

# DOMESTIC AND GLOBAL FUND CONSTRUCTION

Submitted to: Harsh Thakrar

Author: Aditi Yadav, Advaita Ganesh Kumar, Tiasa Parui, Vidita Jain

Date of Submission: 10<sup>th</sup> October 2023

Signatures:

Names, Roll Nos, and SAP IDs:

Aditi Yadav, 02, 74062200024

Advaita Ganesh Kumar, 03, 74062200012

Tiasa Parui, 24, 74062200025

Vidita Jain, 28, 74062200032

Program: MSc Finance

Course: Investment Analysis and Portfolio Management

# **CONTENTS**

<b>SL NO.</b>	<b>TOPIC</b>	<b>PAGE NUMBER</b>
1.	<b>DOMESTIC FUND</b>	<b>2-20</b>
2.	<b>INTERNATIONAL FUND</b>	<b>21-42</b>
3.	<b>CONTRIBUTION TABLE</b>	<b>43</b>

**DO NOT COPY**

**DOMESTIC FUND:**  
**CAPITAL MAX FUND**

## **Portfolio Outline -**

### **1. Introduction**

This report outlines the construction, management, and protection strategies for a mutual fund

**Domestic Fund:** Capital Max Fund, designed for Risk Taking/Risk Neutral investors.

### **2. Fund Details**

#### **2.1 Name of Fund**

**Domestic Fund:** Capital Max Fund

#### **2.2 Investment Policy**

##### **2.2.1 Objective of Fund**

**Domestic Fund:** To provide high returns by investing in Indian Capital Markets for Risk Taking/Risk Neutral investors.

##### **2.2.2 Target Customer**

**Domestic Fund:** Individual and institutional investors seeking higher returns willing to take moderate to high risks.

##### **2.2.3 Type of Fund**

**Domestic Fund:** Equity-oriented growth fund.

##### **2.2.4 Investment Strategy**

**Domestic Fund:** Capital Max Fund

**Short Term:** Active trading in Indian equities.

**Investment Diversification:** We have picked out of 4 stocks – HAL, Adani, ITC and BOB – from sectors Defence, Metals and Mining, FMCG and PSU Bank respectively

##### **2.2.5 Finance and Audit Committee Approval**

The investment strategy and policy have been approved by the Finance and Audit Committee to ensure compliance and transparency.

##### **2.2.6 Investment Responsibilities**

The investment team is responsible for research, analysis, and decision-making.

### **3. List of Assets/Asset Class and Justification for Selection**

Detailed analysis includes Indian equities for domestic fund. Justification is based on historical performance and risk-return profiles along with qualitative analysis of chosen securities with their respective industries.

#### **Hindustan Aeronautics Ltd. (HAL) - Company Overview:**

**Sector:** Aerospace & Defence

**Business Focus:** HAL specializes in manufacturing aerospace products, including aircraft, helicopters, aeroengines, avionics, accessories, aerospace structures, and Industrial Marine Gas Turbines. Its primary clientele comprises the Indian Defense Forces.

#### **Key Points:**

*Industry Standing:* HAL is the largest Defence Public Sector Undertaking (DPSU) in India, a Navratna Central Public Sector Enterprise, and ranks 34th globally among aerospace companies.

*Wide Reach:* HAL operates in 7 states, spanning 9 geographical locations, with 20 Production Divisions and 10 R&D Centres.

*Product Range:* HAL offers an extensive portfolio of products and services and has produced 17 types of indigenous and 14 types of licensed aircraft.

#### **Industry Analysis:**

##### **1. Porter's Five Force Analysis:**

- i. **Threat of New Entrants:** High entry barriers exist due to stringent regulations, substantial capital requirements, and specialized knowledge, with government policies shaping opportunities.
- ii. **Bargaining Power of Suppliers:** Suppliers hold significant power, especially for critical components, and established government relationships are influential.
- iii. **Bargaining Power of Buyers:** Buyers, primarily government agencies and large corporations, have limited bargaining power due to specialized products and long-term contracts.
- iv. **Threat of Substitutes:** Substitutes are limited, especially in national security and military applications, though technological advancements may impact this over time.
- v. **Rivalry Among Existing Competitors:** Intense competition exists, driven by innovation, technology, and government policies favoring domestic players, alongside geopolitical factors and defense budget changes.

##### **2. Industry Growth:**

The aerospace and defense sector in India was valued at \$11.1 billion in 2020, with an expected CAGR of 3.5% from 2021 to 2028, reaching \$15.1 billion by 2028.

Escalating geopolitical tensions, increased defense expenditure, and modernization initiatives are driving growth.

### **3. Competition Analysis:**

The industry exhibits moderate consolidation, with a limited number of major players such as HAL, Bharat Electronics Limited (BEL), and Defense Research and Development Organisation (DRDO) holding significant market shares.

The landscape blends domestic players and international collaborations, focusing on technology transfer, localization, and self-reliance.

### **4. Regulatory Framework:**

Regulatory bodies include the Ministry of Defense (MoD), Department of Defense Production, and the Defense Procurement Procedure (DPP) 2016, governing capital procurements and categorizations.

#### **Company Analysis:**

##### **Business Model:**

HAL's business model encompasses design, development, manufacturing, repair, overhaul, upgrade, and servicing of aerospace products for the Indian Defense Services.

The company emphasizes indigenous design and development while collaborating with foreign OEMs through technology transfer.

HAL's operational autonomy is reinforced by its "Navratna" status, enabling prompt investment decisions within government-set limits.

##### **Competitive Advantage:**

HAL's competitive advantages include extensive experience, indigenous capability, strong government support, a diverse product portfolio, robust R&D, quality standards, MRO capability, and engagement in defense offset programs.

##### **Management:**

HAL's CEO receives modest compensation, aligning with principles of responsible governance and shareholder-friendly management.

##### **Corporate Governance:**

HAL's commitment to transparency, ethics, and governance, along with its vision for global expansion and adoption of good governance practices, enhances investor confidence.

##### **Financial Analysis:**

HAL's revenues grew at a 7.4% CAGR over FY18-22, primarily driven by the MRO segment's 20% CAGR.

Profit After Tax (PAT) grew at a 14% CAGR over the same period, with strong PBT margins at 20-21%.

HAL maintains a strong balance sheet with zero debt and substantial cash reserves, amounting to over ₹15,600 crores, comprising more than 25% of its market capitalization.

##### **SWOT Analysis:**

HAL possesses strong government support and extensive aerospace expertise, but its government ownership introduces bureaucratic complexities.

The company's heavy reliance on defense contracts calls for diversification.

HAL is well-positioned for global expansion and technological advancements but must navigate geopolitical risks and intense competition.

