Vedanta – 5 Years, 3 Coal Mines, 0 Progress

Vedanta's coal autonomy strategy has failed. Radhikapur, Kuraloi, and Ghogharpalli remain stuck in early-stage permitting, years after allocation.

PLEASE READ IMPORTANT DISCLAIMER - PAGE 10

September 11, 2025 – For at least the past 5 years, Vedanta Limited (VEDL) has repeatedly emphasized its intent to reduce dependence on external coal sources. This has a direct impact on the Company's parent, Vedanta Resources Limited (VRL), whose ability to deleverage and refinance is built on a narrative of operational delivery.

To that end, VEDL is currently developing three coal blocks:

- Radhikapur (West) allocated December 2020
- Kuraloi (A North) allocated November 2020
- Ghogharpalli & Dip Extension allocated March 2023

Together, these blocks are projected to supply over 30 million tonnes per annum (MTPA) of thermal coal. In theory, this would drastically cut coal procurement costs and increase energy security. In practice, all three projects are still in the pre-operational stage, with permitting delays, land acquisition setbacks, and regulatory missteps eroding timelines and credibility.

VEDL stated in 2022 that captive coal mines, including Radhikapur and Kuraloi, were intended to lower their coal costs by more than 50%, making these projects critical for margin protection and energy security. More than 3 years later, they remain paper assets¹.

The situation mirrors VEDL's stalled **Sijimali bauxite mine**, which remains locked in pre-clearance delays nearly two years after allocation. Together, these setbacks on **coal and bauxite** leave the Company increasingly exposed on both ends of its aluminium value chain.

These delays reflect a deeper execution deficit at VEDL and VRL's leadership. Management consistently gives timelines disconnected from reality and fail to course-correct when timelines slip.

The following analysis was sourced with VEDL's public filings, Environment Clearances and Meeting Minutes from the Ministry of Coal^{2,3,4}.

Definitions

Acronym	Definition
CA	Compulsory Afforestation
DGPS	Differential Global Positioning System
EAC	Expert Appraisal Committee
EC	Environmental Clearance
EIA	Environmental Impact Assessment
FAC	Forest Appraisal Committee
FC-I	Forest Clearance I
FC-II	Forest Clearance II
FRA	Forest Rights Act
IRO	Integrated Regional Office
MoC	Minstry of Coal
MoEFFC	Ministry of Environment, Forest and Climate Change
MTPA	Million Tonnes Per Annum
SIA	Social Impact Assessment
ToR	Terms of Reference

¹ https://economictimes.indiatimes.com/industry/indl-goods/svs/metals-mining/captive-mines-value-added-businesses-will-help-vedanta-realise-hefty-margins-ceo-sunil-duggal/articleshow/91228049.cms

² https://www.vedantalimited.com/eng/investor-relations-overview.php

³ https://environmentclearance.nic.in

⁴ https://coal.gov.in



Radhikapur

Project Summary

VEDL was awarded the Radhikapur (West) Coal Block in December 2020, with the stated intention of developing the mine as a captive fuel source for the Jharsuguda smelter. By April 2022, management claimed they expected the mine to be operational by H2 FY23.

Radhikapur Mine Information					
Estimated Reserves	~312 million tonnes				
Production Capacity	6 MTPA				
	Allocated to Vedanta Ltd under the				
Allotment	CMSP (Coal Mines Special Provisions)				
	Act				
Mining Lease Area	1048 ha				

Five years after allocation, Radhikapur remains an on-paper asset.

Meeting minutes from India's Ministry of Coal show that, as of May 2025, the project has still not completed compliance for FC-I. VEDL has now formally requested an extension, having allowed the previous FC-I window to lapse without fulfilling its obligations.

Regulatory Breakdown

Over four years of Ministry of Coal meetings, Vedanta repeatedly assured regulators of progress on Radhikapur, yet failed to clear even the first regulatory hurdle. The previous allottee had initiated but not completed the Forest Clearance (FC) process by the time of deallocation.

