Confidential

Transpower

Utilities and infrastructure sector update

January 2017

Market backdrop

Investor appetite for regulated utilities remains high given scarcity of opportunities and underweight holdings. However, the sector is not without its challenges, particularly as the pull back in yield reduces trading levels for listed players and dynamic technology change raises uncertainty over the future development of electricity transmission and distribution networks

1 The recent pullback in demand for listed "yield" exposures due to expectations of Federal Reserve monetary tightening and the Trump Presidency has seen the return of a pricing arbitrage between private and public markets for infrastructure and utility assets

- Listed yield stocks have been under pressure over the last six months with increased expectations of Federal Reserve tightening and following the US elections
- Notwithstanding an uptick in base rates, private capital return requirements in the infrastructure sector have not changed materially (Ausgrid transaction and CKI bid for DUET)
- For the first time since 2010 we are seeing a scenario of disconnect between public market and private capital valuations for infrastructure – expect listed stocks to come under takeover pressure over the next six months

2 Against this backdrop, the utilities sector is also experiencing significant change in technological developments impacting both demand and supply. There are varying levels of understanding amongst investors in relation to the impact of these changes on network companies and industry outlook

- **Demand side:** energy efficiency; electric vehicles; smart metering
- **Supply side:** distributed generation; micro grids; battery storage; increased penetration of renewable electricity supply
- **Tariff reform**: reform in relation to network tariff pricing responding to this changing environment and approach of regulators

3 Notwithstanding these challenges, we believe Transpower will be considered a very high quality asset by both public and private markets. However, there are a number of stakeholder considerations which will need to be worked through

- Consideration should be given to addressing stakeholder concerns upfront including:
  - i) concerns regarding network charge increases;
  - ii) commitment to continued investment;
  - iii) employment intentions (particularly in regional areas)
- Significant preparatory work is also required in relation to governance framework; tax and capital structure and treasury policies

Section 1

NSW T&D overview

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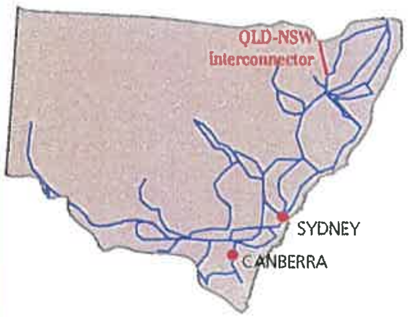
Recap of the NSW Electricity Transaction Structure

The NSW electricity network transactions provide useful insights for Transpower

- Sale of 49% interest across the State's regulated electricity network assets
- Sell down percentages based on regulated asset bases of each business, taking into account the 100% retention of Essential Energy. UBS structured percentages to:
  - maximise proceeds received by the State *(greatest equity interest sold in Transgrid—transmission entity which was the most sought after business)*
  - ensure off balance sheet treatment for the State *(majority stake sold down to support deconsolidation of debt)*
  - value of the State's retained interest *(protective governance regime)*

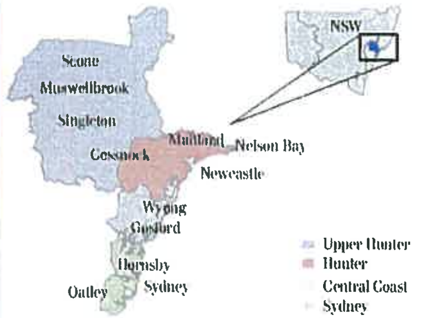
TransGrid

Timing:	Dec-15
RAB (FY16):	A$6.1bn
Sell down interest:	100%
Gross proceeds:	A$10.3bn
EV/RAB	1.65x



Ausgrid

Timing:	Jul-16
RAB (FY16):	A$15.5bn
Sell down interest:	50.4%
Expect. gross proceeds:	~A$25bn+
EV/RAB	TBC



Endeavour Energy

Timing:	Mar-17
RAB (FY16):	A$6.2bn
Sell down interest:	50.4%
Expect. gross proceeds:	~A$9bn +
EV/RAB	TBC

essential energy

Timing:	na
RAB:	A$6.8bn
Sell down interest:	nil

Essential Energy will remain 100% owned by the State with this ownership counting towards the State's 51% interest across the network businesses

Strategies adopted to address stakeholder concerns

Addressing stakeholder concerns upfront were a critical element of transaction preparations and the scoping study undertaken