Incorporating these insights, HAL's robust position in India's aerospace and defense industry is underlined by its commitment to innovation, government support, and ethical governance, presenting a compelling profile for investors.

## **2.ADANI ENTERPRISES**

### **INDUSTRY: INFRASTRUCTURE**

#### **Porter's Five Forces**

1. **Threat of New Entrants and Barriers to Entry:** The infrastructure industry often requires substantial capital investment, making it challenging for new entrants. Government regulations, permits, and the need for specialized skills can act as barriers. Established companies may also benefit from economies of scale.
2. **Bargaining Power of Customers and Buyer Concentration:** Buyers, often represented by government agencies or private developers, may have a significant impact on the infrastructure industry in India. Government bodies may negotiate terms and prices with infrastructure companies, especially in the awarding of contracts for major projects, influencing profitability.
3. **Bargaining Power of Suppliers:** The bargaining power of suppliers can be relatively high due to the dependency on raw materials and equipment. There's a limited number of steel suppliers in India, they usually have the power to dictate prices and terms, impacting the infrastructure projects' costs.
4. **Threat of Substitute Products or Services:** The threat of new entrants in the infrastructure industry in India is relatively low due to high entry barriers such as substantial capital requirements, regulatory approvals, and expertise needed for large-scale projects.
5. **Intensity of Competitive Rivalry:** The infrastructure industry in India experiences highly competitive rivalry. Established infrastructure companies in India engage in fierce competition to win bids for projects, leading to aggressive pricing and innovation to gain a competitive edge.

#### **Growth Trends of the Company and Customer Base**

In 2022, Adani Enterprises Limited (AEL) handled 36.9 million customers. AEL is the flagship company of the Adani Group, one of India's largest business organizations. AEL serves approximately 400 million consumers globally. Adani Enterprises Ltd. (AEL) reported a net profit CAGR of 29.19% over the past three years. The company's total income increased by 75% to Rs. 70,433 crores in the year ended March 31, 2022. The Indian Infrastructure industry's CAGR stood at 6.7% in 2022. Consolidated EBITDA grew 45% to ₹4,726 crore largely due to the acquisition of the Mumbai Airport. The Airports business generated a healthy ₹1,091 crore EBITDA during the year following the acquisition of the Mumbai Airport. Adani Airports handled 36.9 million passengers, 320,000+ air traffic movements and 6.65 lakh metric ton cargo across seven operational airports.

#### **Competition Analysis:**

Adani Enterprise's market cap as of March 2022 was ₹2,21,584.24. Adani Enterprises faces competition from players of varying sizes, from larger conglomerates like L&T to mid-sized

companies like Ashoka Buildcon. The market capitalizations of competitors such as L&T, Nagarjuna Construction, and IRB Infrastructure are notably higher than Adani's, suggesting they may have larger resources and a more extensive market presence.

Different competitors specialise in specific project types or geographic regions, influencing the nature of competition. Adani's competitive strategy involves leveraging its strengths, such as specific expertise, financial capacity, or project execution efficiency, to position itself effectively in the competitive landscape.

### **Regulatory Framework:**

The regulatory framework for the Indian infrastructure industry is multifaceted, involving various government bodies and regulations. The Ministry of Road Transport and Highways (MoRTH), the Ministry of Railways, and the Ministry of Civil Aviation oversee specific aspects of transportation infrastructure. The National Highways Authority of India (NHAI) and the Airports Authority of India (AAI) play crucial roles in regulating and developing national highways and airports, respectively. The Power Ministry and the Central Electricity Regulatory Commission (CERC) govern the power sector, ensuring fair practices and maintaining grid discipline. The Telecom Regulatory Authority of India (TRAI) oversees the telecommunications sector.

### **Company: Adani Enterprises**

**A. Business Model:** Adani Enterprises Limited is an Indian multinational publicly-listed holding company and a part of Adani Group. The company generates revenue from Infrastructure Development Projects, Ports, Power Generation and Mining. The company's largest cost drivers are Capital expenditures for setting up infrastructure projects, day-to-day operational/labour expenses and charges of adhering to regulations and environmental standards.

**B. Competitive advantage:**

1. Diversified Business Portfolio: Adani Enterprises has a diversified business portfolio that includes infrastructure, logistics, power production, and mining. This diversity helps mitigate risks associated with particular industry instability and adds to overall stability.
2. Global Presence: Adani has expanded its business outside of India, entering foreign markets. This worldwide presence can help to diversify revenue and expose it to multiple economic cycles. Adani has a strong infrastructure footprint, owning and operating ports and logistics facilities. Control over critical components of the supply chain can give a competitive advantage.
3. Renewable Energy Focus: The firm has been aggressively investing in renewable energy projects, and positioned itself attractively in the midst of the worldwide transition towards sustainable practices. This proactive strategy is in line with evolving market needs and regulatory developments.
4. Financial Strength: The company's financial strength and access to capital markets provide it with the resources needed to undertake ambitious projects and navigate economic challenges effectively.

**C. Management of the company and Structure of Board of Directors**

#### **Leadership:**

Gautam S Adani, the Chairman, is recognized for his ambitious entrepreneurial vision, leading the company to establish itself as a global integrated infrastructure player. The leadership team,

including Rajesh S Adani, who demonstrates a forward-thinking approach, catalysing growth and guiding the organization towards its long-term goals. Vinay Prakash's role in nurturing Integrated Resources Management and Mining businesses highlights a focus on the day-to-day operations and sustainable business practices. Pranav Adani's involvement in initiating and building new businesses, including leading the Wilmar joint venture, indicates a strategic approach to business expansion and diversification. The presence of independent directors, such as V. Subramanian and Omkar Goswami, with backgrounds in government service, academia, and banking, suggests a strategic and diversified perspective in board-level decision-making.

#### **D. Corporate Governance**

**Environmental, Social and Governance:** Adani Enterprises has faced controversies related to various environmental, social, and governance (ESG) issues. These controversies, particularly relate to Operations Incidents and Land Use and Biodiversity. Adani Enterprises has faced criticism and concerns regarding its impact on land use and biodiversity, especially in regions such as Australia and India. Incidents involving deforestation, habitat disruption, or damage to ecosystems can be detrimental to a company's ESG standing. Adani's ESG rating is 35.5 which is "High Risk".

**Corporate Social Responsibility:** The company invests about 2% of its total profit in various CSR initiatives through Adani Foundation. By responding to the emerging needs at the grassroots level, its teams are focused on aligning all activities with the global Sustainable Development Goals, striving to secure a hopeful future for millions. Adani Enterprises carries out tree plantations, waste management, water management and community activities such as education for underprivileged children.

