

# Aurizon Holdings (ASX:AZJ)

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Off the right track

McGill Investment Club ESG Stock Pitch Competition – March 20, 2021

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# Aurizon Holdings At A Glance

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We recommend a sell due to its exposure to coal coupled with no opportunities for diversification

## 2-Year Historical Performance



## Market Data<sup>1</sup>

General Information		
	Units	Current
Price	AUD	3.88
Headquarters		Brisbane
Valuation Currency		AUD
Fiscal Year		Jul1-Jun30
Market Capitalization	M	6,822
52-Week Range	/Share	3.59 - 5.07

## LTM Valuation Multiples

Price-to-Earnings	13.2x
Price-to-Book Value	1.8x
EV/EBIT	11.8x

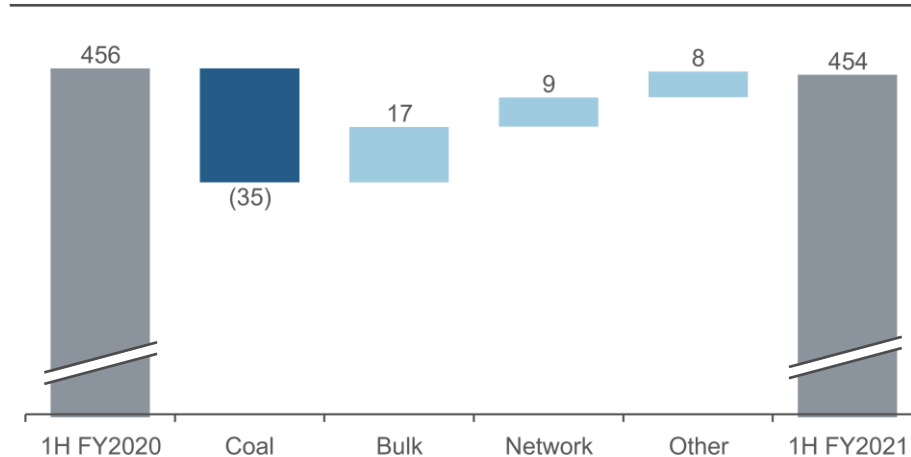
## Liquidity and Solvency

Credit Rating <sup>2</sup>	BBB+
Debt-to-EBITDA	2.6x
EBIT Interest Coverage	5.8x

## Valuation Summary

Implied Share Price	\$2.90
Implied Downside	(26%)

## Underlying Group EBIT Bridge 1HFY2020-2021 (\$M)



Source(s): Capital IQ, Company Filings

1. Market data as of March 25, 2021

2. Rating as of September 2019

## II. Business Overview

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# Revenue Segments

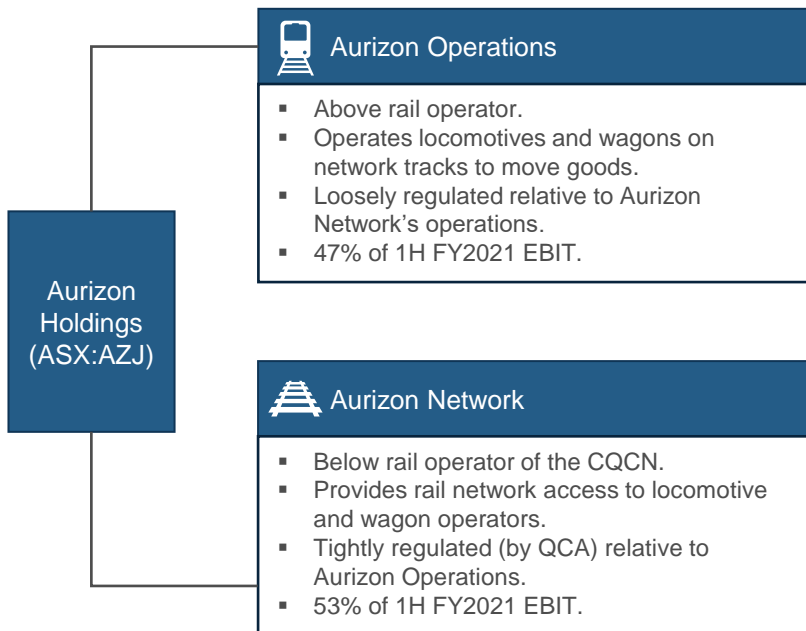
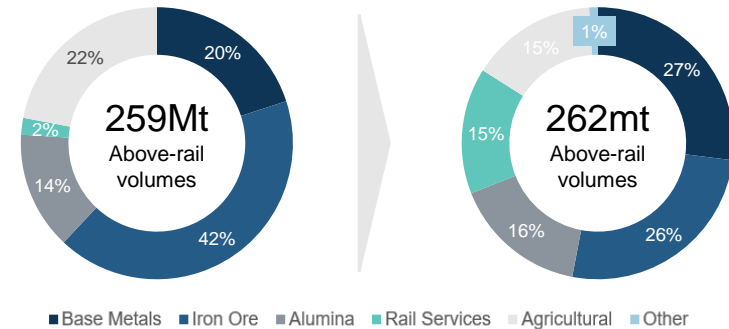
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Aurizon aims to deliver critical commodities across Australia for end-market sales focused in Asia

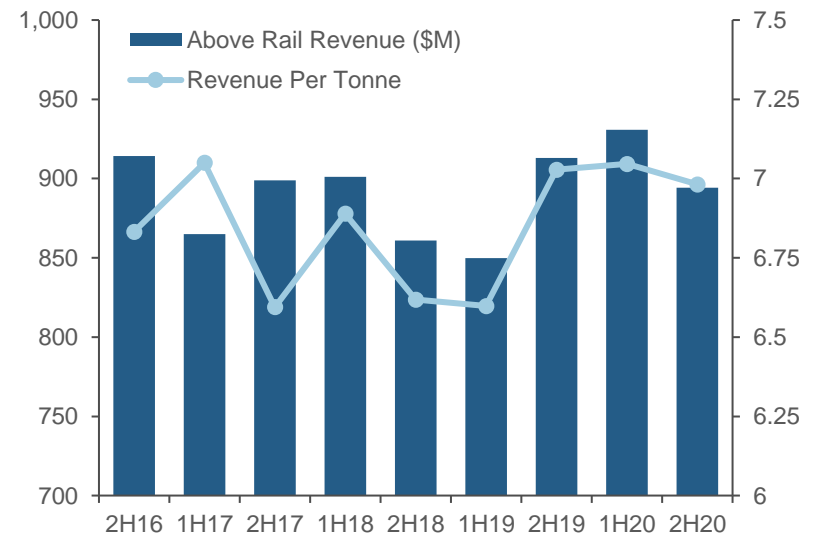
## Overview

- Aurizon is one of the largest private rail operators in Australia with 500 active locomotives, 11,000 active wagons, and 40 sites.
- The firm operates two main segments:
  - Transportation of commodities (i.e., “Coal” and “Bulk”).
  - Access to the Central Queensland Coal Network (“Network”).
- Aurizon charges customers fees for hauling commodities across Australia or charges customers for access to their rail network.
- 58% of customer volumes contracted for over seven years and 60% of contracts are fixed-rate.

## Bulk Commodity Exposure (2017 vs. 2020)



## Revenue Snapshot and Trend



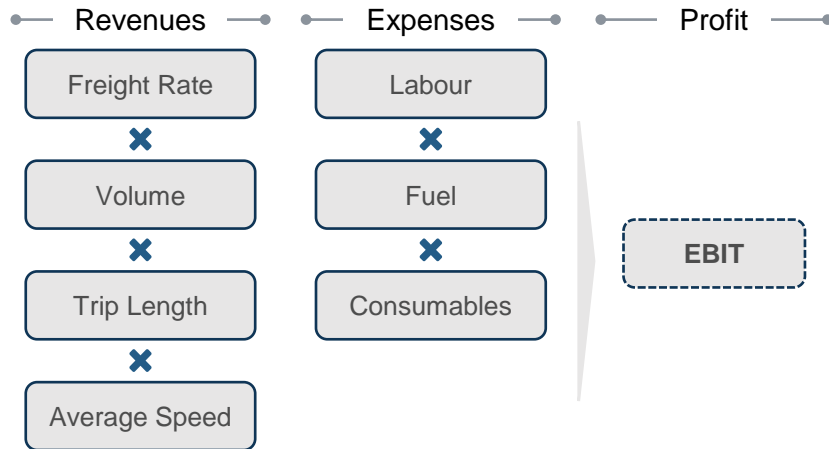
Source(s): Company Filings

# Unit Economics of Freight

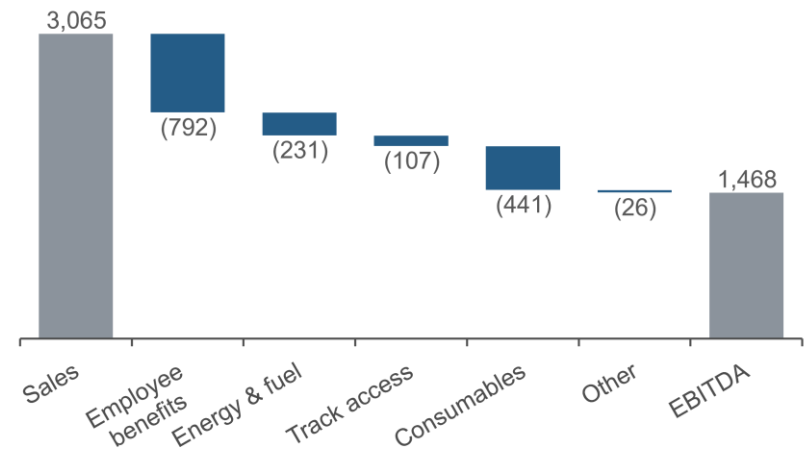
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Economics of freight are tilted heavily towards spreading out variable costs across a large network

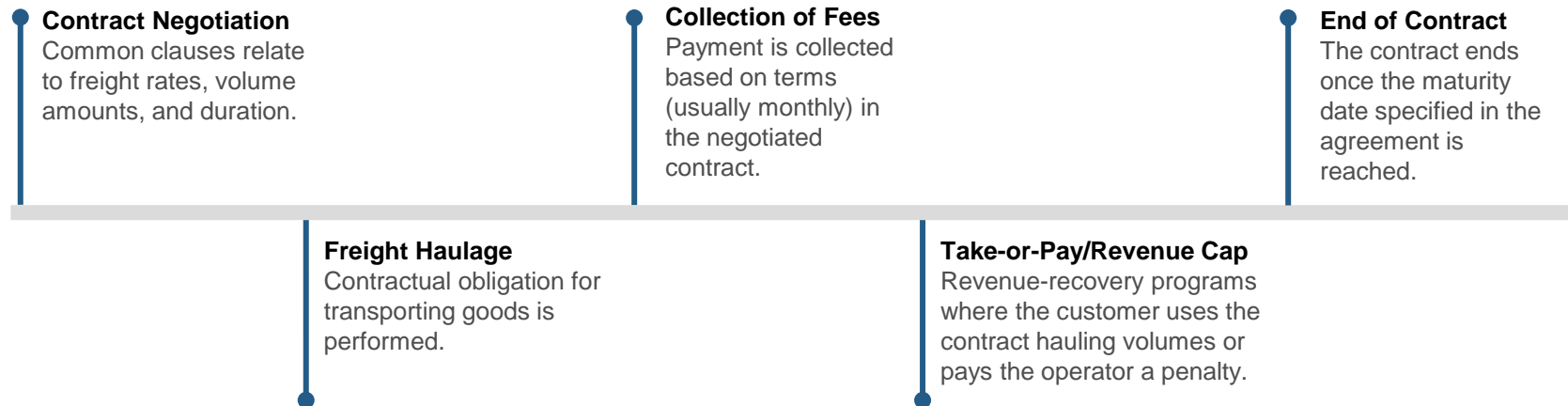
## Key Business Drivers



## FY2020 Operating Expenses (\$M)



## Process Chain For Revenue Generation



Source(s): Company Filings

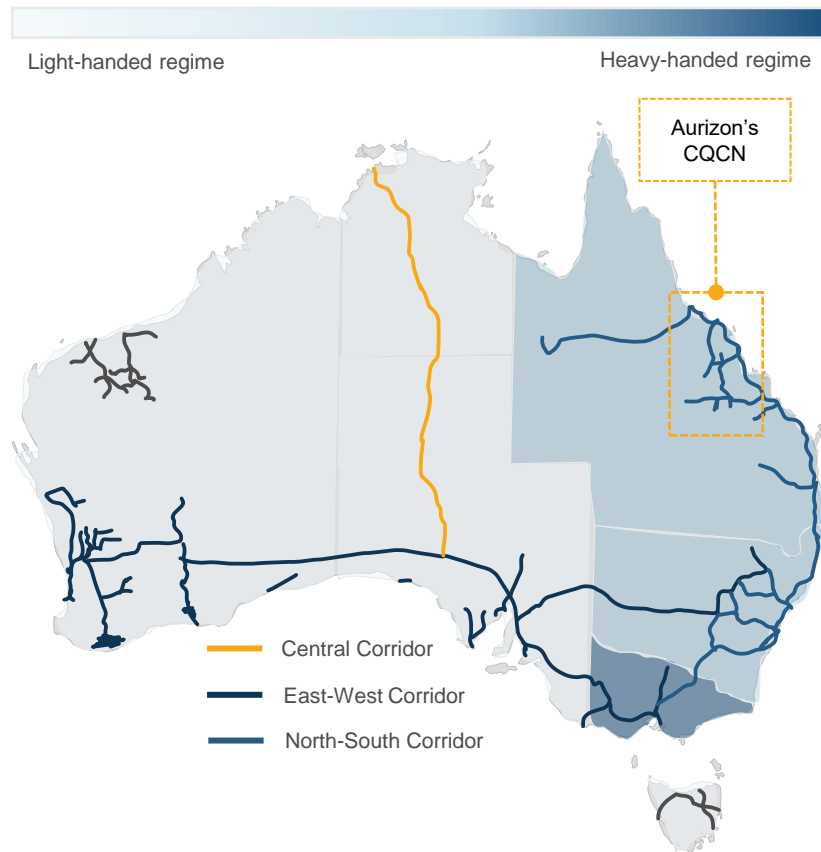
### III. Industry Overview

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Operators under regulation in the industry have little room for pricing advances and growth activities

Rail Corridors in Australia



Differences Between Regimes

Regime	Light Handed	Heavy Handed
<b>Regulatory Approach</b>	Negotiate/arbitrage model with legal obligation to negotiate with access seekers.	Direct control with revenue cap regulation and access arrangements approved by the regulator.
<b>Dispute Resolution</b>	Set out in legislation. Disputes are resolved through an escalation and can occur over a long timeframe.	Set out in access arrangements or the legislation. Shorter timeframe.
<b>Access Charges</b>	Access charges only set in the event of an arbitration dispute.	Access charges subject to revenue cap regulation.
<b>Impact on Operators</b>	Low protection and high uncertainty for operators. They have flexibility to negotiate terms and conditions that suit them.	High protection and certainty for operators. Access arrangements are even more detailed. Operators can still negotiate, but on a restricted basis.
<b>Impact on Regulators</b>	Low regulatory costs, although monitoring is usually required, and disputes may arise more often.	High regulatory costs in assessments, setting price methodologies and other activities.

Source(s): PwC

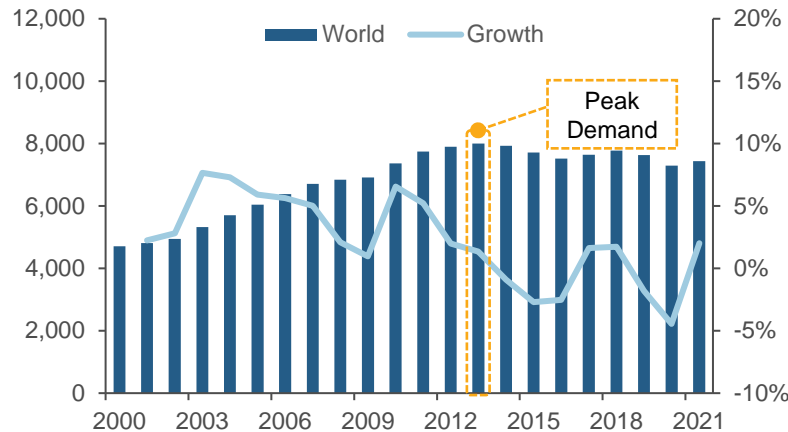


# Macroeconomic Outlook for Commodities

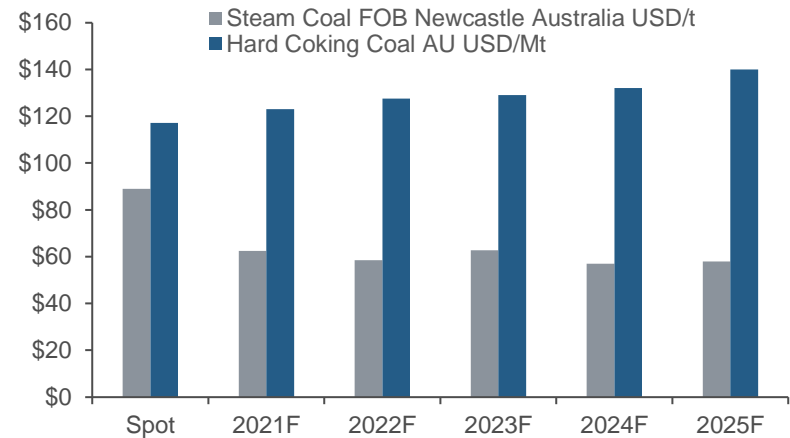
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Global coal consumption declining with producer capex, driving impact on thermal coal globally

## Global Coal Consumption (Mt) & Growth



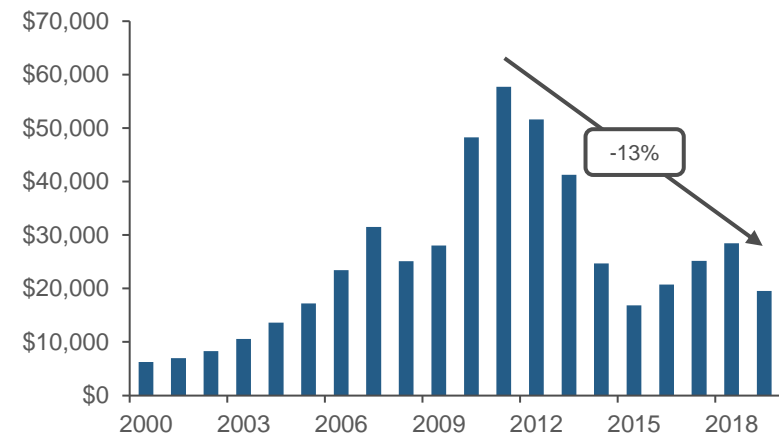
## Thermal Price Decline; Metallurgical Price Increase



## Downhill From Peak Demand in 2013

- Global coal consumption peaked at 8,000 Mt in 2013.
- Consumption decreased at a -1% CAGR 2013-2021.
- Thermal coal demand driven lower by increased renewable electricity generation and cost efficiencies in natural gas production.
  - CAGR 2021-2025: -8.6%.
- Metallurgical coal demand driven higher by increased demand for steel for renewable infrastructure development.
  - CAGR 2021-2025: 3.8%.
- Declining producer capital expenditures illustrates the lack of positive NPV projects, driven by increased competition for assets and poor outlook.