- Instead of initiating a fresh FC application, VEDL spent nearly a year attempting to transfer the prior allottee's incomplete file.
- The MoEFCC flagged multiple compliance gaps, including missing Compensatory Afforestation (CA) land details and the absence of suitability certification.
- VEDL applied for an EC in June 2021, despite not having obtained FC-I, a violation of standard regulatory sequencing.
- In June 2022, VEDL informed the Ministry of Coal that the MoEFCC had rejected its request to transfer the previous allottee's EC file.
- The rejection was grounded in the fact that EC had never been formally granted to the prior allottee: it had only been recommended. This ruling forced VEDL to restart the clearance process from scratch.
 - o This included new CA land identification, public consultations, and a fresh EIA process.
- By December 2022, VEDL had offered to place a deposit as a gesture of progress while trying to resolve delays.
- However, the CA land they identified was later found to be classified as Protected Reserve Forest, rendering
 it ineligible for use and forcing Vedanta to begin CA identification again.
- The issue escalated to the point where, in June 2024, the MoC issued a show-cause notice to VEDL over its failure to obtain both FC-II and EC.
- The MoC committee warned that if the mine was not operational by June 2025, they would recommend penalties against the Company for non-performance.

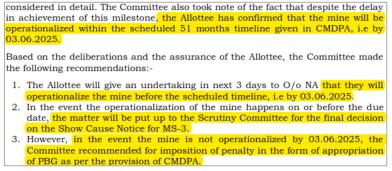


Figure 1 – MoC Show Cause Notice dated June 2024



The table below shows a pattern of missed milestones, recycled commitments, and persistent non-compliance stretching from 2021 through mid-2025.

Radhikapur I Date	Ministry of Coal Meeting Notes Meeting Notes
19-Jul-21	Vedanta reported land acquisition had begun with state approval, but their attempt to transfer the prior allottee's EC failed after discovering FC-I was never granted. Only the FAC stage had been reached.
21-Sep-21	Vedanta stated that EC and FC applications from the prior allottee had been vested in their name, but MoEFCC required fresh applications for both.
17-Jan-22	Vedanta stated they applied for EC in June 2021, but it was not processed due to lack of FC-I. With FAC recommending FC-I in December 2021, they would proceed with EC after receiving the grant letter.
24-Jun-22	Vedanta reported that MoEFCC had rejected the EC transfer request due to the absence of a formal grant letter for the prior allottee and advised them to apply afresh for ToR. Vedanta stated baseline data had been collected and ToR would be filed by month-end. SIA was underway, land acquisition was in progress, and FC-I had been granted on 06.01.2022. Compliance with FC-I conditions was ongoing.
13-Jul-22	Vedanta stated that progress was limited due to land acquisition issues, but they were working to resolve them and aimed to secure mine opening permission within the year.
14-Sep-22	The Ministry noted that mine opening permission had not been granted. Vedanta confirmed the EC was not transferred and that they had applied for a revised ToR, with a presentation made on 21.08.2022. FC-I had been transferred, and compliance for FC-II was underway.
31-Oct-22	Vedanta reported ongoing issues with EC and FC, and stated that public consultation was underway. They were working to arrange additional CA land. Due to these delays, no coal production was expected in the current year. They expressed hope to begin mining by Q3 of the following year.
12-Dec-22	Vedanta reported that the CA land vested to them from the prior allottee was rejected by the DFO, who instructed them to arrange a new parcel. They were in the process of identifying alternate CA land.
1-Feb-24	MoEFCC had sought clarification regarding the CA land earlier declared suitable by the prior allottee, as well as on the presence of an elephant corridor. Vedanta committed to completing all FC-I compliance within six months. On land acquisition, Gram Sabha proceedings had been completed in 3 of the 5 affected villages.
7-Mar-24	Vedanta acknowledged no milestone progress but cited movement on supporting activities. Gram Sabha proceedings for 2 villages remained pending, and efforts were ongoing to complete them. The company planned to conduct public hearings for private land acquisition in March and April.
8-Jul-24	The CA land previously identified was later found to be within a Protected Reserve Forest. As a result, they were in the process of identifying 91.92 ha of alternate non-forest land for CA compliance.
30-Sep-24	Vedanta reported that the CA land transferred with FC-I was now void, as it was located in a forest area. Following the Scrutiny Committee's advice, they were arranging fresh CA land to enable FC-II approval. On land acquisition, the SIA report under Section 4(1) was completed, and Gram Sabhas of the remaining 2 expected soon.
25-Nov-24	VEDL's mining lease application had been forwarded to the State Chief Secretary and was awaiting approval.
29-Jan-25	VEDL identified an additional 112 ha of CA land, obtained suitability certification, and completed the DGPS survey. For government land, the acquisition file had progressed from the Tehsildar to the Collector's office.
14-May-25	Vedanta confirmed that FC-I had been transferred and that additional CA land had been identified. They were in the process of obtaining a suitability certificate and requested the Ministry to extend the timeline for FC-I compliance.