"Higher power prices are inevitable"

- **Price Guarantee Commitment provided** in relation to future electricity prices
  - commitment that real power prices in 2019 will be lower than 2015
- Role of an **Independent Price Commissioner** established to report to Parliament confirming compliance with legislation
  - report is to also confirm that the NSW electricity transactions (i.e. price paid) would not result in any increase in future network prices

"Reliability and security of supply will be compromised"

- Existing **licence conditions were enhanced** ahead of transactions
  - conditions comprised operating and safety standards (if not already considered adequate)
  - seeking to embed FIRB requirements in relation to on-shoring of management and maintenance of the networks in the licences
  - providing greater review rights for IPART (NSW regulatory)
  - conditions placed over telecommunications security
- Provisions were included in the **Lease Agreement** to require compliance with licence conditions
- **Lease termination** or State **step-in rights** to apply where licence conditions have not be met

"Regional areas will be worse off"

- **Essential Energy (regional distribution)** retained by the Government
- The key concern is whether private sector ownership would reduce incentives to continue to invest in regional areas or lead to widespread job losses in regional employment centres

"Employees are going to lose their protections"

- **Employment guarantee** provided under enabling legislation
- Terms included :
  - five year guarantee
  - guarantee only related to "funded" employees under the AER's efficient cost allowance (i.e no guarantee for excess employees)
  - given the guarantee period extended beyond the next regulatory reset, a mechanism was included that adjusted the level of guaranteed employees for the revised regulatory allowance (e.g. if allowable costs fell so did the number of guaranteed employees)

Governance arrangements established

A dynamic governance regime has been adopted to allow bidders to maximise their valuation of upfront proceeds while ensuring any future sell down of the State's minority interests will have real governance rights

- Potential conflicts of interest between the State as both regulator of the licensee and lessor were addressed by limiting the State's voting rights in the Partnership to a limited number of critical issues ("A Class Interest Reserve Matters"). By providing the private investor with day-to-day operating control, they had confidence that they would be able to implement their business strategy and operating plans
- Upon any future sale of the State's equity interests, the voting rights associated with the State's interests "sprung up" or escalated such that a new incoming investor would have real governance rights over the Partnership. This avoided any minority interest applying to the State's interests on any future sell down

	While State retains an equity interest	Where State Sells down equity interests
Form of interest	• Private investor will initially own all the ordinary interest in the Partnership (equivalent to 50.4% economic interest) • The NSW Government's 49.6% economic interest will be held in the form of separate A Class interests	• On any future sell down by the State, the State's A Class Interests will convert to ordinary interests • Post conversion the ownership interests will comprise – initial private investor: 50.4% – new private investor 49.6%
Governance rights	• Private investor effectively has day-to-day operating control of the Partnership, except for a limited number of A Class Reserve Matters • **A Class Interest Reserve Matters** comprise – capital structure: minimum BBB (S&P) investment grade capital structure to be maintained – approval of large acquisitions or disposals – related party transactions	• The Partnership Agreement provides for a Special Majority governance regime where key decisions require support from ordinary interests of in excess of 80% • **Special Majority** approval rights including approval of budget, business plan, CEO appointment, distributions, capital structure, regulatory submissions • This ensures that any incoming acquirer of the State's 49.6% interest would have real governance control over the business
	✓ ***Minimise conflict of interest, facilitate private sector efficiencies, maximise upfront proceeds by passing control***	✓ ***Maximise attractiveness of State's retained interest on a future sell down by providing real governance powers***

Impact of new technologies

Emerging technology presents issues and also opportunities to network operators – the role of the network is likely to evolve substantially over the short-medium term

