Global investors and the Carmichael mega-mine

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Investors in Adani Ports and Special Economic zone (ticker: ADSEZ) bonds and equity should engage and/or divest to halt potential alternative financing or other assistance to the Carmichael project through the company, in our view.

The Carmichael coal mine is set to commence operations shortly, and with it a logistic chain that opens up one of the world's largest untapped coal reserves – the Galilee Basin. Recently, Adani Abbot Point (ticker: ADAABB), a subsidiary of Adani Group which in turn is a controlling owner of ADSEZ, has been the remaining private funding vehicle of this chain but has landed in financing and operation difficulties due to investor and service provider withdrawals on the back of perceived negative environmental exposure.

Recent court rulings and other news flow indicate that sister company ADSEZ is operating in a concerted fashion with ADAABB and is integrated into the Carmichael value chain. Thus, we believe that the coal development critique of ADAABB should also apply to ADSEZ.

The issue bears relevance for global investors. In contrast to ADAABB, ADSEZ has been a frequent and successful benchmark issuer in USD investment grade markets over the past year and its equity is held by a number of large global institutions. **The bond funding cost differential between ADSEZ and ADAABB is currently in excess of 6%, making it potentially attractive from a cost of capital basis to switch activities from ADAABBB into ADSEZ.**

This note explores why the Carmichael mine is of such importance for climate change mitigation, it looks at the co-dependencies of ADAABB and ADSEZ and the funding entities and investors in those entities. Especially on the bond holder side, we find some fairly big and concentrated positions. We further discuss some broader coal exclusion and ESG (rating) considerations.

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Background: Carmichael and Abbot Point

The Carmichael coal mine was given clearance to commence construction by the Queensland authorities in June, 2019. The decision was commented on as “The World’s Most Insane Energy Project Moves Ahead” (Rolling Stone magazine, 14 June, 2019).

Officially, the planned output of Carmichael has been reduced from originally 50-80 million tonnes (MT) per annum to a mere 10MT, albeit with some question marks around the sincerity of the latter plan.[1] However, **the logistics chain for Carmichael enables tapping of the Galilee basin,** Figure 2**, which is one of the world’s biggest untapped coal fields in the world,** with estimated 7bn tonnes of coal deposits.[2] Extraction and incineration of that would be equivalent to around 20-30 gigatonnes of CO2 emissions, or approximately 5-10% of the remaining carbon budget for the Paris 1.5C target.[3]

The logistics chain is presented in Figure 1, where the Abbot Point terminal connects the railway system with shipping. **BlackRock (BLK), criticized German engineering group Siemens (SIEGR) earlier this year for their involvement as a supplier of railway signaling to this project,**[4] highlighting the controversy around the infrastructure enabling the mine.

“The world’s largest asset manager said on Thursday that one of Germany’s largest industrial companies had failed to fully consider the ‘breadth of risks’ of an infrastructure deal at the A$2bn Carmichael coal mine in Queensland.” (Financial Times, 6 Feb 2020)

A critique of the broader Adani Group’s involvement in the mine can be found “The World’s Most Controversial Mine Is In A Hole” (Bloomberg Quint, 28 May, 2020). Further controversies are discussed in the final section on ESG rating evaluation, and includes conflicts with aboriginal populations, and attempted miscellaneous legal actions against protesters.[5]

Figure 2. Coal deposits and mines in Australia. Galilee basin in circle. Source: Geoscience Australia.

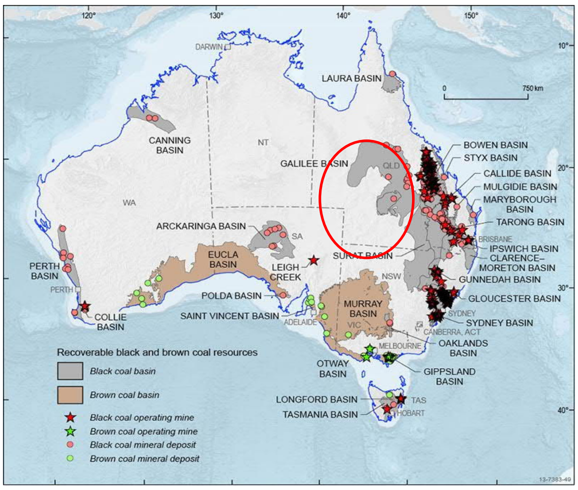
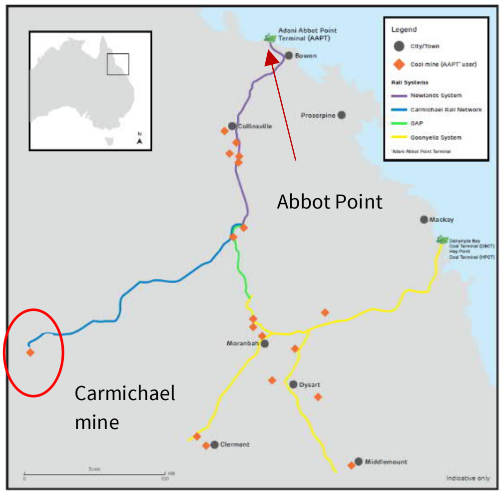


