BIJU PATNAIK INSTITUTE OF INFORMATION TECHNOLOGY
& MANAGEMENT STUDIES (BIITM), BHUBANESWAR
Plot No. F/4, Chandaka Industrial Estate, Infocity, Patia, Bhubaneswar-24
Approved by AICTE, Govt. of India | Affiliated to BPUT, Odisha | NAAC Accredited | ISO 9001 : 2015

SUMMER INTERNSHIP PROJECT 2024

REPORT TITLE

"A COMPREHENSIVE STUDY ON RENEWABLE PROJECTS FINANCING THROUGH ECB AT ADANI GREEN ENERGY LTD."

SUBMITTED BY

DEEPAK KHUNTIA
MBA Batch: 2023-2025
University Regn. No.: 2306258056

Faculty Guide

Prof. Ajitav Acharya
Asst. Prof. (Finance) BIITM, Bhubaneswar

Corporate Guide

Mr. Ashish Maheswari
General Manager, F&A,
AGEL, Ahmedabad

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CERTIFICATE OF FACULTY/INTERNAL GUIDE

This is to certify that **Mr. Deepak Khuntia** bearing university **registration no.2306258056** of 2023-25 batch, has completed his/her summer internship at **Adani Green Energy Limited** from **03/06/2024** to **15/07/2024** under the supervision of **Mr. Ashish Maheswari** (corporate guide) and has submitted this project report under my guidance in partial fulfilment of the requirements for award of the degree of Master of Business Administration at Biju Patnaik Institute of Information Technology and Management Studies, Bhubaneswar. To the best of my knowledge and belief, this project report has been prepared by the student and has not been submitted to any other institute or university for the award of any degree or diploma.

Date:

Place: Bhubaneswar

Signature of the Internal Guide

Prof. Ajitav Acharya

Designation: Asst. Professor (Finance)

adani
Renewables

Date: 16-July-2024

Internship Certificate

This is to certify that **Mr. Deepak Khuntia,** 1st Year Student of Master of Business Administration (MBA) from Biju Patnaik Institute of Information Technology & Management Studies has successfully completed the Internship Programme with **Adani Green Energy Limited** from 03-Jun-2024 to 15-July-2024.

His Internship Project was on **"A Comprehensive Study on Renewable Project Financing Through ECB".**

We found him to be sincere and hardworking.

For Adani Green Energy Ltd

Pramath Nath
Head HR

Adani Green Energy Limited
Adani Corporate House
Shantigram, S G Highway
Ahmedabad - 382 421
Gujarat. India
CIN: L40106GJ2015PLC082007

Tel +91 79 2555 5555
Fax +91 79 2555 5500
www. adanigreenenergy.com

Registered Office: Adani Corporate House, Shantigram, Nr Vaishno Devi Circle, S G Highway, Khodiyar. Ahmedabad-382 421, Gujarat. India

DECLARATION

I**, Mr. Deepak Khuntia** Bearing university **registration no. 2306258056** (2023-25 batch), hereby declare that the project report titled **"A comprehensive study on renewable project financing through ECB"** is based on my internship at **Adani Green Energy Limited** during the period **03/06/2024** to **15/07/2024** and is an original work done by me under the supervision of **Mr. Ashish Maheswari** (Corporate Guide) and **Dr. Ajitav Acharya** (Internal Guide). This report is being submitted to Biju Patnaik Institute of Information Technology and Management Studies, Bhubaneswar, affiliated to Biju Patnaik University of Technology, Odisha, in partial fulfilment of the requirements for the award of the degree of Master of Business Administration. This project report has not been submitted to any other institute/university for the award of any degree or diploma.

Date:

Place: Signature

ACKNOWLEDGEMENT

A project work cannot be a sole effort. A lot of people contribute towards the completion of a project to make it successful. Many people have played a vital role in making this project success.

It is a great pleasure to have this opportunity to express the feeling of gratitude. I am grateful to Principal Dr. MIHIR RANJAN NAYAK and Dean Dr. CHINMAYA KUMAR DASH of Biju Patnaik Institute of Information Technology and Management Studies (BIITM), Bhubaneswar, for providing us with the best facilities and atmosphere for the development and implementation of our project.

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I would like to thank Mr. Ashish Maheswari, General Manager at Adani Green Energy Limited for giving me the opportunity to be a part of the team which endeavored the issuance of the ECB Construction facility. I would like to express my sincere gratitude towards my Industry Mentor Mr. Raj Tanna, Senior Manager, Adani Green Energy Limited for making the resources available at the right time and providing Valuable insights leading to the successful completion of my project.

I would like to thank Biju Patnaik Institute of Information Technology and Management Studies (BIITM) for arranging the internship. I also extend my gratitude to my Institute Mentor Mr. Raj Tanna, who assisted me in compiling the project. I would also like to thank all the faculty members of Biju Patnaik Institute of Information Technology and Management Studies (BIITM) as well as members of Finance and Account, Adani Green Energy Limited for their critical advice and guidance without which this project would not have been possible.

Deepak Khuntia

Registration No. - 2306258056

EXECUTIVE SUMMARY

Any infrastructure project can be financed in one of two ways: with owner money or with debt. When investing any kind of capital into a project, business owners frequently take a risk. However, when a large infrastructure project needs to be put up, it is nearly difficult for the project owner to invest all equity capital, which is when debt financing enters the picture. One of the finest industries for project financing is the one involving renewable energy.

India's renewable energy industry has grown in a very spectacular way, and it is poised to dominate the globe in technologies like solar power, wind power, and hydrogen power. India is anticipated to have 450 GW of installed renewable energy capacity by 2030. To reach this goal, the company finances those renewable energy projects using owner stock or debt. Renewable energy is an industry that requires significant investment and cannot be supported solely by owner funds. As a result, the corporation finances the project through debt and succeeds in its goal. However, companies can encounter obstacles when trying to finance domestic as opposed to international markets. Therefore, a corporation may choose external borrowings to obtain finance at a cheaper interest rate than domestic market.

The renewable energy sector in India is witnessing unprecedented growth, driven by the country's commitment to sustainable development and reducing carbon emissions. Financing these large-scale projects is crucial to achieving these goals. This study titled "Comparative Study on Renewable Project Financing through External Commercial Borrowings (ECB) vs. Rupee Loan" aims to provide a comprehensive analysis of the two primary financing options available for renewable energy projects in India.

The study seeks to compare and contrast the process, effectiveness, cost-efficiency, and overall feasibility of financing renewable energy projects through External Commercial Borrowings (ECBs) and domestic Rupee Loans. The objective is to determine the most advantageous financing method in terms of cost of capital, risk management, regulatory compliance, and impact on project execution.

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CHAPTER: 1

INTRODUCTION

India is the third-largest consumer of electricity worldwide. With 100 million people obtaining access in 2018, it has grown to be one of the main drivers of the world's energy consumption and has made considerable strides towards its goal of universal electrification for residential users. Despite the government's intention to pursue strict energy efficiency standards, including LED lighting, efficient cooling, and building standards, per capita electricity consumption across the 28 Indian states and eight union territories is still about a third of the global average. Following a considerable reduction in 2020 due to Covid-19, the overall demand for energy in India has started to increase once more. Because of the epidemic, the power distribution firms (DISCOMs), who were already dealing with increasing debt and a liquidity crisis, are no longer financially viable.

India faces three main challenges: (1) how to increase reliable energy access and use while keeping consumer costs low and Discoms' finances stable; (2) how to simultaneously integrate rising shares of renewable energy in a secure and reliable manner; and (3) how to reduce emissions to achieve ambitious social and climate goals while achieving economic goals.

Company may finance/refinance the project by:

- Issuing term loan
- by issuing Non-Convertible Debentures (NCDs)
- by lowering interest rate in existing bank
- external Commercial borrowings (ECB)
- by issuing bond

Out of which this study aims to provide a comprehensive analysis of ECBs, one of the primary financing options available for renewable energy projects in India.

External Commercial Borrowing (ECB):

External Commercial Borrowings are commercial loans widely used by eligible resident entities who raise ECBs from recognized non-resident entities. ECBs should adhere to the criteria like minimum maturity period, maximum all-in-cost ceiling, permitted and non-permitted end-uses, etc. ECBs are governed by the Foreign Exchange Management Act (FEMA).

External Commercial Borrowings (ECBs) represent a major component of India's overall cross- border capital flows which are influenced by various pull and push factors. These are in the form of cash bonds, securitized instruments, preference shares (non-convertible/optionally or partially convertible) and some hybrid instruments such as Foreign Currency Convertible Bonds (FCCBs) and Foreign Currency Exchangeable Bonds (FCEBs) raised by eligible resident entities from recognized non-resident entities.

OBJECTIVES:

- To understand the process of financing renewable energy projects through External Commercial Borrowings (ECBs).
- To determine the advantages of financing through External Commercial Borrowings (ECBs).

RESEARCH METHODOLOGY:

As my project is not based on primary research, I used secondary data for data collection from different government and privately held data.

Sources of Data:

Secondary data in the organization was collected from various secondary sources like AGEL's internal documentation, sanctions documentation contracts, security documents, financial information, financial model, Project term sheet, AGEL's Annual Report, latest Investor presentation & Information memorandum. In addition to that Secondary data generated from national and international government departments, Reserve bank of India

and FED data, documents and Data identification from data sources identified or google search for relevant data needed.

Details:

The methodology began with extensive research and a comprehensive literature review to understand various aspects of renewable project financing and general financing activities in the field of renewable energy. A review of existing literature on financing mechanisms and frameworks for large renewable energy projects has been done.