	Themes	Potential industry impacts	Key considerations
1 Electricity demand drivers	• Electric vehicle take-up • Proliferation of smart meters and 3rd party load aggregation and control • Increasing levels of energy efficiency	• Potential increase in peak demand through concurrent EV charging • Provision of increased transparency and real-time usage data through smart meters	• What will be the impact on required network capacity? • Will a new price signal be needed for efficient EV charging? • How will tariffs be modified to make use of smart meters?
2 Distributed energy generation	• Future of large-scale generation • Commercial and residential solar PV • Emerging micro-grids and embedded generation	• Reinforcing climate change policy geared towards renewables • Increased penetration of renewable energy generation • Emergence of localised grids with energy transported over short distances	• Ongoing role of large scale, remote generation? • Cost of network augmentation to enable safe and efficient "power flow reversal"
3 Storage and role of batteries	• Large-scale and residential battery applications • Rate of development and cost decline	• Potential reduction in required network augmentation to alleviate capacity issues • Smoother peaks as batteries discharge • Changes in economics of existing generation technology	• Will batteries + solar facilitate grid disconnections? Will this ever be as reliable as a grid connection? • Will battery discharge become the marginal electricity producer i.e. lowest cost supply vs. matching energy production to demand
4 Regulatory and tariff reform	• Shift to cost-reflective tariff structure • Economics of going "off-grid"	• Shift away from energy-consumption charges to time-of-day pricing	• How will the tariff structure change to reflect drivers of networks costs (i.e. peak demand and reliability)? • Is a "connection-charge" required to discourage free-riding by solar / storage users?

Key transaction structure questions to be determined

A number of threshold transaction structure questions will need to be decided in determining the optimal transaction structure

				Key issue impacted
1 What form of interest to sell?	Outright sale	vs	Long term lease	*State control rights and future network management*
2 Business split?	Grid ownership and system operatorship	vs	Separate system operatorship and transfer to Electricity Authority	*Business preparation & separation complexities*
3 What percentage to monetise	Sell control: 100% vs 51%	vs	Sell non-controlling stake: <50%	*Governance considerations*
4 How to deal with retained State interests (if any)?	Establish fund to manage and retain NZ Govt stake?	vs	Securitisation	*Maximised value of retained interest*
5 What is the appropriate monetisation route?	Trade sale auction	vs	IPO	*Competitive tension and bidder appetite*

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Transaction structure alternatives provide flexibility

	Sale or lease of 100%	Partial sell down with Govt retaining an interest	Separate Transmission and Systems operation activities	IPO (part or all)
	• 100% long term lease or sale of Transpower to private investors (i.e. similar to TransGrid)	• Undertake a partial sell down • Ideally sell down would be minimum 50% interest in order to facilitate deconsolidation of debt from Govt's accounts	• Structural separation of transmission and system operations activities • System operations activities could be transferred to the Electricity Authority or separated into a standalone entity • Sell transmission assets	• IPO of Transpower • Potential for Govt to retain sizeable investment under Mixed Ownership Model • Consider whether the Govt retains its stake through an interest in the IPO entity versus retaining a direct interest at the asset level and only IPO interests subject to private ownership
Complexity	Straight forward	Straight forward	Complicated	Straight forward
Timing	As early as August 2017	As early as August 2017	Likely in 2018 and beyond	Likely in 2018 and beyond
Govt ratings treatment	Off balance sheet	Off balance sheet to the extent that >50% interest sold and/or control passes to private sector	Off balance sheet for transmission assets	Off balance sheet to the extent that >50% interest sold and/or control passes to IPO vehicle

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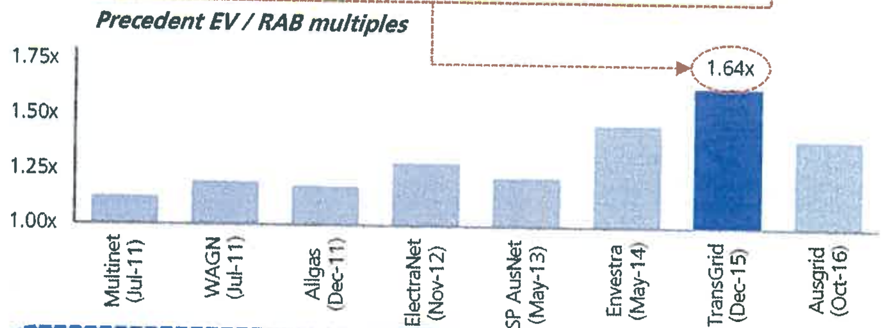
Outcomes achieved – TransGrid and Ausgrid

Whilst similar in asset class, company-specific and transaction structure related items created unique challenges for each of the TransGrid and Ausgrid processes

Long-term lease of 100.0% of TransGrid (2015)

- **Cost structure:** largely at AER-efficient frontier and industry-leading approach to asset management and development
- **Regulatory matters:** limited regulatory uncertainty with firm decision through to 2018 and strong visibility on AER's approach to cost of capital and cost allowance
- **Unregulated business:** embryonic and high-growth unregulated businesses in telecommunications and infrastructure services, forecast to make significant contribution to EBITDA and cash flow
- **Governance:** full control by incoming private investors