## Declining Global Coal Producer CAPEX (\$M USD)



Source(s): IEA, Bloomberg

## IV. ESG Analysis

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# Management and Compensation Overview

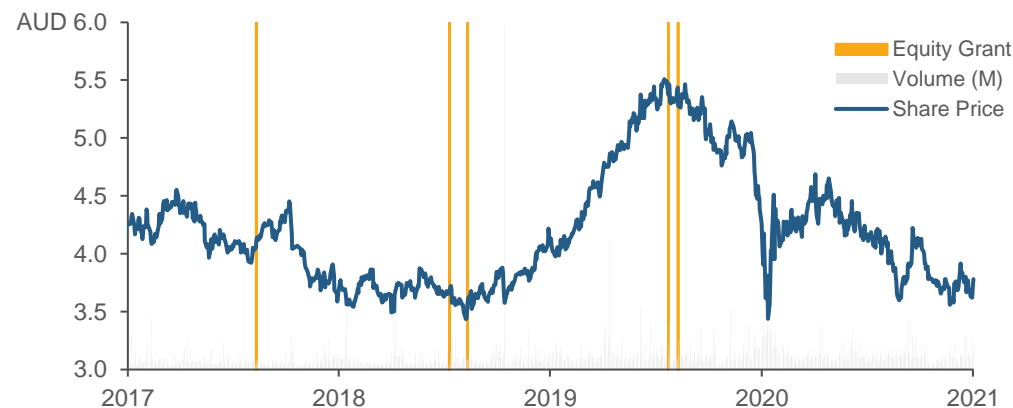
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Foundations exist but current practices impose a ceiling on growth opportunities for Aurizon

## Management Overview

Name	Andrew Harding	George Lippiatt	Pam Bains	Clayton McDonald	Edward McKeiver
Position	CEO	CFO	Network Executive	Bulk Executive	Coal Executive
Tenure	5	8	10	12	11
Background	B.Eng. and MBA. CEO Copper and Iron Ore at Rio Tinto.	KPMG Corp. Finance, VP Strategy and Head of Corporate Development at Aurizon.	Head of Finance at Telefonica, Controller at Ventura, Audit at Arthur Andersen.	GM Coal, VP Network Ops., VP Network Commercial at Aurizon.	B.Eng. And MBA. Director at RISSB. VP Coal Ops., VP Coal Marketing at Aurizon.

## Price-Volume Chart Overlaid with CEO Equity Grants



Source(s): Company Filings, CFA Institute, Capital IQ

## Compensation Rating: C+

- Our group views compensation as an integral part to evaluating governance due to the power it holds over economic actors.
- We ascribe an overall grade of C+ towards the compensation practices of the firm.
- For the most part, the firm has adhered to best practices, however lags sector peers in aligning NEOs to shareholders.
- The comparative group we used comprised Canadian National Railway, Union Pacific, Norfolk Southern, Canadian Pacific Rail, and CSX Corporation.

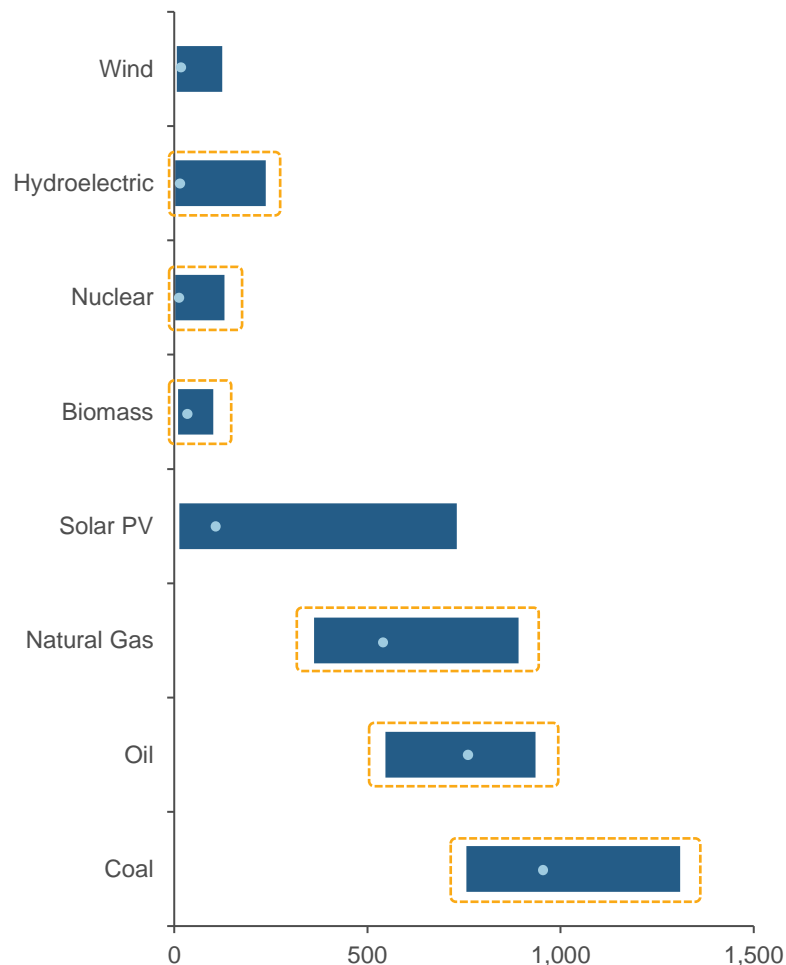
### Key Areas of Concern

- Lack of a clear definition of a peer group.
- Only partial use of external, independent compensation consultants.
- No specific guidance for the individual goal portion of short-term incentive awards.
- Pay mix for Aurizon's CEO comprises 24% fixed and 76% variable while peer CEOs have ~11% fixed and ~89% variable.
- Minimum share ownership for CEO is 1x annual salary while peer CEOs must hold ~6x.

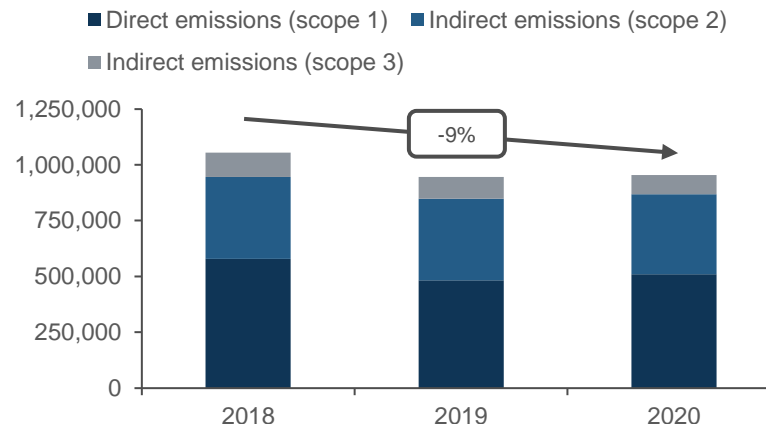
**Current pay mix and share ownership rules do not incentivize company growth and risk-taking.**

Aurizon's contribution to the coal industry produces a poor rating on the basis of scope 3 emissions

**Carbon Efficiency (Tonnes CO2 per GWh)**



**Aurizon's GHG Emissions (Metric Tonnes of CO2e)**



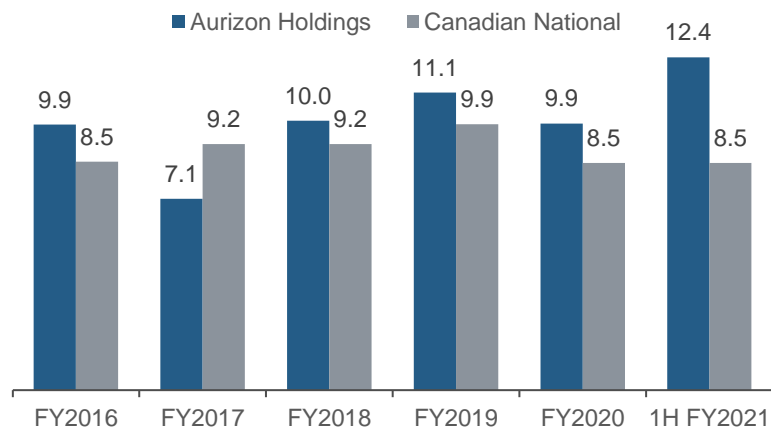
**Emissions Rating: D**

- Coal is the least carbon efficient source of electricity amongst its non-intermittent peers.
- Meaningful improvement has been achieved in scope 1 and 3 emissions; however, emissions that arise from the coal commodities that it transports are not included in scope 3.
  - TFS Investment Group undertakes the view that emissions arising from coal should be included in scope 3. This considerably worsens Aurizon's emissions.
- There is increasing pressure on Australia to make policy changes to meet climate change targets.
  - Bloomberg reported that a free trade deal being negotiated between the EU and Australia won't be ratified unless more is done to reduce emissions.

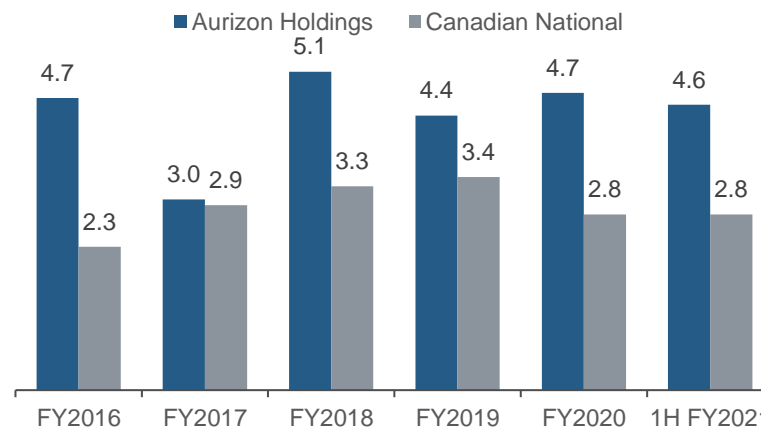
Source(s): Bloomberg, Company Filings

Aurizon’s injury frequency rates are comparably worse than its peer’s

**Injuries Per Million Person-Hours Worked<sup>1</sup>**



**Incidents Per Million Train-Kilometers Travelled<sup>1</sup>**



**Aurizon’s Glassdoor Reviews: ★★☆☆☆**

“Inept management. Management seem to have contempt for the workers. There are double standards and no accountability for management. Many have their own agenda and there is a culture of bullying.”

“Had the unfortunate circumstance of working for a manager [...] with an extremely toxic and destructive management style and [...] made regular comments to myself that my job security was at risk [...]”

While the most repeated complaint was related to management, the most repeated praise was for Aurizon’s pay.

**Employee Governance & Safety Rating: C**

- Our group believes that strong safety and employee governance are critical aspects for any firm. To operate, all businesses need employees and that’s why businesses should strive to keep their employees’ safety and well-being a priority.
- Specifically in the rail industry, rail workers are at higher risk of injury. In FY2020, Aurizon unfortunately suffered the loss of one train operator in a workplace-related incident.
- We ascribe Aurizon Holdings with a grade of C for its safety governance practices because of its rising injury frequency rates and underperformance relative to peers.
- Lastly, Aurizon’s Glassdoor reviews indicate a culture of bullying and toxicity perpetuated by its managers. This is concerning from an employment sustainability perspective.

Source(s): Company Filings, TFSIG Estimates, Glassdoor

1. Canadian National Railway 2021 figures were estimated using the most recent frequency rates

## V. Short Theses

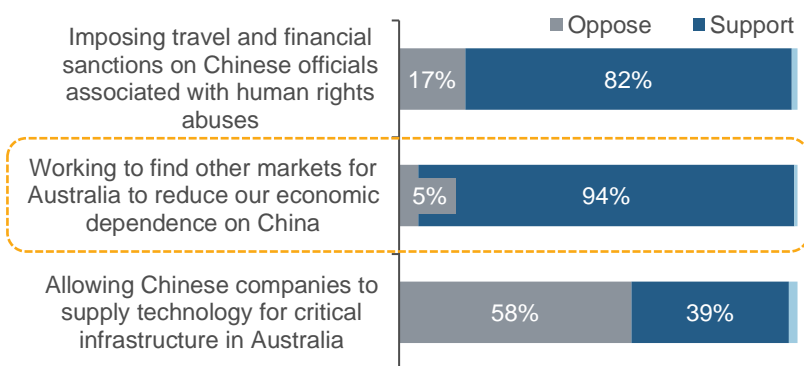
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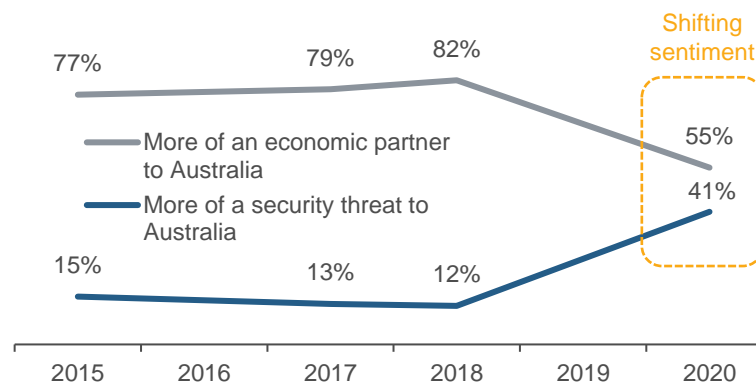
With no end in sight, Australia's commodity export market will suffer extended periods of difficulty

## Surveys of Australian Citizens Demonstrate That Australia Feels Increasingly Hostile to China

Survey participants' views on potential policies towards China



Survey participants' view of China as...



- April 2020**

Australian PM openly supports the call for investigation into the origins of the Coronavirus.
- May 2020**

Five major Australian beef exporters suspended from exporting to China.
- June 2020**

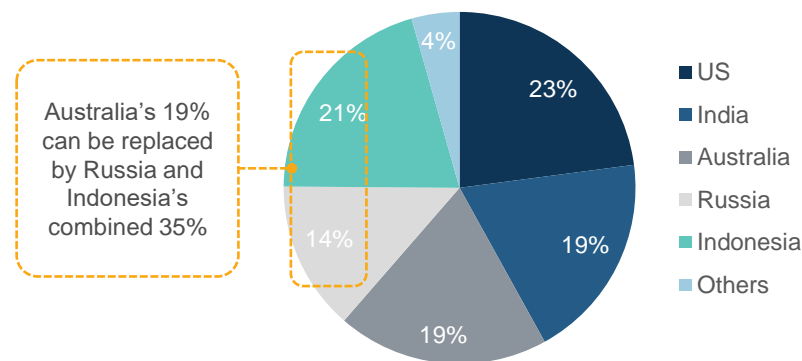
China issues a warning to those wishing to travel to Australia based on rising racial and/or discriminatory acts.
- November 2020**

China bans Australian copper ore and concentrates, timber, sugar, and wheat. Chinese copper imports from Australia cut by 50%.
- August 2020**

Chinese utilities and steel mills receive notice to stop importing Australian coal.
- August 2020**

Beijing and Canberra tensions force LNG exports from Australia to be postponed.

## China Import Partner Coal Production Capacity



Source(s): Lowy Institute, IEA, Bloomberg, ACR

# Poor Capital Allocation and a Declining Opportunity Set

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We see no material benefits to be realized with this acquisition and a closed runway for growth

## Unfit Addition to the Portfolio

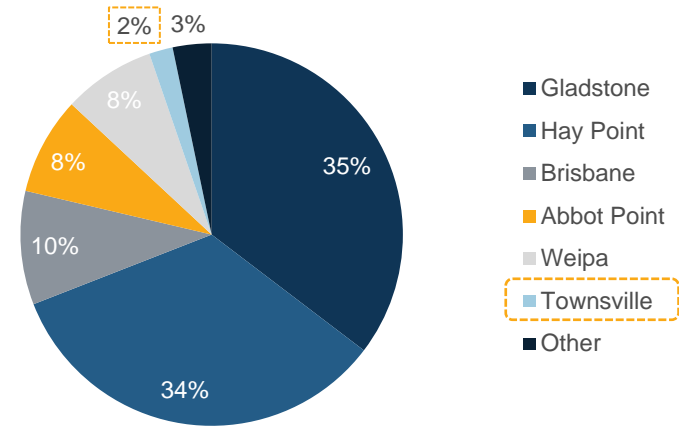
### Acquisition Overview

- \$25M acquisition of Townsville Bulk Storage & Handling.
- Acquisition is aimed at Bulk segment customers, contributing only of 16% of group revenue and 9% of group EBIT.
- Aurizon owns only 1 out of 8 competing terminals in the area.
- From our call with Aurizon, we could not ascertain any tangible benefits from this acquisition.
- For Bulk customers, the administrative convenience isn't a significant selling point.