Figure 2 – Radhikupar Ministry of Coal Meeting Minute Timeline

What has been accomplished to date

• Stage-I Forest Clearance (FC-I) has been technically transferred, but compliance remains incomplete. No final clearance has been granted.

- In response to the June 2024 show-cause notice, VEDL claimed to have obtained Environmental Clearance (EC). This is impossible, as EC cannot be granted without FC-I being approved and complied with⁵.
- Compensatory Afforestation (CA) land is still under identification, and suitability certification from the Forest Department is pending.
- No land acquisition has occurred. No physical infrastructure has been developed. There are no haul roads, no boundary walls, and no site-level construction.
- The Company has filed a formal extension request with the MoC to retain its FC-I status and avoid potential regulatory penalties.

Guidance vs Reality

The last public forecast for Radhikapur came during VEDL's Q1 FY25 earnings call in August 2024, where management claimed the mine would achieve first ore by Q1 FY26. This timeline was repeated in the Company's response to the Ministry of Coal's show-cause notice, suggesting a high degree of confidence in permitting progress.

Radhikapur Coal Mine VEDL Management Comments						
Earnings call date	Period	Comments				
October 29, 2021	Q2 FY22	Operational within 2 years time				
		Two of Jamkhani, Kuralooi and Radhikapur				
January 28, 2022	Q3 FY22	operational in the next year				
April 28, 2022	Q4 FY22	Operational in H223				
July 28, 2022	Q1 FY23	Cost between INR 0.5 - 0.55				
October 28, 2022	Q2 FY23	Mining targeted by Q2 FY24				
January 27, 2023	Q4 FY23	Mining targeted by Q1 FY25				
November 4, 2023	Q2 FY24	Mining targeted by Q2 FY25				
April 25, 2023	Q4 FY24	Mining targeted by Q4 FY25				
August 6, 2024	Q1 FY25	First ore by Q1 FY26				
January 31, 2025	Q3 FY25	Not yet operational, EC received, no forecast				

Figure 3 – Radhikapur Coal Mine VEDL Management Comments

In terms of the coal mines both Kurloi Radhikapur we are targeting good first ore in the first quarter of FY '26 and the same with Sijimali. So not quite what we had hoped, but as I said with now a successful change in government those processes are tracking really well. We continue in our land acquisition processes and so we're sort of pretty pleased with how things continue to progress.

Figure 4 – VEDL FY22 Q2 Earnings Call Transcript August 2024

The final public mention of Radhikapur came in January 2025, when, prompted by an analyst, the CEO of Vedanta's Aluminium division dismissed concerns, stating: "...there is no problem. We have everything in our hands".

Sumangal Nevatia:	And what about Radhikapur, sir?
Sunil Gupta:	Radhikapur, we are progressing well with Radhikapur. We have already got the EC. So, there is
	no issue in that. So, the Radhikapur there is no problem. We have everything in our hands.

