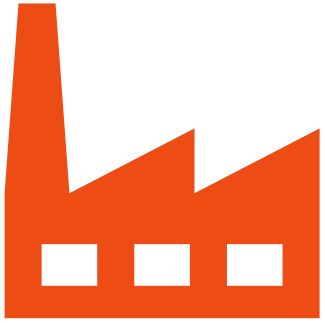
Summary

Inflation, rates and real estate

- Property's ability to capture rising inflation is achieved through the relationship between property values and replacement costs in the long-term, while inbuilt inflation protection in leases and diversified tenant bases provide inflation protection over the short to medium-term.
- Our analysis suggests that inflation is not the sole driver of property performance, with the broader macro environment also contributing meaningfully.
- Specific sector and market fundamentals are also important considerations, since various sub-sectors and geographies perform differently at a given time.

So what does this mean for investors?

- For investors concerned about the risks of rising inflation, real estate can provide an effective hedge.
- Given its ability to capture rising inflation, investors should focus on real bond yields.
- Portfolio diversification can help overcome the challenge relating to uncertain economic conditions and the resulting differential in future sub-sector returns.



Property performance

Performance to 31 March 2021

frontier

Property performance

Performance to 31 March 2021

	1 year return			Total returns						Index composition		
	Income	Capital	Total	3 years % p.a.	5 years % p.a.	10 years % p.a.	15 years % p.a.	20 years % p.a.	25 years % p.a.	Assets	Value A$m	%
All Australian property	**4.6**	**-2.8**	**1.7**	**5.6**	**7.9**	**9.3**	**8.9**	**9.8**	**9.9**	**1,321**	**185,396**	**100**
Retail	4.2	-10.1	-6.3	-1.3	3.0	6.4	7.0	8.9	9.2	351	60,911	33
Office	4.8	-0.1	4.8	9.6	11.0	10.8	10.0	9.9	9.9	323	89,855	48
Industrial	5.4	9.0	14.9	13.6	12.4	12.3	10.2	11.0	11.5	420	23,565	13
Others	4.4	3.3	7.8	8.3	11.4	12.4	11.7	-	-	231	11,496	6
Retail - Australia												
Super regional and major regional	3.7	-12.1	-8.9	-2.6	2.1	5.3	6.5	8.6	8.8	64	33,522	18
Regional	5.1	-9.8	-5.1	-2.1	2.0	6.1	7.0	8.7	8.9	26	5,218	3
Sub regional	5.7	-7.1	-1.8	-0.1	3.6	7.3	7.1	9.4	9.7	69	8,318	4
Neighbourhood	5.3	-2.1	3.1	1.9	5.1	8.3	7.5	9.4	10.2	64	2,979	2
Other	3.6	-8.9	-5.7	1.1	4.9	8.2	8.7	-	-	127	10,710	6
Office - Australia												
Premium grade CBD	4.9	-1.3	3.6	8.9	9.7	10.5	9.9	9.8	9.8	60	30,050	16
Grade A CBD	4.6	0.0	4.7	9.7	11.4	10.8	10.0	9.8	9.6	114	38,447	21
Grade B CBD	5.0	0.3	5.3	9.6	13.6	11.8	10.6	10.9	10.5	22	2,122	1
Non CBD	5.2	2.7	8.0	10.9	11.7	11.4	10.0	10.0	10.6	110	14,862	8
Industrial - Australia												
Warehouse	5.3	9.5	15.2	13.5	12.4	13.4	11.2	11.6	11.8	170	7,216	4
Distribution	5.6	9.2	15.3	13.6	12.3	12.1	10.6	11.5	11.4	136	9,516	5
Industrial estate	5.6	8.3	14.4	13.7	12.8	11.8	9.2	10.3	11.5	28	2,272	1
International unlisted												
IPD UK All Property	5.8	-2.8	2.8	2.9	4.6	7.4	4.7	6.9	5.9	N.A.	N.A.	N.A.
IPD Europe Ex-UK	1.7	3.6	5.4	7.8	8.2	7.1	6.6	6.7	N.A.	N.A.	N.A.	N.A.
NCREIF US Property Index	N.A.	N.A.	2.6	4.9	5.8	8.8	7.0	8.2	9.1	N.A.	N.A.	N.A.
REITs												
S&P/ASX 300 AREIT	N.A.	N.A.	45.4	7.9	6.0	10.8	3.6	6.7	7.9	N.A.	N.A.	N.A.
FTSE EPRA GREIT $A (H)	N.A.	N.A.	29.7	4.4	3.6	7.7	4.4	N.A.	N.A.	N.A.	N.A.	N.A.