Figure 1. The Carmichael mine and related logistics points. Source: Adani Australia, AFII



¹ See ”Adani executive talks up bigger coal mine in leaked video” (ABC News, 18 March, 2020).
² See “Australian In Situ Coal Resources 2012” (Geoscience Australia).
³ Estimates vary, see e.g. a meta-analysis in “How much ‘carbon budget’ is left to limit global warming to 1.5C?” (Carbonbrief, 9 April 2018). A general description of the broader implications is available through “One of the world’s largest untapped coal reserves to be mined” (Financial Times, June 13, 2019).
⁴ “BlackRock rebukes Siemens on its environmental record”, (Financial Times, 5 Feb, 2020)
⁵ The website www.stopadani.com covers some of these conflicts from the activists’ perspective.

Adani Abbot Point (ADAABB): Funding train wreck

Given the controversy around the mine, finding **funding for Adani Abbot Point (ADAABB) as a stand-alone appears to have been difficult.**[6] ADAABB was downgraded to sub investment grade ("junk") by S&P/Moody's/Fitch during 2020H1, as a consequence of the cancellation of a planned USD debt issue scheduled for March and syndicated by what we would consider a weak set of lead banks. We note that the activist movements appear to have been effective in dissuading a number of financial and insurance institutions from providing services to ADAABB,[7] see for example "Investec ditches Adani over climate change" (Australian Financial Review, 19 June 2020), making alternatives to bond financing less likely to take place.

From a financing standpoint, we note that a number of bank facilities and smaller loans have been due during 2020.[8] According to reports, these repayments have been or will be made by parent Adani Group. Next maturity is an AUD170mn bank facility falling due on 28 Nov 2020, also indicated to be covered by Adani Group. **We believe the recent penalty ordered by the Queensland Supreme Court of AUD0106mn puts further pressure on the cash flow situation for ADAABB.**[9]

The remaining bond curve and financing hurdles that we are aware of ADAABB is shown in Table 1. First on the curve, ADAABB has a 5.43% private placement of USD143mn maturing in Sept 2021. A private placement is a small bond issue generally sold to a small number of investors, a 'club', and this one appears to be owned by a set of US insurance and reinsurance companies, with Massachusetts Mutual Life, RGA Reinsurance and Connecticut General Life Insurance appearing as key investors. **We believe refinancing of the 5.43% will be extremely relevant for understanding the potential of refinancing the slightly longer 4.45% bond**.

Going to that, **the main financing hurdle is the USD500mn 4.45% bond maturing in Dec, 2022**. The bond is currently trading (Figure 3) in the low 90s, with a yield to maturity of 8.4% ⇔ z-spread of 815bp which as a rough approximation indicates an implied probability of default of around 25%. The bond is a constituent of the Bloomberg Barclays US HY index (BEJKTRUU) and with few conc-entrated positions although some of the investor names are interesting from an ESG perspective.

Table 1. Adani Abbot Point outstanding bonds.

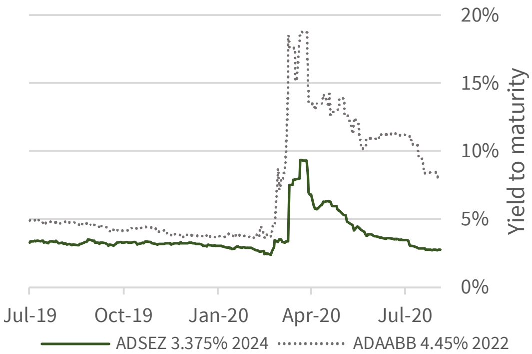
Bond	ADAABB 5.43 2021	ADAABB 4.45 2022
Coupon	5.43	4.45
Maturity	22-Sep-2021	15-Dec-2022
Issue date	n.a.	30-Nov-2017
ISIN 144a	AZ4207934	US00653GAB05
ISIN REGS	(private placement)	USQ0102FAD70
Amount issued (USD mn)	143	500
Current price (ind)	n.a.	89.85
Spread vs govt bmark (ind)	n.a.	G+925
Spread vs govt at issuance	n.a.	n.a.
Leads	n.a.	Haitong, Investec, Stifel

