Introduction

Costco and Brexit – what a month! The second point you'll understand, the first however will likely seem strange. See article 1 and all will be explained. On Brexit we won't try and repeat the reams of analysis that has been circulated before and after last week's historic vote. In short, our view is that Europe (including the UK) will face a significant overhang of uncertainty over the next couple of years, with the more significant challenges relating to the sustainability of the Euro currency area, rather than the intricacies of the UK exit from the EU and the negotiation of new trade/immigration arrangements.

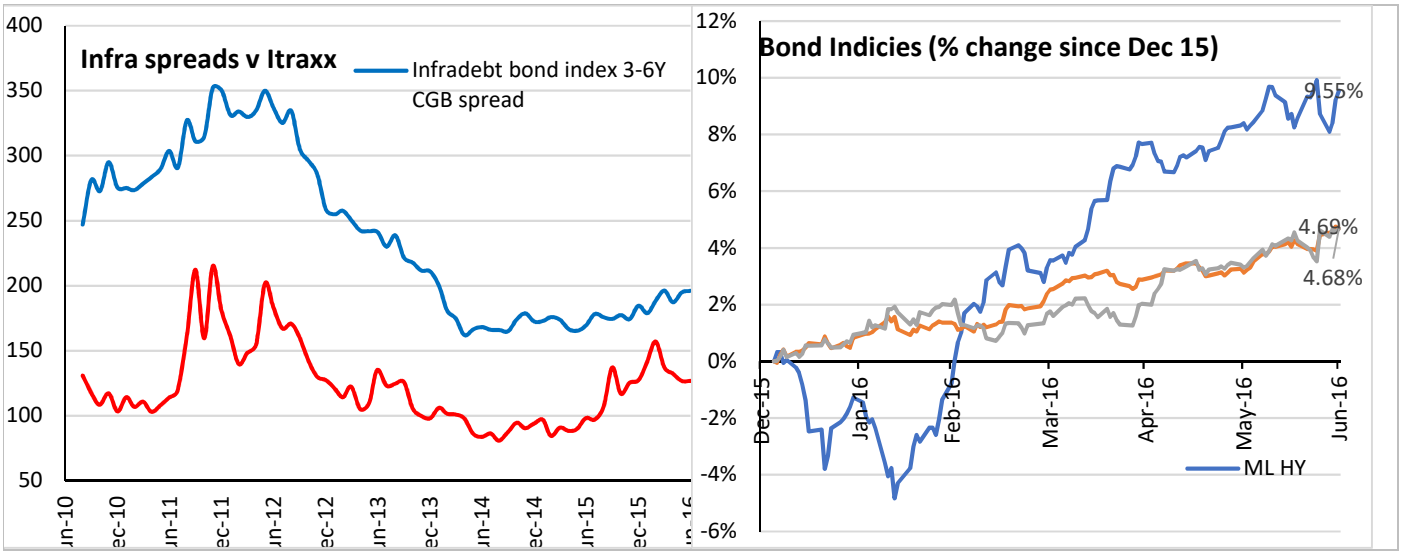
It's been a challenging year for funds with returns well down on prior years, that said the continued fall in base rates will have helped the performance of each funds' infrastructure positions.

