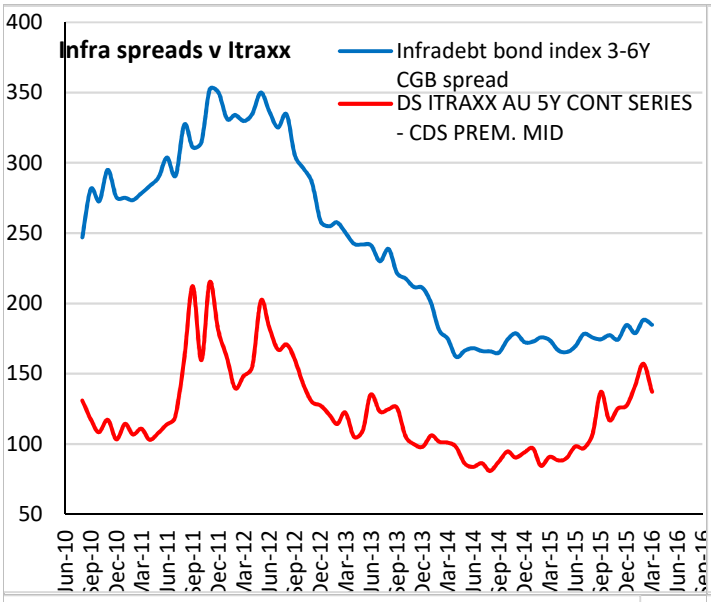
Introduction

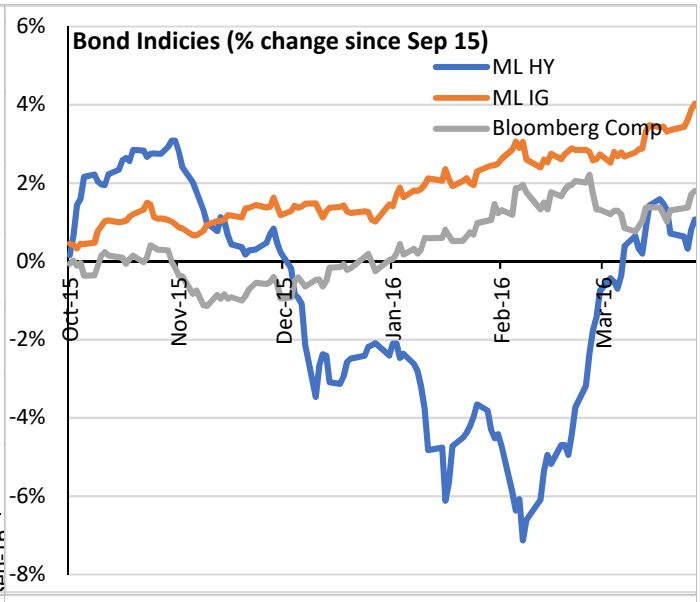
Well the start of 2016 certainly wasn't one for the faint hearted! The first article in this quarter's newsletter takes a look at the potential consequences of high speed rail on Australia's eastern seaboard and the likely effects on airport passenger numbers. Our second article looks at the unintended consequences of the high renewable energy certificate price relative to the price of power. We then turn our attention to world trade and its historic correlation to global economic growth.