[6] See e.g. "Adani Group to fully fund troubled Carmichael coal mine in Australia" (Reuters, 29 Nov 2018).
[7] See e.g. "Adani Carmichael Contractor Risks", (IEEFA, 16 Aug 2019).
[8] See e.g. "Fitch downgrades Adani Abbot Point Terminal to 'BB+'; Ratings on RWN" (Fitch, 31 Mar 2020)
[9] See "Adani ordered to pay $106mn over port dispute" (Australian Financial Review, 27 Aug 2020).

Adani Ports (ADSEZ): On a roll in global bond markets

In contrast to ADAABB, ADSEZ has been quite successful in obtaining bond financing over the past year, with hard currency issuance as shown in Table 2. **A total of USD2.65bn is outstanding, with the lion's share of that (3 bonds for a total of USD2.15bn) having been issued after the go-ahead on the Carmichael mine in June last year**. It would be reasonable to assume that the investor information for very recent $4.2 08/27 bond would have included reference to Carmichael controversy risk, if such risks exist, however we have not been able to review a prospectus for that bond.

Figure 3. ADAABB and ADSEZ bond yields.



Aggregated holding statistic for the three earlier bonds[10] suggest a fairly high concentration of bond holders, with **25% of outstanding sitting with the top 10 holders**. Indicatively, according to the reporting, top three holders of these bonds are Allianz/PIMCO (6% of nominal outstanding), TIAA (4%) and Lord Abbett & Co (4%).

Given the investment grade ratings, their outstanding notionals and other parameters, **all four bonds are eligible for, and included in, a number of important bond indices,** such as the Bloomberg Barclays Global Aggregate Index. This would suggest a fairly substantial passive investor base in the bonds as well.

We highlight the differing fortunes of the ADAABB bonds and the ADSEZ bonds in Figure 3. On a yield basis, the ADSEZ 3.375% 2024 have traded in the same ball-park as the ADAABB 4.45% 2022s up until March this year. However, a big divide opened up in early-March, coinciding with the COVID-19 volatility as well as the failed ADAABB bond issue, and the yield spread has since then amounted to around 6%. To phrase it differently, **the cost of bond funding is three times higher for ADAABB than for ADSEZ.**

Table 2. ADSEZ outstanding benchmark sized bonds.

Bond	ADSEZ 3⅜ 2024	ADSEZ 4 2027	ADSEZ 4.2 2027	ADSEZ 4 ⅜ 2029
Coupon	3.375	4	4.2	4.375
Maturity	24-Jul-2024	30-Jul-2027	4-Aug-2027	3-Jul-2029
Issue date	16-Jul-2019	22-Jun-2017	28-Jul-2020	26-Jun-2019
ISIN 144a	US00652MAF95	US00652MAD48	US00652MAG78	US00652MAE21
ISIN REGS	USY00130RW92	XS1636266832	USY00130VS35	USY00130RP42
Amount issued (USD mn)	650	500	750	750
Current price (ind)	102.4	101.6	101.2	102.6
Spread vs govt bmark (ind)	G+250	G+324	G+354	G+341
Spread vs govt at issuance	5y+150	10y+195	7y+376	ind. 10y+205
Leads	BOFA, BARC, CITI, DB, JPM, Mizuho, MUFG, STANLN	BARC, CITI, MUFG, SBICAP, STANLN	BARC, BOFA, CITI, CS, DBS, DB, Emirates, JPM	BOFA, BARC, CITI, DBS, Emirates, JPM, Mizuho, MUFG, STANLN

[10] Aggregated statistics throughout this piece generated based on data available through Bloomberg. This is incomplete and time-staggered data and may not represent, even indicatively, current holdings. Bigger holders than those presented here may exist. Holdings of the ADSEZ $4.2 bond issued in August, 2020, have been excluded due to very sparse data.