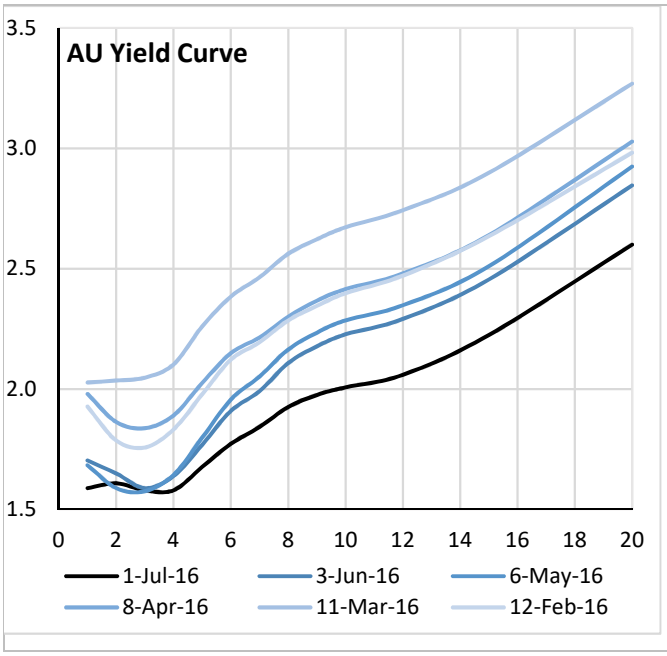
As we're presently running a winter series, which has a broader fixed income narrative, we've kept this quarter's articles specific to infrastructure debt– one piece looks at the underlying credit quality of infrastructure projects from a debt perspective, the second considers the impact of low base rates on infrastructure equity positions. The only exception to the infrastructure theme is the first short article relating to Costco (the wholesale supermarket chain) which we thought was fascinating and not reported in more mainstream publications.

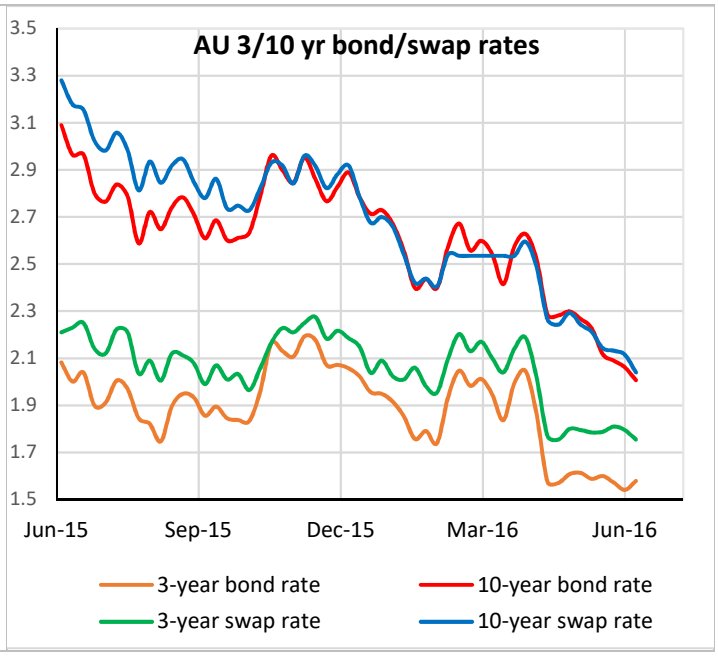
Markets update

High Yield has come roaring back since the market downturn earlier in the year. The general theme across markets with respect to bond rates of 'lower for longer' has continued this quarter. The volume of negative yielding bonds across the world continues to expand, and this trend with rates is causing some stress with banks, particularly in Europe.

With respect to Australian infrastructure, generally we're seeing increased credit spreads with most issuance pricing wider than Q2-Q4 last year. The most significant driver of the widening is the cost of bank funding – which has increased significantly compared to last year. Whilst spreads have been wider, there has been a slight shift in issuance this year with less activity by Australian projects in the USPP market (as this market has been somewhat disrupted by the volatility in US high yield).







New issuance and refinancing

The table below provides a list of publicly available deals.

Date	Borrower	Instrument	Size (m)	Term (Yrs)	Curr.	Pricing
April	Sydney Airport	Bond	900	10	AUD	200 bps
April	United Energy	Loan	150/305	2/4	AUD	
May	Canberra Metro	Loan	650	5	AUD	185bps
May	Port of Brisbane	Bond	250	7	AUD	180bps
May	SA Power Networks	USPP	85/15/210 /210	10/10/12 /15	USD	130/128/140/155
May	NT Airports	Loan	146/181/10 0	3/5/7	AUD	
May	Transurban	Loan	460	5/9/12/1 5	AUD	
May	Transurban	Bond	750	7	EUR	
June	NT Airports	USPP	150	10/12	USD	
June	Multinet Gas	Loan	185	3/5	AUD	
June	Transgrid	USPP	Up to $1bn	10/12	USD	~150

Equity and other news

- Duet completed a A$200m capital raising ahead of acquiring the remaining 20% stake in Dampier Bunbury Pipeline from Alcoa for A$205m.