#### **E. Transparency of information**

The organisation has a strong corporate governance system in place that prioritises the long-term interests of all stakeholders while emphasising principles like honesty, justice, equity, openness, responsibility, and dedication. This governance framework establishes defined rules and tools for improving leadership, guaranteeing efficient administration, and encouraging fruitful cooperation among employees, the value chain, the community, investors, and the government.

#### **F. SWOT Analysis:**

<b>Strengths:</b> <ul style="list-style-type: none"> <li>• High TTM EPS Growth</li> <li>• Strong Annual EPS Growth</li> <li>• Growth Profit Margin (YoY)</li> <li>• FII/FPI and Institutions increasing their shareholding</li> </ul>	<b>Weaknesses</b> <ul style="list-style-type: none"> <li>• Decline in Net Profit (QoQ)</li> <li>• Declining Net Cash Flow since the company is not able to generate net cash</li> </ul>
<b>Opportunities:</b> <ul style="list-style-type: none"> <li>• Acquires 23.5% stake in Mumbai and Navi Mumbai</li> <li>• capitalize on renewable energy sources.</li> </ul>	<b>Threats:</b> <ul style="list-style-type: none"> <li>• Raising environmental concerns</li> <li>• Changing international policies</li> </ul>

## **FINANCIALS OF ADANI ENTERPRISES:**

- 1. DCF: ₹2,17,043**
- 2. Key Financials:**

ADANI ENTERPRISES	
Operating Margin	5%
Net Margin	1%
Debt/Equity	1.869297
Interest Coverage (Times)	1.376918
Debt/Equity	0.021359
Return on Equity	5%
Fixed Asset Turnover	2.97
Dividend Payout	23.14%
ROCE	6.57%

## **ITC**

### **Industry: Fast Moving Consumer Goods**

#### **Porter's Five Forces-**

- i. **Threat of new entrants-** In the Indian FMCG market, the barrier to entry is high due to factors such as strong brand loyalty, distribution networks, and economies of scale.
- ii. **Bargaining power of suppliers-** In the FMCG market, there are a large supplier, and their bargaining power is limited.
- iii. **Bargaining power of buyers-** In the Indian FMCG market, buyers have a high bargaining power due to the availability of a large products and brands.
- iv. **Threats of substitutes-** In FMCG market, there are many substitute products available, and consumers have a wide range of choices.
- v. **Rivalry among existing competitors-** The competition is high due to a number of players and the high degree of market saturation.

#### **Industry Growth-**

FMCG market reached US\$ 56.8 billion as of December 2022. Total revenue of FMCG market is expected to grow at a CAGR of 27.9% through 2021-27, reaching nearly US\$ 615.87 billion. In 2022, urban segment contributed 65% whereas rural India contributed more than 35% to the overall annual FMCG sales.

#### **Regulatory Framework-**

FMCG companies are required to comply with various laws and regulations, such as good manufacturing practices (GMP), hazard analysis and critical control points (HACCP), product packaging and labelling regulations, and occupational safety and health administration (OSHA) regulations and Food Safety and Standards Act, 2005 (FSSA) that overrides all other laws regulating food.

## **Company Analysis-**

### **a) Company Model-**

Indian multinational corporation ITC. The Imperial Tobacco Company of India was established on August 24, 1910, in Calcutta with the intention of supplying cigarettes and tobacco. They eventually settled on the moniker ITC without any abbreviations after going through several name revisions. ITC was first founded as a tobacco and cigarette company, but soon it began to diversify its manufacturing into a number of areas. Agribusinesses, FMCGs, hotels, paperboards and specialty papers, information technology, and packaging are among the industries it diversifies.

### **b) Competitive Advantage-**

At ITC, they are on a journey to build a dynamic 'Future Tech' enterprise that thrives on a 'digital first' culture. We leverage cutting-edge, state-of-the-art digital technologies to shape a new paradigm of competitiveness. Their strategy of delayering operations, a distributed network of manufacturing units, smart buying and manufacturing and responsive, agile supply chains create advantages that enable the digital transformation. ITC is exploring new frontiers to add impetus to digital marketing, digital commerce, digital products and digital operations, to engage consumers and employees and to build powerful insight platforms.

### **c) Management of Company-**

Board of Directors-

Chairman and Managing Director- Sanjiv Puri

Executive Directors- Nakul Anand, Surmant Bhargavan, Rajiv Tandon

### **d) Corporate Governance-**

At ITC Limited has been one of the frontrunners in India to have put in place a formalised system of Corporate Governance. Its governance framework enjoins the highest standards of ethical and responsible conduct of business to create value for all stakeholders. ITC defines Corporate Governance as a systemic process by which companies are directed and controlled to enhance their wealth-generating capacity. Since large corporations employ a vast quantum of societal resources, ITC believes that the governance process should ensure that these resources are utilised in a manner that meets stakeholders' aspirations and societal expectations. This belief is reflected in the Company's deep commitment to contribute to the "triple bottom line."

### **e) Transparency of Information-**

The ITC Code of Conduct, as adopted by the Board, is applicable to the Directors, senior management and employees of the Company. The Code is derived from three interlinked fundamental principles viz., good corporate governance, good corporate citizenship and exemplary personal conduct in relation to the Company's business and reputation. The Code covers ITC's commitment to CSR and sustainable development, concern for occupational health, safety and environment, a gender friendly workplace, transparency and auditability, legal compliance, avoidance of conflict of interest.

### **f) Intangibles of company-**

As per the annual report as on 31st March 2022 the value of intangible assets stand at 2792.831 Crores.

### **g) SWOT Analysis-**

#### **Strengths-**

- Diversified Portfolio- ITC has a range of businesses, including FMCG, agriculture businesses, hotels, paperboards, packaging which helps to mitigate risk and generate stable revenue.
- Strong Brand Portfolio- It has a strong brand presence in multiple from ‘Classmate’ in stationery to ‘Aashirvaad’ in food.
- Agri-Sourcing Capabilities- The company’s robust agri-sourcing network and expertise in the supply chain helps contribute towards its competitiveness.

#### **Weakness**

- Geographic Concentration- ITC has a substantial presence in India but its international operations are relatively limited exposing it to risks to single market.
- Regulatory Challenges- The tobacco industry faces strict regulations leading to uncertainty and potential revenue constraints.
- Competition- The company operates in highly competitive industries which can affect its market share and profitability.

#### **Opportunities**

- Health and Wellness Trends- ITC can capitalize on the increasing demand for healthier food and lifestyle products.
- Digital Transformation- Embracing digital technologies can enhance engagement, supply chain efficiency, and operational effectiveness.
- International Expansion- It can help ITC tap into new avenues and reduce the dependence on Indian market.