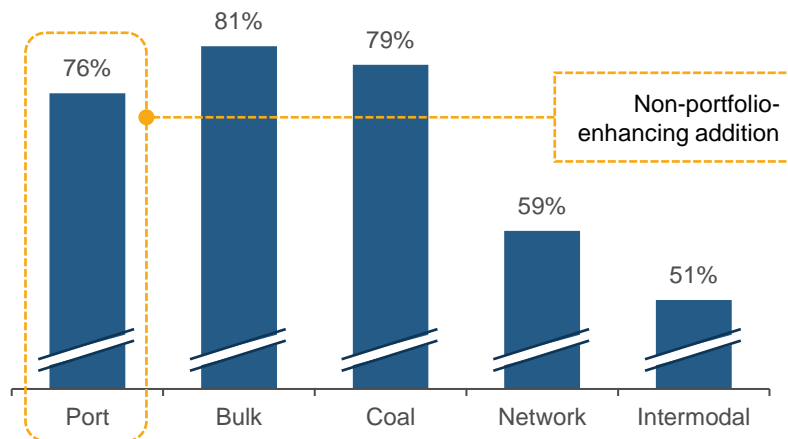
### Sunset Industry

- Aurizon operates in a sunset industry that is stifled by regulatory practices.
- The firm is finding it increasingly difficult to allocate capital towards growth opportunities.
- Not to mention, compensation practices stifle growth as well.

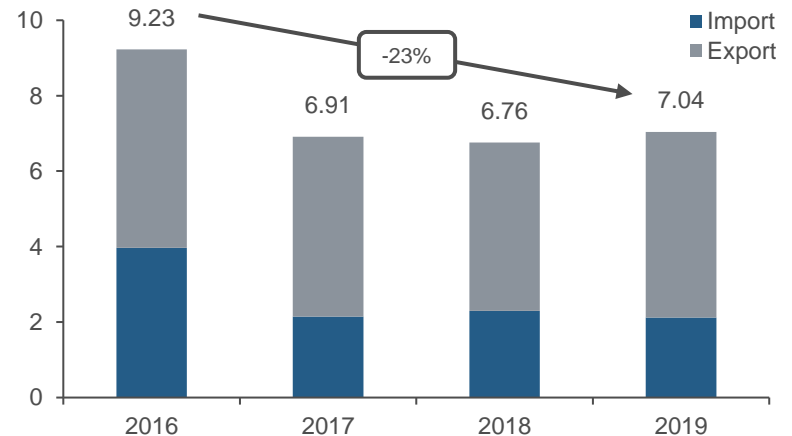
## The Port Only Commands a 2% Share in Queensland



## Business Unit Operating Ratios<sup>1</sup>



## Townsville Port Throughput (Mt) Is On The Decline



Source(s): Company Filings, Ports Australia, Investor Relations

1. Operating ratio is calculated by dividing operating expenses by revenues. Also note that Intermodal is a discontinued operation.

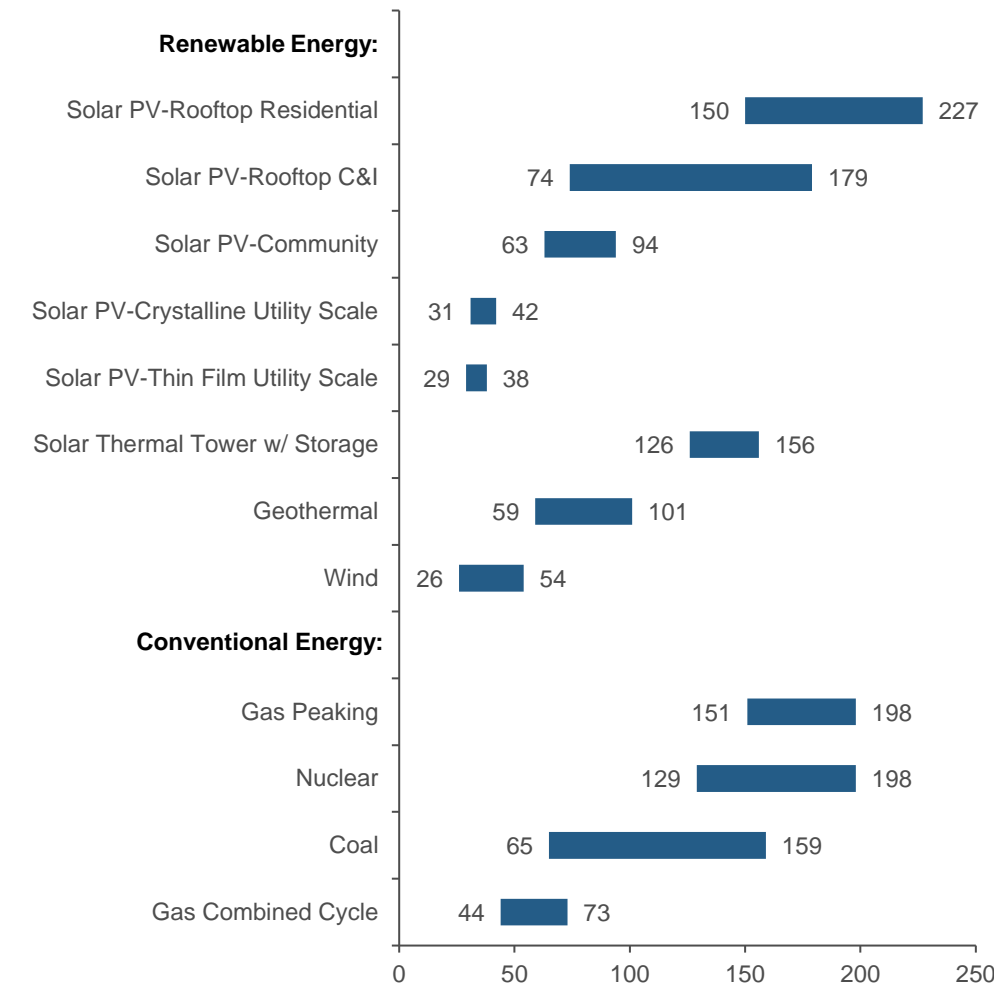


# Renewable Viability and Shifting Policies

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Select cost-competitive renewable sources will lead the way for the wider adoption of renewables

## Levelized Cost of Energy Across Sources (\$USD/mWh)<sup>1</sup>



## China

- Metallurgical coal used for steelmaking will remain a key driver of demand.
- Thermal coal is being targeted for phase outs in the long-term.
- Despite coal generation capacity coming online in China, these are situated in Inner Mongolia and Shaanxi, 2 coal producing economies.
- Plants close to coal mining hubs account for 75% of approved capacity.
- Furthermore, the CNCA proposes capping consumption at 4.2B tonnes p.a. by 2025.
  - This represents 1.02x 2020 consumption, indicating a peak demand for coal.

## India

- Coal-fired power generation declined 4.5% in 2020 in favour of a shift to renewables.
  - Y/Y April'20 generation down 30%.
- Akin to China, metallurgical coal will remain a key driver of demand while thermal coal will be phased out over the long-term.
- India is opening renewable projects for international investment and auctions to drive investment in a cost-effective way.
- The likes of KKR and CDPQ have started investing in India.
- India has ambitious targets to increase renewables to 44% of installed capacity by 2027.

Source(s): Lazard, IEA, Reuters

1. Values are estimated without the effect of subsidies

## VI. Valuation

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See appendices for full model output

Coal Revenue	<ul style="list-style-type: none"> <li>Coal volumes tapering off by ~4% p.a. due to decline in contracted volumes and long-term contract renewal rates. Coal revenue/tonne to slowly decline from 8.0 to 7.0 over the projection period. <ul style="list-style-type: none"> <li>Overall decline due adverse effects of China's trade war, difficulties in relocating coal, renewable tailwinds, and international pressures to phase coal out.</li> </ul> </li> </ul>
Bulk Revenue	<ul style="list-style-type: none"> <li>Bulk volumes declining by ~1.8% p.a. within first 3 years due to lasting effects of the China trade war; offset by increasing volumes of ~2.3% p.a. afterwards due to renewed cyclical commodity strength and exposure to renewable-critical minerals. Bulk revenue/tonne to stay consistent at 11.8 (3-year average). <ul style="list-style-type: none"> <li>Overall strengthened segment due to renewable tailwinds and timing of commodity cycle.</li> </ul> </li> </ul>
Network Revenue	<ul style="list-style-type: none"> <li>Network volumes declining by ~3% p.a. due to CQCN asset being structured around coal mines. Network revenue/tonne to stay constant at 5.3 (3-year average). <ul style="list-style-type: none"> <li>Heavy exposure to coal leads us to forecast declining volumes; partially offset by take-or-pay protection.</li> </ul> </li> </ul>
Operating Expenses (% of Revenue)	<ul style="list-style-type: none"> <li>Energy &amp; fuel to fall as a percentage of revenue from 3-year average by 40bps due to Precision Project rollout.</li> <li>Track access, consumables, and G&amp;A to stay consistent with 3-year average.</li> </ul>
Capex (% of Revenue)	<ul style="list-style-type: none"> <li>\$518M capex estimated in FY21 per midpoint of management guidance.</li> <li>Declining from 18% of revenues to 14% by end of projection period due to declining need for maintenance (due to falling volumes).</li> </ul>
Depreciation (% of Revenue)	<ul style="list-style-type: none"> <li>200bps above capex percentage of revenue per historical trend.</li> <li>Reflects lack of significant investment opportunities in fleet acquisition or M&amp;A.</li> </ul>
Δ Non-Cash Working Capital (% of Revenue)	<ul style="list-style-type: none"> <li>Days sales outstanding to increase slightly by 2 days by end of projection period.</li> <li>Days payables outstanding to decline significantly from 42 to 32 by end of projection period; driven by increased gearing and tightening credit conditions.</li> </ul>

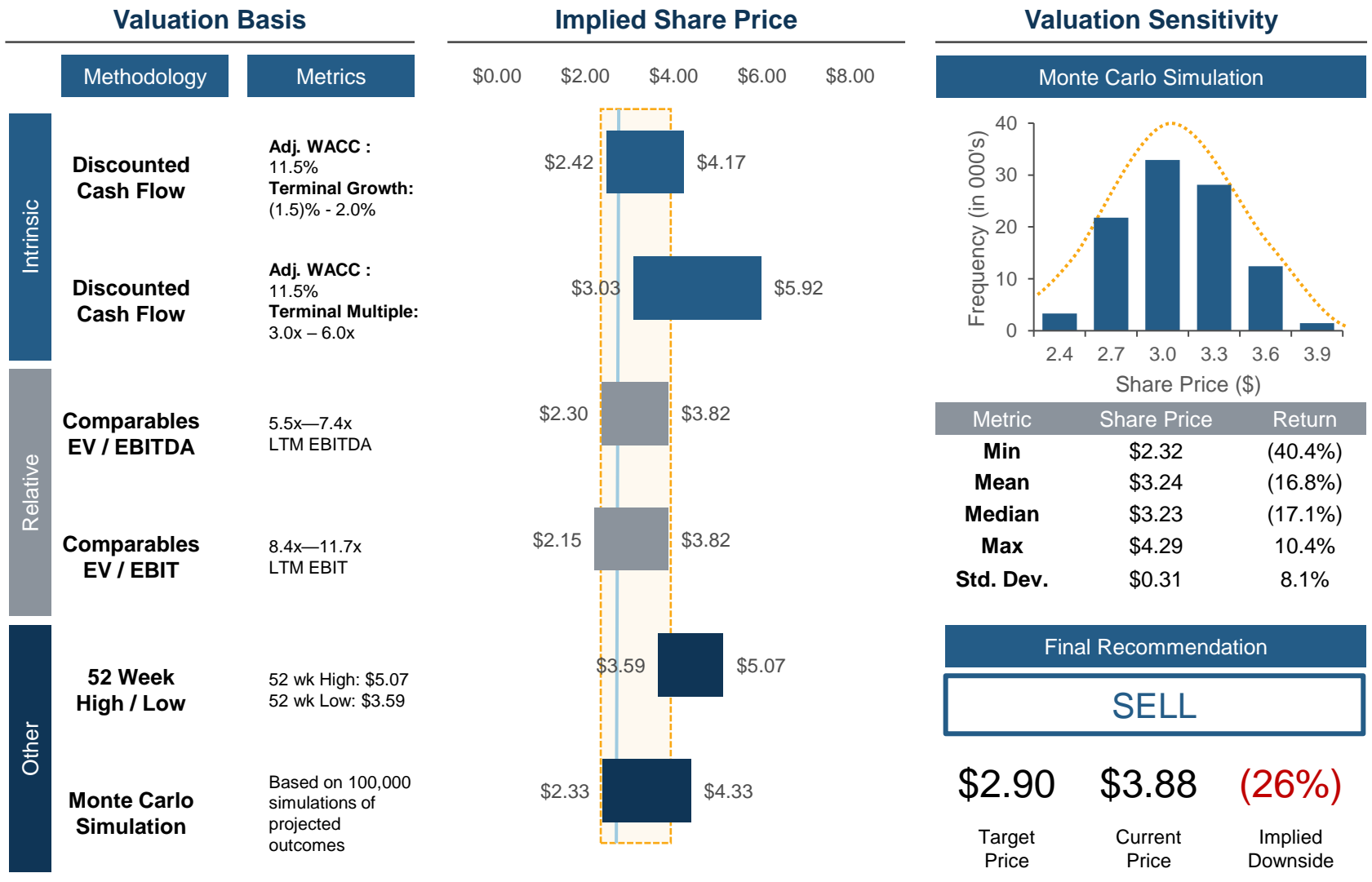
<i>All in \$ M</i>	FY20	LTM	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33
<b>Consolidated</b>	<b>3,064.5</b>	<b>3,034.1</b>	<b>2,869.5</b>	<b>2,717.7</b>	<b>2,607.9</b>	<b>2,526.8</b>	<b>2,439.3</b>	<b>2,370.2</b>	<b>2,299.4</b>	<b>2,232.3</b>	<b>2,179.1</b>	<b>2,128.7</b>	<b>2,079.7</b>	<b>2,026.2</b>	<b>1,965.4</b>
Coal	1,775.3	1,702.1	1,634.2	1,489.8	1,400.8	1,334.0	1,252.9	1,192.5	1,128.9	1,068.5	1,020.4	974.5	925.8	879.5	831.1
Bulk	608.8	633.0	553.4	542.3	536.9	542.3	553.1	564.2	575.5	587.0	601.6	616.7	635.2	654.2	673.9
Network	1,188.5	1,185.6	1,208.0	1,183.8	1,148.3	1,113.9	1,080.4	1,048.0	1,016.6	986.1	956.5	927.8	900.0	864.0	820.8
Other	40.7	26.6	34.0	32.2	30.9	29.9	28.9	28.0	27.2	26.4	25.8	25.2	24.6	24.0	23.3
Internal Eliminations	(548.8)	(513.2)	(560.0)	(530.4)	(509.0)	(493.2)	(476.1)	(462.6)	(448.8)	(435.7)	(425.3)	(415.5)	(405.9)	(395.5)	(383.6)

Source(s): Investor Relations, Company Filings, TFSIG Estimates

# Valuation Summary

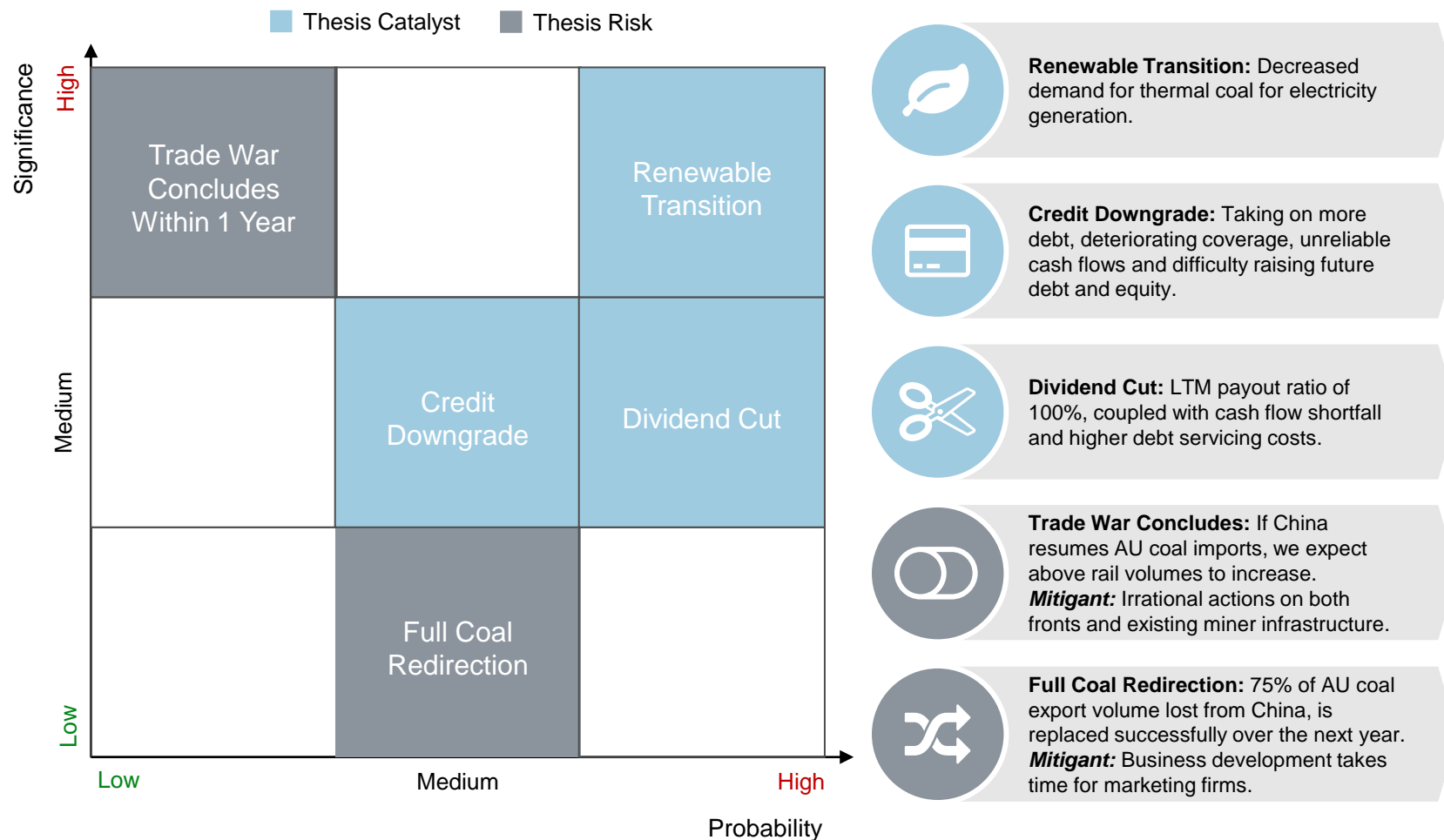
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Using our base case, we arrive at a target price of \$2.90 with an implied downside of 26%