- Origin reported a 15-year power purchase agreement for 100% of output from Fotowatio Renewable Ventures' Moree solar farm.
- Transurban has reached an agreement with the Victorian government on the Western Distributor project, with the planning process to conclude in 2017. The majority of capex will take place once work starts in FY18. The Victorian government will provide full funding for the project in their budget.
- APA Group increased their ownership of EPX ethane pipeline to above 50%.
- One of Brexit's Australian victims was Aurizon. They had to pull their EU500m 10-year bond (pricing was estimated at MS +265bps).
- Spark Infrastructure has sold their 5.6% Duet Group stake. The proceeds will be used to accelerate the repayment of debt.
- Westlink Motorway Group is considering a bond deal, and will meet with debt investors from June 14. Moody's has rated their bond program a provisional rating of A3 with stable outlook.

WTF? – A private placement at negative interest rates?

The end of the financial year draws near and no doubt everyone will be reviewing their results. But do you ever stop and look further back at where you've been, and where you have come from? No doubt you do, it's natural, and as investors I'm sure you do this regularly. But I sometimes wonder whether our central bankers do?

If I had said to you in June of 2006, that in June 2016 the Australian 10 year bond rate would be ~2.0%, and that the cash rate would be 1.75% you'd say I was crazy. If I also said, that despite these record low levels, Australia would enjoy one of the highest levels of economic growth in the OECD over the same period, and continues to outperform many of its peers - you'd have me committed.

Why I am I raising this point? Last week a seminal moment occurred in this great global monetary experiment of the last 10 years. In capital markets terms it was a very small transaction (AUD 121m), but we do stop and question its meaning. CostCo Japan issued a 5 year bullet loan in the US private placement (USPP) market at a yield of **minus 10bp** (yes, that figure is correct).

We have of course heard of a number of large corporates issuing bonds in public markets at near zero yields (e.g. Toyota), and of course then there are the 60% of the world's sovereign bonds trading with negative yields. If you trade in these securities, I think I understand why you hold them – you're just waiting for the next central bank buying spree to capture the capital gain. That is, investors aren't buying negative yielding bonds on a 'buy and hold' basis – they are buying them to speculate.

But secondary trades in the US Private Placement market occur infrequently. Its participants are typically large pension funds and insurers who participate on a buy and hold to maturity basis – they are asset liability matching investors. Sure, positions trade, but it's irregular. Why would anyone invest in this illiquid negative yielding instrument? Perhaps the cross-currency basis makes the opportunity attractive for the end investor. But more importantly – it shows that as a corporate in Japan you can be paid to borrow!

To us it begs the question as to where this (the monetary experiment) is all going, but more importantly, how does it unwind? The implications are significant for all long-term investors as well as all investors in long-duration assets.

What's different about infrastructure debt – ratings agency studies?

This article looks at ratings agency analysis of the credit characteristics of infrastructure assets compared with generic corporate credit. These studies show that across a large sample of loans/bonds – infrastructure credits have shown lower volatility, lower defaults, and higher recoveries.