Premium valuation driven by the lowest observed equity IRR of recent infrastructure transactions, and the ability to fully value ambitious new business development opportunities

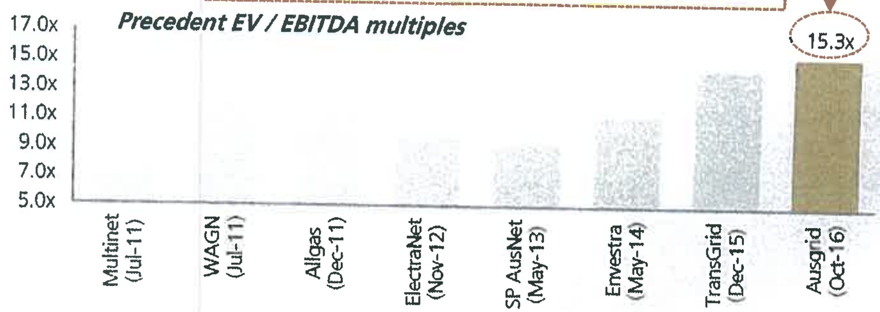


- Five bidders in indicative bid phase
- Four bidders shortlisted into binding bid stage
- Four bids received with aggregate equity of over A$12 billion

Long-term lease of 50.4% of Ausgrid (2016)

- **Cost structure:** highly challenged with significant over-spend relative to AER allowances, exacerbated by inflexible enterprise agreement and ongoing uncertainty due to prolonged negotiations
- **Regulatory matters:** ongoing regulatory uncertainty on cost of capital and operating expenditure allowance due to appeals processes (yet to be resolved)
- **Unregulated business:** minor contribution to overall revenue and cash flow, with no business plan to grow and develop
- **Governance:** state retains 49.6%, with private investors provided effective control over day-to-day matters. State's governance rights limited to A-Class reserve matters

Premium multiple demonstrates private investors' ability to value business transformation programs whilst still bidding a competitive cost of capital



- Original auction process had to be abandoned post FIRB not providing consent to State Grid and CKI (despite pre-consent previously having been provided prior to process commencement
- Unsolicited proposal received from AusSuper and IFM (Australian investors) which avoided need for FIRB consent. The price could be benchmarked against offers received in the original auction process