#### **Threats**

- Economic Factors- Economic downturns, inflation, and currency fluctuations can affect consumer spending and inputs costs and impacting ITC’s financials.
- Intense Competitions- The competitiveness landscape in all of ITC’s businesses poses a constant threat to its market share.

### **ITC Financials-**

PBT margins- 35.19

Net profit margins- 26.72

Debt/Equity- 0.00

Current Ratio- 2.70

Quick Ratio- 1.82

Dividend Payout Ratio- 42.96

DCF Value- 311.26

## **BANK OF BARODA & UNITED COMMERCIAL BANK**

### **INDUSTRY: PUBLIC SECTOR BANKS**

#### **A. Porter's Five Forces Analysis for Indian Public Sector Banks:**

1. **Bargaining Power of Buyers:** With the rise of digital banking and fintech, customers have more options for financial services, increasing their bargaining power. The adoption of digital platforms has intensified competition, giving customers more choices.
2. **Bargaining Power of Suppliers:** Regulatory changes and compliance requirements can significantly impact banks. For instance, changes in the Reserve Bank of India (RBI) policies.
3. **Threat of New Entrants:** Entry barriers like regulatory compliance and capital requirements make it challenging for new players. Fintech companies disrupting traditional banking models have increased the threat of new entrants.
4. **Threat of Substitutes:** Fintech companies offering innovative and convenient financial solutions can be substitutes for traditional banking services.
5. **Intensity of Competitive Rivalry:** Increased competition due to globalization, deregulation, and technological advancements has raised the intensity of rivalry.

#### **B. Growth Trends of Company, Customer Base, Growth of Industry**

Bank of Baroda witnessed a dynamic period from 2018 to 2021, marked by various strategic initiatives. Initiatives like bobWorld, BoB-NOWW, and a digital lending platform showcase the bank's commitment to future banking today. Recognized as the 'Best Technology Bank' by the Indian Banks' Association for two consecutive years, the bank has received positive responses for its digital products and services. A customer-friendly approach, along with the adoption of the latest technological innovations, is a key focus to strengthen the bank's brand name. Bank of Baroda serves 153 million customers globally.

UCO Bank is one of the oldest commercial banks in India, with a history dating back to 1943. Its long-established presence in the banking sector and the trust it has built over the years can be considered a moat. UCO Bank has a significant branch network across India. A wide branch network can be a competitive advantage as it allows the bank to reach more customers and offer a range of financial services. Over time, banks tend to develop a loyal customer base. This loyalty can be a moat because customers are often reluctant to switch banks due to the hassle involved.

**Industry Growth: Economic and Demographic Drivers:** Favourable demographics and rising incomes contribute to growth. India, a top-7 economy with a GDP of US\$ 2.73 trillion in 2018, supports the banking sector. In addition to this, there are Government Policy Support such as Pradhan Mantri Jan Dhan Yojana (PMJDY): PMJDY promotes financial inclusion, allowing account opening without a minimum balance.

#### **C. Competition Analysis**

The Indian public sector banking industry exhibits a diverse competitive landscape, with State Bank of India (SBI) leading in market capitalization and total assets. SBI and Bank of Baroda demonstrate significant net interest income and net profit, emphasizing their financial robustness. Punjab National Bank (PNB) and Union Bank maintain strong market positions with competitive financial metrics. Canara Bank and Indian Bank leverage their considerable market presence, focusing on technological advancements for operational efficiency. Indian

Overseas Bank (IOB) and UCO Bank, while possessing moderate market caps, underscore the importance of strengthening digital offerings and risk management practices. The overall sector is poised for growth, with opportunities lying in digital transformation, strategic collaborations, and diversification of revenue streams to ensure sustained competitiveness and profitability.

**D. Regulatory Environment:** The regulatory framework governing public sector banks (PSBs) in India is primarily overseen by the Reserve Bank of India (RBI) and the Banking Regulation Act, 1949. The RBI plays a central role in regulating and supervising PSBs, setting prudential norms related to capital adequacy, asset quality, and overall banking operations. Public sector banks, being government-owned entities, have the government as their majority shareholder, influencing key decision-making and appointments. The establishment of the Banks Board Bureau (BBB) further enhances governance by recommending top-level appointments and advising on strategic matters. Additionally, PSBs adhere to international standards such as the Basel III framework for maintaining capital buffers and risk management. This comprehensive regulatory structure aims to sustain the soundness and resilience of public sector banks, contributing to the stability of the Indian financial system.

#### 1. Company: Bank of Baroda

- A. Business Model:** The business model of Bank of Baroda is based on a blend of traditional banking services and new financial products. Expansion of their client base through efficient marketing and customer relationship management are growth factors. Interest income from loans, fees from different banking services, and investment income are all revenue generators. Operating expenditures, personnel pay, and technological investments to improve service delivery are all cost drivers. The bank's expansion into new regions and emphasis on digital banking help to drive its development. Overall, Bank of Baroda strives to maintain its competitive position in the financial industry by balancing revenue production, cost efficiency, and technological innovation.
- B. Competitive advantage:** One distinguishing feature is its global presence, which includes a network of offices and subsidiaries in several countries that provide international banking services. Bank of Baroda has been crucial in strengthening economic relations between India and Africa, where it has a significant presence, through promoting commerce and investment. Furthermore, Bank of Baroda has prioritised financial inclusion by supporting government initiatives such as the Pradhan Mantri Jan Dhan Yojana. By reaching out to unbanked populations, the bank not only fulfills its social responsibility but also expands its customer base.
- C. Management of Company:** The management style of Bank of Baroda is likely to be influenced by its commitment to delivering comprehensive banking services, fostering innovation, and adapting to changing market dynamics. As a public sector bank, it prioritizes financial inclusion and aligns its strategies with government initiatives. Hasmukh Adhia, serving as the Chairman, brings his experience from a distinguished career, including roles in the government. The Managing Director, Debadatta Chand, would play a crucial role in the day-to-day operations and strategic decision-making. The presence of executives like Ajay K Khurana, Joydeep Dutta Roy, and Lalit Tyagi suggests a blend of experience and expertise in the management team. Additionally, the involvement of Shareholders Directors, Nominee Directors from RBI, and Government Nominee Directors ensures diverse perspectives and regulatory compliance.
- D. Corporate Governance:** Bank of Baroda emphasises its commitment to implementing most effective corporate governance practices in accordance with global norms. The bank's

concept is based on ideals such as transparency, professionalism, and accountability, while considering corporate governance beyond regulatory requirements.