Infrastructure assets have very low operating cash flow volatility compared to a typical corporate entity. These low volatility characteristics are appealing to a debt investor. Traditional credit analysis involves a comparison of leverage

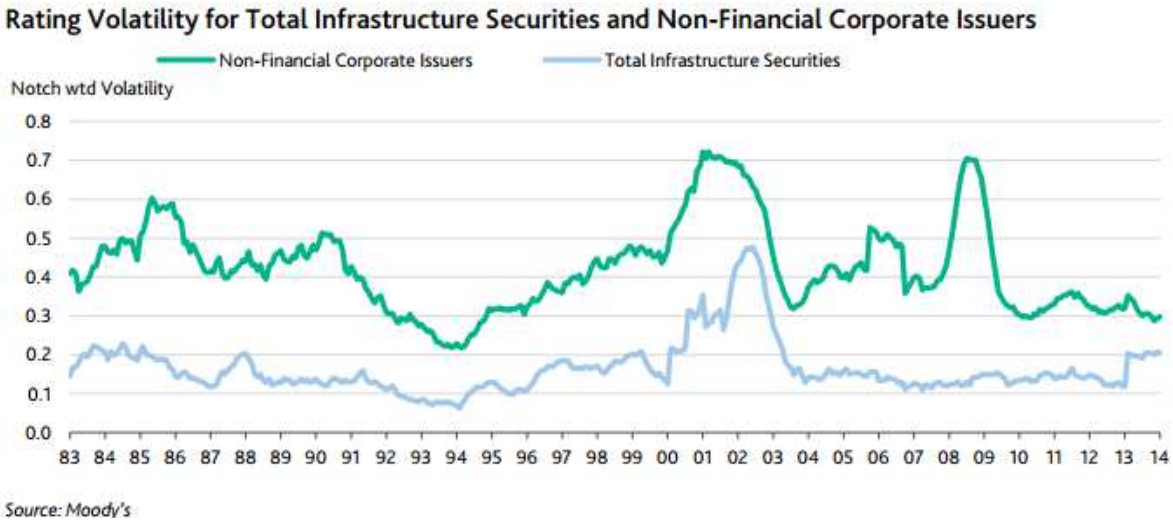
and interest coverage ratios to ascertain the credit worthiness of a borrower. The underlying volatility of the business is often overlooked, and is a key ingredient in determining the probability, or distance, to default of a borrower.

The low volatility characteristics of infrastructure assets are commonly due to very stable revenues and/or high operating margins. All things being equal, a borrower with lower cash flow volatility has a lower probability of defaulting on its obligations (in a random walk world).

Moody's have conducted a study comparing infrastructure borrowers to non-financial corporates (non-infrastructure borrowers that are not financial institutions) over the period 1983 to 2014. This includes over $3.3 trillion of infrastructure debt currently rated. The report contains interesting findings from their back tested data over the 30-year period.

Ratings volatility

The following chart is the sum of the notch weighted upgrade and downgrade ratios over a twelve-month horizon. A notch is when a borrower goes up or down one credit rating level, for example from Baa1 to Baa2 is a notch down by one. The analysis does not make a distinction between upgrades or downgrades.