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Section 2

Utilities and Infrastructure Market overview

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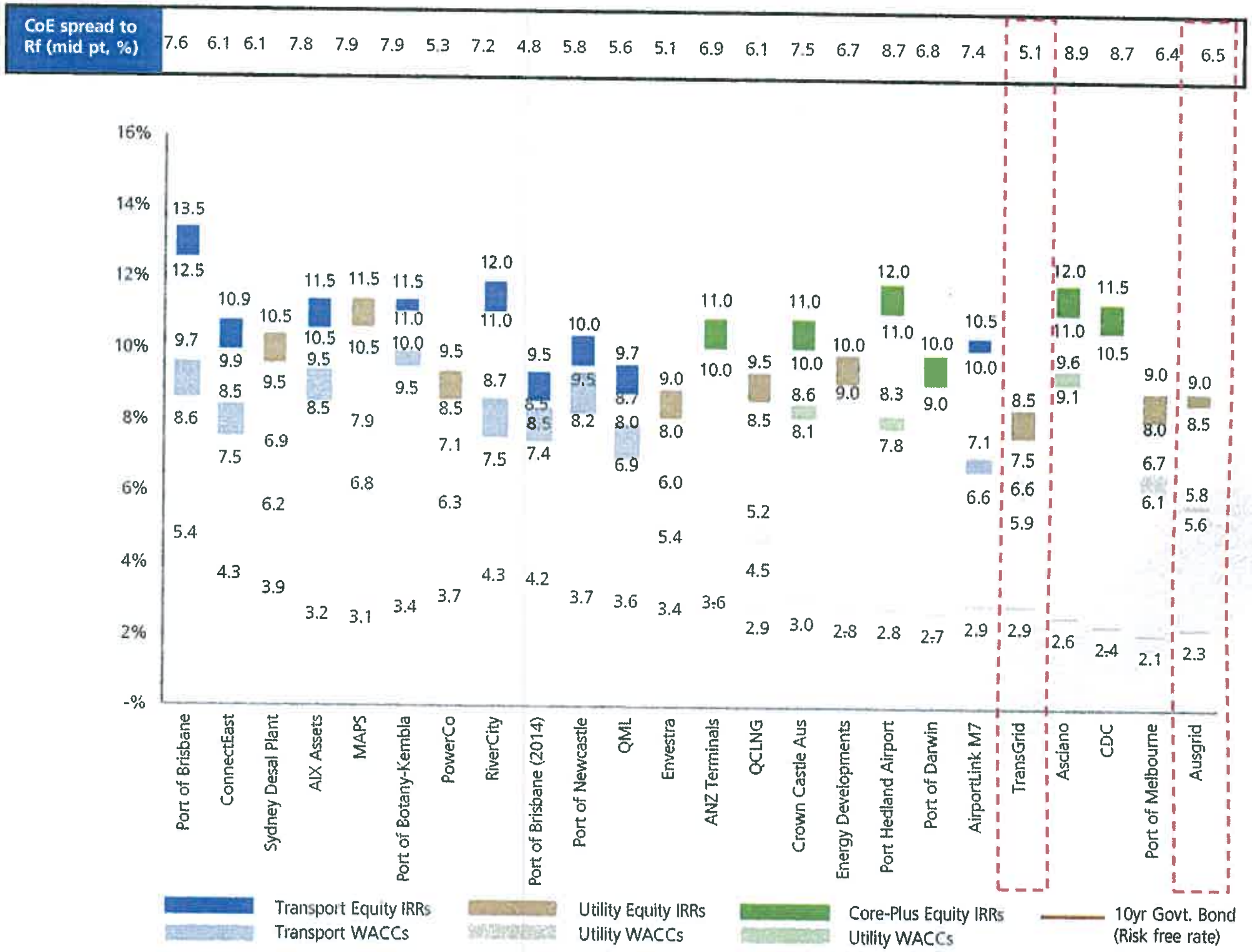
Private markets – cost of capital (A$, Aus transactions)

Return levels for utilities and infrastructure assets remain at all time lows, driven by a contraction of base rates and scarcity of high quality infrastructure assets relative to available investor capital

Transactions have tracked declining interest rates, with equity IRRs being bid consistently getting tighter

- Recent Equity IRRs and WACCs on Ausgrid and TransGrid processes have been amongst the lowest of the recent infrastructure transactions
- Equity IRR spreads to long term base rates have remained at around 6% to 7%
- CKI's recent bid for DUET is estimated to be at 8.5% equity IRR – around a 5.75% spread to the 10 year Aus government bond rate

Estimated returns (IRR and WACC)



Source: Market intel, UBS estimates

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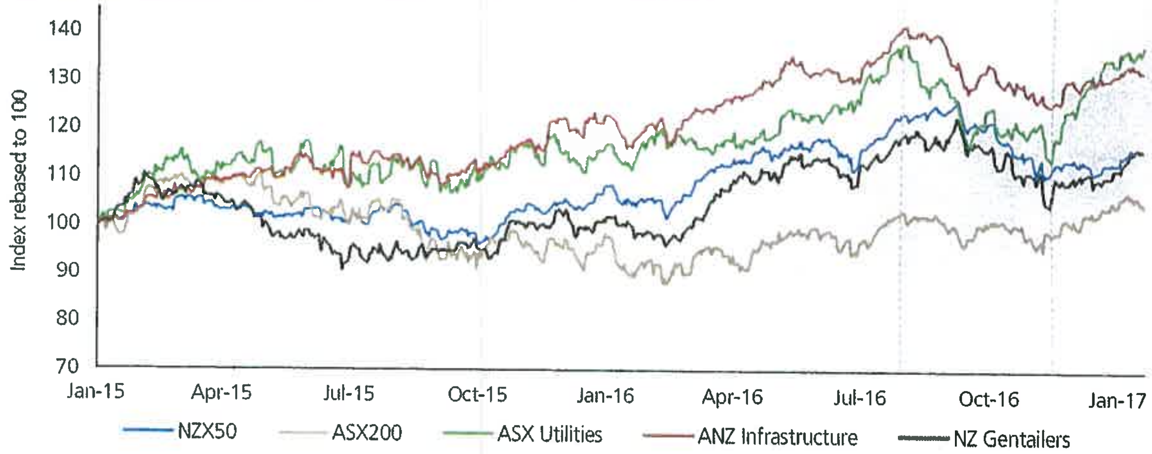
Moderating of the yield trade has occurred