I utilized financial databases to gather data on historical and current interest rates, exchange rates, and other relevant financial metrics. I analysed policy documents and guidelines from regulatory bodies such as the RBI and the Ministry of Finance to understand the legal and regulatory environment affecting ECBs.

The next step was to develop detailed financial models to predict the costs, revenues and financial performance of renewable projects and to compare the costs associated with ECBs , focusing on interest rates, fees, and other relevant expenses. Evaluation of various financing structures to determine the optimal mix of debt, equity and grants. Financial models were important for making informed decisions about project profitability and financing strategies.

SCOPE OF THE STUDY:

This study aims to provide a comprehensive analysis of project financing through External Commercial Borrowings (ECBs). It examines the key factors influencing corporate financing decisions, including project requirements, cost of capital, and regulatory frameworks. The scope of this study encompasses the following key areas:

- The study will define ECB, compare it with domestic financing options, and assess its suitability for renewable energy projects in India.
- It will examine RBI guidelines, recent policy developments, and their impact on the viability of renewable energy projects financed through ECB.
- The study will explore currency risks, hedging strategies, and regulatory compliance risks associated with ECB.
- Case studies of specific renewable energy projects financed through ECB will be

analyzed to understand the benefits and challenges.

- Current trends in ECB financing, potential for growth, and the future prospects of ECB in India's renewable energy sector will be assessed.
- The study will provide recommendations on best practices for using ECB and policy suggestions to enhance its effectiveness in financing renewable energy projects.

REVIEW OF LITERATURE:

- Rastogi & Rao (2011): India's infrastructure financing needs will surpass $1 trillion by the end of the 12th Five-Year Plan. The reliance on commercial banks leads to asset-liability mismatches. The study proposes innovative financial products to reduce costs and diversify financing for infrastructure projects.
- Leontiou (2020): The study explores the European Central Bank's (ECB) role in environmental protection, analyzing its mandate to integrate climate considerations and the implications for monetary policy.
- Horny & Kapoor (2020): Analyzing the ECB's Corporate Sector Purchase Program (CSPP), the study finds that eased corporate bond funding leads firms to invest more in replacing assets, with a significant shift toward intangible assets, especially in lower-rated firms.
- Shaukat, Mirakhor, & Krichene (2013): The study highlights the unsustainability of interest-based debt, predicting a debt crisis in G-20 countries. It advocates for Islamic finance's risk-sharing model as a viable alternative.
- RBI (2020): The RBI's Master Circular on Priority Sector Lending sets targets to ensure financial inclusion, affecting bank lending practices and promoting equitable credit distribution.
- HSBC & Climate Bonds Initiative (2017): The report analyzes the $895 billion climate-aligned bond market, emphasizing the role of cities and corporates in financing climate goals and the need for increased green bond issuance.
- Cao (2021): This textbook provides a comprehensive overview of banking theory, addressing market failures, financial frictions, and the roles of monetary authorities in maintaining macroeconomic stability.
- BloombergNEF (2020): The report offers insights into renewable energy technology advancements and their economic impacts, providing data-driven forecasts for policy and investment decisions.
- Fernández et al. (2016): The study examines the economics of High Concentrator

Photovoltaic technology, finding that higher energy yields do not always result in lower Levelized Cost of Electricity (LCOE), influenced by location-specific factors.

- Twarowska (2017): The paper evaluates how global economic shifts, particularly China's rise, impact monetary stability, concluding that the lack of a dominant global currency weakens monetary stability.
- Romaniv & Aidekova (2019): The study critiques Norway's Government Pension Fund Global's 3% payout rule, suggesting that a lower payout might better preserve the fund's purchasing power over time.
- Krauthausen (2020): An analysis of environmental versus conventional funds in Europe finds no significant performance differences, despite the challenges in sustainability reporting and data constraints.

LIMITATION OF RESEARCH:

During my Comprehensive study on Project finance through External Commercial Borrowings (ECBs), I encountered followings limitations:

- While the study explores the impact of currency fluctuations on the cost of ECB financing, fully understanding and quantifying these risks may be challenging due to the volatility and unpredictability of foreign exchange markets.
- The study relies on publicly available data and case studies, which may not capture the full spectrum of ECB financing details, especially those related to private negotiations and proprietary financial strategies used by companies.
- The constantly evolving regulatory landscape for ECB, both in India and internationally, may limit the study's ability to provide long-term recommendations, as new policies could alter the dynamics of ECB financing after the study's completion.
- The study is concentrated on the Indian context, which may limit the generalizability of findings to other countries or regions with different economic, regulatory, and financial environments.
- The analysis heavily relies on specific case studies, which might not be fully representative of the broader renewable energy sector. The unique circumstances of each project could skew the general applicability of the findings.

- The study's time frame may limit the depth of analysis, particularly in understanding long-term trends and outcomes associated with ECB financing in the renewable energy sector.
- The study includes certain economic assumptions regarding interest rates, inflation, and economic growth, which might change over time, affecting the study's conclusions about the viability of ECB financing.

These limitations highlighted the complexities of studying the financing processes through ECB for renewable projects and underscored the need for careful consideration when interpreting the findings.

CHAPTER: 02

COMPANY PROFILE AND INDUSTRY ANALYSIS

COMPANY PROFILE

Adani Green Energy Limited (AGEL) stands as one of India's largest renewable energy companies, boasting a current project portfolio of 20,884 MW. AGEL is aligned with the Adani Group's commitment to usher in a cleaner and more sustainable future for India. Guided by the Group's principle of 'Growth with Goodness', the company is devoted to developing, constructing, owning, operating, and maintaining large-scale solar and wind farm projects connected to the grid. The electricity generated is then supplied to government-backed corporations, as well as central and state government entities.

Adani Green Energy Limited ("AGEL") is a public company domiciled in India and is incorporated under the provisions of the Companies Act, 2013. Its shares are listed on two recognized stock exchanges in India. The registered office of the Company is located at "Adani Corporate House", Shantigram, Near Vaishno Devi Circle, S. G. Highway, Khodiyar, Ahmedabad382421, Gujarat. Adani Green Energy Limited is engaged in manufacturing of electricity through Solar / Wind renewable source. The company generate its power through multiple location in India. The company have locked in growth capacity of ~ 20.6 GW under the long term PPA for 25 years with average tariff of INR 3.02/kwh, out of which 8.4 GW is already commissioned and able to supply electricity to various parties. Out of total locked in growth capacity, 86% of the capacity are backed by sovereign and sovereign equivalent counter parties to demonstrate strength of the portfolio.

Subsidiaries

AGEL operates through various subsidiaries that focus on different renewable energy

Projects, including solar and wind power plants. Some key subsidiaries include:

- Adani Renewable Energy Holding Fifteen Limited
- Adani Wind Energy Kutch Five Limited

- Adani Renewable Energy Park Rajasthan Limited
- Adani Renewable Energy Forty-Two Limited

PRODUCTS OF AGEL

AGEL mainly deals in:

- Solar Power Generation
- Wind Power Generation
- Hybrid Power Generation

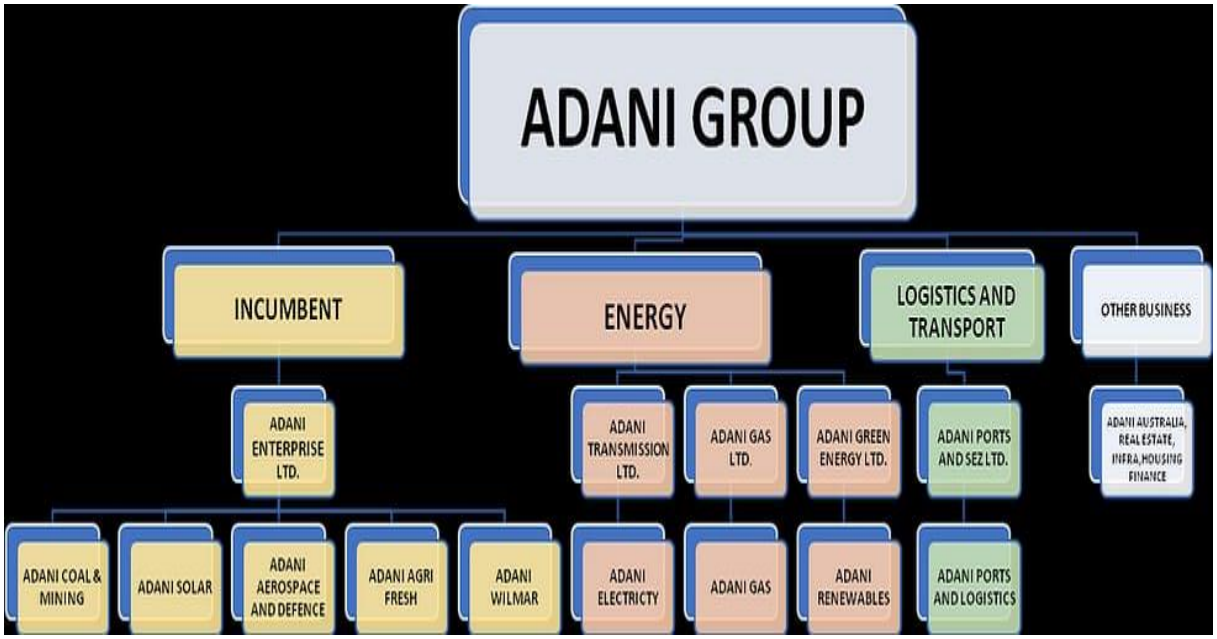
Market Size and Market Share

AGEL has a notable presence in the Indian Renewable Energy market:

With more than 14 GW of renewable energy projects in operation, under construction, or awarded, AGEL has a sizable market share.