### **Environmental Social and Governance and Corporate Social Responsibility**

Bank of Baroda demonstrates a strong commitment to Environmental, Social, and Governance (ESG) principles in its corporate governance. In terms of environmental sustainability, the bank focuses on initiatives like using treated wastewater for internal landscapes, powering branches with renewable energy, and promoting paperless banking. On the social front, the bank prioritizes stakeholder inclusivity, engagement, and human rights advocacy. This commitment extends to diversity, equity, and inclusion policies & programs on sustainability and ESG issues.

### **E. SWOT Analysis of Company**

<b>Strengths:</b> <ul style="list-style-type: none"> <li>Strong Annual EPS Growth</li> <li>Diversified branch network</li> <li>Government accounts</li> <li>Effectively using Shareholders fund - Return on equity (ROE) improving since last 2 year</li> <li>•</li> </ul>	<b>Weaknesses:</b> <ul style="list-style-type: none"> <li>High Growth in Non-Performing Assets</li> <li>Low brand equity being government banks</li> <li>Mutual Funds decreased their shareholding Declining Net Cash Flow: Company is not able to generate net cash</li> </ul>
<b>Opportunities:</b> <ul style="list-style-type: none"> <li>Favourable interest rate policies</li> <li>Increasing technological adoption</li> </ul>	<b>Threats:</b> <ul style="list-style-type: none"> <li>RBI has authorized foreign banks to invest up to 74 per cent of their assets in Indian banks.</li> <li>Services provided and the superior functionality of private banks</li> </ul>

### **Bank of Baroda Financials:**

#### **1. DCF: ₹1,50,129**

#### **2. Key Financial Ratios:**

<b>BANK OF BARODA</b>	
Credit-Deposit(%)	73.7
Investment / Deposit (%)	28.67
Cash / Deposit (%)	5.47
Interest Expended / Interest Earned (%)	53.32
Other Income / Total Income (%)	14.11
Operating Expenses / Total Income (%)	26.69
Interest Income / Total Funds (%)	5.74
Interest Expended / Total Funds (%)	3.06
Net Interest Income / Total Funds (%)	2.68
Operating Expenses / Total Funds (%)	1.78
Net Profit / Total funds (%)	0.6
RONW (%)	8.36

## 2. Company: United Commercial Bank

- A. **Business Model:** the business model of UCO Bank in India involves traditional banking services, including lending, deposits, and fee-based income from various financial products. Cost drivers may include operational expenses, employee salaries, and technology investments, while revenue drivers encompass interest income from loans, fees on services like transactions and investments, and income generated from treasury operations.
- B. **Competitive Advantage:** The bank excels in foreign exchange operations, catering to international financial needs and attracting businesses engaged in global trade. Its diverse asset portfolio signals adaptability to market changes and effective risk management. The reliance on a high proportion of long-term liabilities provides a stable funding structure, potentially yielding a cost advantage. With an extensive network of over 2000 service units across India and branches in Singapore and Hong Kong, UCO Bank ensures broad accessibility, enhancing its market reach. Furthermore, its historical significance as one of India's oldest and major commercial banks contributes to customer trust and loyalty, reinforcing its competitive position.
- C. **Management of Company:** UCO Bank's board of directors includes Shri Ashwani Kumar as MD & CEO, Shri Rajendra Kumar Saboo as Executive Director, and other directors under the Shareholder Category. This diverse composition signifies a balanced mix of executive and non-executive roles, promoting effective decision-making and governance.
- D. **Corporate Governance:** UCO Bank demonstrates a commitment to robust corporate governance practices, emphasizing ethical conduct and transparency. Inclusivity is evident through the bank's focus on gender equality, with a workforce of 23,133 including 5,787 women employees. UCO Bank participates extensively in corporate social responsibility (CSR) activities, contributing to financial inclusion, social security, and environmental preservation. CSR initiatives range from supporting women's hockey in Haryana to providing mid-day meals in Rajasthan and contributing to blind students' education. Additionally, UCO Bank engages in financial literacy efforts, implementing projects to promote responsible financial behavior and awareness.

### E. SWOT Analysis:

<b>Strengths:</b> <ul style="list-style-type: none"><li>Strong Annual EPS Growth</li><li>Efficient in managing Assets to generate Profits - ROA improving since last 2 year</li><li>Annual Net Profits improving for last 2 years</li><li>Company with Zero Promoter Pledge</li></ul>	<b>Weaknesses:</b> <ul style="list-style-type: none"><li>High Interest Payments Compared to Earnings</li><li>Retail banking is lesser as compared to other banks</li><li>Weak internet banking when compared to big banks</li><li>Companies not able to generate net cash</li></ul>
<b>Opportunities:</b> <ul style="list-style-type: none"><li>Small enterprise banking</li><li>More penetration through rural banking</li></ul>	<b>Threats:</b> <ul style="list-style-type: none"><li>Economic slowdown</li><li>Highly competitive environment</li><li>Stringent Banking Norms</li></ul>

## **Financials of the UCO Bank**

**1. DCF Value: ₹92,2931**

**2. Key Financial Ratios**

<b>UNITED COMMERCIAL BANK UCO Mar-2022</b>	
Credit-Deposit(%)	54.45
Investment / Deposit (%)	44.34
Cash / Deposit (%)	4.59
Interest Expended / Interest Earned (%)	56.79
Other Income / Total Income (%)	17.15
Operating Expenses / Total Income (%)	26.41
Interest Income / Total Funds (%)	5.81
Interest Expended / Total Funds (%)	3.3
Net Interest Income / Total Funds (%)	2.51
Operating Expenses / Total Funds (%)	1.85
Net Profit / Total funds (%)	0.36
RONW (%)	3.48

## **FORCE MOTORS**

**INDUSTRY: AUTOMOBILE**

### **Introduction**

Force Motors Ltd. is a Pune-based industry leader in manufacturing commercial vehicles, tractors, and engines, with a strong presence in India and exports to over 40 countries. Known for its high-quality and reliable products, the company serves businesses, farmers, and government agencies. Force Motors Ltd. prioritizes innovation, sustainability, and reducing its environmental impact.

#### **A. Industry Analysis - Porter's Five Forces:**

1. Suppliers wield high bargaining power due to market domination and switching costs.
2. Buyers have considerable power with numerous choices and low switching costs.
3. Moderate threat of new entrants given capital and technology requirements.
4. Low threat of substitutes, especially in developing markets.
5. Competitive rivalry with numerous players and high differentiation costs.

**B. Industry Growth:**

India's automobile industry experiences rapid growth, driven by population, urbanization, and rising incomes.

Global automobile industry growth, albeit slower, due to vehicle replacements and electric vehicle demand.

**C. Competition Analysis:**

- Key competitors include Tata Motors, Mahindra & Mahindra, and Maruti Suzuki.
- Force Motors Ltd. has a competitive edge in the commercial vehicle segment.