Figure 5 – VEDL FY25 Q3 Earnings Call Transcript January 2025

VEDL continuously misrepresented Radhikapur to investors as a turn-key asset instead of a stalled permit file. Over 5 years after acquiring the block, there is no tangible progress on the mine, and the Company is still stuck at the first regulatory hurdle.

Viceroy Research Group 4 viceroyresearch.org

⁵ https://parivesh.nic.in/publicdocument/UPLOAD OM NOTIFICATION/IA DOCS/Manual/225064928%24Validity-Stg-II%20FC-OM.pdf



Kuraloi

Project Summary

Kuraloi (A North) is one of Vedanta's largest coal blocks by allocated capacity, intended to anchor fuel supply for its aluminium operations.

Management claimed during the October 2021 earnings call that Kuraloi would be "operational within 2 years." This forecast has since been quietly

Kuraloi Mine Informati	on
Estimated Reserves	~399 million tonnes
Production Capacity	8 MTPA
	Allocated to Vedanta Ltd under the
Allotment	CMSP (Coal Mines Special Provisions)
	Act
Mining Lease Area	966 ha

de-emphasized in investor materials, replaced with vague "in development" disclosures.

other two mines also we are making and building a strategy. Our own vision is that we want to operationalize Jamkhani coal block in next say one year and rest, Radhikapur and Kuraloi mine block in the next two years' time so that we have a structural reduction in the cost which has a delta of say around \$200 per ton from the current level, but we want to insulate and make our

Figure 6 – VEDL FY22 Q2 Earnings Call Transcript October 2021

As of May 2025, Kuraloi has not received its mining lease, nor has forest clearance been finalized. Instead, the mine is trapped in maze of regulatory filings, most of which remain incomplete. Vedanta's own filings acknowledge that school relocation, stream clearances, and R&R permissions are still pending.

Regulatory Breakdown

Over nearly three years of MoC meetings, VEDL has repeatedly committed to near-term progress on Kuraloi, but the project remains trapped in regulatory limbo. The table below reveals a pattern of fragmented land acquisition, repetitive EC updates, and a prolonged FC-I process that forced the Company to restart from scratch in 2024.

- VEDL delayed its ToR application until mid-2022 despite Mine Plan approval in April 2022.
- The Company only partially completed CA land identification by late 2022, leaving over half the required area undefined.
- EC was recommended in August 2023, but remained ungranted due to lack of FC-I, a breakdown in sequencing that stalled the project.
- VEDL was forced to resubmit a fresh FC-I proposal in March 2024, indicating the previous file had either expired or was procedurally invalid.
- The FC-I process stretched over a year, with additional documentation (EDS) raised in November 2024, delaying final recommendation until April 2025.
- Two Gram Sabhas had to be reconducted due to lack of quorum, slowing FRA progress.
- Land acquisition remained fragmented, with private land still in the SIA stage as of late 2024, and mining lease execution delayed by pending approvals across state departments.