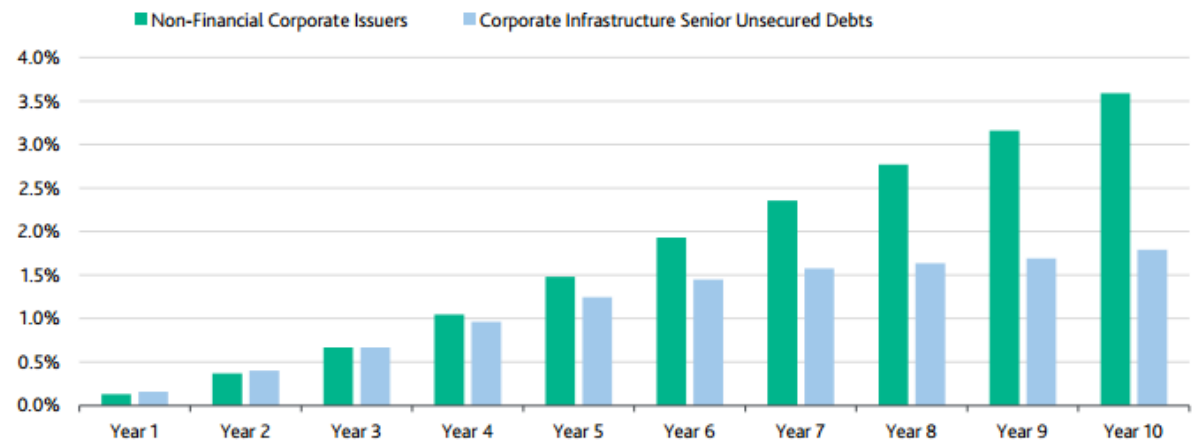
Source: Moody's

The chart above shows that infrastructure borrowers have consistently demonstrated around half the ratings volatility of non-financial corporates. For the history buffs – the spike in infrastructure ratings volatility in the early 2000s relates to fallout from the collapse of Enron (and associated defaults by Pacific Gas and Electric Company and Southern California Edison).

Default and recovery rates

The lower volatility cash flows of infrastructure assets are reflected in the observed default rates for equivalently rated corporate issuers. Infrastructure credits demonstrate similar default rates in the early part of their lives (typically during the construction period), but then experience much lower default rates over longer time horizons. Ten years after issuance, the average infrastructure borrower has a cumulative default rate under half that of the typical corporate.

Baa Cumulative Default Rates



Source: Moody's

When infrastructure issuers default, they have higher recoveries. The key reasons why recoveries are better for infrastructure issuers are structural seniority, and hard asset backing. The following table is the average trading price of an issuers bonds 30 days after missing a payment or filing for bankruptcy.

Recovery Rates for Defaulted Corporate Infrastructure Debts

Sector	Senior Secured	Senior Unsecured
Utilities	76%	58%
Regulated E&G Utilities and Networks	83%	63%
Unregulated E&G Utilities and Power	80%	55%
Transportation	74%	n/a
Average Corporate Infrastructure Debt Securities	75%	57%
Average Non-Financial Corporate Issuers	53%	37%

Source: Moody's

Most infrastructure loans are senior secured. That is, they benefit from a first ranking security over all of the assets of the borrower. The average recovery rate of secured infrastructure loans is 75%. By contrast, most corporate bonds are issued on an unsecured basis. This lower security position is reflected in lower recoveries (only 37%) and hence higher losses for investors.

Low base rates – an issue infrastructure equity investors can't ignore

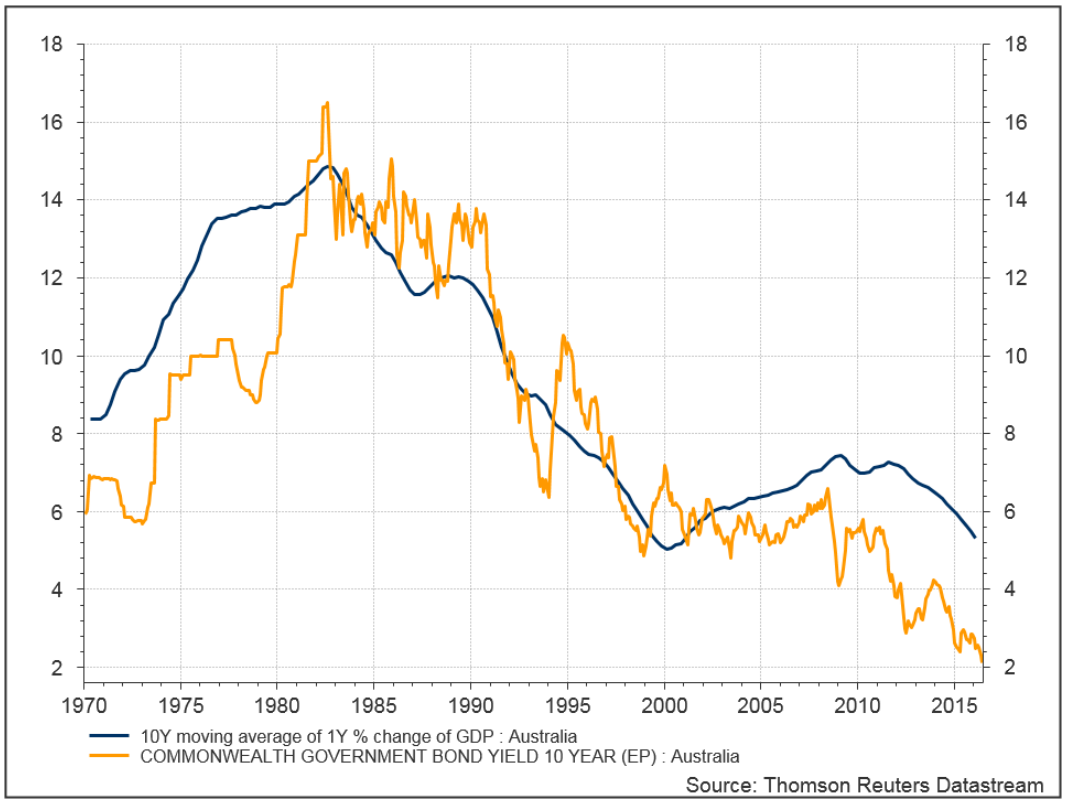
Base rates are very low and likely to stay low for some time. There are mixed views on what the long-term brings. Will rates revert to longer term averages – ie 5%+ for Australia – or is the new normal permanently lower rates?