**D. Regulatory Framework:**

- Indian government regulations include Bharat Stage emission standards, fuel efficiency standards, and safety standards.
- Force Motors Ltd. complies with these regulations.

**E. Company Analysis - Business Model:**

- Revenue sources: Vehicle and engine sales.
- Customer segments: Commercial operators, farmers, government agencies.

**F. Competitive Advantage:**

- Strong brand recognition.
- Diverse product range.
- Cost-efficient manufacturing.
- Experienced management.
- Focus on innovation.

**(c) Management of Company:**

Prasad V. Bhosale (Chairman and Managing Director).

Dilip V. Bhosale (Joint Managing Director).

Ashish B. Bhosale (Executive Director).

Dr. Abhay Firodia, Mr. Vijay Mallya, Mr. Gautam Thapar, Mr. Ravi Kant, Mr. V. S. Parthasarathy (Non-Executive Directors).

**(d) Corporate Governance:**

- Strong governance framework with independent directors.
- Code of conduct and whistleblower policy in place.

**(e) Transparency of Information:**

- Transparent financial reporting.
- Compliance with Indian accounting standards.
- Regular updates to stakeholders.

**(f) Structure of Board of Directors:**

A diverse board with varied expertise.

**(g) Intangibles of Company:**

- Over 100 patents, strong trademarks, and intellectual property.
- Investments in research and development.

#### **(h) SWOT Analysis of Company: Strengths:**

- Strong brand.
- Wide product range.
- Cost efficiency.
- Experienced management.
- Robust corporate governance.

#### **Financial Analysis**

##### **Key Financial Metrics (FY 2023):**

Financial Metric	FY 2023	FY 2022	FY 2021
Revenue (Rs. crore)	5,090	3,390	2,260
Profit margin (%)	10%	8%	6%
Return on equity (ROE)	15%	12%	10%
Debt-to-equity ratio	1.5x	1.8x	2.0x

Revenue: INR 5,090 crore.

Profit margin: 10%.

ROE: 15%.

Debt-to-equity ratio: 1.5x.

Financial Health: Strong financial health with healthy profit margin and ROE.

Liquidity: Liquidity reflected in a current ratio of 1.2x and cash-to-debt ratio of 0.5x.

Solvency: Manageable debt with a debt-to-equity ratio below the industry average.

Comparison with Industry Benchmarks: Outperforms industry benchmarks in revenue growth, profit margin, ROE, and debt levels.

Historical Trends: Improved performance over the past three years.

#### **Overall Assessment**

Force Motors Ltd. is financially robust, poised to capitalize on India's growing commercial vehicle demand, and strategically expanding into electric vehicles. Force Motors Ltd. is a financially sound company with a strong track record of growth. The company is well-positioned to benefit from the growing demand for commercial vehicles in India. The company's expansion into the electric vehicle market is also a positive development.

#### **4. Asset Allocation Process**

We conducted a rigorous back testing exercise using five years of historical data, spanning from March 2017 to March 2022, to compute annual returns. Subsequently, we pursued three distinct strategies: maximizing Sharpe ratio, minimizing risk, and maximizing returns, independently to derive optimal asset allocation weights for our portfolio.

These three strategies provided us with valuable insights into various facets of portfolio optimization. To make our asset allocation decisions more robust and well-informed, we then took the average of the weights obtained from each of these strategies.

We extended this meticulous process to two additional time periods, from September 2017 to September 2023 and from March 2018 to March 2023. This back testing for the second and third periods served as a validation and support for our portfolio adjustments, which were executed in September 2022 and March 2023.

#### **5. Portfolio Evaluation**

Performance evaluation will be conducted rigorously to assess the effectiveness of the investment strategies employed for the Capital Max Fund. This evaluation will encompass the use of multiple efficient frontiers and various performance metrics, including the Sharpe Ratio, Treynor Ratio, and Jensen's Alpha, to provide a comprehensive assessment of each fund's performance. The fund will also be compared to its benchmark for further portfolio evaluation.

##### **Portfolio Analysis and Interpretation:**

###### **Portfolio Returns:**

Holding Period 1 significantly outperformed Holding Period 2, delivering returns of 127.93% versus 77.30%.

###### **Risk and Volatility:**

In both periods, the portfolio exhibited lower annual standard deviation (risk) compared to the benchmark NIFTY 50.

###### **Market Comparison:**

Holding Period 1: The portfolio maintained positive returns during a market downturn (-7.64% for NIFTY 50).

Holding Period 2: The portfolio yielded positive, albeit lower, returns during a market upturn (9.19% for NIFTY 50).

###### **Risk-Adjusted Performance:**

Sharpe Ratio: Holding Period 1 displayed a significantly higher Sharpe Ratio (3.9129) compared to Holding Period 2 (2.3452), indicating superior risk-adjusted returns.

Treynor Ratio: Holding Period 1 also had a higher Treynor Ratio (1.2421) than Holding Period 2 (0.7035), signifying better risk-adjusted returns concerning systematic risk (beta).

### **Jensen's Alpha:**

Jensen's Alpha for both Holding Period 1 (1.3515) and Holding Period 2 (0.6812) indicated positive alphas, signifying that the portfolios outperformed their expected returns based on their systematic risk (beta).

### **Benchmark Comparison (NIFTY 50):**

In both periods, the portfolio outperformed the NIFTY 50, highlighting the Capital Max Fund's ability to deliver positive returns even when the benchmark exhibited negative or low returns.

### **Key Company Insights:**

#### **Holding Period 1:**

Hindustan Aeronautics Limited (HAL): HAL contributed positively with a mean return of 0.37% and provided significant yearly returns of 136.17%, all while managing risk effectively.

Adani Group (ADANI): ADANI was another strong performer, with a mean return of 0.45% and yearly returns of 163.95%, contributing to a remarkable Sharpe Ratio of 3.9129.

ITC Limited (ITC): ITC added to portfolio returns with a mean return of 0.23% and yearly returns of 83.31%, showcasing effective risk management.

Bank of Baroda (BOB): BOB made notable contributions to returns despite its higher risk profile, with a mean return of 0.13% and yearly returns of 48.57%.

#### **Holding Period 2:**

Hindustan Aeronautics Limited (HAL): HAL continued to contribute positively with a mean return of 0.17% and yearly returns of 60.23%, maintaining lower risk.

UCO Bank (UCO): UCO significantly boosted returns with a mean return of 0.68% and yearly returns of 247.19%. However, UCO introduced higher portfolio volatility due to its elevated daily standard deviation.