Bond yields have edged higher off the back of tightening monetary policy and increased growth expectations, resulting in investors adjusting their views on discount rates and a modest rotation away from yield and defensive assets

- From 1H15 to 1H16 yield and defensive stocks performed strongly due to decreasing bond yields and heightened market volatility
- Since 2H16, yields have been edging higher
  - the Federal Reserve and other reserve banks have begun moving towards a more neutral monetary policy stance
  - the global growth environment experienced since the GFC is improving
  - Trump's proposed fiscal expenditure policies are perceived to boost growth
- Increasing bond yields in 2H16 has driven a weakness in many yield and defensive assets
  - investors adjusted their views on appropriate discount rates
  - there was a modest rotation away from yield stocks and a shift into cyclical growth exposures
- The yield sell-off bottomed-out in November
  - recent strengthening reflects softening of yields, broader market strength and sustained geopolitical uncertainty
- Yield and defensive stocks are expected to remain highly sensitive to interest rate hikes and signalling throughout 2017

Recently yields have edged higher...

...and yield-sensitive stocks have come under pressure



Source: IRESS, Datastream

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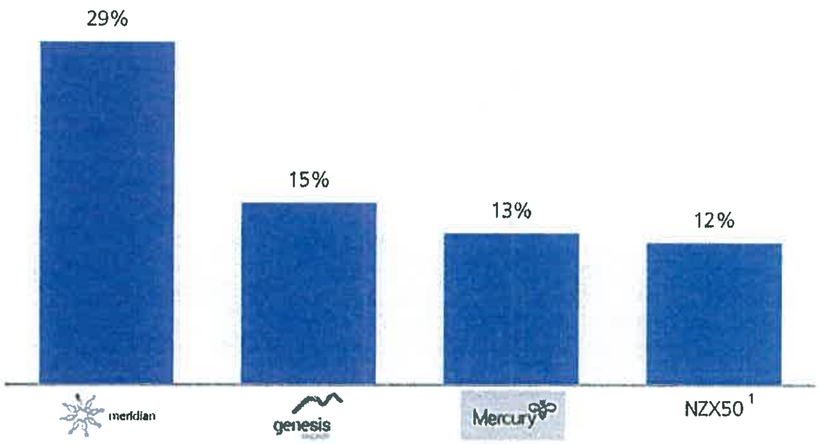
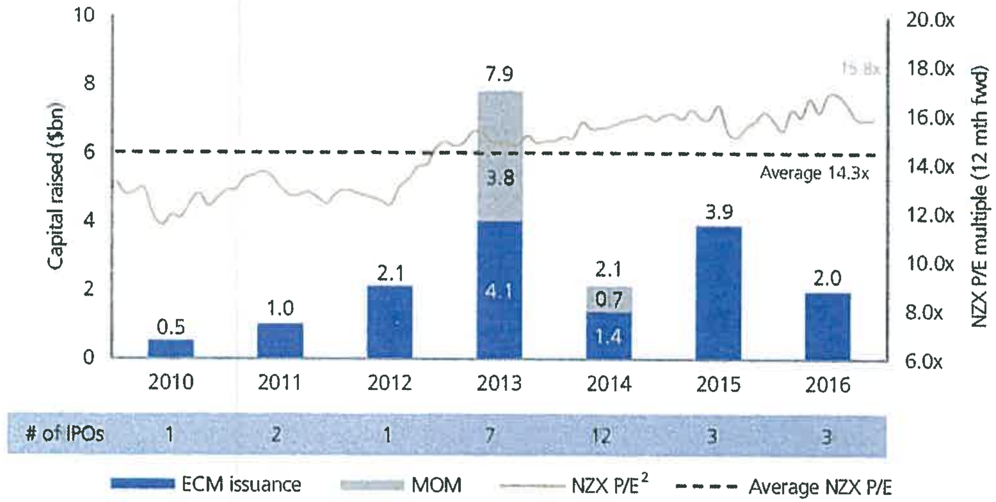
NZ public markets are receptive to new issuance