Kuraloi Mini	stry of Coal Meeting Notes
Date	Meeting Notes
24-Jun-22	VEDL stated that the Mine Plan was approved in April 2022. Baseline data collection was underway, and they intended to apply for ToR the following month.
12-Dec-22	VEDL reported that out of 252 ha required for CA, 125 ha had been identified, and a suitability certificate was applied for with the DFO, Angul on 22.10.2022. Draft EIA/EMP for EC was in progress.
1-Feb-24	VEDL reported receiving suitability certificates for 528 acres of CA land across two districts. FRA application was in preparation, Gram Sabhas were expected to conclude by end of January, and the SIA study for land acquisition would begin soon. EC had been recommended by the EAC but would only be granted after FC-I.
7-Mar-24	VEDL stated that Gram Sabhas had been completed in six villages, but would be re-conducted in two due to lack of quorum, with the sessions planned for the first week of March. They were initiating acquisition of private land. EC had been recommended by the EAC but remained pending until FC-I was granted.
8-Jul-24	VEDL reported that EC had been recommended on 29.08.2023 but remained ungranted due to the absence of FC-I. A fresh FC proposal was submitted on 25.03.2024. PSC-I processed the file, and site visits were completed by DFO, RCCF, and PCCF.
30-Sep-24	VEDL confirmed that EC had been recommended but was still pending due to the absence of FC-I. They reported that the PCCF had forwarded the FC-I proposal to the State Government on 10.09.2024. They also requested a correction to village names in the vesting order. On land acquisition, IDCO had acquired 70% of the government land. For private land, VEDL requested MoC's help to obtain state approval so they could proceed with the Section 4(1) notification
25-Nov-24	VEDL reiterated that EC had been recommended but was pending due to lack of FC-I. An EDS was raised on 08.11.2024, and compliance was ongoing. IRO site inspection was completed on 12.11.2024. CA land identification was complete, land alienation was in process. Gram Sabhas were completed, and the company was awaiting the Collector's NOC under FRA. VEDL is coordinating with the DDM office to submit documents to the Steel and Mines Department. For land acquisition: of 611 acres of government land, 417 acres had been sanctioned; the remainder was under process.
14-May-25	VEDL reported that their FC-I proposal was considered in the FAC meeting held on 16.04.2025, where the committee recommended in-principle approval for diversion of 213.37 ha of forest land within the 965.58 ha mining lease area. VEDL requested urgent support for issuance of Section 4(1), alienation of remaining government land, LOI for the mining lease, relocation of an SC/ST school, permission for R&R construction, and Nalla NoC.

Figure 7 – Radhikupar Ministry of Coal Meeting Minute Timeline

What has been accomplished to date

While this list may seem impressive, we note that FC-I was **only recommended** in April 2025, almost 2 years after the mine was supposed to be operational, and 2 months after management expected to receive it outright.

- The mine plan was approved in April 2022. Baseline data collection, EIA/EMP preparation, and the ToR process were completed by early 2023.
- VEDL secured suitability certificates for 528 acres of CA land and completed CA land identification across two districts.
- Gram Sabha proceedings were held in all affected villages, completing the community consultation process for FRA.
- The integrated Wildlife Management Plan was approved, and the IRO site inspection was successfully completed in November 2024.
- EC was recommended by the EAC in August 2023. FC-I was recommended in-principle by the FAC in April 2025.
- On land acquisition, 70% of government land was sanctioned, and SIA was underway for private land by the end of 2024.

Of the three coal blocks, Kuraloi is by far the most developed.

Guidance vs Reality

Vedanta's messaging on Kuraloi has consistently projected near-term production, with first coal repeatedly promised within the next four quarters over the past three years.

Kuraloi Coal Mine VEDL Management Comments						
Earnings call date	Period	Comments				
October 29, 2021	Q2 FY22	Operational within 2 years time				
		Two of Jamkhani, Kuralooi and Radhikapur				
January 28, 2022	Q3 FY22	operational in the next year				
April 28, 2022	Q4 FY22	Operational by H1 FY24				
July 28, 2022	Q1 FY23	Cost between INR 0.6 - 0.65				
October 28, 2022	Q2 FY23	Mining targeted by Q4 FY24				
November 4, 2023	Q2 FY24	Mining targeted by Q2 FY25				
January 25, 2023	Q3 FY24	Mining targeted by Q2 FY25				
April 25, 2023	Q4 FY24	Commissioning by in Q4 FY25				
August 6, 2024	Q1 FY25	First ore by Q1 FY26				
January 31, 2025	Q3 FY25	Expecting forest clearance in 1 month.				
April 30, 2025	Q4 FY25	Operational in Q3 FY26				
July 31, 2025	Q1 FY26	Operational in Q3 FY26				

Figure 8 – Kuraloi Coal Mine VEDL Management Comments

Starting as early as October 2021, management claimed the mine would be operational "within two years." That target has now slipped by more than three full fiscal years.