STRUCTURE OF THE FIRM

Listed since:	18-June-2018	Listed on:	NSE, India BSE, India
Tickers:	NSE : ADANIGREEN BSE : 541450	ISIN code:	INE364U01010
Currency:	INR	Face value:	10.00
Shares outstanding:	1584,032,478	Financial year ending:	March 31 of every year
AGM timeperiod:	August/ September		



Vision

To be a world class leader in businesses that enrich lives and contribute to nations in building infrastructure through sustainable value creation.

Mission

To establish an integrated renewable energy portfolio, focusing on innovation, operational excellence, and stakeholder value creation.

FINANCIAL RESULTS

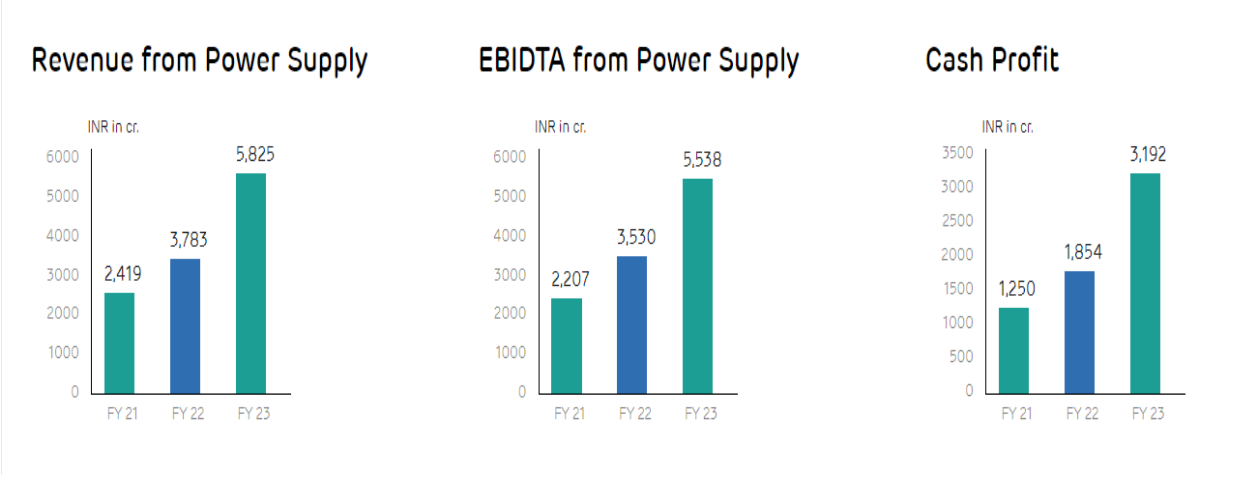
Balance Sheet

Balance Sheet

Consolidated Figures in Rs. Crores / View Standalone

CORPORATE ACTIONS

	Mar 2017	Mar 2018	Mar 2019	Mar 2020	Mar 2021	Mar 2022	Mar 2023	Mar 2024
Equity Capital	1,274	1,564	1,564	1,564	1,564	1,564	1,584	1,584
Reserves	-71	-223	369	792	636	1,050	5,720	5,912
Borrowings +	4,347	9,864	11,142	14,867	24,209	52,832	54,223	64,858
Other Liabilities +	610	4,503	1,582	1,201	2,283	3,508	5,382	15,732
Total Liabilities	**6,160**	**15,709**	**14,658**	**18,424**	**28,692**	**58,954**	**66,909**	**88,086**
Fixed Assets +	4,341	9,120	10,388	12,554	16,429	28,452	48,336	62,284
CWIP	267	1,725	743	1,208	4,452	19,899	5,291	6,427
Investments	26	87	77	477	502	574	1,149	1,515
Other Assets +	1,525	4,777	3,449	4,185	7,309	10,029	12,133	17,860
Total Assets	**6,160**	**15,709**	**14,658**	**18,424**	**28,692**	**58,954**	**66,909**	**88,086**



INDUSTRY ANALYSIS

The Indian Renewable industry has been undergoing significant changes and experiencing substantial growth. Here are some key insights from recent analysis:

1. **Number of Players:** The renewable energy sector in India, where Adani Green Energy Ltd operates, includes several key players. These include large corporations like Tata Power Renewable Energy, ReNew Power, Suzlon Energy, and state-owned entities like NTPC and Solar Energy Corporation of India (SECI). The sector also has numerous small and medium enterprises involved in solar and wind energy generation.

Key Players:

- Adani Green Energy Ltd
- Tata Power Renewable Energy
- ReNew Power
- Suzlon Energy
- NTPC (through its Renewable Energy arm)
- Solar Energy Corporation of India (SECI)
- ACME Solar

2. **Total Market Size:** India's renewable energy market is substantial and growing rapidly, driven by government initiatives and increasing energy demand. As of 2023, India's total installed renewable energy capacity was approximately 175 GW, with solar and wind contributing the largest shares.

Market Size:

- Solar energy capacity: ~67 GW
- Wind energy capacity: ~42 GW
- Other renewable sources (biomass, small hydro, etc.): ~17 GW

3. **Relative Share of Players:** Adani Green Energy: One of the largest renewable energy companies in India, with an operational capacity of around 7.3 GW (as of 2023), and an overall portfolio (including under-construction projects) of over 20 GW.

- Tata Power Renewable Energy: Another major player with a renewable energy capacity of around 3.9 GW.
- ReNew Power: Approximately 10 GW of total renewable energy capacity.

- Suzlon Energy: Primarily a wind energy player, with an installed capacity of around 12 GW.
- NTPC Renewable Energy: NTPC, through its renewable energy arm, is expanding aggressively, aiming for 60 GW by 2032.
- SECI: Acts as an intermediary between developers and distribution companies, facilitating project development and providing a competitive platform.

4. **Nature of Competition:** Oligopoly: The renewable energy sector in India operates as an oligopoly. A few large companies dominate the market, but with new entrants emerging as the market grows, especially with government support and foreign investments.

The competition is intense, primarily in terms of securing long-term power purchase agreements (PPAs) and access to financing. Companies often compete on pricing, project efficiency, and capacity expansion.

5. **Differentiation Practiced by Various Players:** Adani Green Energy: Focuses on large-scale solar and wind projects, emphasizing operational efficiency and technological integration. The company leverages economies of scale to offer competitive pricing.

- ReNew Power: Diversifies across solar, wind, and hydro projects, with a strong emphasis on sustainability and innovation.
- Tata Power Renewable Energy: Differentiates through its experience and strong brand equity, along with a balanced portfolio of solar and wind assets.
- Suzlon Energy: Primarily focuses on wind energy, offering end-to-end solutions, including manufacturing of turbines, project execution, and maintenance services.

6. **Barriers in the Industry:**

Entry Barriers:

- High Capital Requirements: Setting up renewable energy projects, especially large-scale ones, requires significant capital investment.
- Regulatory Hurdles: Compliance with regulatory requirements and obtaining necessary clearances can be challenging for new entrants.
- Access to Land: Securing large tracts of land, especially for solar farms, can be difficult due to regulatory and logistical challenges.

- Technological Expertise: Expertise in solar and wind technologies is essential, and new players might face challenges in acquiring or developing this expertise.

Exit Barriers:

- Long-term Contracts: Companies often enter into long-term PPAs, making exit difficult.
- High Sunk Costs: The industry involves significant sunk costs in the form of infrastructure and equipment, which can be difficult to recover.
- Market Saturation: With increasing competition and falling tariffs, profitability might be squeezed, making exit a less attractive option.

7. **Current Trends and Future Outlook:** The Indian government's push towards achieving 500 GW of renewable energy capacity by 2030 is driving rapid growth in the sector. Adani Green Energy Ltd is well-positioned to capitalize on this trend, given its aggressive expansion plans and significant market share.

The sector is also witnessing increased investments from both domestic and international players, further intensifying competition.

This analysis provides an overview of Adani Green Energy Ltd.'s position within the broader Indian renewable energy market, highlighting the competitive dynamics, barriers, and growth prospects.

SWOT ANALYSIS OF AGEL

Strengths:

- **Diversified portfolio:** Adani Group has a diversified presence across various sectors, including energy, resources, transportation, and real estate.
- **Strong leadership:** The group is led by Gautam Adani, a visionary entrepreneur with a proven track record.
- **Strategic partnerships:** Adani Group has formed partnerships with global companies, enhancing its credibility and access to international markets.
- **Infrastructure development:** The group has a strong focus on infrastructure development, aligning with India's growth priorities.
- **Financial performance:** Adani Group has demonstrated robust financial performance, with significant revenue growth and profitability.

Weaknesses:

- **High debt levels:** Adani Group has significant debt, which can impact its financial stability and creditworthiness.
- **Regulatory challenges:** The group has faced regulatory hurdles and legal challenges in some of its projects.
- **Environmental concerns:** Adani Group's businesses, particularly in the energy and resources sector, have raised environmental concerns.
- **Dependence on government policies:** The group's businesses are influenced by government policies and regulations, which can be unpredictable.
- **Corporate governance:** Adani Group has faced corporate governance concerns, including related-party transactions and board composition.