Source: Bloomberg, NCREIF, MSCI, Frontier

Note: AU, US and UK data to 31 March 2021, EU data to 31 December 2020

Transactions

Key property transactions

frontier

Recent property transactions

Key office transactions

Recent major transactions (Q4 2020 and Q1 2021)

Date	Asset	Location	Buyer	Seller	Grade/type	Lettable area	Price	Cap rate
Office sector								
Mar-21	1 Bligh Street (33.3% stake)	Sydney NSW	Mercatus (90%), Dexus (10%)	Cbus Property	Premium	43,000 sq. m.	A$375 m	4.38%
Mar-21	310 Ann Street	Brisbane QLD	AsheMorgan	Pidgeon, Cornerstone	A-grade	18,360 sq. m.	A$210 m	5.50% initial yield
Feb-21	Chevron HQ (25% stake)	Perth WA	GIC	Brookfield	Premium	55,000 sq. m.	A$220 m	-
Jan-21	39 Martin Place	Sydney NSW	Investa, Manulife	Macquarie	Premium	30,000 sq. m. (and 2,000 sq. m. retail)	A$800 m	4.62%
1Q21	MQX4	Macquarie Park NSW	Ascendas REIT	Fraser, Winten	-	17,750 sq. m (and 1,600 sq. m. retail)	A$167 m	-
1Q21	Macquarie Park Corporate Centre	Macquarie Park NSW	AEW	Goodman	A-grade	15,000 sq. m.	A$144 m	-
Dec-20	1 Farrer Place (25% stake)	Sydney NSW	Lendlease	GPT	Premium	55,000 sq. m.	A$585 m	4.46%
Dec-20	1-5 Thomas Holt Drive	Macquarie Park NSW	Ascendas REIT	AMP Capital	A-grade	39,000 sq. m.	A$289 m	5.90%
Dec-20	505 Little Collins Street	Melbourne VIC	AEW	Credit Suisse	B-grade	18,000 sq. m.	A$154 m	5.47%
Dec-20	400 George Street (25% stake)	Sydney NSW	M&G	Investa	A-grade	51,000 sq. m.	A$300 m	4.90%

Sources: Cushman & Wakefield, CBRE, Colliers, JLL, J.P. Morgan, Lendlease, Savills.

Recent property transactions

Key office transactions

Recent key transactions (Q4 2020 and Q1 2021)

Date	Asset	Location	Buyer	Seller	Grade/type	Lettable area	Price	Cap rate
Office sector (continued)								
Dec-20	600 Collins Street	Melbourne VIC	Hines	Landream	Premium (development)	-	A$200 m	-
Dec-20	53 Berry Street	North Sydney NSW	Domestic private investor (Paul Lederer)	-	A-grade	-	A$54 m	5.15%
Nov-20	60 Miller Street	North Sydney NSW	Huge Linkage	Dexus	A-grade	14,640 sq. m.	A$275 m	5.30%
Nov-20	Grosvenor Place (50% stake)	Sydney NSW	CIC	Dexus, CPPIB	Premium	90,000 sq. m.	A$925m	4.75-5.00%
Nov-20	190 St Georges Terrace	Perth WA	Fiveight	Credit Suisse	A-grade	9,270 sq. m.	A$51 m	7.29%
Oct-20	101 Miller Street	North Sydney NSW	Mirvac	Nuveen	Premium	37,500 sq. m.	A$450-475 m	4.80% (office), 5.30% (retail)

Sources: Cushman & Wakefield, CBRE, Colliers, JLL, J.P. Morgan, Lendlease, Savills.