As far as coal is concerned, Kuraloi, we have an in principle approval for FC1. And just few days back, we got a grant for the EC as well. FC2 is also being targeted by the end of the quarter. And as is the guidance in the last quarter, in Quarter 3, we should be up and we should be ready to start Kuraloi. So, that is the guidance and we stick to the guidance.

Figure 9 – VEDL FY26 Q1 Earnings Call Transcript

This is a case of guidance being decoupled from regulatory facts. The project has missed every public timeline since 2021, with investors repeatedly told that production was imminent even as MoC filings showed otherwise.

The project also requires the relocation of a school, clearance for Resettlement and Rehabilitation (R&R) construction, and a Nalla NoC each of which has the potential to introduce additional delays. Execution of the mining lease is still pending, and no physical infrastructure has been developed on site.

We believe Kuraloi faces at least 12–18 months of permitting and site-level preparation before mining can begin.



Ghogharpalli

Ghogharpalli is Vedanta's most recently activated coal asset, and the least advanced among the three under review⁶.

The project remains in early-stage regulatory processing, with core applications only recently filed. An annexure hosted on the Government

Ghogharpalli Mine Information				
Estimated Reserves	~578 million tonnes			
Production Capacity	20 MTPA			
	Allocated to Vedanta Ltd under the			
Allotment	CMSP (Coal Mines Special Provisions)			
	Act			
Mining Lease Area	1048 ha			

eMarketplace site (GeM), dated November 27, 2024, confirms that Vedanta had obtained **none** of the required clearances as of that date⁷.

S.No	Coal Mine	State	Allottee	EC	FC I	FC II	LA	ML	No. of Clearances to be obtained
118&	Ghogharpalli & Its Dip	Odisha	Vedanta Limited	N	N	N	N	N	5
	Extension								

Figure 10 – Annexure hosted on GeM dated November 27, 2024

This is corroborated by VEDL's January 2025 earnings call stating that the Company had only applied for EC and filed a ToR. Despite this, VEDL management continue to guide for production in Q4 FY26.

For the Ghogarpalli Mines, we have already taken the action on the ground. Land acquisition, alienation of land is already completed. We have application for EC, ToR has been filed. Application for ML has been filed. So, we are on track as far as the Ghogarpalli and mining plan is already submitted to MoEF. And I am very hopeful that Quarter 1 off, as per the original guideline, original target of Ghogarpalli, quarter 4 of FY '26, they are going to take out the first coal for the Ghogarpalli.

Figure 11 – VEDL Q3 FY25 Earnings Call January 31, 2025

This timeline is not credible.

- The MoC Meeting Minutes dated May 14, 2025 indicate the Company has neither FC-I nor EC clearance.
- The land acquisition and alienation processes have not yet been started and there is no mention of public hearings, compliance or forest related approvals.
- We found no documentation related to Ghogharpalli's EC on the Environment Clearance site.

Regarding EC, the Allottee has informed that ToR presentation has been completed on 18.03.2025. EAC recommended the proposal subject to uploading of approved Mine Plan and Mine Closure Plan prescribing specific ToRs for undertaking detailed EIA and EMP study in addition to generic ToR. In this regard, ToR has been granted on 16.04.2025. Regarding Mining Lease, ML application with technical reports has been forwarded by Collector Sundergarh to the Director of Mines & Geology, GoOR on 03.01.2025. Scrutiny of the ML application is in progress by, DOMG, Odisha. Further, the Allottee has requested to issue OM based on issued request letter for further expediting the Acquisition & Alienation process and Nala NoC from State Government.