Source(s): TFSIG Estimates, Yahoo Finance

Catalysts for the short thesis outweigh upside risks in both probability and significance



Source(s): Bloomberg, IEA, Investor Relations

## VII. Appendices

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**Main Presentation**

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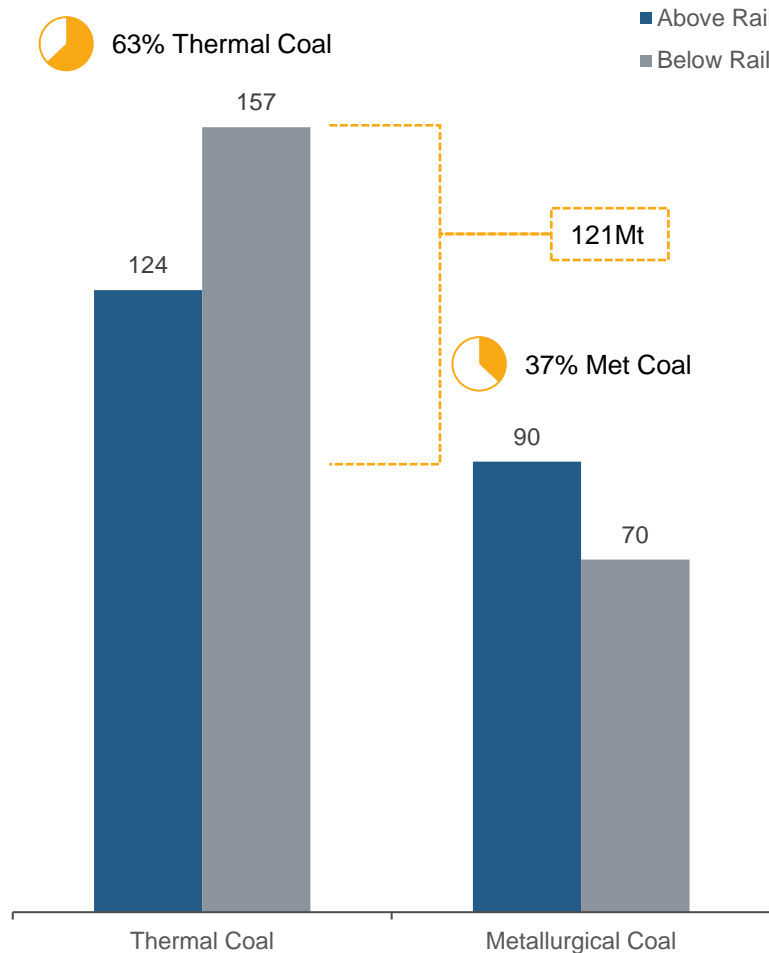
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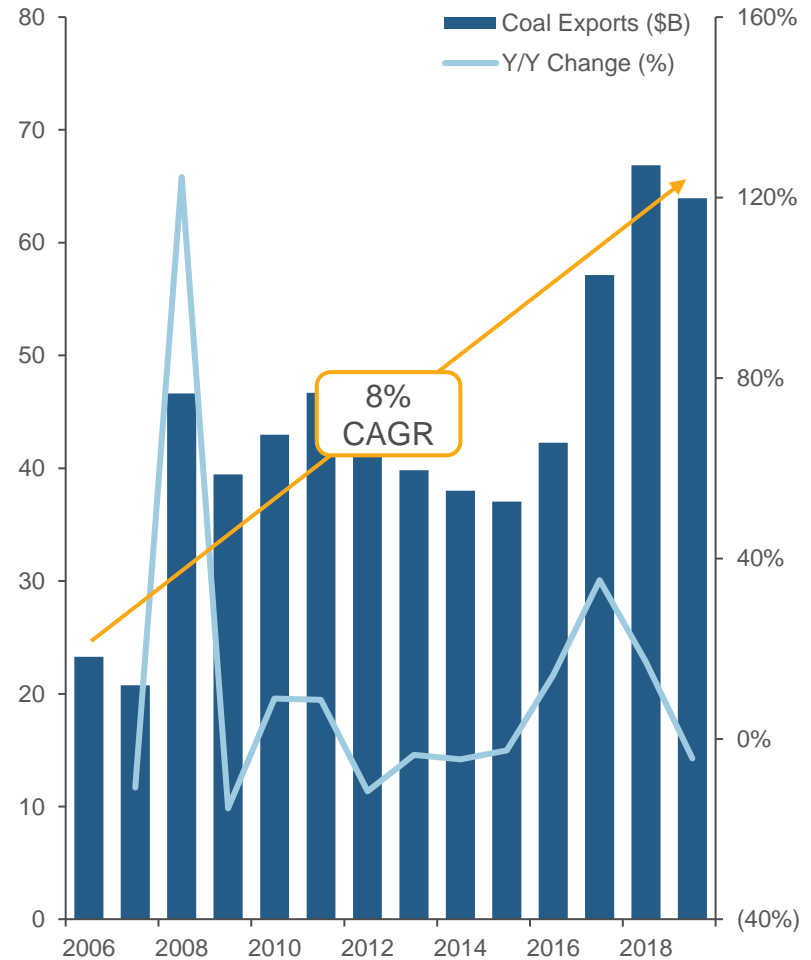
# Australian and Aurizon Coal Exposure

Approximately 80% of Aurizon's revenues relate to Australia's 2<sup>nd</sup> largest export, coal

## Aurizon's Exposure to Thermal Coal is Higher than That of Metallurgical Coal by a Factor of 1.8x



## Australia's Own Exposure to Coal Has Been on the Rise As Well

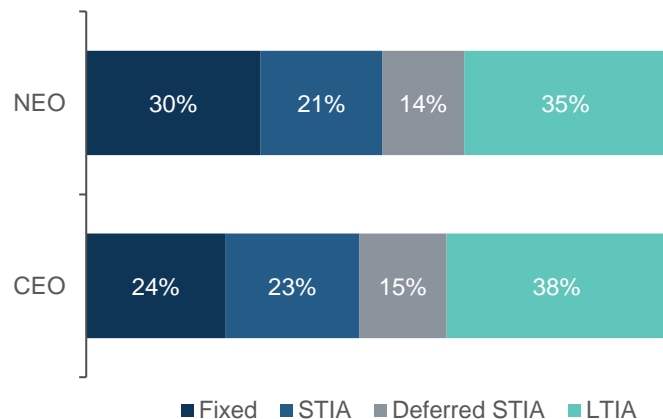


Source(s): Australian Bureau of Statistics, Company Filings



Form of Compensation	Description	Caps	KPIs
Fixed Remuneration	Salary and other benefits	--	--
Short-term Incentive Awards (STIA)	“At risk” compensation in the form of cash bonuses or equity vesting after 12 months. STIA are awarded on the performance period of 12 months.	<b>CEO:</b> target 100% of fixed, max 150% <b>KMP:</b> target 75% of fixed, max of 112.5%	EBIT, safety, individual targets set out by the Board
Long-term Incentive Awards (LTIA)	“At risk” compensation in the form of equity. LTIA are awarded on the performance period of 4 years.	<b>CEO:</b> max 150% <b>KMP:</b> max 112.5%	Relative TSR, ROIC

Detailed Pay Mix for Aurizon CEO and NEOs

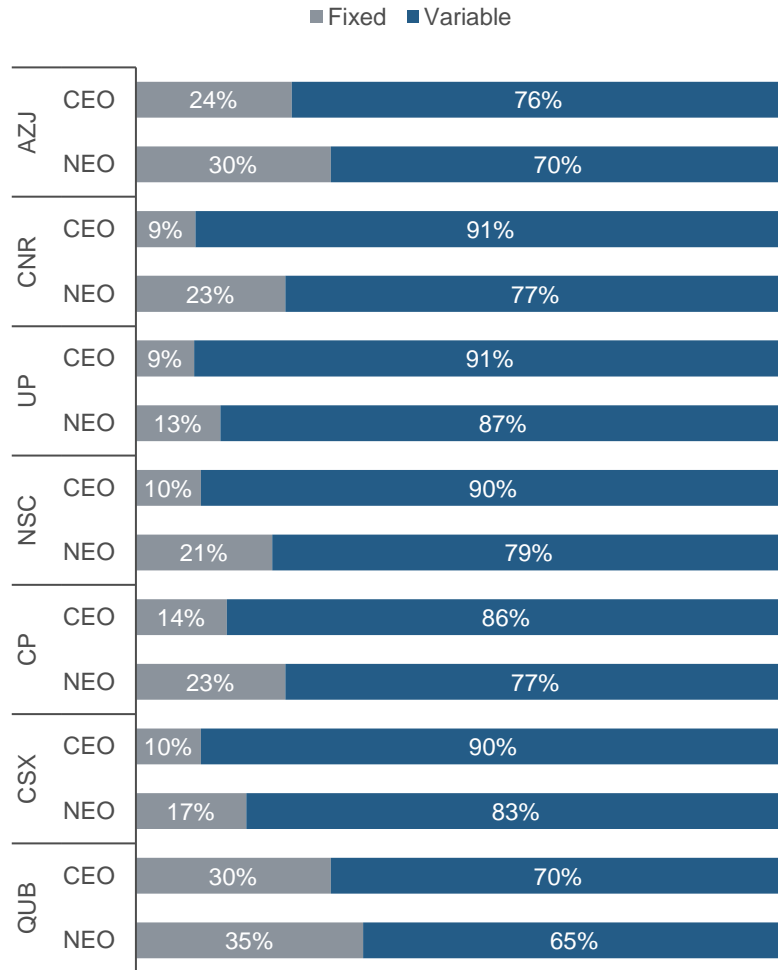


Notes on Compensation

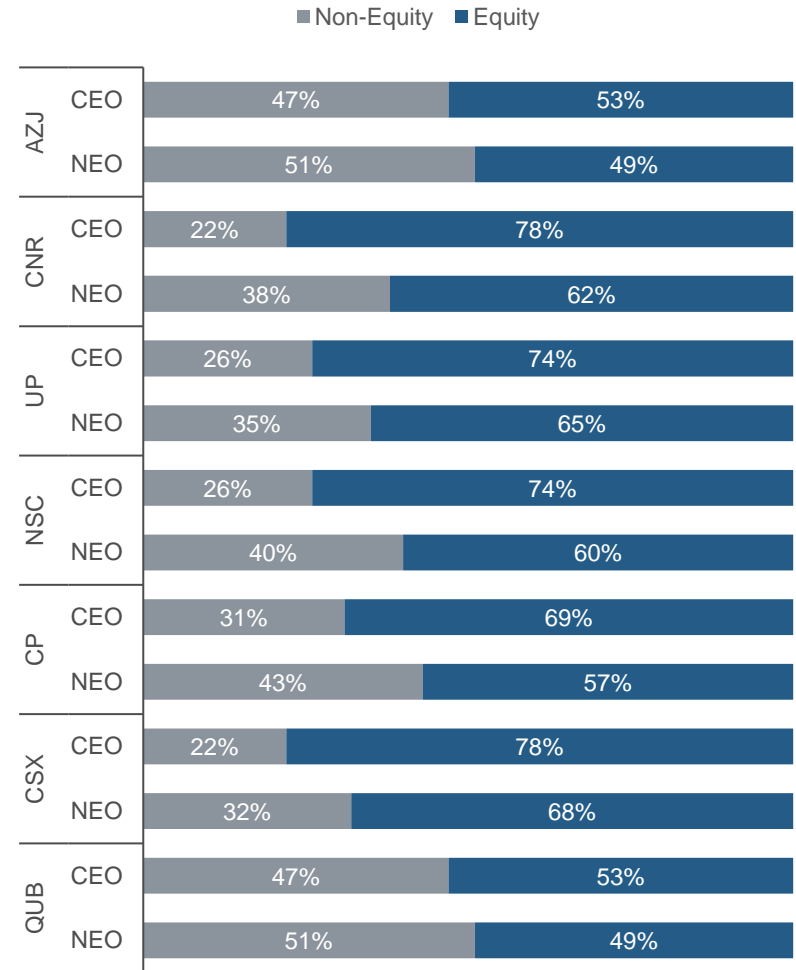
- In FY2021, the compensation board lessened fixed compensation in favour of long-term incentive awards.
- LTIA maximum payout will be increased from 120% to 150% in FY2021 for the CEO.
- During FY2020, only the 3-year TSR award vested (relative to FY2017). No portion of the ROIC component vested.
- 2017 ROIC target of average 10.5% over a four-year period
- Average ROIC target upped from 9% in FY2018 to 9.5% in 2019/20 to reflect current business outlook.
- KPIs only focused on EBIT and ROIC whereas peers use EPS and FCF as well.

Most peers are increasingly structuring compensation to rely on pay-for-performance