Opportunities:

- **Growing demand for energy and infrastructure:** India's growing economy and population drive demand for energy and infrastructure development.
- **Renewable energy transition:** Adani Group can leverage its expertise to capitalize on the shift towards renewable energy sources.
- **Global expansion:** The group can explore opportunities in international markets, particularly in the energy and resources sector.
- **Diversification into new sectors:** Adani Group can expand into new sectors, such as technology or healthcare, to reduce dependence on traditional businesses.
- **Government initiatives:** The group can benefit from government initiatives promoting infrastructure development and economic growth.

Threats:

- **Regulatory changes:** Changes in government policies or regulations can impact Adani Group's businesses.
- **Competition:** The group faces competition from established players in various sectors.
- **Economic downturn:** Economic slowdowns or recessions can impact Adani Group's financial performance.
- **Environmental and social activism:** The group may face scrutiny and backlash from environmental and social activists.
- **Reputation risk:** Adani Group's reputation can be impacted by controversies, legal

challenges, or corporate governance concerns.

PRODUCT FEATURE MATRIX

Adani Green Energy Ltd. (AGEL), a subsidiary of the Adani Group, is one of India's leading renewable energy companies, focusing on the development, construction, and operation of solar and wind power projects. Below is a detailed product feature matrix for AGEL:

Product Feature Matrix of Adani Green Energy Ltd.

Feature	Description	Specifications	Competitors
Solar Power Projects	Development and operation of utility-scale solar power plants.	Capacity: Up to 12 GW+ installed and operational.	Tata Power Solar, Azure Power, ReNew Power
Wind Power Projects	Development and operation of wind power projects.	Capacity: Around 2 GW+ installed and operational.	Suzlon Energy, Inox Wind, ReNew Power
Hybrid Projects	Integration of solar and wind power generation to optimize energy output.	Projects: Multiple hybrid projects in operation and development.	ReNew Power, Greenko Group
Energy Storage Solutions	Implementation of energy storage technologies to enhance reliability and stability of renewable power supply.	Technologies: Battery energy storage systems (BESS).	Tata Power, Greenko Group
Power Purchase Agreements (PPAs)	Long-term agreements with utilities, industries, and government bodies for the supply of renewable energy.	Duration: Typically 25 years.	NTPC Renewable Energy, Tata Power, ReNew Power
Green Energy Certificates	Issuance of Renewable Energy Certificates (RECs)	Availability: On request.	Indian Energy Exchange (IEX),

	to support corporate sustainability goals.		Power Exchange India (PXIL)
Technological Innovation	Utilization of advanced technologies and digital tools to enhance operational efficiency and reduce costs.	Technologies: AI, IoT, big data analytics.	Tata Power, Greenko Group
Sustainability Initiatives	Commitment to sustainability and environmental protection through various initiatives and compliance with global standards.	Certifications: ISO 14001, ISO 45001.	Tata Power, ReNew Power, Greenko Group
Financial Performance	Strong financial backing and robust growth trajectory with significant investments in renewable energy projects.	Revenue: INR 5,500+ crores (FY 2022-23).	Tata Power, NTPC Renewable Energy, ReNew Power

Detailed Analysis:

1. **Solar and Wind Power Projects:** AGEL has a vast portfolio of solar and wind power projects, making it a key player in India's renewable energy sector. With over 12 GW of solar and 2 GW of wind capacity, AGEL stands out for its large-scale and efficient project execution.
2. **Hybrid Projects:** By integrating solar and wind energy, AGEL optimizes power generation and ensures a more consistent energy supply, setting a benchmark in the renewable energy market.
3. **Energy Storage Solutions:** AGEL is exploring energy storage solutions to complement its renewable energy generation, ensuring a steady and reliable power supply. This positions AGEL as a forward-thinking company addressing the intermittency of renewable energy.

4. **PPAs and Green Energy Certificates:** Long-term PPAs and the provision of green energy certificates bolster AGEL's market presence and appeal to corporate clients aiming to meet sustainability goals.
5. **Technological Innovation and Sustainability Initiatives:** AGEL leverages advanced technologies and maintains high sustainability standards, enhancing operational efficiency and environmental stewardship.
6. **Financial Performance:** Robust financial performance and strong backing from the Adani Group enable AGEL to continue expanding its renewable energy portfolio, securing its position as a market leader.

AGEL's comprehensive approach, combining large-scale project development, technological innovation, and sustainability, ensures its competitive edge in the rapidly growing renewable energy sector. Adani Green Energy Ltd's product offerings are centered around renewable energy generation, including solar and wind power, hybrid energy systems, energy storage, and green hydrogen production. The company also offers energy management solutions and participates in carbon credits and RECs trading. Each product is designed with scalability, sustainability, and efficiency in mind, contributing to the global shift towards a greener economy.

CHAPTER 03

COMPETITOR ANALYSIS

To conduct a differential competitor analysis of Adani Green Energy Limited (AGEL) and its competitors, we'll focus on several key areas: product offerings, market positioning, technology, financial performance, and sustainability initiatives. This will help in understanding how AGEL compares to its main competitors in the renewable energy sector.

Key Competitors:

1. Tata Power Renewable Energy Limited (TPREL)
2. ReNew Power
3. NTPC Limited (Renewable Energy Division)
4. Azure Power Global Limited

Product Offerings and Technology

AGEL:

- Solar Projects: AGEL's solar projects are among the most extensive in the country, leveraging advanced PV (Photovoltaic) technology and tracking systems to maximize efficiency.
- Wind Projects: Utilizes state-of-the-art turbines and optimized site selection to enhance energy yield.
- Hybrid Projects: Integration of solar and wind projects with energy storage solutions to ensure consistent power supply.

Tata Power Renewable Energy Limited:

- Solar and Wind: Offers a diverse portfolio similar to AGEL, with a strong focus on rooftop solar in addition to utility-scale projects.
- Energy Storage: Pioneering in integrating battery storage solutions with renewable energy projects.
- Microgrids: Developing microgrid solutions for rural and off-grid areas.

ReNew Power:

- Solar and Wind: Large-scale solar and wind energy projects, with a focus on expanding capacity through acquisitions and greenfield projects.
- Battery Storage: Emphasizing the integration of battery storage to enhance grid stability.
- Distributed Solar: Expanding into distributed solar energy, catering to commercial and industrial clients.

NTPC Limited (Renewable Energy Division):

- Solar Parks: Developing large solar parks, often in partnership with state governments.
- Floating Solar: Investing in innovative floating solar projects on reservoirs and water bodies.
- Wind Energy: NTPC is also scaling its wind energy capacity, though it remains smaller compared to its solar portfolio.

Azure Power:

- Solar Projects: Specializes in utility-scale solar PV projects with significant capacity across India.
- Solar Rooftops: Azure Power is a key player in the solar rooftop segment, particularly for commercial clients.
- Innovative Financing: Pioneering in securing international financing for renewable projects, including green bonds.

Market Positioning and Strategy

AGEL:

- Scale and Growth: Positioned as a market leader, with aggressive growth plans to achieve 45 GW by 2030.
- Strategic Partnerships: Collaborates with global players to leverage technology and

capital for expansion.

- Focus on Cost Leadership: Aims to be the lowest-cost producer of renewable energy, driven by economies of scale and efficient operations.

Tata Power Renewable Energy Limited:

- Diversification: Focused on a diverse renewable portfolio, including rooftop solar, utility-scale projects, and microgrids.
- Brand Trust: Leveraging the Tata brand for strong market trust and reliability.
- Urban Focus: Strong emphasis on urban markets, particularly through rooftop solar and EV charging infrastructure.

ReNew Power:

- Aggressive Expansion: Expanding capacity rapidly through a mix of acquisitions and new developments.
- Sustainability Focus: Strong emphasis on sustainability and corporate social responsibility, enhancing its brand image.
- Technology Adoption: Early adopter of battery storage and smart grid technologies.

NTPC Renewable Energy:

- Government Backing: Benefiting from its association with NTPC, India's largest power utility, ensuring strong financial and operational support.
- Large-Scale Projects: Focus on developing large solar parks and floating solar, aligning with government renewable targets.
- Public Sector Advantage: Strong relationships with government bodies and state utilities.

Azure Power:

- Focus on Solar: Specializes in solar, particularly utility-scale projects, with a lean operational model.
- International Financing: Leading in securing international capital through green

bonds and global partnerships.

- Niche Focus: Maintains a niche focus on solar, avoiding diversification into wind or hybrid projects.

Financial Performance

AGEL:

- Revenue Growth: Strong revenue growth driven by the expansion of its project portfolio and long-term Power Purchase Agreements (PPAs).
- Cost Efficiency: Continuous focus on reducing Levelized Cost of Energy (LCOE) through scale and technology.
- Debt Levels: High debt levels due to aggressive expansion, but with a manageable debt-service coverage ratio due to stable cash flows.

Tata Power Renewable Energy Limited:

- Stable Revenues: Stable revenues from a diversified portfolio, including significant contributions from the rooftop solar segment.
- Moderate Debt: Well-managed debt levels, with strong backing from Tata Power's overall balance sheet.
- Investment in Storage: Significant investment in energy storage, though returns are expected to materialize in the longer term.

ReNew Power:

- High Growth: High revenue growth due to rapid capacity expansion, though profitability is impacted by high capital expenditures.
- Leveraged: High leverage due to aggressive expansion, but with strong backing from institutional investors.
- Strategic IPO: Raised capital through IPO and subsequent offerings, improving its financial flexibility.

NTPC Renewable Energy:

- Government Support: Strong financial stability due to NTPC's overall performance, though renewables are a smaller part of its portfolio.
- Expansion Plans: Significant planned investments in renewables, though financial returns are expected to be gradual.
- Public Funding: Access to low-cost government funding and international financing for green projects.