The MOM provided strong shareholder returns since IPO

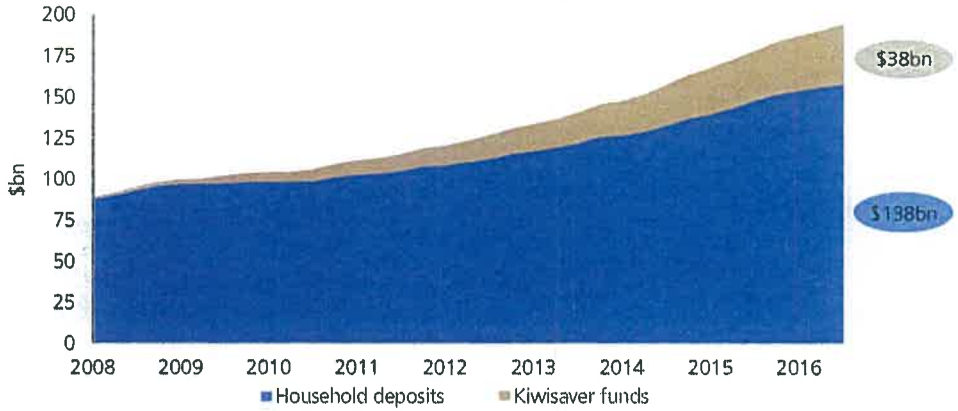
Annualised total shareholder return since IPO



The NZX is trading at a premium and there is a lack of new issuance

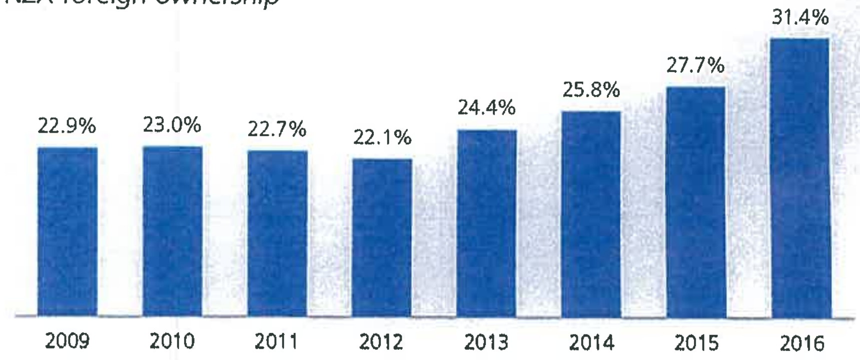


Kiwisaver and household deposits continue to grow



NZX offshore investor interest is at record highs

NZX foreign ownership



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Source: Datastream, UBS Research, Dealogic, RBNZ, JBWere

Notes:
1 NXZ50 annualised returns are calculated since the Mercury IPO
2 Includes all listed New Zealand companies except for retirement villages, investment companies and loss-makers

Investor trends

We estimate that there is currently over $30bn of private capital available for large scale utility and infrastructure transactions. Public markets are supportive of the New Zealand infrastructure yield story and have a lack of investable stocks

Private capital investor trends

Large direct investors — AustralianSuper, Borealis Infrastructure, IFM, CPP Investment Board

✓

Expanding direct investment capabilities

Seeking platforms to grow

Managed funds — Macquarie Capital, Global Infrastructure Partners, Morgan Stanley

✓ / ×

Funds with a differentiated offering are excelling. Close ended IB sponsored funds struggling

SWFs — ADIA, GIC, China Investment Corporation

✓ / ?

Mainly "filler" equity on large transactions. "Value add" provided on certain transactions being questioned by other investors

Listed players — APA Group, Spark Infrastructure, transurban

?

Having returned to competitiveness recent de-rating may impact longer term prospects

Accessible equity in Australasian transactions

Target investment size	# of funds	Capacity
< $500m	10-15	$5- $10bn
$500m to $1bn	10	>$10bn
>$1bn	5-7	>$10bn
Total		**>$30bn**

Public market investors

Domestic (ANZ) funds

- View infrastructure as an expensive sector, and as a result, they are typically at market- or under-weight
- Concerned regarding potential further share price pressure as bond yields increase

NZ retail investors

- Strong appetite for income and yield stocks
- Supportive of infrastructure and utilities which provide stable earnings and a robust dividend

Specialist infrastructure funds

- Take a long-term view and remain supportive of core infrastructure / yield investments
- Differentiating based on growth opportunities (GDP-plus), cash flow reliability and exposure to interest rate increases