**Fixed (Salary) Pay vs. Variable (Bonus) Pay Mix**



**Non-Equity Pay vs Equity Pay Mix**

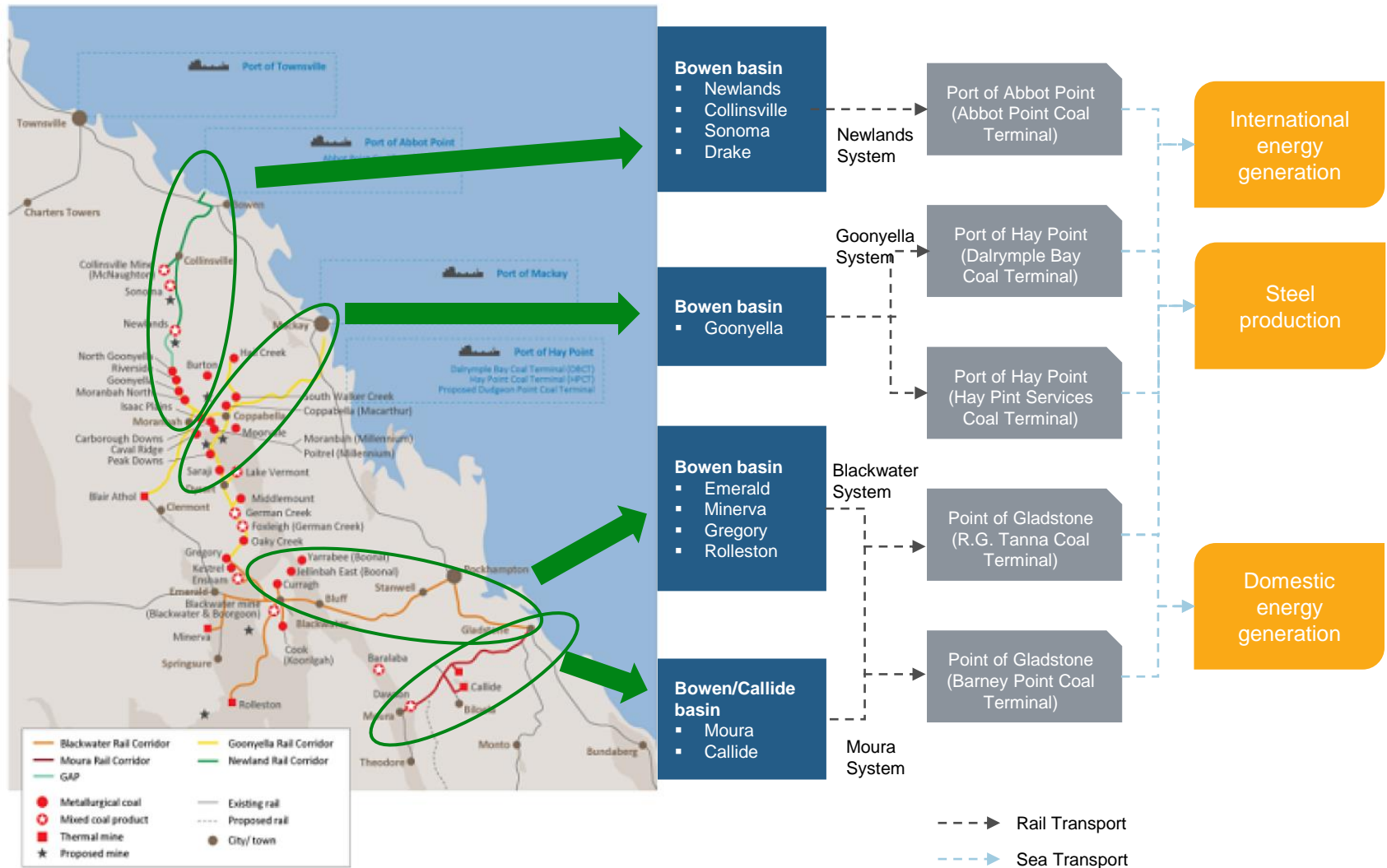


Source(s): Company Filings

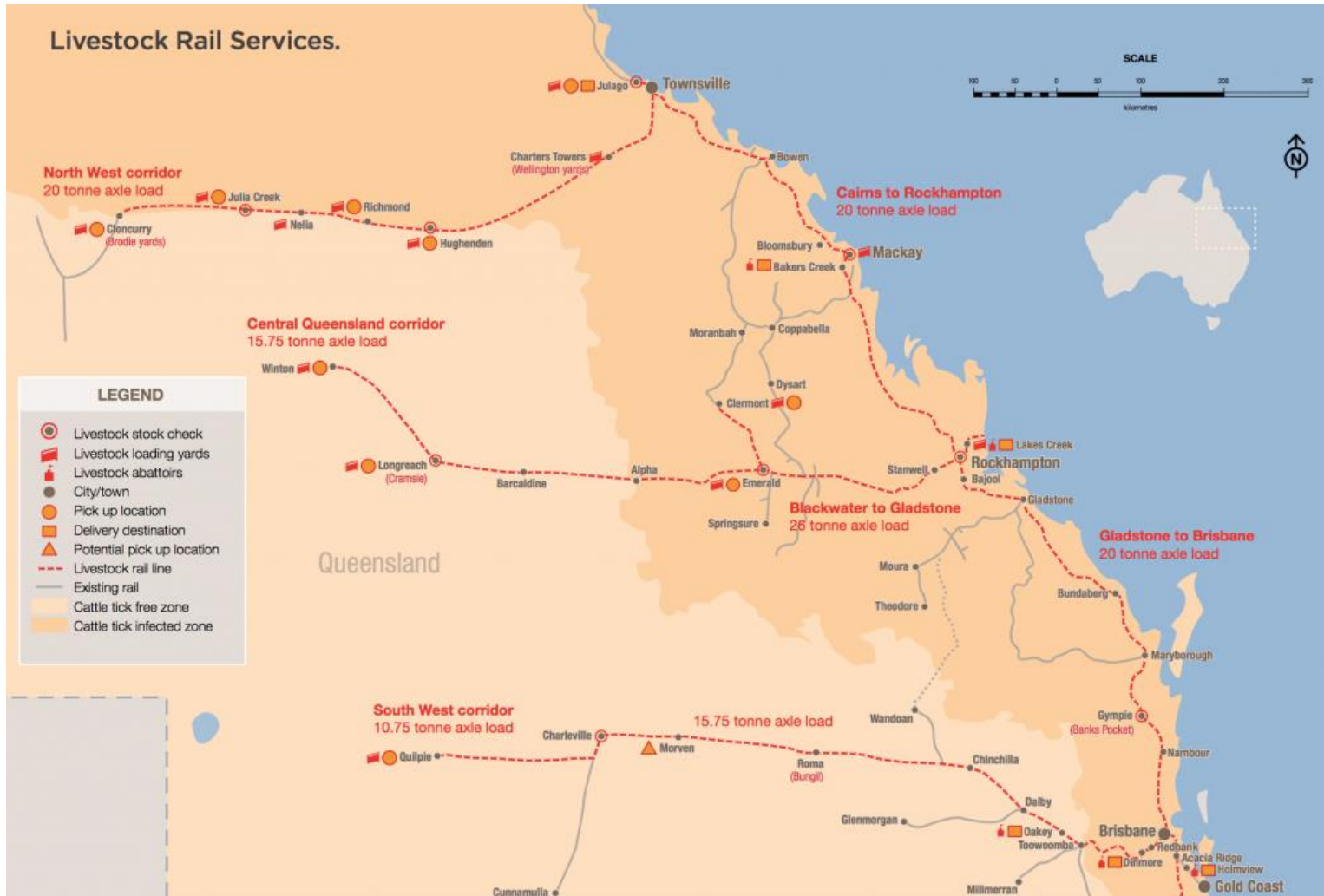
## Share Ownership Comparison

Most peers require substantial more share ownership for its management team relative to Aurizon

Company	Ticker	CEO	KMP/NEO	Time to meet requirement
Aurizon	AZJ	1x	0.5x	6
CNR	CNR	8x	1.5x – 5x	5
Union Pacific	UP	7x	4x	--
Norfolk Southern	NSC	5x	1x – 3x	5
CP Rail	CP	6x	1x – 3x	5
CSX Corp.	CSX	6x	1x – 4x	5



Source(s): Company Filings



Source(s): Company Filings

## 2018 Capital Allocation Framework



- Ongoing operating cash flows and NOPAT.
- Borrowings from debt issuance.
- Driven by credit ratings and asset-based lending.
- Maintenance capital expenditures scaling with volume.
- Target of 70% to 100% payout ratio (relative to NPAT).
- Share repurchases.
- Tuning capital structure.
- Selective growth projects.



## 2020 Capital Allocation Framework

Our target price represents the base case, but we run a scenario analysis to cover our bases

	Bear	Base	Bull
Above Rail Revenue	<ul style="list-style-type: none"> <li>Coal volumes declining by ~5% p.a. due to declines in contracted volumes.</li> <li>Bulk volumes declining slightly, followed by an increase of ~1.3% p.a.</li> </ul>	<ul style="list-style-type: none"> <li>Coal volumes declining by ~4% p.a. due to declines in contracted volumes.</li> <li>Bulk volumes declining slightly, followed by an increase of ~2.3% p.a.</li> </ul>	<ul style="list-style-type: none"> <li>Coal volumes declining by ~2% p.a. due to declines in contracted volumes.</li> <li>Bulk volumes declining slightly, followed by an increase of ~4% p.a.</li> </ul>
Network Revenue	<ul style="list-style-type: none"> <li>CQCN volumes declining by ~1% p.a.</li> <li>Revenue/tonne at 5.3.</li> </ul>	<ul style="list-style-type: none"> <li>CQCN volumes declining by ~3% p.a.</li> <li>Revenue/tonne at 5.3.</li> </ul>	<ul style="list-style-type: none"> <li>CQCN volumes declining by ~1% p.a.</li> <li>Revenue/tonne at 5.3.</li> </ul>
Operating Expenses (% of Revenue)	<ul style="list-style-type: none"> <li>Consistent with base case.</li> </ul>	<ul style="list-style-type: none"> <li>Energy &amp; fuel at 7%.</li> <li>Track access at 3.3%.</li> <li>Consumables at 14.7%.</li> <li>G&amp;A at 26.4%.</li> </ul>	<ul style="list-style-type: none"> <li>Energy &amp; fuel at 6%.</li> <li>Track access at 3%.</li> <li>Consumables at 14.7%.</li> <li>G&amp;A at 24%.</li> </ul>
Working Capital	<ul style="list-style-type: none"> <li>3-day increase to DSO relative to base case.</li> <li>DPO and other items consistent with base case.</li> </ul>	<ul style="list-style-type: none"> <li>DSO at 55 days, slowly rising to 58 days by end of projections.</li> <li>DPO at 42 days, declining to 32 by end of projections.</li> <li>Driven by deteriorating coal miner operations, increased gearing and tightened credit conditions.</li> </ul>	<ul style="list-style-type: none"> <li>3-day decline to DSO relative to base case.</li> <li>8-day increase to DPO relative to base case.</li> </ul>
Refinancing and Interest Coverage	<ul style="list-style-type: none"> <li>Revolver refinance rate at 4%.</li> <li>Long-term debt refinancing at 10%</li> <li>Rapid change; firm can't deleverage.</li> </ul>	<ul style="list-style-type: none"> <li>Revolver refinance rate at 3%.</li> <li>Long-term debt refinancing at 7%.</li> </ul>	<ul style="list-style-type: none"> <li>Revolver refinance rate at 2%.</li> <li>Long-term debt refinancing at 6%.</li> <li>No financing issues.</li> </ul>
China Trade War	<ul style="list-style-type: none"> <li>Maintenance of current tariffs and trade blockades on coal, copper, sugar, wheat, timber, etc.</li> <li>Lasting throughout project period.</li> </ul>	<ul style="list-style-type: none"> <li>Maintenance of current tariffs and trade blockades on coal, copper, sugar, wheat, timber, etc.</li> <li>Lasting at least 3 years (akin to US-China trade war since 2018).</li> </ul>	<ul style="list-style-type: none"> <li>Trade war ends within 2021.</li> <li>Tariffs on coal and bulk commodities are removed.</li> <li>FDI resumes.</li> </ul>
Renewables Transition	<ul style="list-style-type: none"> <li>Collective effort by major countries to shift towards net-zero emissions.</li> <li>Tightened financing regulations for coal-associated companies, forcing asset managers to divest coal.</li> </ul>	<ul style="list-style-type: none"> <li>Shift to renewables remains a priority and makes progress over the next decade.</li> <li>Major coal consumers follow through on projected policies and agreements.</li> <li>Difficult equity financing due to asset manager non-association with coal.</li> </ul>	<ul style="list-style-type: none"> <li>Shift to renewables takes longer than anticipated.</li> <li>Major coal consumers (US, China, India) regress towards coal.</li> <li>Lenient policies and governance for coal phase out.</li> </ul>
ESG	<ul style="list-style-type: none"> <li>Safety governance stays lagging.</li> <li>Compensation altered to de-incentivize growth.</li> </ul>	<ul style="list-style-type: none"> <li>Compensation stays consistent with current practices.</li> </ul>	<ul style="list-style-type: none"> <li>Compensation restructured and lenient Australian regulation allow for growth M&amp;A.</li> </ul>

# Discounted Cash Flow Output

Using our base case assumptions, we arrive at an implied downside of 26%

All in \$ M	LTM	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33
Revenue	3,034.1	2,869.5	2,717.7	2,607.9	2,526.8	2,439.3	2,370.2	2,299.4	2,232.3	2,179.1	2,128.7	2,079.7	2,026.2	1,965.4
% growth		(6.4%)	(5.3%)	(4.0%)	(3.1%)	(3.5%)	(2.8%)	(3.0%)	(2.9%)	(2.4%)	(2.3%)	(2.3%)	(2.6%)	(3.0%)
EBITDA	1,493.4	1,394.6	1,320.8	1,267.5	1,228.1	1,185.5	1,152.0	1,117.6	1,084.9	1,059.1	1,034.6	1,010.8	984.8	955.2
% margin		49.2%	48.6%	48.6%	48.6%	48.6%	48.6%	48.6%	48.6%	48.6%	48.6%	48.6%	48.6%	48.6%
EBIT	926.3	817.6	755.6	728.7	706.1	722.1	725.3	726.7	705.4	732.2	715.3	698.8	680.9	660.4
% margin		30.5%	28.5%	27.8%	27.9%	27.9%	29.6%	30.6%	31.6%	31.6%	33.6%	33.6%	33.6%	33.6%
Tax on EBIT	(227.8)	(203.0)	(184.4)	(166.3)	(159.5)	(163.1)	(164.1)	(148.8)	(142.4)	(137.8)	(132.8)	(127.8)	(122.4)	(116.3)
<b>NOPAT</b>	<b>698.5</b>	<b>614.5</b>	<b>571.1</b>	<b>562.5</b>	<b>546.6</b>	<b>559.0</b>	<b>561.3</b>	<b>577.9</b>	<b>563.1</b>	<b>594.4</b>	<b>582.5</b>	<b>571.0</b>	<b>558.4</b>	<b>544.1</b>
(+) Depreciation & amortization	567.1	577.1	565.3	538.7	522.0	463.5	426.6	390.9	379.5	326.9	319.3	311.9	303.9	294.8
% of revenue		18.7%	20.1%	20.8%	20.7%	19.0%	18.0%	17.0%	17.0%	15.0%	15.0%	15.0%	15.0%	15.0%
(-) Changes in net working capital	(21.2)	23.5	(7.1)	9.2	8.2	21.2	13.3	18.8	17.7	(0.9)	(0.9)	(0.8)	(0.9)	(1.0)
% of revenue		0.7%	(0.8%)	0.3%	(0.4%)	(0.3%)	(0.9%)	(0.6%)	(0.8%)	(0.8%)	0.0%	0.0%	0.0%	0.1%
(-) Capital expenditures	545.2	518.0	449.8	429.0	413.1	396.4	383.5	369.1	334.8	305.1	298.0	291.2	283.7	275.2
% of revenue		(18.0%)	(18.1%)	(16.6%)	(16.5%)	(16.4%)	(16.3%)	(16.2%)	(16.1%)	(15.0%)	(14.0%)	(14.0%)	(14.0%)	(14.0%)
(-) Debt service		140.8	(309.2)	174.6	174.6	178.5	178.5	230.8	230.8	272.7	272.7	272.7	272.7	272.7
% of revenue		4.9%	(11.4%)	6.7%	6.9%	7.3%	7.5%	10.0%	10.3%	12.5%	12.8%	13.1%	13.5%	13.9%
<b>Levered free cash flows (LFCF)</b>	<b>741.6</b>	<b>509.2</b>	<b>1,002.9</b>	<b>488.5</b>	<b>472.7</b>	<b>426.4</b>	<b>412.6</b>	<b>350.1</b>	<b>359.2</b>	<b>344.3</b>	<b>331.9</b>	<b>319.9</b>	<b>306.9</b>	<b>292.1</b>
% margin		17.7%	36.9%	18.7%	18.7%	17.5%	17.4%	15.2%	16.1%	15.8%	15.6%	15.4%	15.1%	14.9%
Discount factor (cost of equity = 6.9%)		1.0	1.0	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7
<b>Present value of LFCF</b>		<b>503.6</b>	<b>958.7</b>	<b>451.3</b>	<b>422.0</b>	<b>367.9</b>	<b>344.1</b>	<b>282.1</b>	<b>279.7</b>	<b>259.2</b>	<b>241.5</b>	<b>224.9</b>	<b>208.5</b>	<b>191.8</b>

DCF Valuation Output	
Long-term growth rate	(1.0%)
Enterprise value	9,697.3
Net debt	4,300.5
Equity value	5,396.8
Shares outstanding	1,863.3
Equity value per share	\$2.90
Implied upside/downside	(26%)

		Long term growth rate (g):				
		(2.0%)	(1.5%)	(1.0%)	(0.5%)	0.0%
Discount rate	9.0%	(31.9%)	(31.7%)	(31.5%)	(31.2%)	(31.0%)
	8.0%	(29.2%)	(28.9%)	(28.6%)	(28.3%)	(28.0%)
	7.0%	(26.1%)	(25.8%)	(25.5%)	(25.0%)	(24.5%)
	6.0%	(22.5%)	(22.1%)	(21.6%)	(21.0%)	(20.4%)
	5.0%	(18.3%)	(17.7%)	(17.0%)	(16.3%)	(15.5%)



Trading multiples against Tier 1 large cap peers

*All in \$M, except per share data and percentages*

Company	Enterprise Value/					Price/
	LTM Sales	LTM EBITDA	LTM EBIT	LTM FFO	LTM EPS	
Aurizon Holdings Limited	3.6x	7.4x	11.7x	8.3x	13.7x	
Income Statement Figure:	3,034	1,468	929	1,321	0.28	
<b>Tier 1: Large-Cap</b>						
Union Pacific Corporation	8.6x	16.7x	21.4x	19.8x	27.2x	
Canadian National Railway Company	8.6x	16.6x	21.4x	19.3x	29.5x	
CSX Corporation	8.0x	14.6x	19.1x	19.8x	25.8x	
Norfolk Southern Corporation	7.9x	16.7x	22.3x	21.3x	33.3x	
Canadian Pacific Railway Limited	9.7x	17.0x	20.4x	26.6x	26.6x	
Transurban Group	16.5x	33.0x	nmf	61.6x	nmf	
Kansas City Southern	9.2x	17.4x	23.4x	22.5x	34.3x	
Daqin Railway Co., Ltd.	1.5x	5.4x	8.4x	7.8x	9.7x	
West Japan Railway Company	2.4x	nmf	nmf	nmf	-6.7x	
Rumo S.A.	6.8x	14.6x	25.5x	16.2x	nmf	
GMéxico Transportes, S.A.B. de C.V.	3.2x	7.3x	11.3x	8.2x	19.4x	
High	16.5x	33.0x	25.5x	61.6x	34.3x	
Low	1.5x	5.4x	8.4x	7.8x	(6.7x)	
Mean	7.5x	15.9x	19.3x	22.3x	22.1x	
Median	8.0x	16.7x	21.4x	19.8x	26.6x	

Football Field Valuation Summary



Source(s): Capital IQ, Company Filings  
 nmf = non-meaningful figure

Operating data and benchmarking against Tier 1 large cap peers

<i>All in \$M, except per share data and percentages</i>																		
Company	Market Valuation		LTM Financial Statistics					LTM Profitability Margins (%)				Growth Rate						
	Equity Value	Enterprise Value	Sales	Gross Profit	EBITDA	EBIT	Net Income	Gross Profit	EBITDA	EBIT	Net Income	Sales		EBITDA		EPS		
												Hist. 1-year	Est. 1-year	Hist. 1-year	Est. 1-year	Hist. 1-year	Est. 1-year	Est. 2-year
Aurizon Holdings Limited	5,559	8,538	2,341	1,165	1,133	717	415	50%	48%	31%	18%	2%	(1%)	1%	1%	(7%)	1%	3%
<b>Tier I: Large-Cap</b>																		
Union Pacific Corporation	143,404	169,878	19,533	11,433	10,088	7,878	5,349	59%	52%	40%	27%	(10%)	7%	(7%)	10%	(6%)	0%	0%
Canadian National Railway Company	82,068	92,283	10,845	6,023	5,625	4,378	2,795	56%	52%	40%	26%	(7%)	7%	(5%)	10%	(14%)	12%	13%
CSX Corporation	71,561	85,644	10,583	5,795	5,795	4,412	2,765	55%	55%	42%	26%	(11%)	8%	(9%)	11%	(14%)	21%	17%
Norfolk Southern Corporation	65,860	78,393	9,789	4,632	4,632	3,478	2,013	47%	47%	36%	21%	(13%)	10%	(11%)	16%	(24%)	21%	17%
Canadian Pacific Railway Limited	49,671	57,628	6,051	3,577	3,445	2,867	1,918	59%	57%	47%	32%	(1%)	8%	5%	11%	3%	15%	13%
Transurban Group	27,828	41,758	2,483	1,363	1,245	358	(495)	55%	50%	14%	(20%)	(17%)	(9%)	(21%)	(2%)	nmf	0%	0%
Kansas City Southern	19,582	23,567	2,633	1,414	1,397	1,039	617	54%	53%	39%	23%	(8%)	13%	(0%)	18%	21%	29%	24%
Daqin Railway Co., Ltd.	15,761	16,198	10,709	2,083	2,997	1,909	1,543	19%	28%	18%	14%	(9%)	(8%)	(20%)	(20%)	(26%)	(22%)	(3%)
West Japan Railway Company	11,453	23,561	9,704	(239)	(293)	(1,997)	(1,837)	(2%)	(3%)	(21%)	(19%)	(35%)	(39%)	nmf	0%	nmf	0%	(85%)
Rumo S.A.	6,568	8,929	1,341	432	623	355	57	32%	46%	26%	4%	(2%)	19%	(13%)	20%	(64%)	105%	68%
GMéxico Transportes, S.A.B. de C.V.	5,520	7,382	2,317	1,153	1,012	659	297	50%	44%	28%	13%	(3%)	12%	6%	14%	(2%)	28%	24%
Mean								44%	43%	27%	12%	(11%)	2%	(8%)	8%	(15%)	21%	9%
Median								54%	50%	36%	21%	(9%)	8%	(8%)	11%	(14%)	15%	13%