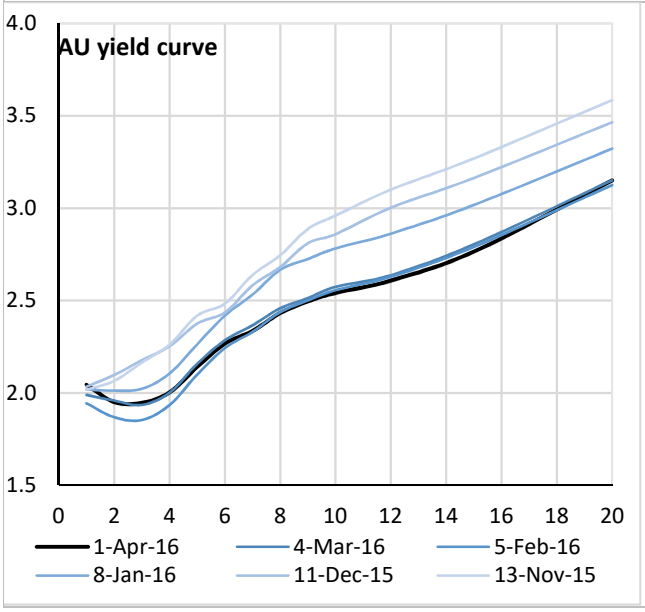
Markets update

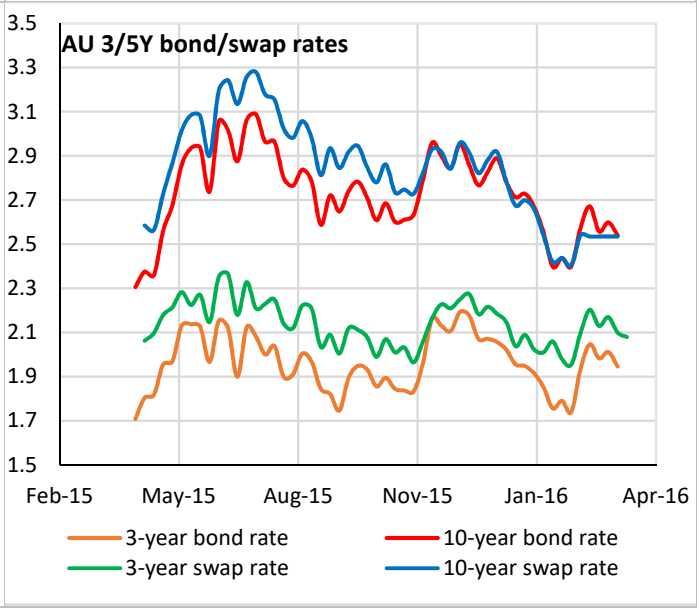
Financial markets had an extremely volatile start to the year – but stabilised somewhat towards the end of the quarter. One consequence of this was significantly lower issuance than is seasonally normal – it would appear borrowers have postponed issuance to later in the year.

During the quarter, there was a large shift in monetary policy expectations (particularly since the G20 meeting in Shanghai). The ECB has given forward guidance that QE is winding down and the Fed's guidance is that rate rises will be at a slower pace than what the market expected. The US dollar index (DXY) has retreated 4.8% over the quarter in response. The Australian yield curve has also shifted 40 bps lower over the quarter.









New issuance and refinancing

The table below provides a list of publicly available deals.

Date	Borrower	Instrument	Size (m)	Term (Yrs)	Curr.	Pricing
December	Jemena	Loan	600/600	4/5	AUD	
January	Pacific Hydro	Loan	1,042/990/ 760	1	AUD/USD / USD	
February	LEAP 2	Loan	100/514/125	5/10/15	AUD	
February	Victoria Power Networks	Loan	250/350/100	3/4/5	AUD	
March	Ausnet	Hybrid	200	60	SGD	5.50%
March	Ausnet	Hybrid	375	60	USD	5.75%
March	Ausnet	Bond	875	12	HKD	2.62%
March	Westconnex	Loan	1500	7	AUD	175 (cons)
March	United Energy	Loan	200/200	3/5	AUD	
March	Port Hedland Airport	Loan	100	5	AUD	

Equity and other news

- Asciano's board has recommended the formal joint takeover bid of $9.28 per share from the Brookfield and Qube consortiums subject to approvals.
- Transurban Queensland Finance was marketing EUR500m of 8-year bonds, with guidance at MS +170-175. The deal has been postponed amid market volatility.
- China's State Power Investment Corp has purchased 107MW Taralga wind farm for A$300m from Banco Santander.
- The ACT Government announced the 260MW Sapphire wind farm as the second winner of Wind Auction 2. The bid was for 100MW at $89.1/MWh nominal for 20 years. The wind farm is to be developed by CWP Renewables. At the same time as the announcement of the outcome of the auction, it was separately announced that Wind Energy Holdings, a Thai company, will also purchase 50% of CWP's Australian business including its development pipeline.
- DUET acquired the remaining 20% stake in the Dampier to Bunbury Natural Gas Pipeline from Alcoa for $200 million. The acquisition will be financed via a capital raising by way of a placement and non-underwritten stapled security purchase plan.
- The AusGrid AER determination has been overturned by the Tribunal, this should give rise to increased revenue over the regulatory period. In other news relating to NSW Poles and Wires and AusGrid, bid competition would appear to be weaker relative to Transgrid, three consortiums are understood to have submitted indicative bids (two still remaining) with final bids due mid-year.