The Carmichael, Adani Mining, Abbot Point and Ports links

Figure 4 illustrates the ownership structure of Adani Group according to the company's own presentation material. Adani Group controls approximately 63% of the equity in ADSEZ, and ADAABB is a fully owned subsidiary by the Group. Gautam Adani is Chairman and Managing director of ADSEZ as well as Adani Group, and holds a 39% direct equity share of ADSEZ.

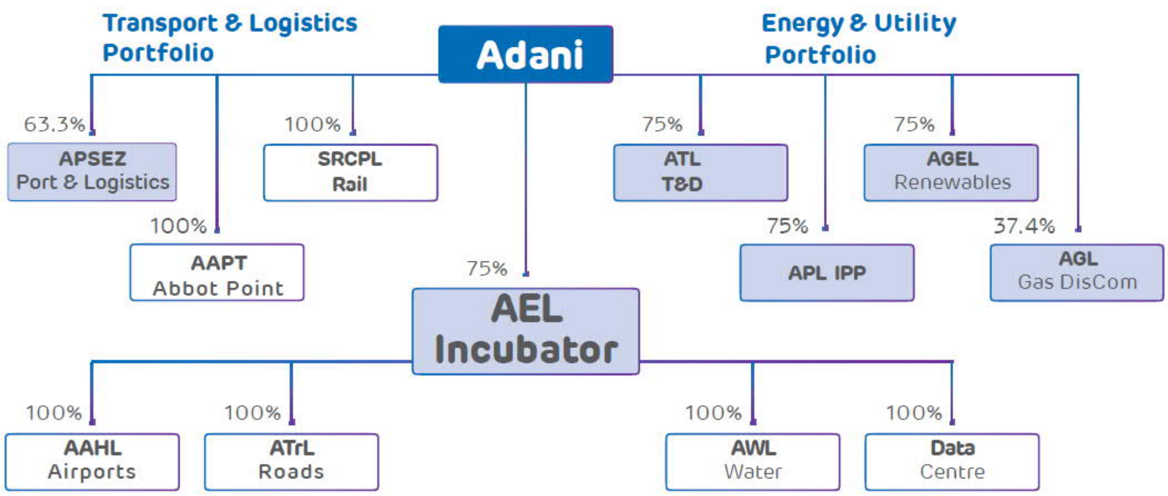
With regards to the controlling power of Adani Group in the Australian activities for both ADAABB and ADSEZ, we refer to the recent ruling by the Queensland Supreme Court[11] (our highlighting and bracketing):

[184] "*As the negotiations […] show, the officeholders of the applicant [ADAABB] do not necessarily make the decisions of the applicant.* ***Significant decisions are made by other corporate entities in the Adani Group, or by the chairman Mr Gautam Adani. The owner of the terminal [ADAABB], its operator [ADSEZ], and AMPL [Adani Mining], a future user of the terminal, are likely to act in the best interests of the Adani Group, not their individual corporate entities.***"

For context ADSEZ is a logistics group: "India's largest integrated ports and logistics company." In 2019, the company handled 68MT (33%) coal, 27MT (13%) crude oil, 84MTeqv (41%) container and 29MT (14%) other bulk cargo, according to company filings. Given this, it seems reasonable to assume that ADSEZ will handle a fair amount of coal from Carmichael. As the CFO of the Adani Group was quoted: **"Carmichael […] is now a support business for Adani Power",** (Reuters, 6 Aug 2020). We discussed Adani Power and its then hypothetical relationship to Carmichael in our earlier piece Top coal, top ESG? (4 August 2020).

We believe it is likely that ADSEZ, owning among other things the world's largest coal terminal, is integral to Adani Group's plan for developing the world's biggest greenfield coal project and to use that coal when operating India's largest private coal utility company.

Figure 4. Adani corporate structure as presented in Debt Investor Presentation, dated May 2020. We believe ADSEZ is reflected in the "APSEZ Port & Logistics" box, ADAABB in the "AAPT Abbot Point" box, Adani Power in the "APL IPP" box.



[11] Adani Abbot Point Terminal Pty Ltd v Lake Vermont Resources Pty Ltd & Ors [2020] QSC 260.

Given the significantly higher funding costs for ADAABB is would theoretically make sense to raise capital in sister company ADSEZ instead, and/or operate capital intensive projects related to Carmichael through ADSEZ subsidiaries rather than ADAABB.