Azure Power:

- Steady Growth: Consistent revenue growth from its solar projects, with a focus on maintaining high margins.
- Debt Management: Prudent debt management, with a focus on securing low-cost, long-term financing.
- Profitability Focus: Focus on maintaining profitability through efficient operations and targeted project selection.

Sustainability and ESG Initiatives

AGEL:

- Net-Zero Commitment: Committed to achieving net-zero carbon emissions by 2050, with significant investments in green projects.
- ESG Leadership: Strong focus on environmental, social, and governance (ESG) criteria, integrating sustainability into all aspects of operations.
- Community Engagement: Active in community development and CSR initiatives, particularly in areas surrounding its projects.

Tata Power Renewable Energy Limited:

- Sustainability Leadership: Recognized for its comprehensive sustainability practices, including significant investments in clean energy and energy efficiency.
- CSR Programs: Extensive corporate social responsibility programs focused on education, healthcare, and rural electrification.

ReNew Power:

- Sustainability Focus: Positioned as a leader in sustainability, with strong ESG practices and reporting.
- Environmental Stewardship: Significant investments in biodiversity and conservation projects alongside its renewable projects.
- Corporate Responsibility: Active in social initiatives, particularly in education and rural development.

NTPC Renewable Energy:

- Government Mandate: Aligns with government mandates for renewable energy and sustainability, though its impact is smaller compared to its thermal power operations.
- Community Projects: Focuses on community development, particularly in regions where it operates large-scale projects.
- Environmental Impact: Committed to reducing its carbon footprint, though the pace is tied to broader NTPC transitions.

Azure Power:

- Green Energy Focus: Entire portfolio focused on green energy, with a strong commitment to sustainability.
- ESG Integration: High ESG standards, particularly in project selection and community engagement.
- Global Standards: Aligns with global best practices in sustainability, aided by its international investor base.

AGEL stands out for its aggressive expansion and leadership in the solar and wind sectors, with a strong focus on scale and cost leadership. Its significant debt load is a concern but is managed by stable, long-term contracts and a focus on reducing costs.

CHAPTER 04

CUSTOMER ANALYSIS

CUSTOMER OF AGEL

Current Customers of Adani Green Energy Ltd. (AGEL)

- Governments and Public Sector Entities: Many governments, especially in India, have ambitious renewable energy targets. AGEL often supplies power to state and central electricity boards.
- Corporates and Industrial Units: Large corporations and industrial entities that need to meet sustainability goals often purchase renewable energy to reduce their carbon footprint.
- Commercial and Residential Consumers: Through power purchase agreements (PPAs) or as part of renewable energy initiatives, AGEL can supply energy directly to commercial or residential customers, particularly in regions where such policies are encouraged.

Potential Customers

- Small and Medium Enterprises (SMEs): As awareness about sustainability grows, SMEs might look to purchase renewable energy as part of their corporate social responsibility (CSR) initiatives.
- Global Companies: Multinational corporations operating in India, especially those committed to reducing carbon emissions, could become potential customers.
- Public Transportation and Infrastructure Projects: As India moves towards greener infrastructure, projects like metro rail systems, airports, and public transportation might seek renewable energy sources.
- New Residential and Commercial Developments: As India urbanizes, new residential complexes, commercial buildings, and smart cities may adopt renewable energy solutions.

Competitors' Customers

- Other Renewable Energy Companies' Clients: Customers of other renewable energy providers, such as Tata Power Renewable Energy, ReNew Power, and others, might also be potential customers for AGEL.
- Traditional Energy Consumers: Companies and entities currently relying on conventional energy sources (like coal, gas, or hydroelectric) might be competitors' customers but could be lured to AGEL with attractive offers or sustainability pitches.

Non-Customers of the Product Category

- Fossil Fuel-Dependent Industries: Industries heavily reliant on fossil fuels and those with long-term contracts for coal or gas may not currently consider renewable energy.
- Regions without Renewable Energy Infrastructure: Areas where the infrastructure to support renewable energy is lacking, or where government policies do not favor renewables, might not currently be customers.
- Low-Income Residential Areas: In regions where, renewable energy is perceived as more expensive or less reliable, residents may not yet be customers of this product category.

By identifying and understanding these segments, AGEL can better tailor its strategies for growth and competition in the renewable energy market.

TYPES OF CUSTOMERS

Adani Green Energy Ltd., a leading renewable energy company in India, caters to various types of customers, each of which can be broadly categorized into economic, cognitive, passive, and impulsive customers. Here’s how these customer types might align with the company's offerings:

Economic Customers

Description: These customers are rational and focused on cost-effectiveness. They carefully evaluate the price, return on investment (ROI), and long-term savings from using green energy solutions**.**

- Large industrial corporations or commercial businesses seeking to reduce operational costs by adopting renewable energy.
- Residential consumers looking for lower energy bills through solar power installations.
- Government bodies or institutions aiming to achieve sustainability goals cost-effectively.

Cognitive Customers

Description: Cognitive customers are well-informed and analytical. They are driven by environmental consciousness and a deep understanding of the benefits of renewable energy.

- Environmentally conscious individuals or businesses that prioritize green energy due to its positive impact on the environment.
- Educational institutions or NGOs advocating for renewable energy adoption.
- Investors or stakeholders with a focus on sustainable and ethical investments.

Passive Customers

Description: Passive customers are less involved in the decision-making process. They may adopt renewable energy solutions based on convenience or because it is a standard offering rather than active choice.

- Consumers who choose Adani Green Energy because it is part of a bundled service or government mandate.
- Homeowners or tenants in properties where renewable energy solutions are pre-installed.
- Businesses or organizations that comply with sustainability norms without actively seeking them.

Impulsive Customers

Description: Impulsive customers make quick decisions based on immediate appeal or trends, often without extensive research or long-term consideration.

- Individuals motivated by trends or peer influence to install solar panels or adopt green energy solutions.
- Small businesses that make swift decisions to appear modern and eco-friendly without a thorough cost-benefit analysis.
- Customers influenced by promotional campaigns or government subsidies to switch to renewable energy quickly.

These categories help in understanding the diverse motivations and behaviors of customers in relation to Adani Green Energy Ltd., allowing for tailored marketing strategies and customer engagement approach.

AIDA MODEL OF PRODUCTS OF AGEL

The AIDA model is a marketing framework that outlines the steps a consumer goes through when deciding to purchase a product or service. It stands for Attention, Interest, Desire, and Action. Here's how the AIDA model might apply to Adani Green Energy Ltd's products:

Attention

- Brand Recognition: Adani Green Energy Ltd captures attention through its strong brand presence in the renewable energy sector, supported by its association with the larger Adani Group.
- Sustainability Campaigns: The company draws attention through its commitment to sustainability and clean energy, leveraging social media, advertisements, and press releases.
- Innovative Projects: High-profile solar and wind energy projects, partnerships, and milestones in renewable energy production are publicized to capture the attention of potential investors and customers.

Interest

- Educational Content: The company generates interest by educating the public and stakeholders about the benefits of renewable energy, the future potential of solar and

wind power, and the specific advantages of their projects.

- Investor Relations: By showcasing impressive growth metrics, financial stability, and future plans in investor presentations, Adani Green Energy Ltd piques the interest of potential investors.
- Sustainability Reports: Detailed sustainability reports and commitments to reducing carbon footprints keep stakeholders interested in the company's long-term vision.

Desire

- Cost Efficiency: Demonstrating the cost-effectiveness and long-term savings of their renewable energy solutions can create a desire among consumers and businesses to switch to green energy.
- Positive Environmental Impact: The desire to contribute to a greener planet can be enhanced by showcasing the environmental benefits of using Adani Green Energy Ltd's products and services.
- Partnerships and Alliances: Collaborations with governments, international bodies, and other corporations reinforce the desirability of being associated with a forward-thinking and responsible company.

Action

- Simplified Investment Processes: Making it easy for investors to buy shares or invest in Adani Green Energy Ltd through clear, accessible channels.
- Subscription Models for Energy: For businesses, providing straightforward subscription models or purchase agreements for green energy can prompt action.
- Customer Support and Consultation: Offering robust customer support and consultation services to help potential customers make informed decisions encourages action.

This AIDA model can guide how Adani Green Energy Ltd can structure its marketing and outreach strategies to attract and convert potential customers and investors.

CHAPTER 05

ACTUAL WORK DONE, FINDINGS AND ANALYSIS

During my summer internship at Adani Green Energy Ltd., I had the opportunity to engage in a variety of tasks and projects that significantly contributed to my professional development. This chapter provides a detailed account of the work I performed, the methodologies employed, and the outcomes achieved. My responsibilities ranged from data analysis and project management to on-site inspections and team collaborations. Through these activities, I gained valuable insights into the renewable energy sector, particularly in the areas of solar and wind energy projects. The following sections outline my key contributions and the impact of my work on the organization's objectives.

ACTUAL WORK DONE, CHALLENGES FACED AND LEARNINGS

Week No. -1

This week at ADANI Green Energy Limited has been both eventful and insightful. I started my summer internship with the project financing department, equipped with a laptop and an ID card for seamless access to resources. My initial task was to study the company's foundational documents, including the Memorandum of Association (MOA) and Articles of Association (AOA), which provided a solid understanding of the company's core principles and legal framework. Additionally, I reviewed the annual report and the latest investor presentation, gaining a comprehensive overview of the company's financial health, performance metrics, and strategic directions.

Challenges Faced:

Despite initial challenges in comprehending complex terms and intricate details of the term sheet, the guidance and support from my team were instrumental in overcoming these difficulties.