- APA Group said they will fund the remainder of their Diamantina stake purchase with existing cash and debt, with the funding requirement expected to be about A$550m. APA sees FY16 EBITDA between A$1.3-1.335b, and FY16 distribution guidance as unchanged. Their net interest cost though will fall towards the upper end of the range. Moody's commented the purchase is credit negative for APA, but their Baa2 issuer rating is unaffected.
- Sydney Airport reported February traffic total up 10%, with domestic and international passengers up 8.5% and 12.7% yoy respectively.

High Speed Rail and Airports:

Possible Election X Factor for Infrastructure Investors

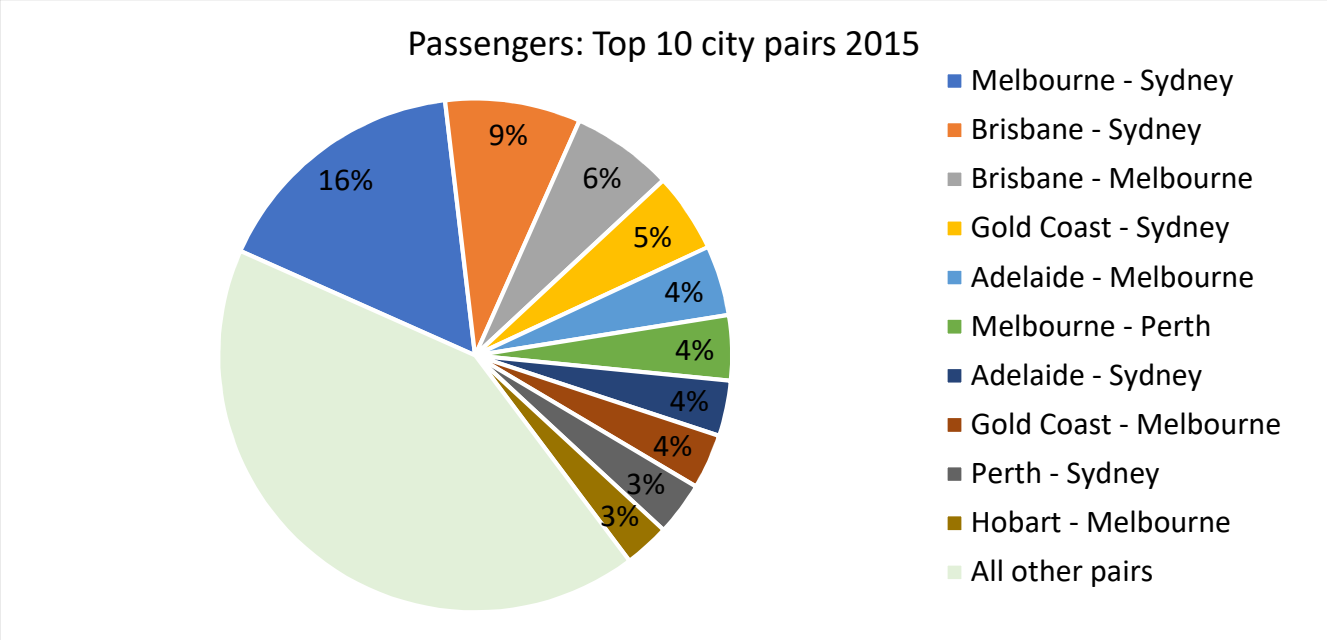
While it is a little late in the year for making forecasts and predictions – we at Infradebt thought we might float a potential "X factor" for Australian infrastructure investors. While most investors are focused on the potential implications of a hard landing in China, fallout from the end of the mining boom, or the potential impact of a rise in long-term interest rates – we wanted to float a risk that perhaps isn't in the forefront of investors' minds.