Source(s): Capital IQ, Company Filings  
 nmf = non-meaningful figure

Return/solvency data and benchmarking against Tier 1 large cap peers

Company	General Information		Return on Investment (%)				LTM Leverage Ratios			LTM Coverage Ratios		Credit Rating
	FYE	Predicted Beta	ROIC	ROE	ROA	Implied Div. Yield	Debt / Capital	Debt / EBITDA	Net Debt / EBITDA	EBITDA / Int. Exp.	EBIT / Int. Exp.	S&P
Aurizon Holdings Limited	Jun-30	0.49	0%	12%	6%	7%	48%	2.6x	2.6x	5.9x	5.8x	BBB+
<b>Tier I: Large-Cap</b>												
Union Pacific Corporation	Dec-31	1.11	6%	30%	8%	2%	63%	2.7x	2.6x	6.5x	6.9x	A-
Canadian National Railway Company	Dec-31	0.62	6%	19%	8%	2%	40%	1.8x	1.7x	8.2x	10.1x	A
CSX Corporation	Dec-31	1.16	7%	22%	7%	1%	57%	2.9x	2.4x	5.6x	5.9x	BBB+
Norfolk Southern Corporation	Dec-31	1.32	4%	13%	6%	2%	48%	2.8x	2.5x	5.5x	5.6x	BBB+
Canadian Pacific Railway Limited	Dec-31	0.71	12%	34%	10%	1%	58%	2.2x	2.2x	6.1x	7.9x	BBB+
Transurban Group	Dec-31	0.45	(7%)	(7%)	1%	2%	70%	11.3x	10.5x	1.5x	0.5x	nmf
Kansas City Southern	Dec-31	1.01	6%	14%	7%	1%	47%	2.7x	2.6x	6.2x	6.9x	BBB
Daqin Railway Co., Ltd.	Sep-30	0.32	2%	10%	5%	7%	7%	0.4x	nmf	36.3x	28.8x	nmf
West Japan Railway Company	Dec-31	0.55	(8%)	(17%)	(4%)	2%	60%	nmf	nmf	nmf	nmf	nmf
Rumo S.A.	Dec-31	0.43	1%	3%	3%	0%	60%	6.4x	3.6x	0.3x	1.1x	BB-
GMéxico Transportes, S.A.B. de C.V.	Dec-31	0.60	2%	13%	7%	4%	36%	1.7x	1.5x	5.8x	5.3x	nmf
Mean		0.75	3%	12%	5%	2%	50%	3.6x	3.4x	8.4x	8.0x	
Median		0.62	4%	13%	7%	2%	57%	2.7x	2.5x	6.0x	6.4x	

Source(s): Capital IQ, Company Filings  
 nmf = non-meaningful figure

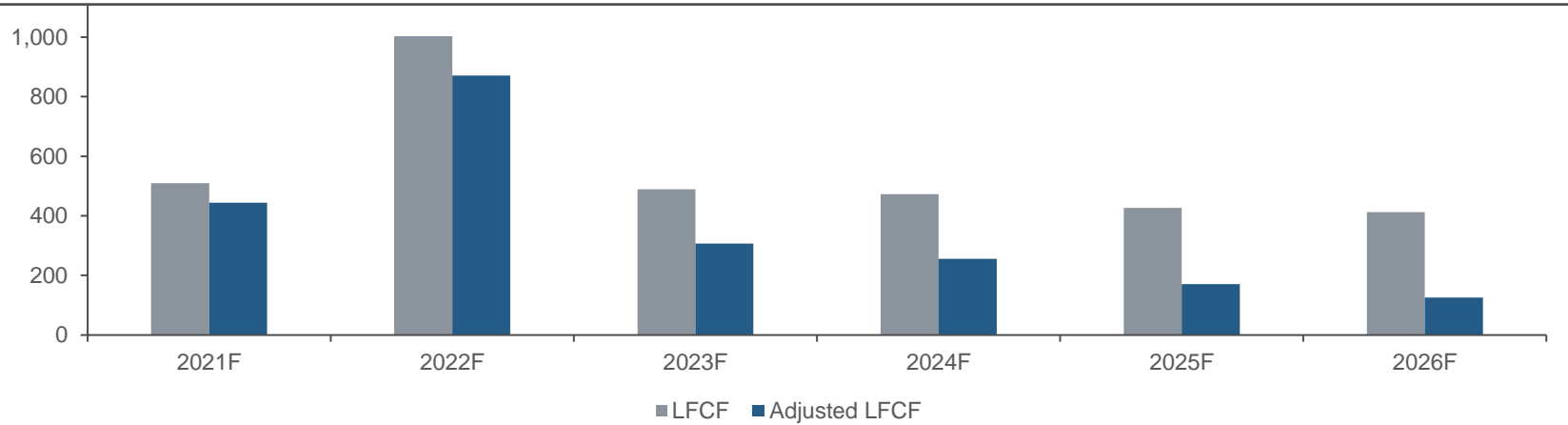
# Considering Margin Degradation (Considering Fixed Operating Costs)



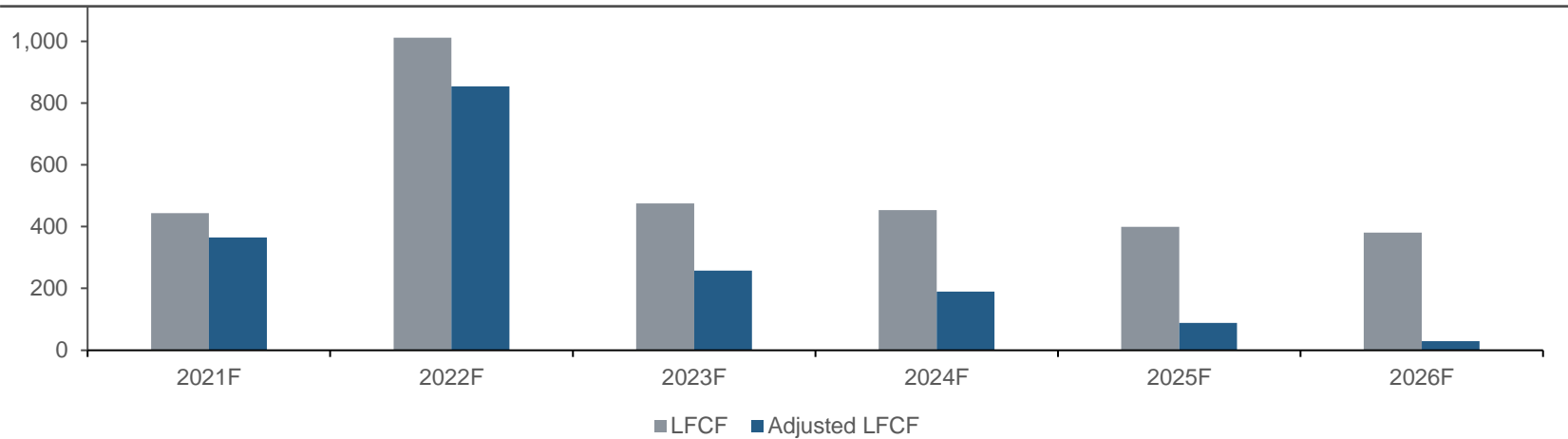
TFS Investment Group

Cash flow available to equity approaches zero by 2026 in worse case scenario

## Base Case



## Worst Case



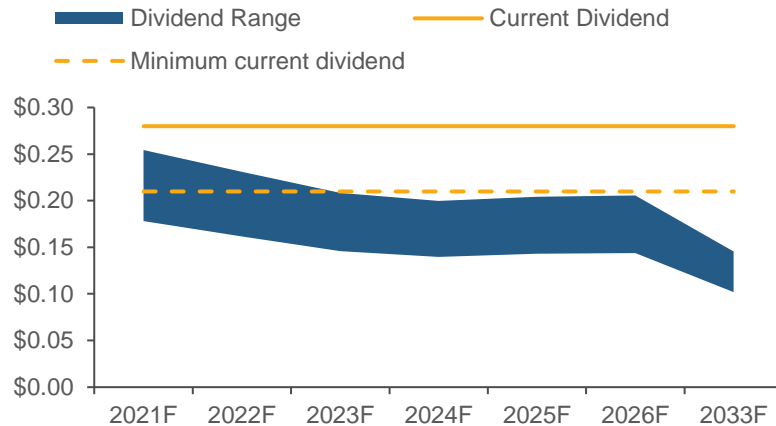
Source(s): Company Filings, TFSIG Estimates

# Dividend and Credit Rating Degradation

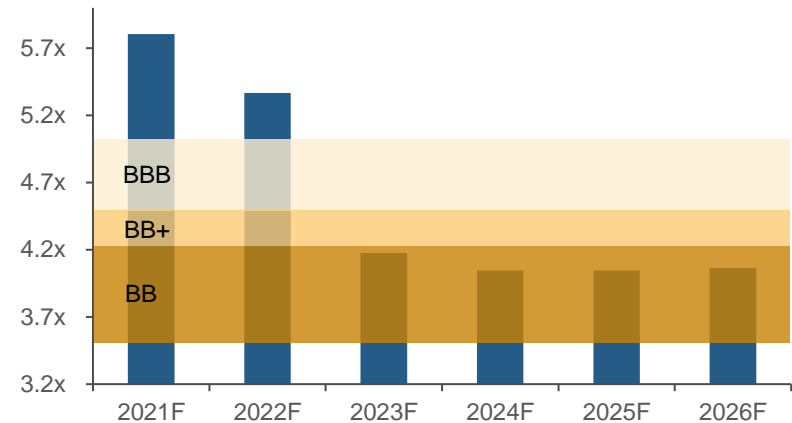
TFS Investment Group

Dividends to be continuously cut and credit rating downgraded to non-investment grade by 2023

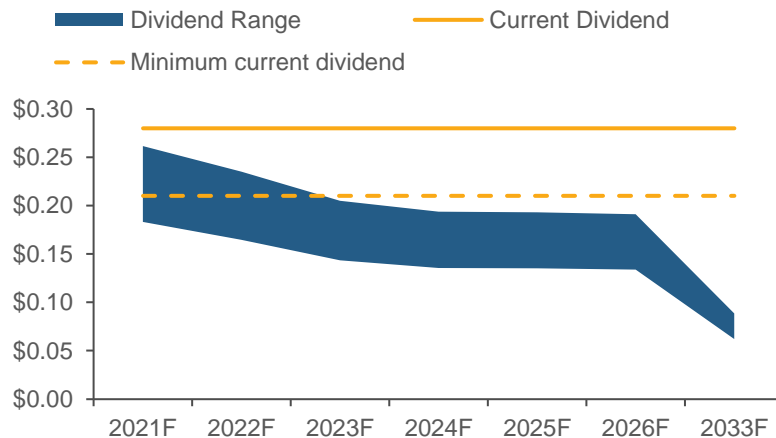
## Dividend Cuts on Base Case Assumptions



## Synthetic Credit Rating Downgrades on Base Case



## Dividend Cuts on Worst Case Assumptions



## Credit Statistic Degradation on Base Case

### Dividend Cut (Base Case)

- Dividend to drop below minimum guidance payout of 75% by 2023 based on 2020 net income.
- By 2022, guidance payout range of 75% to 100% implies a dividend range that has not been seen since 2014.

### Credit Rating Downgrade (Base Case)

- Aurizon's most recent debt issue on March 9, 2021 received a credit rating of BBB+ with a FY 2020 coverage ratio of 6.3x.
- We created a synthetic credit rating scale based on a commonly used synthetic credit rating scale produced by Prof. Aswath Damodaran.
- Synthetic credit rating scale implies that Aurizon's debt should be rated BB by 2023.

# ESG-Adjusted Synthetic Credit Rating Scale

Scale is based off the firm's interest coverage ratio

Synthetic Credit Rating Scale			
Lower Bound	Upper Bound	Rating	Spread
8.50	--	Aaa/AAA	0.63%
6.50	8.49	Aa2/AA	0.78%
5.50	6.49	A1/A+	0.98%
4.25	5.49	A2/A	1.08%
3.00	4.24	A3/A-	1.22%
2.50	2.99	Baa2/BBB	1.56%
2.25	2.49	Ba1/BB+	2.00%
2.00	2.24	Ba2/BB	2.40%
1.75	1.99	B1/B+	3.51%
1.50	1.74	B2/B	4.21%
1.25	1.49	B3/B-	5.15%
0.80	1.24	Caa/CCC	8.20%
0.65	0.79	Ca2/CC	8.64%
0.20	0.64	C2/C	11.34%
--	0.19	D2/D	15.12%



Synthetic Credit Rating Scale (Adjusted)			
Lower Bound	Upper Bound	Rating	Spread
10.50	--	Aaa/AAA	0.63%
8.50	10.49	Aa2/AA	0.78%
7.50	8.49	A1/A+	0.98%
6.25	7.49	A2/A	1.08%
5.00	6.24	A3/A-	1.22%
4.50	4.99	Baa2/BBB	1.56%
4.25	4.49	Ba1/BB+	2.00%
4.00	4.24	Ba2/BB	2.40%
3.75	3.99	B1/B+	3.51%
3.50	3.74	B2/B	4.21%
3.25	3.49	B3/B-	5.15%
2.80	3.24	Caa/CCC	8.20%
2.65	2.79	Ca2/CC	8.64%
2.20	2.64	C2/C	11.34%
--	2.19	D2/D	15.12%

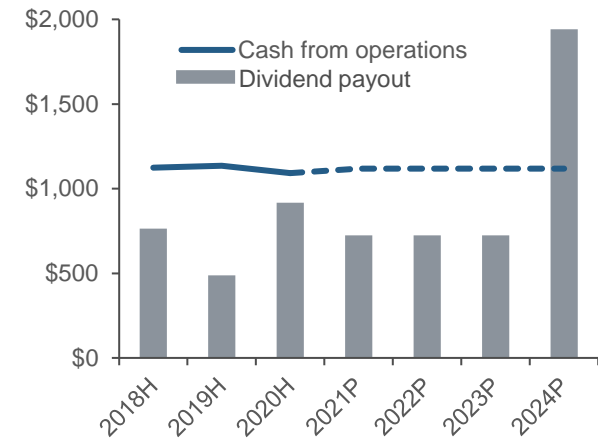
We've adjusted the interest coverage bounds by 2 at each level based on ESG-risks, market premium, and a size factor.

Deteriorating cash flows will downgrade Aurizon's credit rating and cut dividends and buybacks

## Capital Structure

	Amt Out	Market Price	Credit Rating	Maturity
<b>Revolver Debt</b>				
364-day revolver	450.00			Nov-23
364-day revolver	530.00			Dec-23
<b>Total Revolver Debt</b>	<b>980.00</b>	<b>980.00</b>		<b>Nov-23</b>
<b>Bond Debt</b>				
senior unsecured note A	425.00	108%	BBB+	Jun-24
senior unsecured note B	792.80	107%	BBB+	Aug-24
senior unsecured note C	792.80	114%	BBB+	Jun-26
senior unsecured note D	201.80	UK <sup>1</sup>	UK	Dec-27
senior unsecured note D	82.00	UK	UK	Mar-30
senior unsecured note E	500.00	101%	BBB+	Mar-28
<b>Total Bond Debt</b>	<b>2,794.40</b>	<b>2,994.28</b>	<b>1</b>	<b>Feb-26</b>
<b>Total Debt</b>	<b>3,774.40</b>	<b>3,974.28</b>		
hoh2				
<b>Common Equity</b>		<b>7,177.00</b>		
<b>Liquidity</b>				
Cash and cash equivalents	8.00	<b>Credit Statistics</b>		
Undrawn revolvers	445.00	EBIT / Interest Expense	<b>3</b>	6.16
Current ratio	0.74	Net Debt / EBITDA		2.66
Quick ratio	0.43	Total Debt / Equity		0.55
<b>Total Liquidity</b>	<b>453.00</b>	EBITDA		1,493.40
		Interest Expense		150.40

## Cash Flow Vs. Investor Expectations



Aurizon has significant bond maturities upcoming in 2024 and has traditionally kept a ~100% payout ratio.

## Capital Structure Commentary

- 1 Aurizon's debt has held a BBB+ credit rating up to its most recent issue on March 9, 2020 with a weighted average maturity of 5 years (September 2026).
- 2 Aurizon relies on revolving facilities to finance working capital.
- 3 Aurizon's largest revenue-generating segment of coal is expected to decline, likely leading to a substantial decrease in its interest coverage ratio.