Learnings:

This week was a blend of learning, practical assignments, and team collaboration, significantly enhancing my professional skills and knowledge in project financing. Looking ahead, my plans for next week include an in-depth analysis of the Khavda project term sheet, participating in meetings and discussions on project financing strategies, and engaging in

further assignments to deepen my understanding of financial documents and project management.

Week no. -2

During the second week of my internship, I engaged in a variety of tasks and continued my acclimation to the company's environment. My primary responsibilities included creating an Excel sheet with detailed information about the board of directors and collaborating with the banking department to prepare a PowerPoint presentation on "Banking and Operations."

As I navigated my second week, I was still familiarizing myself with the company's software and technologies, which were new to me.

Challenges:

Additionally, I found it challenging to fully grasp the needs of existing customers and the requirements of new customers.

Learnings:

Despite these challenges, the week was interesting and provided valuable learning experiences that contributed to my overall understanding of the company's operations and customer dynamics.

Week No. -3

This week has been both creative and enlightening. During my third week, I was assigned to a significant project in Khavda, Gujarat, focusing on solar and wind energy production. The project aims to generate 30 gigawatts (GW) of electricity from solar panels and wind turbines over an area of 72,600 hectares, enough to power 18 million Indian homes. The project's total cost is INR 8465 crores, with project financing secured from SBI amounting to INR 4000 crore. I was tasked with studying and analyzing the term sheet for the Khavda project.

Challenges:

Despite these engaging tasks, I faced challenges in communicating with customers due to my lack of practical knowledge.

Week No. -4

This week at ADANI Green Energy Limited has been exceptionally busy and productive. I actively engaged in critical discussions, participated in high-level meetings, and contributed significantly to important tasks within the Project Financing Department. My involvement in these activities has provided me with valuable insights into the intricacies of project financing.

Learnings:

Looking ahead, my goal for the next week is to communicate more with customers and staff to gain deeper, insightful knowledge and further enhance my understanding of the company's operations and the renewable energy sector.

Week No. -5

During this week of my internship, I began with an in-depth discussion about the term sheet with my team members to ensure a thorough understanding of its components and implications. I participated in meetings and discussions with the lender's legal counsel to align on legal requirements and compliance issues. I was tasked with preparing Pre Commitment Conditions (PCC) and Pre Disbursement Conditions (PDC) from the given term sheet. A significant part of my week involved collecting and certifying true copies (CTC) of documents, including consent papers from all authorized signatories.

Learnings:

For the upcoming week, my aim is to communicate more with the bank employees during their free time to gain practical knowledge and experience.

Week No. -6

During the week, I completed several key tasks that contributed significantly to the ongoing projects at I Adani Green Energy Ltd. I handled KYC documentation for all authorized signatories, ensuring regulatory compliance. I also oversaw the signing of documents by relevant parties. To maintain order and accessibility, I organized and prepared project folders sequentially. Additionally, I printed and arranged required documents for loan sanctioning, ensuring that all necessary paperwork was in place for the approval process. Our team then

travelled to Mumbai and Delhi to secure the loan sanction. During this period, I was tasked with inputting historical data into a financial model, crucial for projecting future financial performance. Currently, I am working on post-sanction requirements, ensuring all conditions are met and documentation is complete to comply with financial and legal stipulations set by the lenders. Moving forward, I will continue with post-sanction compliance, finalize necessary documentation, and assist in the project's implementation phase, ensuring all measures are thoroughly met.

Learnings:

This week, I gained insights into regulatory compliance, financial modeling, loan sanctioning, and the importance of detail and diligence, all while transitioning from planning to project implementation at Adani Green Energy Ltd.

FINDINGS

This analysis aims to provide a comprehensive study of ECBs focusing on key factors such as process, cost of capital, risk exposure, regulatory considerations, and overall impact on project viability. By examining these aspects, the study seeks to offer insights into the most suitable financing option for various project scenarios, helping stakeholders make informed decisions tailored to their specific needs and circumstances.

Project Finance Overview

A borrower has access to project finance, which is a long-term, zero or restricted recourse financing option secured by the project-related rights, assets, and interests. The cash flow created once the project is finished can be used to repay the loan instead of the sponsors' balance sheets. The lender has the right to take over the project if the borrower doesn't abide by the loan's conditions. Additionally, if a business uses this strategy while partially moving the associated project risks, financial organizations can generate higher margins. Therefore, sponsors, businesses, and lenders all significantly favor this form of financing arrangement.

A Special Purpose Vehicle (SPV) is created as an intermediary to fill the gap between sponsors and lenders. The SPV's primary responsibility is to oversee the administration and purchase of funds to prevent project assets from being lost as a result of project failure. To prevent any future complications, it is crucial that all project risks are recognized and distributed before a lender decides to finance the project.

Features of project finance

- Capital-Intensive Financing Scheme
- Risk Allocation
- Asset Ownership is Determined at Project Completion
- Zero or Limited Recourse Financing Solution
- Loan Repayment Using Project Cash Flow
- Sponsor Credit Has No Impact on Project

External Commercial Borrowing

Generally External Commercial borrowing refer to commercial loans availed by eligible resident entities from recognized non-resident entities and should conform to parameters such as minimum maturity permitted and non-permitted end uses, maximum all-in-cost ceiling etc.

- ECB is a source of funds for financing expansion of existing capacity and for fresh investment out of territory

- ECB an instrument used in INDIA to facilitate the access to foreign money by Indian corporations & PSUs

- Forms of ECB

ECB are defined to include

1. Commercial bonds
2. Buyer's credit
3. Bank loans
4. Supplier's credit
5. Securitized instrument such as floating rate notes & fixed rate bonds
6. Credit from official export credit agencies,
7. Commercial borrowings from private sector
8. Window of multilateral financial institutions such as IFC, ADB, AFIC, CDC 8. Investment by foreign institutional investor in dedicated debt funds

Difference between Lenders and Borrowers

To guarantee the influx of safe funding, the RBI has categorized borrowers into qualified entities and lenders into recognised non-residents, and has implemented safeguards in the form of ECBs, end-use restrictions, and minimum maturity periods, among other things.

Eligible Borrowers:

Foreign Currency ECBs (FCY ECB) and Indian Currency ECBs are the forms of ECBs (INR ECB). Eligible borrowers is a term that can be applied to any company that is qualified to receive FDI. Port Trusts[9], Units in Special Economic Zones[10], the Small Industries Development Bank of India[11], and the EXIM Bank of India are examples of such organisations. It includes:

1. Corporate Companies.
2. NGOs which indulge in micro finance are also allowed to take external commercial borrowings.
3. Companies working in Special Economic Zones.
4. Oil Marketing Companies.
5. SIDBI is also a legitimate borrower.
6. All such entities which are eligible for FDIs.
7. All Limited Liability Partnerships.
8. Venture Capital Funds.

Recognized Lenders:

A citizen of a FATF-compliant nation must be the creditor or investor[12]. Nevertheless, under this arrangement, international divisions of Indian banks, as well as offshore entities in which an Indian corporation has made investment in accordance with the current Overseas Direct Investment Policy[13], would not be deemed recognised creditors. These include:

1. Any member of the Financial Action Task Force (FATF).
2. International Organization of Securities Commissions.
3. Multilateral and Regional FIs.

4. Foreign Equity Holders.
5. Foreign branches of Indian Banks

External Commercial Borrowings (ECB) Routes

External Commercial Borrowings done through two routes:

1. Approval route
    - Under the approval route, the prospective borrowers are required to send their requests to the Reserve Bank through their AD (Authorized Dealer) Banks for examination.
    - RBI shall grant approval based on overall guidelines, macroeconomic situations, and merits of the proposal.
    - All eligible borrowers can raise ECB more than USD 750 million per financial year but
    - borrower needs to take permission from Reserve Bank of India.

2. Automatic route
    - For the automatic route, the cases are examined by the Authorized Dealer banks.
    - All eligible borrowers can raise ECB up to USD 750 million or equivalent per financial year under the automatic route.

ECB ROUTES

AUTOMATIC ROUTE	APPROVAL ROUTE
No approval of the RBI / GOI	Prior application to the RBI through AD Bank (Form ECB)
Obtain Loan Registration Number (LRN) from RBI by fling Form No. 83 through AD Bank	RBI Empowered Committee to consider such application
Monthly filings with RBI through AD Bank in FormECB2	Post approval, obtain LRN and Monthly filings as under Automatic Route

Individual limits of borrowing in approval route and Automatic Route.

Sector	Route	
	Automatic	Approval
Infrastructure and Manufacturing	Upto USD 750 million	USD 750 million and above
Software Development Activities	Upto USD 200 million	USD 200 million and above
Micro Finance Activities	Upto USD 100 million	USD 100 million and above
Others	Upto USD 500 million	USD 500 million and above

External Commercial Borrowings raised through two denominations:

1. Foreign currency denominated ECB
   - Change of currency of ECB from one freely convertible foreign currency to any other freely
   - convertible foreign currency as well as to INR is freely permitted.
   - Foreign currency ECBs have hedging risk both in principal and interest amount.
2. INR is denominated as ECB
   - Change of currency from INR to any freely convertible foreign currency is not permitted.
   - Indian Rupees denominated ECBs do not have hedging risk/costs.