This is an issue that investors can't really ignore.

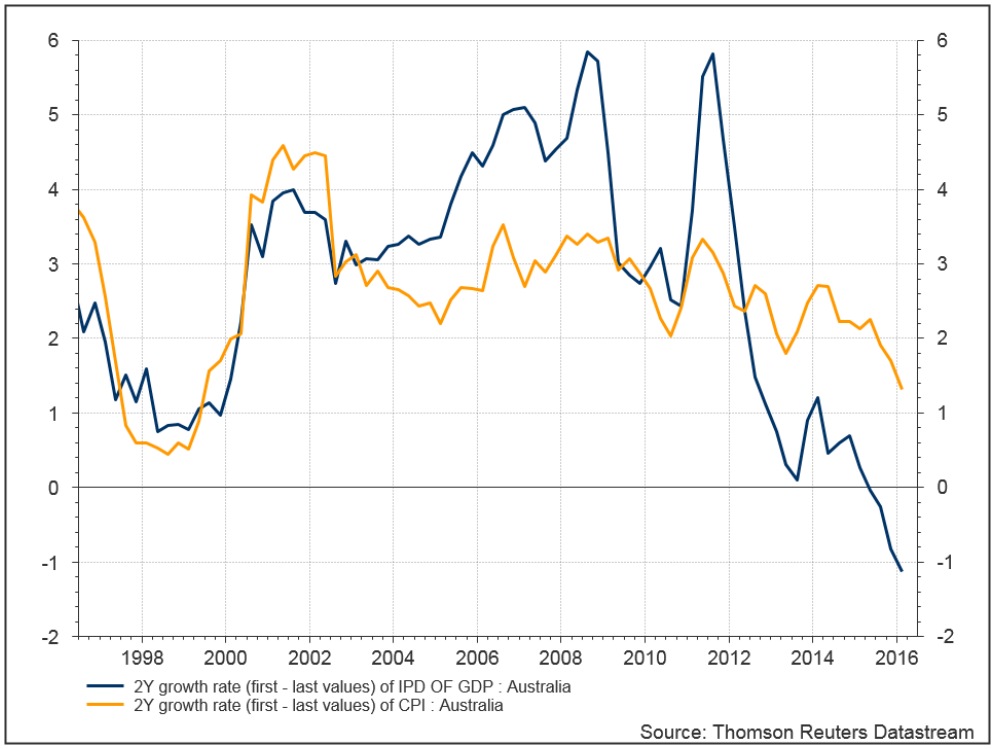
Questions investors should be asking:

- What does it mean for MIC returns and risk objectives?
- What does it mean for investments in government bonds?
- What about other long duration assets – such as infrastructure?