What if Malcom Turnbull announced a plan for the Commonwealth to fund the construction of high speed rail from Melbourne to Brisbane? At the outset, before we even mention the risk, let us say this is not our base case … but it is possible. What would it mean if it did happen?

Such a project would deliver a massive jobs boost over its entire route, not to mention significant development in a number of regional centres. A narrative could be constructed around addressing the inevitable congestion that arises from a disproportionate share of Australia's population growth occurring in Sydney and Melbourne. It would make regional towns all along the route potential satellite cities to the big state capitals.

The project of course isn't financially viable – but that is why Commonwealth help is needed and is consistent with the precedent set by the NBN.

But what would it mean for infrastructure investors? The routes between Sydney, Melbourne and Brisbane are three of the most travelled airline routes in the world. These routes account for just under 30% of all domestic airline travel in Australia!



A very fast train would be expected to result in a significant fall in airline travel along these routes. While the train wouldn't be quite as fast as a plane – on a door to door basis (i.e. taking into account reduced waiting time at the airport or travel to and from the airport) – the offer would be compelling.

The table below shows the percentage of domestic passengers and aeronautical revenue attributable to Melbourne-Sydney-Brisbane triangle routes. While the affected routes represent over half of domestic passengers – it is important to remember that domestic passengers attract materially lower revenue than international passengers – and aeronautical revenue is only around a third of total revenue. Thus, the overall impact would be much smaller.

	% Domestic Passengers	% Aeronautical revenue
Sydney	56%	27%
Melbourne	54%	29%
Brisbane	52%	25%
Canberra*	94%	94%

*Under 20% of Canberra Airport revenue is related to aeronautical revenue.

The implications of this are most serious for equity investors. For debt investors, there would be a significant period before a train could be built and that would provide ample opportunity for airports to de-lever in advance.

Perversely the greatest casualty could be Badgerys creek – which Tony Abbott selected as the site for Sydney's second airport in 2014. After all, would we really need a second Sydney airport, if high speed rail freed up capacity at Sydney's Kingsford Smith Airport?

Interesting thoughts – but to repeat our disclaimer – not our base case, but possible.

When power becomes a worthless by-product – peculiar incentives from the Renewable Energy Target

Now I have got your attention with some "click bait" – sorry – I would like to raise some potentially odd outcomes from the current policy settings for renewable electricity. Renewable power stations (i.e. wind or solar farms) earn their returns through two revenue streams:

- the electricity they produce, the so called black power, which is valued/traded the same as any other electricity (including power from conventional generation sources); and
- the sale of large scale generation certificates (LGCs) – the so called green revenue. Under the Renewable Energy Target (RET) legalisation retailers are required to surrender a certain number of LGCs for each MWh of power they sell to end-users. This creates demand from retailers to buy LGCs from renewable generators.

The last year has seen wind power generation costs fall and the value of LGCs soar. It has now reached the point where the long-run production costs of wind are approximately equal to LGC prices. For example, Hornsdale windfarm just entered into a 20 year contract for difference with the ACT Government at $77 (fixed nominal). This almost exactly matches the current spot price ($74.50) and futures prices a dollar or so higher each year out to 2020 – where the futures price is $82.50.

This means a windfarm could hypothetically cover its costs (including a return of capital) from just the sale of LGCs with no reliance on the black power revenue.

That is, electricity would be a worthless by-product!

This is an odd outcome – and it is hard to think it makes economic or environmental sense. In my view it is a symptom of a sub-optimal set of regulatory arrangements.

A few observations:

- It is likely that a portion of the current spike in LGC prices reflects a short-term squeeze between the ramp up of RET requirements and the dearth of new renewable development during the Abbott government. That is, the long-term LGC price (say over 20 years) is lower than the current spot price or the futures price over the next 4-5 years. While this may be the case – maybe the long-term price is only $60 or so (and there haven't been many long-term LGC offtakes from retailers at the moment). However, it is undeniably the case that the vast majority of the levelised cost of recent wind developments is being delivered by the LGCs produced, not the electricity generated. This has important implications – it means that projects are being selected on the basis of maximising generation rather than maximising the value of the power generated (for example, by optimising the location of generation or the time of supply).
- The RET arrangements, and increased wind generation in particular, have seen an increase in the number of periods with negative pool prices. That is, points in time where generators pay for the right to produce electricity. Historically, these periods had been quite unusual and had generally arisen due to fluctuations in demand not being able to be easily met by the ramp-up/down capacities of coal fired generation. For example, you might have a situation where demand is expected to peak, with coal fired plants ramping up production to meet this peak and, in the short run, this creates an excess supply of electricity that drives the price negative. In these circumstances negative prices could occur, but they tend to be modest, rare and brief. For example, in South Australia, between 2005-07 and 2007-08 there were an average of four negative trading intervals per year. By contrast, between 2008 09 to 2012-13, when installed wind capacity had more than tripled from circa 400 MW to circa 1200 MW, the number of negative price events averaged around 100 per year. These events typically occur in the middle of the night when demand is low, which is also when most wind generation is at its maximum. Why would a producer keep producing when prices are negative? Wind farms can be incentivised to keep producing even when prices are negative, because if they don't, they miss out on the LGC revenue.

The RET was initially intended as a stepping stone on the path to a carbon price. It works OK when renewables are a small share of total generation. However, it is the wrong policy for decarbonising the electricity system. The RET rewards cheap renewable generation. However, it doesn't distinguish when, or where, that renewable generation occurs. What we need is a system that rewards the delivery of the electricity consumers and businesses need without the carbon pollution. While this sounds similar – the outcome is very different.

While participants need to work within the rules set by government – we would encourage participants to recognise that rules can change and one of the catalysts for change can be perverse outcomes.

Peak trade?

This month the IMF has warned that the world is facing the growing risk of economic derailment with the worst monthly collapse in Chinese exports since 2009. In February 2016, China's exports fell 25.4% from February a year earlier.

Historically, outside of recessions, trade volumes have tended to rise significantly faster than GDP (see below). The orthodox view of port investment has been that trade volumes will grow at a significant multiple of real GDP growth (typically a 1.5 – 2x multiple is adopted). Since the GFC, ports have been hit with a double whammy of poor GDP growth and low trade elasticity. The trade elasticity is the multiple between current GDP growth and trade volume growth.

	Trade volume growth rate	Real GDP growth rate	Trade/GDP growth multiple "Trade Elasticity"
1965 - 1970	9.29%	4.95%	1.88
1970 - 1975	4.81%	3.34%	1.44

1975 - 1980	5.98%	3.63%	1.65
1980 - 1985	2.97%	2.85%	1.04
1985 - 1990	6.22%	3.52%	1.77
1990 - 1995	6.34%	3.25%	1.95
1995 - 2000	7.66%	3.85%	1.99
2000 - 2005	5.65%	3.76%	1.50
2005 - 2010	4.20%	3.72%	1.13
2010 - 2015	3.79%	3.35%	1.13

Why has trade elasticity contracted? Is it structural or cyclical?

Our view is that structural factors are important drivers of the recent weak trade growth. In particular, trade elasticity was previously inflated by a number of 'one offs', which boosted trade volumes, and are unlikely to repeat themselves over the next decade. For example:

- containerisation and associated fall in shipping costs;
- the broad-based reduction in global trade barriers since the 1970s;
- the opening up of China, which culminated in it joining the WTO in 2001; and
- the proliferation of globally integrated supply chains which has seen the emergence of Asia, and emerging markets more generally, as manufacturing centres.

In addition, looking ahead, China's transition from an export and investment driven growth model (both of which tend to be very trade intensive) to a growth model more focused on domestic consumption (particularly of services) is likely to dampen trade growth.

Against this, the current composition of growth is quite unusual, with consumption and investment relatively weak on a global basis and government expenditure relatively strong. Given that government expenditure tends to be less trade intensive – this is one cyclical explanation of the current weakness in trade.

While some would hope that recent sluggish trade performance is more cyclical than structural, our view is there are legitimate reasons to be less sanguine and have an expectation of lower volume growth over the next decade than was enjoyed during the boom-time for trade of the late 1990s and early 2000s.

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.

www.infradebt.com.au 02 6172 0222 info@infradebt.com.au Level 1/99 Northbourne Avenue Turner ACT 2612