Hedging:

It is compulsory to hedge the borrowing amount if the borrowing currency is not INR. It is compulsory to hedge at least 70% of the total amount, and the higher the hedge cover, the higher rating can be achieved. There are three types of hedging:

1. Natural hedge: If your business is of a kind where all the transactions are done in the currency of the borrowing, then there is no reason to hedge the amount. This type of hedging is called natural hedge. The prime example of it can be of ports businesses.
2. Currency hedge: As the forex rates keep on changing, it becomes necessary to hedge the amount of borrowing to avoid paying more than the company had intended.
3. Interest rate hedge: Just like the forex rate, interest rates of the ECB also keep on changing. As the interest rate to be paid is linked with the LIBOR or SOFR, which keep on changing, the need to hedge the interest rate arises. Hedging the interest rate is called an interest rate hedge.

Each Co-Issuer must:

A. Ensure that any Senior Debt in excess of 5.0% of all Senior Debt is issued within 90 days following the Closing Date and within 30 days following each Issue Date of Senior Debt (denominated in a currency other than INR), or within any shorter period as may be necessary under the ECB Regulations, whichever is earlier, during the Hedge Period.

I. is not backed by a currency other than Indian Rupees; or

II. is covered by cross-currency and other appropriate hedging agreements in accordance with the hedging policy, or any combination of the aforementioned; and

B. During the Hedge Period, make sure that any such Subordinated Debt in excess of 5.0% of all such Subordinated Debt is issued within 90 days following each Issue Date of Subordinated Debt (denominated in a currency other than INR) or any shorter period as may be necessary under the ECB Regulations, whichever is earlier.

I. is not denominated in any other currency than INR.

II. is subject to appropriate hedging under hedging agreements in line with the hedging policy, or any combination of the aforementioned conditions.

Reporting Requirements:

1. Loan Registration Number (LRN):

Any ECB drawdown should never occur before getting the LRN from the Reserve Bank. Borrowers must deliver duly certified Form ECB, which also includes the ECB's terms and conditions, in duplicate to the selected AD Category I bank in order to get the LRN.

2. Changes in terms and conditions of ECB:

Within seven days of the changes being implemented, revised Form ECB should be used to report changes in ECB parameters that are in accordance with ECB rules.

3. Monthly Reporting of actual transactions:

Actual ECB transactions must be reported by borrowers using Form ECB 2 Return within seven working days of the end of the month to which they pertain. Form ECB 2 Return should be updated to reflect any ECB parameter changes.

Procedure for External Commercial Borrowings

Standard Operating Procedure

1. The idea for finance

When a business wants to implement a new project, acquire another business, or lower the interest rate on its existing debt, it considers financing or refinancing its debt on the open market.

2. Board of meeting and resolution

Key personnel and the board of directors have meetings after deciding to do financing or refinancing of money, after which the resolution is passed.

3. Appoint legal counsels

In general, ECBs companies need to hire four legal counsels, two of whom are from India and two from foreign nations. Indian legal counsels assist the company in creating Indian contract legal documents and properly comprehending foreign paperwork to avoid any obstacles in the future. Legal counsel is in charge of creating legal documents, providing the business with periodic legal opinions or guidance, and ensuring that it is abiding by the law. Legal counsel examines the Information of Memorandum from the standpoint of Indian law. Where foreign legal advisors created the legal agreement in accordance with their guidelines and carefully analyzed the Indian paperwork.

4. Appoint security trustee

Whether a debt instrument is secured or unsecured, a security trustee is required. The security offered by the issuer to the lender is handled by the security trustee. It aids the holders in preventing future defaults from happening. The security trustee makes sure that the issuer owns all of the assets it intends to market as securities and that there are no inconsistencies or other problems with those securities. Security trustees make ensuring that additional procedures are followed and safeguard holders or lenders in the event that a security is not created, and the issuer fails to make any further payments.

5. **Appoint note trustee**

According to the terms of the financing contracts, note trustee acting on behalf of, benefiting from, and for the purposes of the holders. The note trustee performs due diligence to confirm the assets' current valuation status and whether or not all necessary approvals or consents have been secured to generate security. The appropriate financing documentation and any other agreements made between the issuer and current holders may be verified by the note trustee.

6. **Drafting /negotiating/sign of agreements from all the parties**

Following negotiations with all parties, drafting of the agreement is required. The document needs to be signed by each party. The issuer and note trustee create a note trust deed that carries out the obligations of all relevant parties.

7. **Appoint lead arranger and JLMs**

If there are multiple lead managers, they are collectively known as Joint Lead Managers. A commercial or investment bank that has been given the lead manager mandate by the borrower, along with one or more lead arrangers, to organize the financing and manage the structure of debt is known as a lead arranger or Joint Lead Manager. When it comes to debt capital market instruments, the lead arranger is crucial. To JLMs, the company must pay these fees in order to identify holders.

8. **Rate the international facility from Moody/Fitch/S&P**

A corporation must conduct an international rating for external borrowings before issuing any financial instruments. Good ratings from Moody's, Fitch, and S&P decrease the likelihood that a company may experience a default event in the future. However, a poor grade signifies that the corporation faces more repayment risks to its lenders or holders. Therefore, the corporation must obtain a rating from the appropriate credit rating organization each year. A financial model based on the best to worst case scenarios for

many characteristics, such as debt cost, revenue growth, etc., was requested by a credit agency.

9. Hedge the facility with respective hedge counterparty

If currency is not hedged, there are increased chances for a corporation entering the international market to pay more than the amount drawn. Therefore, the corporation hedges the main and interest amount to prevent this problem. If the average maturity period is less than three years, companies must mandatorily hedge the full amount due to the USD's appreciation against the rupee denomination.

The corporation must designate the appropriate hedge counter party in order to perform the hedging on the ECBs amount. When the USD appreciates against the rupee, the hedging counterparty must pay the issuer additional money, which will be counted as income for the issuer.

Example: If you hedge your currency at 1 USD = 70 Rs. And during the payback, one dollar is worth 77 rupees. The hedging counterparty then pays the issuer 7 Rupees, which is regarded as a payment of income to the issuer company.

10. Appoint AD and account bank

The term "AD bank" refers to a bank that has been authorised by the RBI to assist a firm with financing and refinancing in the international market. The AD bank that submits the report or other documentation to RBI is chosen by the issuer company.

Because the waterfall method is carried out through this account or the TRA account, account bank plays a significant role.

When funds are borrowed from the outside market, the lead arranger transfers them to the account bank via AD bank. After receiving these funds and distributing them to various connected accounts or using a waterfall process, any residual funds are regarded as excess by the issuer. The issuer may send this money to the company's promoter.

11. **To receive an LRN number, submit form 83 (ECB) to the RBI through AD bank.**

To withdraw money from the lender, a Loan Registration Number must be obtained from the RBI. With the exception that they are unable to withdraw the money. To obtain the LRN, borrowers must submit the form 83 to the RBI through AD bank. Company use this LRN number while submitting the monthly report and form ECB to RBI.

12. **Execution of agreement**

The corporation executes all agreements and completes all agreements necessary to conduct external borrowings after acquiring the Loan Registration Number. All of these documents are significant since the parties, who are respected, committed to complete them in accordance with their respective commitments.

Take money from investors and deposit it into a bank account through AD Bank

When a corporation withdraws money from a lender or holder, it transfers it through AD bank to the account bank. The distribution of funds to numerous accounts (waterfall mechanism) and the consideration of the surplus by the issuer or borrower.

13. **Security creation**

The issuer or borrower must hypothecate or mortgage some property to the security trustee on behalf of the holders if the debt instrument is secured. Following the withdrawal of funds, the corporation must create the security within 180 days of the withdrawal date. If a corporation does not pay back the money owed, the security formation assists the lender or the holders since the money can be recovered.

14. **complying on a monthly, semi-annual, or annual basis with the requirements of several stakeholders**

Borrower must adhere to certain compliances after receiving the funds and during the repayment period, including annual credit ratings from the ECB to the RBI and no default

statements, among others. These records must be submitted to the RBI, rating agencies, and other respectable parties on a monthly, semi-annual, and annual basis.

Advantages of ECB:

1. As long as the company's return on invested capital is higher than the cost of borrowing, it is advantageous for the company to borrow.
2. The advantages include the tax shield and more importantly, the effect of financial leverage.
3. Another advantage of ECB is that it does not dilute the value of shareholders' equity by adding to the number of shares outstanding.
4. Another advantage of borrowing is that it is a way of raising capital without giving away any control, as debt holders don't have voting rights, etc.
5. Debt may also be a more easily hedged form of raising capital, as swaps and futures can be used to manage interest rate risk.
6. ECBs provide opportunity to borrow large volume of funds
7. The funds are available for relatively long-term
8. Interest rate is also lower compared to domestic funds
9. ECBs are in the form of foreign currencies which enable the corporate to have foreign currency to meet the import of machinery etc.
10. Corporate can raise ECB from internationally recognized sources such as banks, export credit agencies, international capital markets etc.

Disadvantages of ECB

1. Increase in default risk, bankruptcy risk, and a plethora of interest rate and market risks related to having more debt on a company's balance sheet.
2. Having more debt may increase your actual cost of borrowing, i.e. the interest rate paid on the debt.
3. With public companies, the ratings agencies will see the additional debt burden and possibly lower the company's rating, which automatically boosts borrowing costs.
4. This could have a downward spiraling effect on the company as its borrowing costs go up, but suddenly less capital is available to draw from due to the lower credit rating.
5. In the case of a liquidity crunch, this can dramatically increase the risk of bankruptcy.

6. Effect on earnings due to interest expense payments.
7. Small businesses would not be eligible**.**

External Commercial Borrowing Policy in India

The External Commercial Borrowing (ECB) policy is regularly reviewed by the Government in consultation with Reserve Bank of India (RBI) to keep it in tune with the evolving macroeconomic situation, changing market conditions, sectoral requirements, etc.