Source(s): TFSIG Estimates, Company Filings, FactSet

1. UK = unknown

# Base Case Income Statement

	2019H	2020H	LTM	2021F	2022F	2023F	2024F	2025F	2026F	2033F
Revenue	2,908	3,065	3,034	2,869	2,718	2,608	2,527	2,439	2,370	1,965
<b>Operating Expenses</b>										
G&A	(779)	(792)	(804)	(758)	(717)	(688)	(667)	(644)	(626)	(519)
Consumables	(398)	(441)	(445)	(422)	(399)	(383)	(371)	(359)	(348)	(289)
Energy & Fuel	(234)	(231)	(202)	(201)	(190)	(183)	(177)	(171)	(166)	(138)
Track Access	(101)	(107)	(90)	(95)	(90)	(86)	(83)	(80)	(78)	(65)
Depreciation & amortization	(543)	(559)	(567)	(577)	(565)	(539)	(522)	(463)	(427)	(295)
<b>Operating Income</b>	<b>854</b>	<b>935</b>	<b>926</b>	<b>818</b>	<b>756</b>	<b>729</b>	<b>706</b>	<b>722</b>	<b>725</b>	<b>660</b>
Other Income - Net	(25)	(26)	(19)	-	-	-	-	-	-	-
Interest expense	(147)	(149)	(150)	(141)	(141)	(175)	(175)	(178)	(178)	(273)
Equity investment income	0	(0)	0	-	-	-	-	-	-	-
Pretax profit	682	760	757	677	615	554	532	544	547	388
Taxes	(209)	(261)	(228)	(203)	(184)	(166)	(159)	(163)	(164)	(116)
<b>Consolidated Net income</b>	<b>473</b>	<b>500</b>	<b>529</b>	<b>474</b>	<b>430</b>	<b>388</b>	<b>372</b>	<b>381</b>	<b>383</b>	<b>271</b>
Minority Interest	-	-	-	-	-	-	-	-	-	-
Net Income from continuing ops	473	500	529	474	430	388	372	381	383	271
Discontinued Operations	3	11	7	-	-	-	-	-	-	-
<b>Net Income</b>	<b>477</b>	<b>510</b>	<b>536</b>	<b>474</b>	<b>430</b>	<b>388</b>	<b>372</b>	<b>381</b>	<b>383</b>	<b>271</b>



	2019H	2020H	LTM	2021F	2022F	2023F	2024F	2025F	2026F	2033F
Cash	25	29	8	8	8	8	8	8	8	8
Receivables	482	460	330	535	410	393	388	388	377	312
Inventory	117	146	151	129	122	117	114	110	107	88
Other current assets	115	80	97	100	95	91	88	85	83	69
<b>Total current assets</b>	<b>740</b>	<b>715</b>	<b>586</b>	<b>772</b>	<b>635</b>	<b>610</b>	<b>598</b>	<b>591</b>	<b>574</b>	<b>478</b>
Net property, plant & equipment	8,536	8,537	8,526	8,467	8,351	8,242	8,133	8,066	8,023	7,852
Equity accounted investments	3	3	25	25	25	25	25	25	25	25
Derivative financial instruments	197	221	160	160	160	160	160	160	160	160
Intangible assets	177	188	204	204	204	204	204	204	204	204
Other assets	9	71	70	70	70	70	70	70	70	70
LT Inventories	40	38	40	40	40	40	40	40	40	40
<b>Total assets</b>	<b>9,701</b>	<b>9,772</b>	<b>9,611</b>	<b>9,738</b>	<b>9,486</b>	<b>9,350</b>	<b>9,230</b>	<b>9,156</b>	<b>9,096</b>	<b>8,829</b>
Accounts payable	407	323	238	423	313	293	284	267	247	172
Provisions	273	271	263	249	235	226	219	211	205	170
ST borrowings and current portion of LT borrowings	149	658	101	-	-	980	-	1,586	-	-
Current tax liabilities	41	83	45	45	45	45	45	45	45	45
Other liabilities	79	137	144	136	129	124	120	116	112	93
<b>Total current liabilities</b>	<b>949</b>	<b>1,472</b>	<b>790</b>	<b>852</b>	<b>722</b>	<b>1,667</b>	<b>667</b>	<b>2,225</b>	<b>609</b>	<b>480</b>
Long term debt	3,221	2,950	3,673	3,774	4,224	3,244	4,224	2,639	4,224	4,224
Derivative financial instruments	49	46	53	53	53	53	53	53	53	53
Deferred tax liability	537	605	638	638	638	638	638	638	638	638
Other liabilities	205	277	276	276	276	276	276	276	276	276
Provisions	63	64	71	71	71	71	71	71	71	71
<b>Total liabilities</b>	<b>5,024</b>	<b>5,414</b>	<b>5,501</b>	<b>5,664</b>	<b>5,984</b>	<b>5,949</b>	<b>5,929</b>	<b>5,901</b>	<b>5,871</b>	<b>5,743</b>
Common stock	907	507	260	260	260	260	260	260	260	260
Reserves	3,419	3,395	3,384	3,384	3,384	3,384	3,384	3,384	3,384	3,384
Retained earnings	352	456	466	430	(142)	(243)	(343)	(389)	(419)	(557)
<b>Total shareholder's equity</b>	<b>4,677</b>	<b>4,358</b>	<b>4,110</b>	<b>4,074</b>	<b>3,502</b>	<b>3,401</b>	<b>3,300</b>	<b>3,254</b>	<b>3,225</b>	<b>3,086</b>

<i>All in \$ M</i>	2021F	2022F	2023F	2024F	2025F	2026F	2033F
<b>EBIT</b>	<b>818</b>	<b>756</b>	<b>729</b>	<b>706</b>	<b>722</b>	<b>725</b>	<b>660</b>
<i>% margin</i>	28.5%	27.8%	27.9%	27.9%	29.6%	30.6%	33.6%
<b>Cash flow available for debt service</b>	<b>650</b>	<b>1,144</b>	<b>663</b>	<b>1,627</b>	<b>605</b>	<b>2,177</b>	<b>565</b>
<i>% margin</i>	22.7%	42.1%	25.4%	64.4%	24.8%	91.8%	28.7%
<b>Levered free cash flow</b>	<b>509</b>	<b>1,003</b>	<b>488</b>	<b>473</b>	<b>426</b>	<b>413</b>	<b>292</b>
<i>% margin</i>	17.7%	36.9%	18.7%	18.7%	17.5%	17.4%	14.9%
<b>Interest coverage ratio</b>	<b>5.8x</b>	<b>5.4x</b>	<b>4.2x</b>	<b>4.0x</b>	<b>4.0x</b>	<b>4.1x</b>	<b>3.1x</b>
<b>Dividend per share</b>	<b>0.27</b>	<b>0.54</b>	<b>0.26</b>	<b>0.25</b>	<b>0.23</b>	<b>0.22</b>	<b>0.19</b>
<i>% Yield on current price</i>	7.1%	14.0%	6.8%	6.6%	5.9%	5.7%	4.9%

<i>All in \$ M</i>	2021F	2022F	2023F	2024F	2025F	2026F	2033F
Cash inflow	2,869	3,168	2,608	2,527	2,439	2,370	1,965
Cash outflow	2,360	2,165	2,119	2,054	2,013	1,958	1,673
Dividends @ 100% payout	509	1,003	488	473	426	413	292

Worst Case Income Statement

<i>All in \$ M</i>	2019H	2020H	LTM	2021F	2022F	2023F	2024F	2025F	2026F	2033F
Revenue	2,908	3,065	3,034	2,839	2,660	2,526	2,422	2,314	2,226	1,717
<b>Operating Expenses</b>										
G&A	(779)	(792)	(804)	(749)	(702)	(667)	(640)	(611)	(588)	(453)
Consumables	(398)	(441)	(445)	(417)	(391)	(371)	(356)	(340)	(327)	(252)
Energy & Fuel	(234)	(231)	(202)	(199)	(186)	(177)	(170)	(162)	(156)	(120)
Track Access	(101)	(107)	(90)	(94)	(88)	(83)	(80)	(76)	(73)	(57)
Depreciation & amortization	(543)	(559)	(567)	(543)	(527)	(497)	(476)	(417)	(378)	(240)
<b>Operating Income</b>	<b>854</b>	<b>935</b>	<b>926</b>	<b>837</b>	<b>766</b>	<b>731</b>	<b>701</b>	<b>708</b>	<b>703</b>	<b>594</b>
Other Income - Net	(25)	(26)	(19)	-	-	-	-	-	-	-
Interest expense	(147)	(149)	(150)	(141)	(141)	(186)	(186)	(195)	(195)	(359)
Equity investment income	0	(0)	0	-	-	-	-	-	-	-
Pretax profit	682	760	757	696	625	545	515	514	509	235
Taxes	(209)	(261)	(228)	(209)	(188)	(164)	(155)	(154)	(153)	(71)
<b>Consolidated Net income</b>	<b>473</b>	<b>500</b>	<b>529</b>	<b>487</b>	<b>438</b>	<b>382</b>	<b>361</b>	<b>360</b>	<b>356</b>	<b>165</b>
Minority Interest	-	-	-	-	-	-	-	-	-	-
Net Income from continuing ops	473	500	529	487	438	382	361	360	356	165
Discontinued Operations	3	11	7	-	-	-	-	-	-	-
<b>Net Income</b>	<b>477</b>	<b>510</b>	<b>536</b>	<b>487</b>	<b>438</b>	<b>382</b>	<b>361</b>	<b>360</b>	<b>356</b>	<b>165</b>

# Worst Case Balance Sheet

<i>All in \$ M</i>	2019H	2020H	LTM	2021F	2022F	2023F	2024F	2025F	2026F	2033F
Cash	25	29	8	8	8	8	8	8	8	8
Receivables	482	460	330	572	423	401	392	387	372	287
Inventory	117	146	151	170	160	152	145	139	134	103
Other current assets	115	80	97	114	106	101	97	93	89	69
<b>Total current assets</b>	<b>740</b>	<b>715</b>	<b>586</b>	<b>864</b>	<b>697</b>	<b>662</b>	<b>642</b>	<b>626</b>	<b>603</b>	<b>467</b>
Net property, plant & equipment	8,536	8,537	8,526	8,475	8,368	8,268	8,170	8,112	8,077	7,957
Equity accounted investments	3	3	25	25	25	25	25	25	25	25
Derivative financial instruments	197	221	160	160	160	160	160	160	160	160
Intangible assets	177	188	204	204	204	204	204	204	204	204
Other assets	9	71	70	70	70	70	70	70	70	70
LT Inventories	40	38	40	40	40	40	40	40	40	40
<b>Total assets</b>	<b>9,701</b>	<b>9,772</b>	<b>9,611</b>	<b>9,838</b>	<b>9,564</b>	<b>9,429</b>	<b>9,311</b>	<b>9,237</b>	<b>9,179</b>	<b>8,923</b>
Accounts payable	407	323	238	447	321	298	285	266	244	160
Provisions	273	271	263	246	230	219	210	200	193	149
ST borrowings and current portion of LT borrowings	149	658	101	-	-	980	-	1,586	-	-
Current tax liabilities	41	83	45	45	45	45	45	45	45	45
Other liabilities	79	137	144	135	126	120	115	110	106	81
<b>Total current liabilities</b>	<b>949</b>	<b>1,472</b>	<b>790</b>	<b>872</b>	<b>722</b>	<b>1,661</b>	<b>655</b>	<b>2,207</b>	<b>587</b>	<b>435</b>
Long term debt	3,221	2,950	3,673	3,774	4,224	3,244	4,224	2,639	4,224	4,224
Derivative financial instruments	49	46	53	53	53	53	53	53	53	53
Deferred tax liability	537	605	638	638	638	638	638	638	638	638
Other liabilities	205	277	276	276	276	276	276	276	276	276
Provisions	63	64	71	71	71	71	71	71	71	71
<b>Total liabilities</b>	<b>5,024</b>	<b>5,414</b>	<b>5,501</b>	<b>5,684</b>	<b>5,984</b>	<b>5,943</b>	<b>5,917</b>	<b>5,883</b>	<b>5,849</b>	<b>5,697</b>
Common stock	907	507	260	260	260	260	260	260	260	260
Reserves	3,419	3,395	3,384	3,384	3,384	3,384	3,384	3,384	3,384	3,384
Retained earnings	352	456	466	510	(64)	(157)	(250)	(290)	(314)	(418)
<b>Total shareholder's equity</b>	<b>4,677</b>	<b>4,358</b>	<b>4,110</b>	<b>4,154</b>	<b>3,580</b>	<b>3,486</b>	<b>3,394</b>	<b>3,354</b>	<b>3,330</b>	<b>3,226</b>

<i>All in \$ M</i>	2021F	2022F	2023F	2024F	2025F	2026F	2033F
<b>EBIT</b>	<b>837</b>	<b>766</b>	<b>731</b>	<b>701</b>	<b>708</b>	<b>703</b>	<b>594</b>
<i>% margin</i>	29.5%	28.8%	28.9%	28.9%	30.6%	31.6%	34.6%
<b>Cash flow available for debt service</b>	<b>584</b>	<b>1,152</b>	<b>661</b>	<b>1,619</b>	<b>594</b>	<b>2,161</b>	<b>539</b>
<i>% margin</i>	20.6%	43.3%	26.2%	66.8%	25.7%	97.1%	31.4%
<b>Levered free cash flow</b>	<b>443</b>	<b>1,012</b>	<b>475</b>	<b>453</b>	<b>399</b>	<b>380</b>	<b>180</b>
<i>% margin</i>	15.6%	38.0%	18.8%	18.7%	17.3%	17.1%	10.5%
<b>Interest coverage ratio</b>	<b>5.9x</b>	<b>5.4x</b>	<b>3.9x</b>	<b>3.8x</b>	<b>3.6x</b>	<b>3.6x</b>	<b>2.4x</b>
<b>Dividend per share</b>	<b>0.24</b>	<b>0.55</b>	<b>0.26</b>	<b>0.24</b>	<b>0.22</b>	<b>0.21</b>	<b>0.15</b>
<i>% Yield on current price</i>	6.2%	14.1%	6.6%	6.3%	5.6%	5.3%	4.0%

<i>All in \$ M</i>	2021F	2022F	2023F	2024F	2025F	2026F	2033F
Cash inflow	2,839	3,110	2,526	2,422	2,314	2,226	1,717
Cash outflow	2,395	2,099	2,051	1,969	1,915	1,845	1,536
Dividends @ 100% payout	443	1,012	475	453	399	380	180

<i>All in \$ M</i>	2019H	2020H	LTM	2021F	2022F	2023F	2024F	2025F	2026F	2033F
Revenue	2,908	3,065	3,034	2,923	2,820	2,755	2,718	2,671	2,642	2,482
<b>Operating Expenses</b>										
G&A	(779)	(792)	(804)	(702)	(677)	(661)	(652)	(641)	(634)	(596)
Consumables	(398)	(441)	(445)	(430)	(414)	(405)	(399)	(393)	(388)	(365)
Energy & Fuel	(234)	(231)	(202)	(175)	(169)	(165)	(163)	(160)	(159)	(149)
Track Access	(101)	(107)	(90)	(88)	(85)	(83)	(82)	(80)	(79)	(74)
Depreciation & amortization	(543)	(559)	(567)	(610)	(608)	(590)	(582)	(528)	(495)	(391)
<b>Operating Income</b>	<b>854</b>	<b>935</b>	<b>926</b>	<b>919</b>	<b>867</b>	<b>851</b>	<b>840</b>	<b>869</b>	<b>886</b>	<b>907</b>
Other Income - Net	(25)	(26)	(19)	-	-	-	-	-	-	-
Interest expense	(147)	(149)	(150)	(141)	(141)	(168)	(168)	(169)	(169)	(222)
Equity investment income	0	(0)	0	-	-	-	-	-	-	-
Pretax profit	682	760	757	778	726	683	672	700	717	686
Taxes	(209)	(261)	(228)	(233)	(218)	(205)	(202)	(210)	(215)	(206)
<b>Consolidated Net income</b>	<b>473</b>	<b>500</b>	<b>529</b>	<b>545</b>	<b>508</b>	<b>478</b>	<b>470</b>	<b>490</b>	<b>502</b>	<b>480</b>
Minority Interest	-	-	-	-	-	-	-	-	-	-
Net Income from continuing ops	473	500	529	545	508	478	470	490	502	480
Discontinued Operations	3	11	7	-	-	-	-	-	-	-
<b>Net Income</b>	<b>477</b>	<b>510</b>	<b>536</b>	<b>545</b>	<b>508</b>	<b>478</b>	<b>470</b>	<b>490</b>	<b>502</b>	<b>480</b>

<i>All in \$ M</i>	2019H	2020H	LTM	2021F	2022F	2023F	2024F	2025F	2026F	2033F
Cash	25	29	8	8	8	8	8	8	8	8
Receivables	482	460	330	503	402	392	395	402	398	374
Inventory	117	146	151	117	113	110	109	107	106	99
Other current assets	115	80	97	88	85	83	82	80	79	74
<b>Total current assets</b>	<b>740</b>	<b>715</b>	<b>586</b>	<b>715</b>	<b>607</b>	<b>593</b>	<b>593</b>	<b>597</b>	<b>591</b>	<b>556</b>
Net property, plant & equipment	8,536	8,537	8,526	8,473	8,360	8,251	8,141	8,074	8,033	7,875
Equity accounted investments	3	3	25	25	25	25	25	25	25	25
Derivative financial instruments	197	221	160	160	160	160	160	160	160	160
Intangible assets	177	188	204	204	204	204	204	204	204	204
Other assets	9	71	70	70	70	70	70	70	70	70
LT Inventories	40	38	40	40	40	40	40	40	40	40
<b>Total assets</b>	<b>9,701</b>	<b>9,772</b>	<b>9,611</b>	<b>9,688</b>	<b>9,467</b>	<b>9,344</b>	<b>9,233</b>	<b>9,171</b>	<b>9,123</b>	<b>8,929</b>
Accounts payable	407	323	238	563	386	370	365	351	333	272
Provisions	273	271	263	253	244	239	235	231	229	215
ST borrowings and current portion of LT borrowings	149	658	101	-	-	980	-	1,586	-	-
Current tax liabilities	41	83	45	45	45	45	45	45	45	45
Other liabilities	79	137	144	139	134	131	129	127	125	118
<b>Total current liabilities</b>	<b>949</b>	<b>1,472</b>	<b>790</b>	<b>1,000</b>	<b>809</b>	<b>1,764</b>	<b>774</b>	<b>2,340</b>	<b>732</b>	<b>649</b>
Long term debt	3,221	2,950	3,673	3,774	4,224	3,244	4,224	2,639	4,224	4,224
Derivative financial instruments	49	46	53	53	53	53	53	53	53	53
Deferred tax liability	537	605	638	638	638	638	638	638	638	638
Other liabilities	205	277	276	276	276	276	276	276	276	276
Provisions	63	64	71	71	71	71	71	71	71	71
<b>Total liabilities</b>	<b>5,024</b>	<b>5,414</b>	<b>5,501</b>	<b>5,812</b>	<b>6,071</b>	<b>6,046</b>	<b>6,036</b>	<b>6,016</b>	<b>5,994</b>	<b>5,912</b>
Common stock	907	507	260	260	260	260	260	260	260	260
Reserves	3,419	3,395	3,384	3,384	3,384	3,384	3,384	3,384	3,384	3,384
Retained earnings	352	456	466	232	(248)	(346)	(447)	(489)	(515)	(626)
<b>Total shareholder's equity</b>	<b>4,677</b>	<b>4,358</b>	<b>4,110</b>	<b>3,876</b>	<b>3,395</b>	<b>3,298</b>	<b>3,197</b>	<b>3,155</b>	<b>3,129</b>	<b>3,018</b>