We specifically illustrate the structure of Adani Group's Australia/Carmichael related entities in Figure 5 (courtesy of Energy Resource Insights). It is challenging to understand in full, with some material also being hard to access. However, we would like to highlight four points with regards to further a hypothesis of ADSEZ participating actively in the Carmichael project chain:

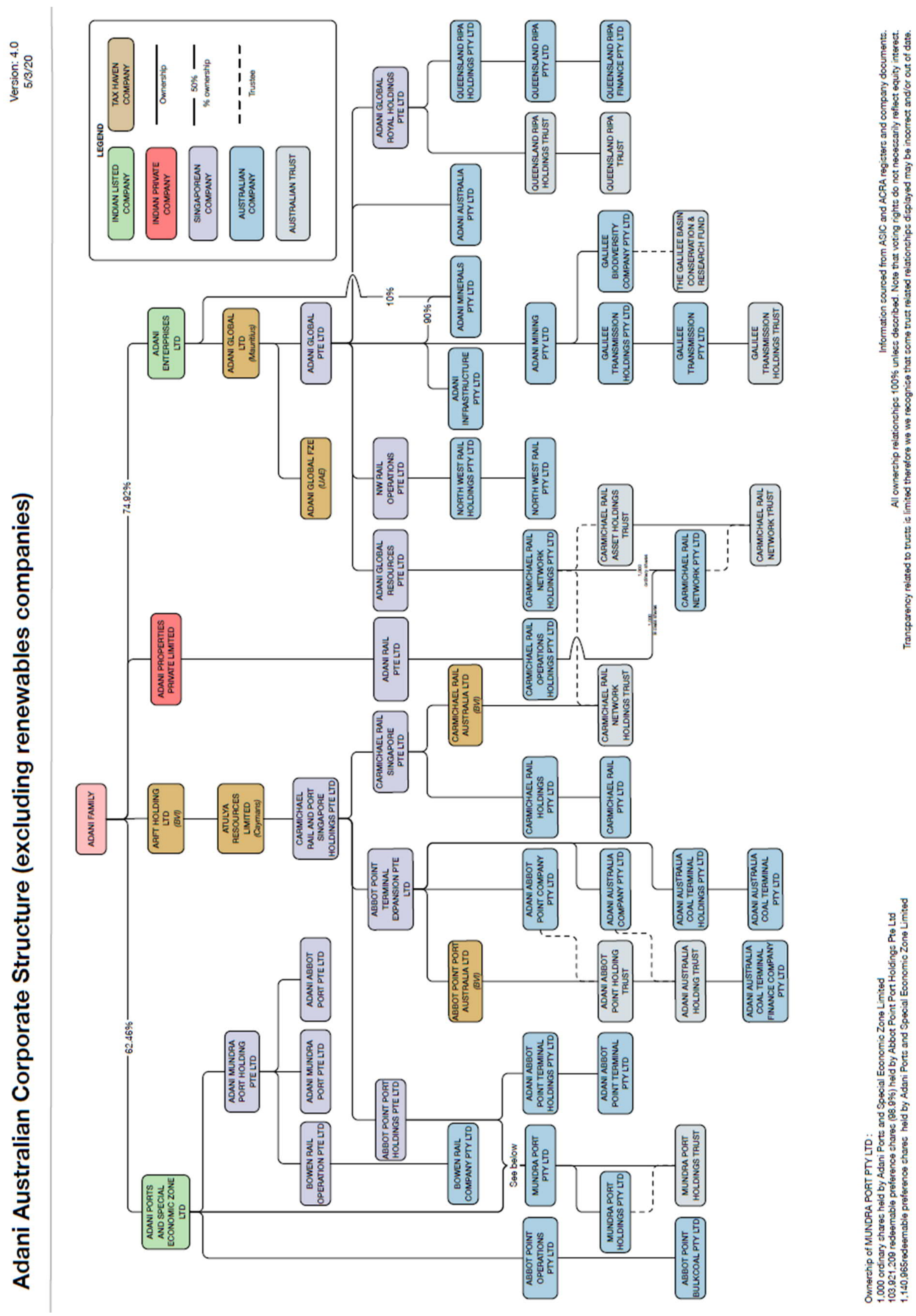
i) **ADSEZ has clear direct subsidiary operations at Abbot Point through the Abbot Point Operations Pty Ltd** *(APO*[12]*)* which is a "100% subsidiary of the Company and engaged in the business of Port Operation".[13] *APO* has operated the Abbot Point Terminal since 2016.[14] This is not to be confused with Adani Abbot Point Terminal Pty Ltd which is the name of the issuing entity for ADAABB. The relationship between ADAABB and Adani Group runs through a number of Singaporean and Cayman Island registered companies. For purposes of the court case quoted above, the judge makes an explicit mention of no differentiation between ADAABB and ADSEZ subsidiary *APO*.[15]