Recent property transactions

Key retail and industrial transactions

Recent key transactions (Q4 2020 and Q1 2021)

Date	Asset	Location	Buyer	Seller	Grade/type	Lettable area	Price	Cap rate
Retail sector								
Mar-21	Rundle Place	Adelaide SA	Irongate, Fortius	Blackstone	CBD retail	23,000 sq. m.	A$210 m	5.50%
Mar-21	Forestway Shopping Centre	Frenchs Forest NSW	Revelop	Invesco	Suburban retail	9,600 sq. m.	A$100 m	5.37%
Jan-21	The Pines Shopping Centre	Doncaster East VIC	JY Group, Haben Property	Stockland	Suburban retail	25,000 sq. m.	A$153 m	-
Nov-20	David Jones Elizabeth Street	Sydney NSW	Charter Hall	David Jones, Woolworths	CBD retail	-	A$510 m	5.00%
Industrial sector								
Mar-21	Moorebank Logistics	Moorebank NSW	LOGOS	Qube	Industrial	850,000 sq. m	A$1.65 b (NB: conditional, non-binding)	4.1% initial yield
Feb-21	917 Boundary Road	Tarneit VIC	GPT, QuadReal	Frasers	Industrial	-	A$137 m	-
Feb-21	278 Orchard Road	Richlands QLD	Dexus	Australian Unity	Industrial	18,000 sq. m.	A$85 m	-
Nov-20	ALDI Distribution Portfolio	Brisbane QLD, Melbourne VIC	Charter Hall, Allianz	ALDI	Industrial	-	A$282 m	4.75%

Sources: Cushman & Wakefield, CBRE, Colliers, JLL, J.P. Morgan, Lendlease, Savills.

Transactions

Key infrastructure transactions

frontier

Notable infrastructure transactions

Q1 2021

Region	Transaction	Sector	Vendors	Equity providers	AUD ($m)	Description
Asia and Middle East	Greenko Energy Holdings (21.8%)	Renewables	Greenko Group	Orix Corporation	1,253	Major renewable energy operator with an existing capacity of 4.4GW in solar; wind, and hydroelectric power generation in India
	Indonesia Multifunctional Satellite PPP	Telecommunications	Indonesian Government	Pintar Nusantara Sejahtera; Pasifik Satelit Nusantara; Nusantara Satelit Sejahtera; PT Dian Semestra Sentosa	704	Development of Satellite through PPP method in Indonesia
	Sendai 112MW Biomass Plant	Renewables	Tohoku Electric Power	Sumitomo Corporation	1,067	Development of 112MW biomass-fired power generating plant in Sendai city, Japan
	Syrdarya 1.5GW CCGT PPP	Power	Minister of Energy of Uzbekistan	ACWA Power	1,294	Procurement of combined cycle gas turbine plant PPP
Australasia	Footscray Hospital Redevelopment PPP	Social Infrastructure	Victorian Government	Honeywell International; Compass Group; Brookfield Multiplex; Sojitz Corporation; Plenary	1,771	Development of new Footscray hospital in Melbourne
	John Laing Wind Portfolio	Renewables	John Laing	First Sentier Investors	285	John Laing's wind assets in Australia
	Queensland Curtis LNG (26.25%)	Energy	Shell	Global Infrastructure Partners	3,280	LNG associated assets in Queensland
Europe	Applegreen Take-Private	Transport		Blackstone Infrastructure Partners LP; Robert Etchingham; Joseph Barrett	2,005	Take-private of 566 service station in Ireland, the UK and US
	Calisen Group (72.8%)	Power	KKR Infrastructure	WSIP III; GEPIF III; West Street Global Infrastructure Partners III; West Street European Infrastructure Partners III; Broad Street Credit; GLQ; Ninteenth Investment	2,586	Sale of Calisen with 12 million smart meters across the UK
	Caruna (40%)	Power	First State European Diversified Infrastructure Fund I (EDIF I)	OTPP; KKR Diversified Core Infrastructure Fund (DCIF)	1,275	Regulated Finnish electricity distributor at 68% premium to book value
	Courseulles-sur-mer 448MW Offshore Wind	Renewables	French Ministry of Environment	Enbridge; EDF Renewables; WPD	3,687	Development of 448MW of offshore wind farm in France
	Fiberklaar Fibre Project	Telecommunications		EQT Infrastructure Fund V; Proximus; Eurofiber	1,036	MoU to roll out fibre networks across Glanders and Wallonia in Belgium