<i>All in \$ M</i>	2021F	2022F	2023F	2024F	2025F	2026F	2033F
<b>EBIT</b>	<b>919</b>	<b>867</b>	<b>851</b>	<b>840</b>	<b>869</b>	<b>886</b>	<b>907</b>
<i>% margin</i>	31.4%	30.8%	30.9%	30.9%	32.6%	33.6%	36.6%
<b>Cash flow available for debt service</b>	<b>919</b>	<b>1,130</b>	<b>744</b>	<b>1,719</b>	<b>702</b>	<b>2,283</b>	<b>719</b>
<i>% margin</i>	31.5%	40.1%	27.0%	63.2%	26.3%	86.4%	29.0%
<b>Levered free cash flow</b>	<b>779</b>	<b>989</b>	<b>576</b>	<b>571</b>	<b>532</b>	<b>528</b>	<b>498</b>
<i>% margin</i>	26.6%	35.1%	20.9%	21.0%	19.9%	20.0%	20.1%
<b>Interest coverage ratio</b>	<b>6.5x</b>	<b>6.2x</b>	<b>5.1x</b>	<b>5.0x</b>	<b>5.1x</b>	<b>5.2x</b>	<b>4.6x</b>
<b>Dividend per share</b>	<b>0.42</b>	<b>0.53</b>	<b>0.31</b>	<b>0.31</b>	<b>0.29</b>	<b>0.28</b>	<b>0.26</b>
<i>% Yield on current price</i>	10.8%	13.8%	8.0%	8.0%	7.4%	7.4%	6.8%

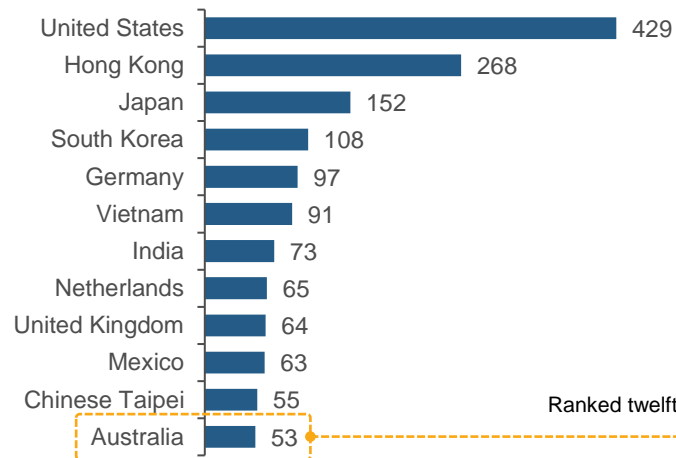
<i>All in \$ M</i>	2021F	2022F	2023F	2024F	2025F	2026F	2033F
Cash inflow	2,923	3,270	2,755	2,718	2,671	2,642	2,482
Cash outflow	2,145	2,281	2,179	2,147	2,139	2,114	1,984
Dividends @ 100% payout	779	989	576	571	532	528	498



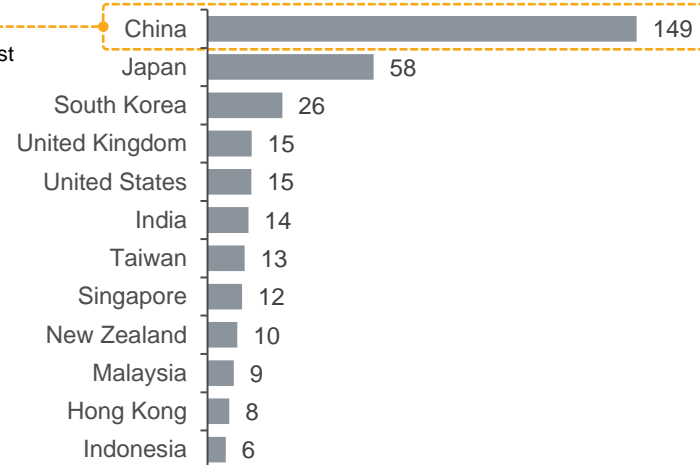
An uneven power dynamic favours China’s position in this trade war

## Australia’s Low on the China’s Export Pecking Order

China’s top export destinations (\$B USD)



Australia’s top export destinations (\$B AUD)



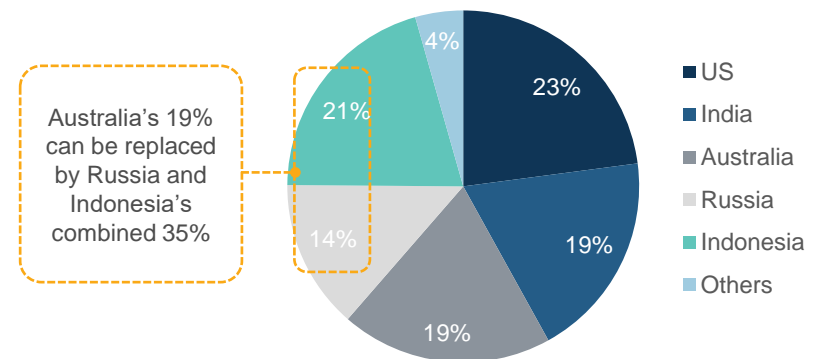
## Styles of Government Clash

- Despite having the United States as its largest trading partner, China has not been passive in the trade war, having levied billions of dollars’ worth of tariffs.
- Neither country willing to concede ground or backpedal on claims and accusations.

### Making Up For Lost Ground

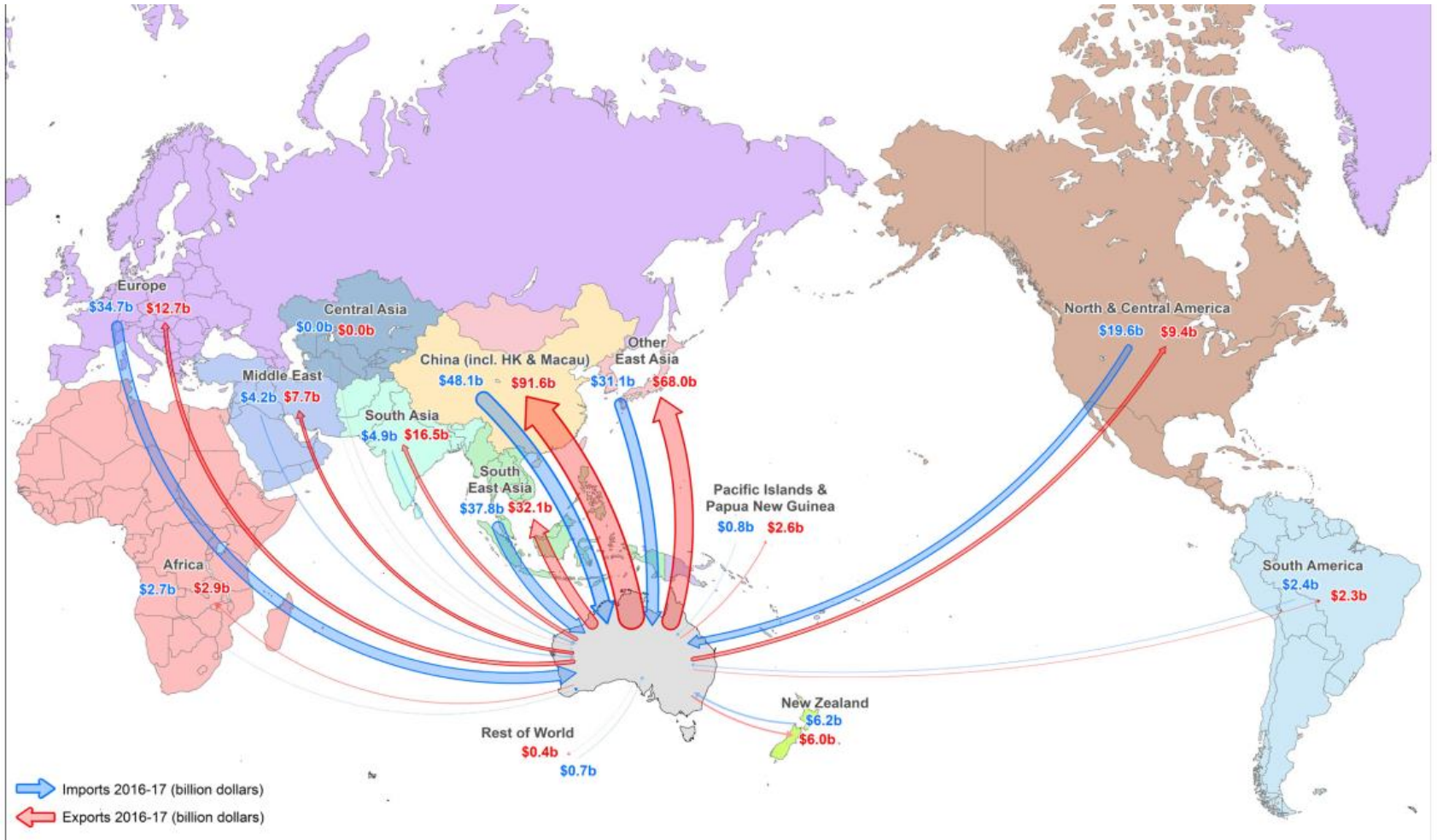
- Xi Jinping & Vladimir Putin agreed to pursue cooperation over energy and infrastructure interests.
- The Elga Project aims to deliver 30Mt of coal by 2023, effectively replacing Australia’s full export volume.
- Indonesia signed a deal to export 28Mt of coal under a deal signed in November 2020.

## China Import Partner Coal Production Capacity



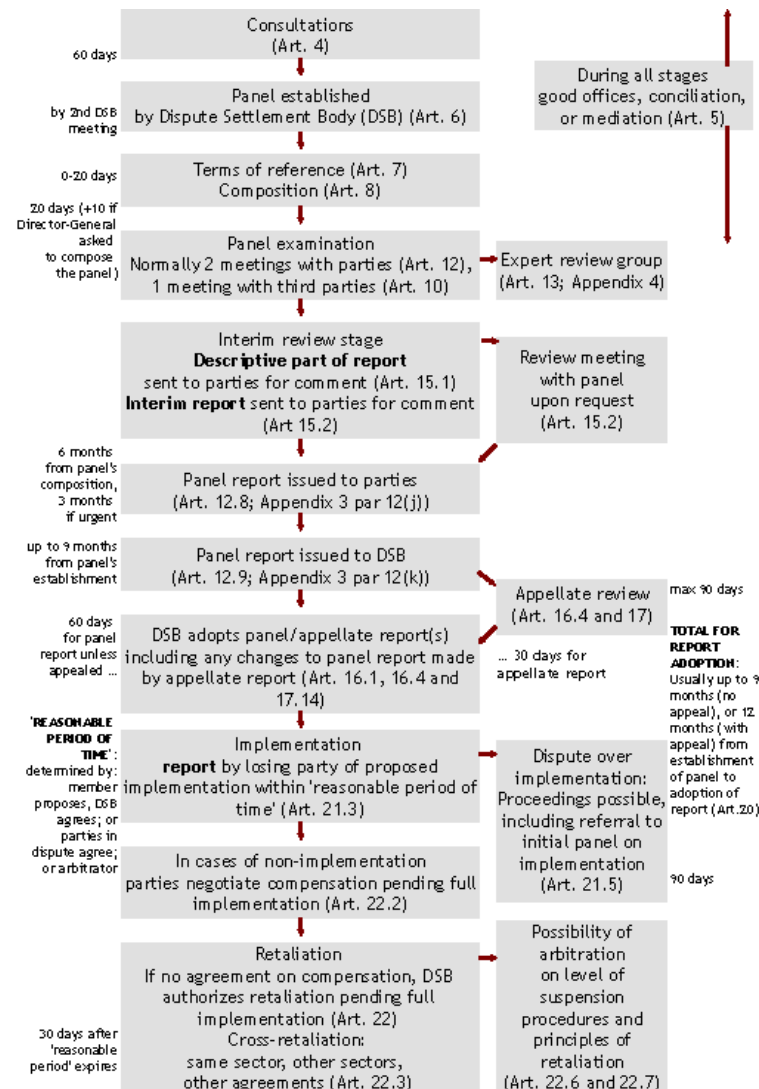
Source(s): OEC, Nikkei Asia, Bloomberg

Value of Australia's international sea freight by trading region of destination/origin (2016-17)



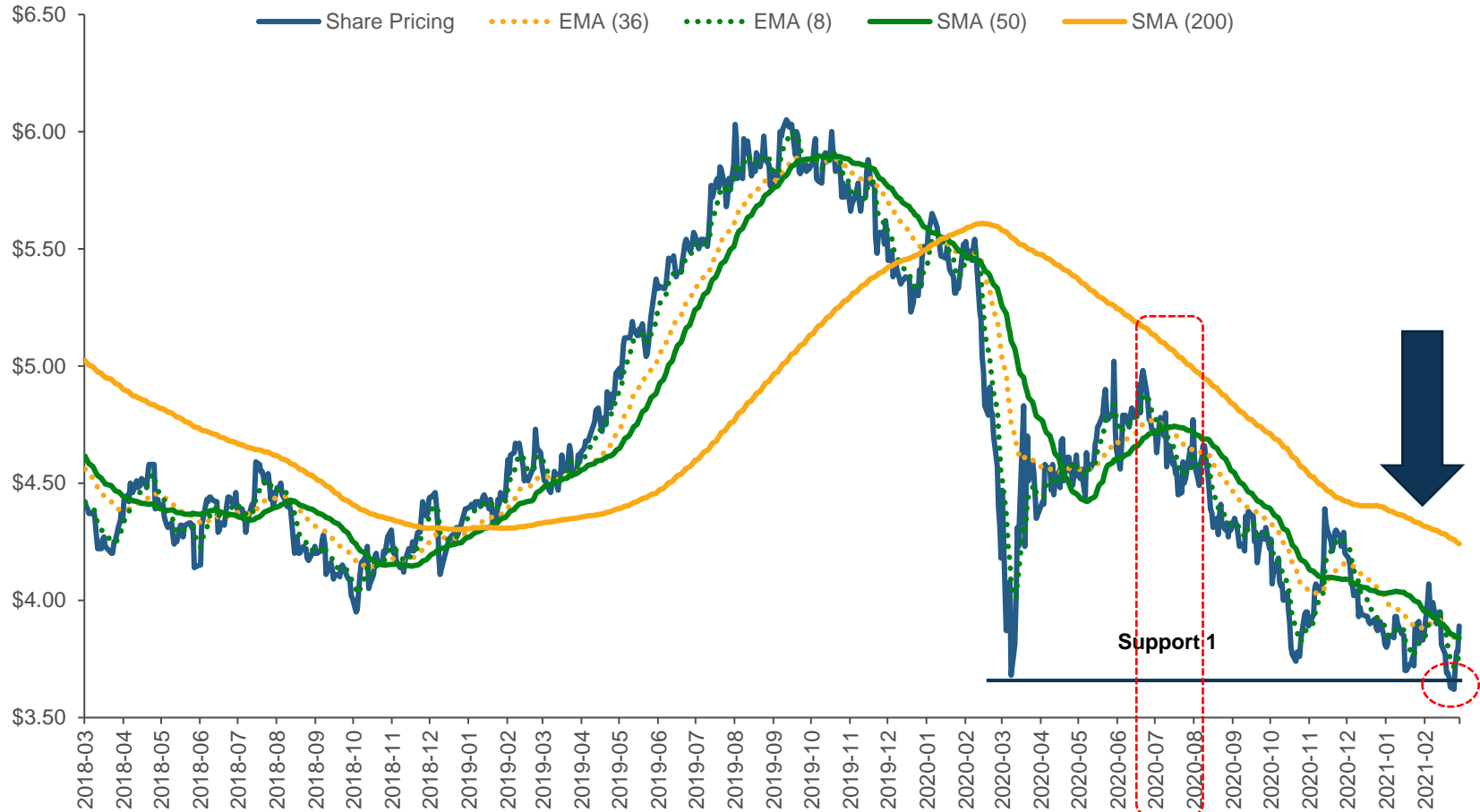
Source(s): BITRE

Overall dispute settlement process can take up to 2-3 years



Source(s): WTO

Negative continuation pattern highlighted via negative EMA price signals and breached support.



Source: Bloomberg

The University of Ottawa's only student-run investment club

## JAMES PATSULA



### CEO

James is a Bachelor of Commerce student set to graduate in December of 2021. James has worked at Brookfield Renewable in FP&A and is scheduled to complete an internship at TD Securities this summer.

## LUCAS HERVATO



### PORTFOLIO MANAGER

Lucas is a Bachelor of Commerce student graduating in December of 2021. Lucas has interned at RBC DS, Brookfield Renewable, and is scheduled to complete an internship at RBC GAM's CIO Office this summer.

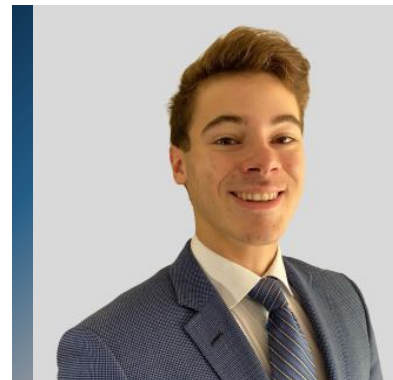
## NATHAN PO



### PORTFOLIO MANAGER

Nathan is a Bachelor of Commerce student set to graduate this May. Nathan has broad experience in the finance industry having interned at EY and RBC. He most recently interned at Ford Motors' Government Relations & Strategy Department.

## DAVID MACNEILL



### PORTFOLIO MANAGER

David is a Bachelor of Commerce student set to graduate in the Spring of 2023. He is scheduled to complete an equity research internship this summer at Gluskin Sheff, an Investment management firm under Onex.

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# TFS Investment Group