ii) **A number of re-registrations at the Australian Securities and Investments Commission in the past week (see box below) again suggest coordinated activity between ADAABB and ADSEZ.** The ADAABB issuing entity is renamed with prefix "North Queensland Export Terminal" and the ADSEZ subsidiary Mundra Port Pty[16] *(MPT) is* renamed with prefix "NQXT" where we see it safe to assume that the acronym stands for "North Queensland Export Terminal".

Current name	New name	Related purpose
Adani Abbot Point Terminal Holdings Pty	North Queensland Export Terminal Holdings Pty Ltd	ADAAAB
Adani Abbot Point Terminal Pty Ltd	North Queensland Export Terminal Pty Ltd	Management/operations of the Abbot Point coal terminal
Mundra Port Pty Ltd	NQXT Port Pty Ltd	ADSEZ
Mundra Port Holdings Pty Ltd	NQXT Holdings Pty Ltd	Holdings of the lease of the Abbot Point coal terminal

[12] Entity acronyms in italics refer to the acronyms used in the Company's annual report 2019. They are not equivalent to corporate tickers as used on, for example, the Bloomberg system.
[13] Source: Company annual report, 5 May 2020, Notes to the consolidated financial statement, 1.xxvi.
[14] See "Abbot Point Operations" (Adani Australia presentation, Sep 2019)
[15] [12] "[…] *Except where it is necessary to distinguish between APO and APB [ADAABB] (Chapter IV), I will simply refer to the operator after 2016 as the Adani operator*." [2020] QSC 260.
[16] For reference, the physical Mundra Port is located in the Gujarat province in India and features the world's biggest coal terminal. It is one of the key operational assets of ADSEZ.

Figure 5. Adani Group Australia related entities. Source: Energy Resource Insights, Summer 2020.



iii) **Recent announcements indicate that the ADSEZ subsidiary Bowen Rail Company has started operations, forming part of the crucial logistics chain for Carmichael output.**[17] Further ADSEZ subsidiaries are Abbot Point Bulkcoal Pty Ltd, Adani Abbot Port Pty Ltd, Bowen Rail Operations Pty Ltd and Bowen Rail Company Pty Ltd.[18] For reference, Bowen is the city located just south-east of the Abbot Point terminal, and the Bowen subsidiaries were incorporated in December, 2019. It shall be noted that the Bowen subsidiaries were listed as inactive ("Names of subsidiaries which are yet to commence operations") in the ADSEZ' annual report for 2019, but as per the link now are starting operations.

iv) **Carmichael Rail and Singapore Rail and Port *(CRPSH)* can receive capital through discretionary dividends from *MPT*/ADSEZ, while ADSEZ still retains voting control over *MPT*.** There exists a preference shareholder relationship between the ADSEZ subsidiary Mundra Port Pty (*MPT*) and Abbot Point Port Holding Pte Ltd (*APPHS,* Singapore). APPHS is owned ultimately by the Adani Group, but through a subsidiary called Carmichael Rail and Port Singapore Holdings Pte Ltd *(CRPSH).* ADSEZ holds the ordinary shares of *MPT* where the *APPHS* holds 98.9% of the preference shares. As a reminder, a preference share is a share that has no voting rights, but has senior dividend rights. Such preference share dividend payments, if they were to happen, could be construed to not be in the interest of minority shareholders of ADSEZ. Hypothetically, further repayments of the ADAABB loans coming due over the next year and a half would be cheaper for Adani Group if made through the financing capacity of ADSEZ, not only through lower interest rates but also as there would be dilution of the capital cost through minority owners' share of it.

ESG ratings and comments

As a final note, **we would contrast the current "Low" ESG rating risk[19] ascribed to ADSEZ by Morningstar/Sustainalytics[20] to the lowest possible 'CCC' ESG rating from MSCI.[21,22]** Other ESG scores[23] for ADSEZ are RobecoSAM 38 (0-100, 100 is worse), Bloomberg ESG disclosure 47.9 (0-100, 100 is better), ISS (governance) quality score 2 (1-10, 10 is higher risk) and CDP climate change score C.[24]

Environmental (E): We believe the latent Carmichael financing/controversy risk motivates a high risk estimate. Carmichael may be one of the most exposed topics on the environmental side in developed markets today, and recent climate change related events have not diminished this.