Source: Inframation

Notable infrastructure transactions

Q1 2021

Region	Transaction	Sector	Vendors	Equity providers	AUD ($m)	Description
Europe	Hornsea One Offshore Wind Transmission Lines	Power	OFGEM	Mitsubishi Corporation; Chubu Electric Power	2,152	Acquisition, operation and maintenance of the transmission link to Hornsea 1 offshore wind farm in the North Sea
	Milano Serravalle-Milano Tangenziali (82%)	Transport	Lombardy Region	Ferrovie Nord Milano	813	Toll road concessionaire in Italy
	Molslinjen Ferry Operator Sale	Transport	Plaris Infrastructure	Sampension; EQT Infrastructure V	1,544	Ferry operator Molslinjen in Denmark
	Nevel Sale	Energy	Vapo Oy	Ardian Infrastructure Fund V (AIF V)	1,037	District heating networks in Finland
	SSE EfW Portfolio (50%)	Renewables	Scottish and Southern Energy	First State European Diversified; Infrastructure Fund III (EDIF III)	1,738	Energy from Waste assets in Scotland
	T-Solar Platform (100%)	Renewables	I Squared Capital	IFM Global Infrastructure Fund	2,313	Spanish renewable energy with 300MW of operational PV assets and 1.1GW of projects
	Telecom Italia	Telecommunications	Telecom Italia	KKR	2,778	Selection of KKR Infrastructure as exclusive partner to develop ultra-broadband business
	Torghatten Ferry and Bus Services Company Sale	Transport	Torghatten ASA	Nysno Climate Investment; EQT Infrastructure Fund V	1,274	Acquisition of Norwegian ferry operator.
	Wheelabrator UK	Renewables	Macquarie Infrastructure Partners IV (MIP IV)	First State European Diversified Infrastructure Fund III (EDIF III)	2,930	Sale of four operational and under-construction UK energy-from-waste plants
North America	Cryo-Trans Acquisition	Transport	Cryo-Trans	Lineage Logistics	647	Acquisition of Cryo-Trans, the owner of North America's largest provider of refrigerated and insulated railcars
	Mountaineer Gas Company Sale	Energy	iCON Infrastructure	UGI Corporation	682	Natural gas distribution company serving West Virginia, USA
	New St Paul's Hospital P3	Social Infrastructure	Canadian Government	Henningson, Durham & Richardson (HDR); PCL Construction; Stantec	2,264	PPP to re-develop St. Paul's Hospital in downtown Vancouver, British Columbia
	Signature Aviation Sale	Transport	Signature Aviation	Blackstone Infrastructure Partners LP; Global Infrastructure Partners IV (GIP IV); Cascade Investment	7,330	Global private jet services firm
	Terra-Gen 10% Stake Sale	Renewables	Energy Capital Partners	First Sentier Investors (First State); Energy Capital Partners III Continuation Fund		Renewables platform

Source: Inframation

Frontier Advisors Pty Ltd

ABN: 21 074 287 AFS Licence: 241266

Level 17, 130 Lonsdale Street

Melbourne, Victoria 3000

Tel: +61 3 8648 4300

frontieradvisors.com.au

@frontier_adv