At present borrowers are allowed to avail ECBs up to USD 500 million under the Automatic Route for import of capital goods and overseas acquisition. In May 2008, it was decided to allow companies to borrow USD 50 million for Rupee Capital expenditure under the Approval route. Similarly, companies in the infrastructure sector are allowed to avail upto USD 100 million for Rupee capital expenditure under the Approval Route.

On a review, it has been decided to further liberalise the ECB policy as under:

- At present, borrowers in infrastructure sector are allowed to avail ECB up to USD 100 million for Rupee expenditure for permissible end-uses under the Approval Route. Considering the huge funding requirements, particularly for meeting Rupee expenditure, it has been decided to enhance the existing limit of USD 100 million to USD 500 million per year for the borrowers in the infrastructure sector under the Approval Route. Borrowings in excess of USD 100 million should have a minimum average maturity of 7 years.
- In view of widening credit spreads in the International financial markets, it has been decided to modify the all-in-cost ceilings in respect of ECBs with minimum average maturity of over seven years.
- As regards companies other than those in infrastructure sector the decision of May 2008, to allow them to borrow upto USD 50 million for Rupee Capital expenditure under the Approval route, remains unchanged.
- All other aspects of ECB policy such as USD 500 million limit per company per year under the Automatic Route, eligible borrower, recognised lender, end-use of foreign currency expenditure for import of capital goods and overseas investments, average maturity period, prepayment, refinancing of existing ECB and reporting arrangements also remain unchanged.

Minimum Average Maturity Period (MAMP):

The ECB's MAMP is three years long. It is not possible to exercise any call or put options before the minimum average maturity has been achieved. However, for the particular categories listed below, the MAMP will be as stated therein:

Sr.No.	Category	MAMP
(a)	ECB raised by manufacturing companies up to USD 50 million or its equivalent per financial year.	1 year
(b)	ECB raised from foreign equity holder for working capital purposes, general corporate purposes or for repayment of Rupee loans	5 years
(c)	ECB raised for (i) working capital purposes or general corporate purposes (ii) on-lending by NBFCs for working capital purposes or general corporate purposes	10 years
(d)	ECB raised for (i) repayment of Rupee loans availed domestically for capital expenditure (ii) on-lending by NBFCs for the same purpose	7 years
(e)	ECB raised for (i) repayment of Rupee loans availed domestically for purposes other than capital expenditure (ii) on-lending by NBFCs for the same purpose	10 years
for the categories mentioned at (b) to (e) – (i) ECB cannot be raised from foreign branches / subsidiaries of Indian banks (ii) the prescribed MAMP will have to be strictly complied with under all circumstances.		

Borrowing Cost of ECB

ECB all in cost determined by after financial hedge with below mentioned components

1. Interest Hedge Cost,
2. Principal Hedge Cost, (Currency Swaps, Forwards, Futures Etc)
3. Insurance,
4. With Holding Tax,
5. LIBOR/SOFR,
6. Spread Over Benchmark

ANALYSIS

Why ECB is useful?

- ECB in India is cheaper than the rupee loan.
- ECB give higher availability of funds at lower interest rate with long maturity.
- Coupon is fixed and floating both available in foreign market.
- Hedge for 10-15 years available.
- Companies like Adani Green Energy Limited issued bond for 50 years maturity and 30 years maturity with natural hedge available.
- Rupee denominated loan market is not available for that much long horizon.
- Lower interest rate with higher maturity.
- The value of funds is generally lower when borrowed from external sources. For instance, some economies have a lower interest rate, and Indian firms and organizations can borrow money at lower interest rates from the Eurozone and the United States as the rates are comparatively low.
- Since the markets are larger when raising funds through ECB, companies can meet larger requirements from international players in comparison with what can be achieved through domestic players.
- External Commercial Borrowing is just a way to take a loan. It does not necessarily have to be of an equity nature, and therefore the company's stakes will not be diluted. Borrowers can essentially raise funds without relinquishing control as debtors will not have any voting rights in the company.
- ECB offers access to global markets so that borrowers have greater exposure to worldwide opportunities.
- ECB offers benefits to the economy as well. Inflows can be directed into the sector by the government of India, thereby increasing its growth potential. For instance, a greater percentage of funding through ECB can be allowed by the government for the SME and infrastructure industry. This aids significantly in the overall growth of the country.
- Companies can become increasingly profitable through ECB.
- We can say that who have large amount of DEBT required at cheaper rate those can apply ECB and enjoy the benefits of the ECB loan.

No	Clause	ECB Loan	INR Loan
1	Form	ECB Loan in any Currency with Financial Hedge, Natural Hedge and Unhedged Loan	Plain Vanila Rupee Denominated Loan
2	Placement	Either Placed Privately or Publicly recognised Banks	Indian Nationlised and Private Banks provide this loan
3	Borrowing Limit	750 Million in Financial Year	AS per RBI Guidliance
4	Minimum Maturity	3 Years	
5	Eligible Borrowers	a) Port Trusts; b) Units in SEZ; c) SIDBI; d) EXIM Bank; and e) Registered entities engaged in micro-finance activities, viz., registered Not for Profit companies, registered societies/trusts/cooperatives and Non-Government Organizations (permitted only to raise INR ECB).	Minimum Operation History of 1 year promoter Age is more than 21 years

6	Recognized Lenders	a) Multilateral and Regional Financial Institutions where India is a member country will also be considered as recognized lenders; b) Individuals as lenders can only be permitted if they are foreign equity holders or for subscription to bonds/debentures listed abroad; and c) Foreign branches / subsidiaries of Indian banks are permitted as recognized lenders only for FCY ECB (except FCCBs and FCEBs). Foreign branches / subsidiaries of Indian banks, subject to applicable prudential norms, can participate as arrangers/underwriters/market-makers/traders for Rupee denominated Bonds issued overseas. However, underwriting by foreign branches/subsidiaries of Indian banks for issuances by Indian banks will not be allowed.	Indian Private and public sector banks, NBFC, Small Finance Bank, Government establish agencies, PFC, REC, NABARD, SIDBI etc
7	All Inclusive Cost	Benchmark rate plus 450 bps spread.	Base Rate MCLR and Spread according to Bank Guidelines
8	Exchange Rate	The market rate on the date of settlement for the purpose of Transactions undertaken for issue and servicing of Bonds or loans	No Requirement
9	Rupee Hedging	overseas invsetors are eligible to hedge their exposure through Permitted derivative products like future, forwards anf SWAPs	No Requirement
		withholding rate of 5% which is the nature of final tax, is applicable. The capital gain, arising on case of	

10	Taxability	appriciation of rupee between the date of issue and the date of redemption against the foreign currency in which the investment is made is exempted from capital gain tax.	As per indian income tax laws
11	Reporting	All bonds and loans issuance should be reported to the RBI and require LRN with ECB 1 form and monthly basis you have to report ECB 2 form	From whom you have received the Loan

CHAPTER 06

Conclusion

In the current liberalized environment, which is a novel phenomenon in the Indian external commercial sector, this study will assist in determining the influence of various difficulties on the external commercial borrowing. There will be a correlation between numerous macroeconomic parameters and the investment outlook for the business sector. It will also make an effort to pinpoint numerous regulatory difficulties that the banking and money market systems are attempting to address when making loans to power projects. The study will make a substantial contribution to the search for novel approaches to address the needs of the renewable energy sector.

The financing of renewable energy projects is a critical component in the transition towards a sustainable energy future. The use of Rupee loans as a financing mechanism for such projects within India offers several advantages, including reduced currency risk, alignment with domestic financial policies, and the fostering of local banking partnerships. Through this study, it is evident that Rupee loans provide a stable and predictable financial environment for renewable projects, which is crucial in managing the long-term risks associated with such investments.

However, the analysis also highlighted certain challenges, including higher interest rates compared to international borrowing options and the dependency on the domestic financial market's liquidity. Despite these challenges, the strategic use of Rupee loans can be highly beneficial, especially when coupled with government incentives and support mechanisms aimed at boosting the renewable energy sector.

While ECBs are cheaper, they come with strict regulations and limits on the amount and maturity of the loan. The funds from ECBs are also restricted in their use, meaning companies can use them for expansion but not for other purposes like real estate investment or loan repayment. Companies must carefully manage exchange rate risks to use ECBs effectively.

In conclusion, the choice between ECBs and Rupee Loans depends on a company's financial needs, project goals, and risk tolerance. By understanding the benefits and drawbacks of each option, companies can make informed decisions that align with their strategic and financial objectives.

Suggestions

Based on the comprehensive analysis of External Commercial Borrowings (ECBs) and Rupee Loans, several strategic suggestions can be made for corporate financing decisions:

- ECB offers lower interest rates and access to international capital markets.
- However, it also presents challenges such as currency exchange risks and regulatory constraints.
- Companies should assess the volatility of currency exchange rates and their impact on project costs.
- Implementing risk management strategies like hedging can mitigate these risks.
- It is crucial to evaluate the regulatory requirements, including approvals from the Reserve Bank of India (RBI) for ECB transactions.
- Regular compliance checks with RBI guidelines are essential.
- Companies should regularly compare ECBs with domestic financing options to ensure alignment with financial objectives.
- Strong risk management strategies should be employed, particularly concerning currency risks.
- Building and maintaining strong relationships with international lenders is vital.
- Transparency in financial reporting can lead to more favorable terms in future ECB arrangements.

By following these suggestions, companies can manage risks, optimize borrowing costs, and improve their overall financial performance.

CHAPTER-7

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