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[17] "New rail company recruiting for Bowen haulage business" (Industry Queensland, 18 Aug 2020). The Bowen Rail Company does not list any association on its web with the Adani Group, however, what appears to effectively be the CEO is listed as an employee of Adani Australia on social media.
[18] Ibid, notes 1.xxvi, 1.xxxii, 1.xxxiv [sic], 1.xxxv, 1.xxxxii, 1.xxxxii. Numerals as per report.
[19] Indicated as a top 83rd percentile among >12k rated companies.
[20] Data from public home-page disclosure, as of 10 Aug 2020.
[21] Data from public home-page disclosure, as of 25 Aug 2020.
[22] Confusingly, equity holdings of ADSEZ IN appears in several MSCI named ETFs. See e.g. the ticker EEDM LN which is the iShares MSCI EM ESG Enhanced UCITS ETF, reviewed 25 Aug 2020.
[23] Scores from Bloomberg terminal as per 25 August 2020.
[24] Link to score.

Social (S): There is recent controversy in association with Adani's involvement in Carmichael coming from indigenous groups (see e.g. "Standing our ground") with concerns around the project's usage of land and water. Adding to this is the charred relationship between Adani Australia and "anti-fossil fuel activists", signified by a recent declined request for a home-search warrant for a leading activist,[25] as well as the company pursuing civil legal proceedings against said activist leader.[26] Thus, we believe ADSEZ could be questioned on the social factor if acting in coordination with Adani Australia.

Governance (G): We find the disclosure on the potentially material Carmichael controversy to be less than satisfactory. ADSEZ' 2019 annual presentation, at 380 dense pages of which many are covering ESG and SRI topics, does not mention any potential relationship to Carmichael at all, nor do recent investor materials. We believe recent renaming of subsidiaries are obfuscating rather than increasing transparency around these controversy risks, and find the corporate structure opaque. The comment from the judge in the Queensland Supreme Court ruling is not encouraging in terms of general governance risks:

[207] *"It [the applicant] attempted to disguise its behavior in complex transactions. It attempted to include dishonest recitals in those transactions. It pleaded matters which were false in this proceeding and had Mr. […] give false evidence in its case.* "

Summary

Taken together, we believe that this establishes **a clear risk of ADSEZ funding and/or operating vital parts of the Carmichael coal value chain with associated exposures.** Given the success of ADSEZ in international bond markets, and its long debt maturity curve compared to ADAABB ultra-short one, it is in our view likely that a switch over of activities to **ADSEZ significantly increases the likelihood of a commercial success and a lower the cost-of-capital for the Carmichael project.**

We believe it would be prudent for investors and other financial intermediaries that have declined to engage in Adani Abbot Point or other coal related financing to also conduct due diligence on ADSEZ. Particularly for ESG focused funds, or other investors committed to climate change mitigation, exposure to the development of one of the world's biggest untapped reserve of coal may be hard to explain to end investors. **In our view and generally speaking, potential financing of the Carmichael project through the ADSEZ/Abbot Point linkages should activate analysis whether ADSEZ should come under coal exclusion criteria for investors that apply such. Otherwise, we would offer the frank opinion that such criteria lack credibility.**

So far, we have discussed bond holders of ADSEZ and ADAABB bonds. **On the equity side**, assorted important minority free float holders[27] (~38% of share capital) either through size or their coal divestment commitments are Vanguard (1.25%), Norges Bank Investment Management (0.75%), BlackRock (0.70%), GPIF (0.23%), Nordea (0.18%) and Calpers[28] (0.06%)**. We would suggest engagement and/or divestment.**

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[25] "Mining giant Adani secretly applied to raid Brisbane home of activist […]" (ABC News, 27 Aug, 2020)
[26] "Adani launches civil legal proceedings against anti-coal activist", (Adani Australia, 27 Aug, 2020).
[27] Source: Bloomberg data. These numbers come various points in time and may not reflect current positions.
[28] To give an example of possible equity engagement, Calpers argues for "mandatory climate disclosure in financial accounts" (Financial Times, 15 Aug 2020) relating back to our point on disclosure.

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