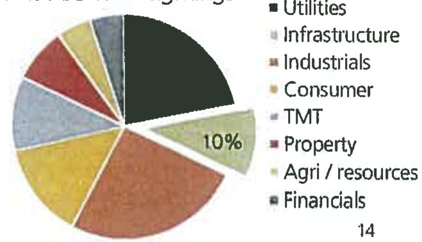
Offshore generalist funds

- Strong demand for New Zealand utilities, infrastructure and construction given attractive underlying fundamentals
- Some have down-weighted infrastructure recently to manage yield exposure

There is a lack of ANZ infrastructure yield opportunities

- Infrastructure is underrepresented on the NZX, with a lack of investable stocks
  - Auckland Airport and Port of Tauranga are the only two scale NZX-listed infrastructure companies
- There is a diminishing number of ASX infrastructure companies following several take-privates (see next page)

NZX50 sector weightings



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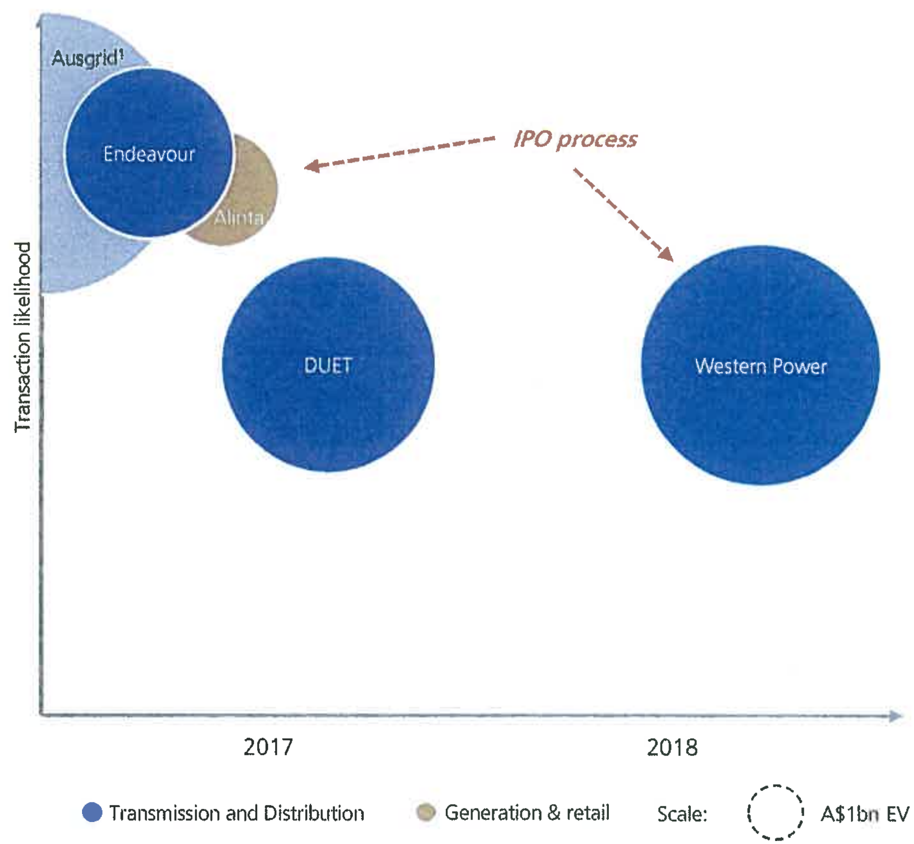
Outlook for the transaction pipeline

Other than Alinta and Western Power, there are no new investment opportunities available to public market investors in Australia. There is a weight of money to be deployed in the space as the listed universe of infrastructure and utilities stocks has diminished over the last decade

ANZ infrastructure and utilities pipeline



Notes:
1 Completed in November 2016

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NZ IPO pipeline

Name	Offer size (NZ$)	Timing
Complectus	100	2Q 2017
Hirepool	100	3Q 2017
Oceania Healthcare	250	4Q 2017

Diminishing universe of listed utilities and infrastructure stocks…

Company	Delisting date
asciano	Aug-2016
Envestra	Oct-2014
Australian Infrastructure Fund	Apr-2013
Hastings Diversified Utilities Fund	Jan-2013
challenger	Dec-2012
CONNECTEAST	Mov-2011
intoll	Nov-2010
MACQUARIE Communications Infrastructure Group	Jul-2009