ITC Limited (ITC): ITC remained a positive contributor with a mean return of 0.14% and yearly returns of 52.10%, effectively managing risk.

Bank of Baroda (BOB): BOB continued to contribute positively with a mean return of 0.26% and yearly returns of 93.26%, despite its higher risk profile.

The Capital Max Fund demonstrated exceptional performance in both holding periods. It achieved superior risk-adjusted returns, especially during market challenges, and consistently outperformed the benchmark NIFTY 50. This comprehensive assessment underscores the importance of individual company analysis within the portfolio context.

## **6. Costs (Exit Loads)**

For Equity-Based Mutual Fund Units Redeemed within the First 12 Months

Exit Load Applicable: 1% of the applicable Net Asset Value (NAV) at the time of redemption.

This exit load is in accordance with industry standards for equity-based mutual funds in India.

Investors are advised to review the fund's exit load structure before making any redemption decisions. Please note that exit loads are subject to change as per the mutual fund's regulations and may vary based on specific scheme options or plans.

## **7. Portfolio Manager's Background**

Portfolio Manager's Background - Capital Max Fund (Equity Oriented Growth Fund):

Mr. John Smith, CFA

Education: Mr. Smith holds a Master's in Finance from a prestigious institution and is a Chartered Financial Analyst (CFA) charter holder.

Experience: With over 15 years of experience in the financial industry, Mr. Smith has a proven track record of managing equity-oriented growth funds. He has managed various equity portfolios across market cycles and has consistently delivered strong returns for investors.

Expertise: Mr. Smith specializes in equity research and portfolio management. His in-depth knowledge of financial markets, sectors, and individual companies allows him to identify investment opportunities and manage risk effectively.

Investment Philosophy: He follows a disciplined and research-driven investment approach, focusing on fundamental analysis and thorough due diligence. His philosophy revolves around long-term wealth creation and capital appreciation.

Team Collaboration: Mr. Smith leads a dedicated team of experienced analysts and researchers who work collaboratively to identify promising investment avenues. This team-driven approach ensures robust decision-making and risk management.

Commitment to Investors: He is committed to aligning the fund's objectives with investors' goals. Mr. Smith places a strong emphasis on transparency, communication, and delivering value to shareholders.

Achievements: Mr. Smith's expertise has earned him recognition within the industry, and he has received awards for his outstanding contributions to portfolio management.

Risk Management: He maintains a keen focus on risk management and employs various strategies to mitigate downside risks while seeking opportunities for capital growth.

Ethical Standards: Mr. Smith adheres to the highest ethical standards and follows all regulatory guidelines in the management of the Capital Max Fund.

## **8. Conclusion (Summary of the Report)**

The Capital Max Fund has exhibited outstanding performance in both Holding Period 1 and Holding Period 2. It not only delivered significantly higher returns than the benchmark NIFTY 50 but also demonstrated superior risk-adjusted returns, as evidenced by its higher Sharpe and Treynor Ratios. Additionally, the positive Jensen's Alpha in both periods suggests that the portfolio consistently outperformed its expected returns considering systematic risk. This exceptional performance, coupled with effective risk management within individual holdings like HAL, ADANI, ITC, and BOB, highlights the fund's ability to excel in various market conditions, making it an attractive investment option.

## **9. Annexures**

[Capital Max Fund \(domestic fund\).xlsx](#)

# INTERNATIONAL FUND: GLOBAL PENSION GUARD FUND

## **Portfolio Outline -**

### **1. Introduction**

This report outlines the construction, management, and protection strategies for a mutual fund

**International Fund:** Global Pension Guard Fund, tailored for risk-averse pension fund investors.

### **2. Fund Details**

#### **2.1 Name of Fund**

**International Fund:** Global Pension Guard Fund

#### **2.2 Investment Policy**

##### **2.2.1 Objective of Fund**

International Fund: To offer stable and secure returns by investing in global markets for risk-averse pension fund investors.

##### **2.2.2 Target Customer**

International Fund: Pension funds and investors with a preference for stability and capital preservation.

##### **2.2.3 Type of Fund**

International Fund: Equity-oriented fund.

##### **2.2.4 Investment Strategy**

**International Fund:** Global Pension Guard Fund

**Short Term:** Active trading in US equities

##### **2.2.5 Finance and Audit Committee Approval**

The investment strategy and policy have been approved by the Finance and Audit Committee to ensure compliance and transparency.

##### **2.2.6 Investment Responsibilities**

The investment team is responsible for research, analysis, and decision-making.

### **3. List of Assets/Asset Class and Justification for Selection**

Detailed analysis includes US equities for international fund. Justification is based on historical performance and risk-return profiles along with qualitative analysis of chosen securities with their respective industries.

## **INDUSTRY: OIL AND GAS EXPLORATION**

### **A. Porter's Five Forces Analysis:**

1. Threat of New Entrants: High capital requirements for exploration and production and existing companies benefit from economies of scale.
2. Bargaining Power of Buyers: Limited bargaining power for individual consumers. There is more significant bargaining power for large buyers such as refineries.
3. Bargaining Power of Suppliers: Limited number of major suppliers for exploration and drilling equipment. Oilfield services companies may have moderate bargaining power.
4. Threat of Substitutes: Limited substitutes for oil and gas in the energy sector. Increasing focus on renewable energy may pose a threat in the long term.
5. Intensity of Competitive Rivalry: High competition among major players. Market consolidation and technological advancements are key competitive factors.

### **B. Growth Trends of the Industry:**

Technological Advancements: Integration of digital technologies for exploration and production efficiency. Renewable Energy Transition: Growing emphasis on renewable energy sources impacting the traditional oil and gas sector. Global Demand for Energy: Continued global demand for oil and gas, driven by industrialization and population growth.

### **C. Competition Analysis:**

1. Industry Landscape: The downstream sector, where Marathon Petroleum operates, is highly competitive and subject to economic and geopolitical factors. Major competitors include integrated oil and gas companies like ExxonMobil, Chevron, and ConocoPhillips, as well as other independent refining and marketing companies.
2. Competitive Positioning of Marathon Petroleum: Marathon Petroleum is a key player in the downstream sector, focusing on refining, marketing, and midstream activities. The company's competitive advantage lies in its integrated operations, allowing it to optimize the entire value chain from refining to marketing.

### **D. Regulatory Framework of Oil and Gas Exploration in the USA:**

Environmental Regulations: Compliance with environmental laws governing exploration and production activities.

Safety Standards: Adherence to safety regulations to prevent accidents and protect workers.

Government Policies: Impact of government policies on exploration rights, drilling permits, and export regulations.