Figure 12 – MoC Meeting Minutes dated May 14, 2025

https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwiWitmthM6PAxUI4TgGHREKFM4QFnoECBgQAQ&url=https%3A%2F%2Ffulfilment.gem.gov.in%2Fcontract%2Fslafds%3FfileDownloadPath%3DSLA UPLOAD PATH%2F2024%2FNov%2FGEM_2024_B_5546206%2FCLM0012%2FAnnexure_f945ea1e-da87-4651-

⁶ https://ospcboard.odisha.gov.in/wp-content/plugins/hearing/uploads/files 1747826935 187365352.pdf



Management continues to guide for first coal by Q4 FY26, but no clearances have been granted, and the permitting process has barely begun. There is also no mention of public hearings, FRA compliance, or Wildlife/Forest-related approvals.

Across Radhikapur, Kuraloi, and Ghogharpalli, VEDL has missed every operational milestone it set for itself. These aren't technical failures, they're execution failures. While VEDL and VRL continue to tell investors and bondholders that production is imminent, their filings show the opposite.



Attention: Whistleblowers

Viceroy encourage any parties with information pertaining to misconduct within Vedanta Resources, its affiliates, or any other entity to file a report with the appropriate regulatory body.

We also understand first-hand the retaliation whistleblowers sometimes face for championing these issues. Where possible, Viceroy is happy act as intermediaries in providing information to regulators and reporting information in the public interest in order to protect the identities of whistleblowers.

You can contact the Viceroy team via email on viceroy@viceroyresearch.com.

About Viceroy

Viceroy Research are an investigative financial research group. As global markets become increasingly opaque and complex – and traditional gatekeepers and safeguards often compromised – investors and shareholders are at greater risk than ever of being misled or uninformed by public companies and their promoters and sponsors. Our mission is to sift fact from fiction and encourage greater management accountability through transparency in reporting and disclosure by public companies and overall improve the quality of global capital markets.

Important Disclaimer - Please read before continuing

This report has been prepared for educational purposes only and expresses our opinions. This report and any statements made in connection with it are the authors' opinions, which have been based upon publicly available facts, field research, information, and analysis through our due diligence process, and are not statements of fact. All expressions of opinion are subject to change without notice, and we do not undertake to update or supplement any reports or any of the information, analysis and opinion contained in them. We believe that the publication of our opinions about public companies that we research is in the public interest. We are entitled to our opinions and to the right to express such opinions in a public forum. You can access any information or evidence cited in this report or that we relied on to write this report from information in the public domain.

To the best of our ability and belief, all information contained herein is accurate and reliable, and has been obtained from public sources we believe to be accurate and reliable, and who are not insiders or connected persons of the stock covered herein or who may otherwise owe any fiduciary duty or duty of confidentiality to the issuer. We have a good-faith belief in everything we write; however, all such information is presented "as is," without warranty of any kind – whether express or implied.

In no event will we be liable for any direct or indirect trading losses caused by any information available on this report. Think critically about our opinions and do your own research and analysis before making any investment decisions. We are not registered as an investment advisor in any jurisdiction. By downloading, reading or otherwise using this report, you agree to do your own research and due diligence before making any investment decision with respect to securities discussed herein, and by doing so, you represent to us that you have sufficient investment sophistication to critically assess the information, analysis and opinions in this report. You should seek the advice of a security professional regarding your stock transactions.

This document or any information herein should not be interpreted as an offer, a solicitation of an offer, invitation, marketing of services or products, advertisement, inducement, or representation of any kind, nor as investment advice or a recommendation to buy or sell any investment products or to make any type of investment, or as an opinion on the merits or otherwise of any particular investment or investment strategy.

Any examples or interpretations of investments and investment strategies or trade ideas are intended for illustrative and educational purposes only and are not indicative of the historical or future performance or the chances of success of any particular investment and/or strategy. As of the publication date of this report, you should assume that the authors have a direct or indirect interest/position in all stocks (and/or options, swaps, and other derivative securities related to the stock) and bonds covered herein, and therefore stand to realize monetary gains in the event that the price of either declines.

The authors may continue transacting directly and/or indirectly in the securities of issuers covered on this report for an indefinite period and may be long, short, or neutral at any time hereafter regardless of their initial recommendation.