Our view is that interest rates will remain below long-term averages for some time. We use long-term nominal GDP growth as a yard-stick for assessing long-term interest rates. This approach suggests a long-term outlook in the 4-5% range for Australia – based on 2-3% economic growth and around 2% inflation.

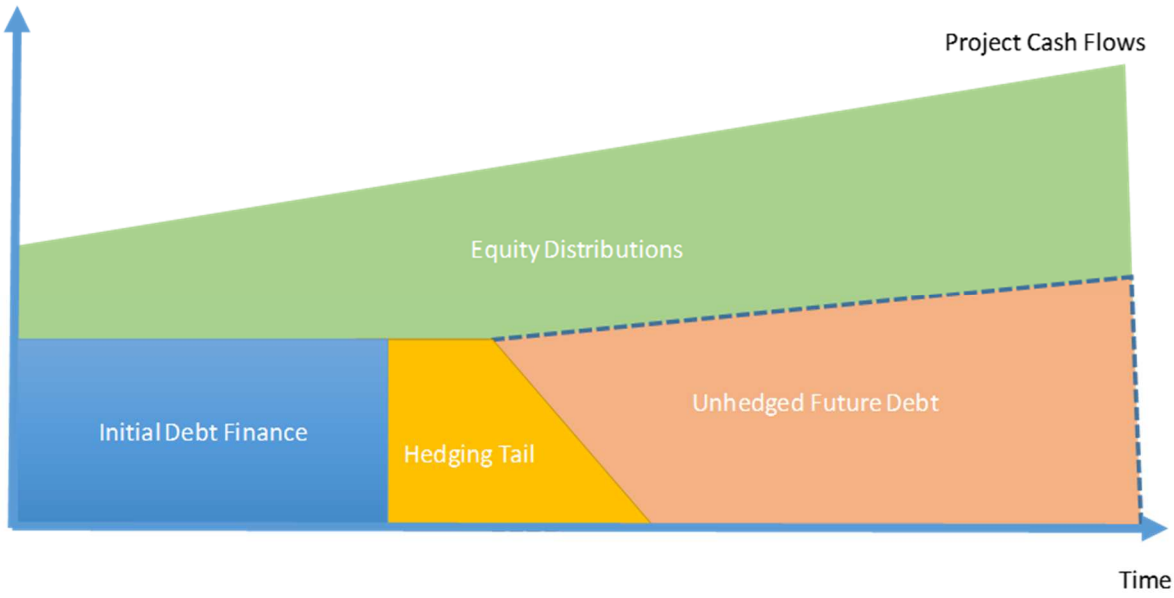


It is worth noting that GDP weighted inflation is running substantially below consumer price inflation (see chart below) as falls in commodity prices hurts export earnings. This is likely to see real interest rates (measured on a CPI basis) somewhat lower than you might otherwise expect.



For infrastructure investors, there is a big difference between infrastructure equity and infrastructure debt. Infrastructure equity returns are inevitably dominated by back-end cash flows. For example, it is not uncommon for equity distributions after year 10 to account for half to two thirds of the net present value of equity.

While most transactions have some level of interest rate hedging – with the exception of PPPs – most transactions are much longer than their hedges. This means long term base rate movements have a significant impact on equity returns. This is illustrated in the diagram below.



Equity investors are effectively exposed to the impact of base rates on their distributions (the green area in the diagram) as well as the unhedged portion of debt (the orange area). Importantly, the gross exposure to base rates will be larger than the value of equity – that is, equity is leveraged to long-term base rates.

For infrastructure equity investors – particularly at today's extremely high multiples - you have to believe in low long term rates. With debt you can be agnostic. You can choose between fixed and floating. The debt maturity ends your direct exposure to base rates.

Contact Us

We're always happy to chat (and learn new things!) if you want to know more, contribute more on a particular topic, or wish to discuss any of the above topics in greater detail feel free to drop us a line. Also, please don't hesitate to send us ideas for future articles.