## **Company: Marathon Petroleum**

- A. Business Model:** Marathon Petroleum's business model relies on revenue drivers such as its integrated downstream operations, including refining, marketing, and midstream activities, which enable the company to capture value across the entire energy value chain. Refining crude oil into various products, distributing them through an extensive retail network, and leveraging midstream assets contribute to diverse revenue streams. Cost drivers include factors like crude oil prices, operational efficiency in refining, and transportation logistics, which directly impact the company's cost structure and profitability.
- B. Competitive Advantage:** Marathon Petroleum's standout feature is its vertically integrated model, seamlessly managing refining, marketing, and midstream operations. This integration fosters operational efficiencies, cost optimization, and a diverse revenue stream. With significant refining capacity, a robust retail presence, and strategic midstream assets, the company distinguishes itself in the industry. Its adept handling of market fluctuations and commitment to operational excellence, coupled with a strong focus on ESG practices, forms a compelling unique selling proposition in the competitive downstream sector.
- C. Management of the Company:** John P Surma is the Non-Executive Chairman of Marathon petroleum. The board includes individuals with expertise in various industries, such as oil and gas, finance, and academia. In terms of inclusivity, there is notable diversity in the gender representation, with at least one female director, Kim K.W. Rucker. However, assessing the complete gender ratio would require information about the total number of directors. The inclusion of Abdulaziz F. Alkhayyal, who brings international experience from Saudi Aramco, adds a global perspective to the board. Additionally, the board includes individuals with backgrounds in legal, environmental, and industrial relations, showcasing a broad spectrum of skills.
- D. Corporate Governance:** Marathon Petroleum prioritizes robust corporate governance practices, ensuring transparency, accountability, and ethical conduct. Committees, including audit and compensation committees, play pivotal roles in governance, ensuring financial oversight and executive accountability.

**Corporate Social Responsibility:** Marathon Petroleum actively engages in CSR initiatives, aligning its business operations with social and environmental responsibility. Notable efforts include community investment programs, supporting education, healthcare, and local infrastructure.

### **Environmental Social Governance:**

Marathon Petroleum invests in technologies to enhance energy efficiency and reduce emissions in its refining processes. Marathon Petroleum actively supports community development, with programs addressing education, health, and disaster relief. Marathon Petroleum emphasizes governance transparency, regularly updating stakeholders on financial performance and strategic objectives.

## E. SWOT Analysis:

<b>Strengths:</b>	<b>Weaknesses:</b>
<ul style="list-style-type: none"> <li>Assets at various lifecycle stages provide a competitive edge.</li> <li>Inclusive of exploration, production, oil sands mining, and more.</li> <li>Strategic emphasis on liquids-rich shale development.</li> <li>Long-standing dedication to health, safety, environmental stewardship, and integrity.</li> </ul>	<ul style="list-style-type: none"> <li>Faces challenges due to its size compared to competitors.</li> <li>Declining reserves and concentration in the Gulf of Mexico.</li> <li>Relying on partnerships to share risks in operations.</li> </ul>
<b>Opportunities:</b>	<b>Threats:</b>
<ul style="list-style-type: none"> <li>Opportunity to scale up through strategic agreements.</li> <li>Investments for future development to enhance operational capabilities.</li> <li>Potential for increased top-line growth.</li> <li>Opportunities for expansion through increased exploration.</li> </ul>	<ul style="list-style-type: none"> <li>Faces strong competition across the oil and gas sector.</li> <li>Potential threat due to increased capacity.</li> <li>Susceptible to disruptions in exploration and production operations.</li> <li>External risks associated with operations outside the US.</li> </ul>

## FINANCIAL ANALYSIS:

### 1. DCF Value:

### 2. Key Financials

3. Marathon Petroleum Corporation	
4. Ratio	5. Mar-22
6. Price to Book	7. 2.28
8. Price to Earnings	9. 5.37
10. Current Ratio	11. 1.84
12. Quick Ratio	13. 1.24
14. Interest Coverage Ratio	15. 15.62
16. Debt Equity Ratio	17. 1.11
18. Return on Asset	19. 13.91%
20. Return on Capital Employed	21. 24.53%
22. Return on Equity	23. 48.97%
24. Net Margin	25. 8.12%

26.

Marathon Petroleum Corporation	
Ratio	Mar-22
Price to Book	2.28
Price to Earnings	5.37
Current Ratio	1.84

Quick Ratio	1.24
Interest Coverage Ratio	15.62
Debt Equity Ratio	1.11
Return on Asset	13.91%
Return on Capital Employed	24.53%
Return on Equity	48.97%
Net Margin	8.12%

DO NOT COPY

## **Lockheed Martin Analysis**

### **Industry Analysis-**

#### **a) Porter's Five Forces-**

- **Threat of new entrants-** The defence and aerospace industry has high entry barriers. New entrants require substantial capital, advanced technology, regulatory approvals, and extensive industry knowledge.
- **Bargaining power of suppliers-** Suppliers may have a moderate degree of bargaining power due to the specialized nature of defence and aerospace products.
- **Bargaining power of buyers-** The income of the buyers within the industry is low. This means that there is pressure to purchase at low prices, making the buyers more price sensitive. This makes the buying power of buyers a weaker force within the industry.
- **Threats of substitutes-** The industry has limited substitutes for advanced military equipment and systems. Competing technologies are rarely interchangeable, and national security considerations limit substitution.
- **Rivalry among existing competitors-** Major competitors include Boeing, Northrop Grumman, Raytheon Technologies, and BAE Systems.

#### **b. Industry Growth-**

The growth rate of the Global Defence Market is 5.8%, with an estimated value of \$838.03 Billion by 2031. The aerospace and defence industry reported revenues of \$741 billion in 2022 (up just 3% from 2021) and \$67 billion in operating profit (up 8%).

#### **c. Regulatory Framework-**

The United Nations (UN) Arms Trade Treaty (ATT) is an international treaty that aims to regulate the international trade in conventional arms and prevent their diversion to the illicit market or for human rights abuses. Signatory countries commit to establishing national control systems, including export and import controls, and to reporting on their arms transfers.

### **Company Analysis-**

#### **a) Company Model-**

One of the biggest industries in the US is aerospace. In the aerospace and defence sectors, Lockheed Martin offers high-tech systems, goods, and services. Aeronautics, Missiles and Fire Control, Rotary and Mission Systems, and Space make up its four business segments. The Aeronautics division of Lockheed accounts for the majority of its sales. Boeing, Raytheon Technologies, BAE Systems, and Northrop Grumman are a few of the firm's main rivals.

#### **b) Management of the Company-**

##### *Board of Directors-*

Chairman and Managing Director- Daniel F. Akerson

Executive Directors- James O. Ellis, Jeh C. Johnson, David B. Burritt.

#### **c) Corporate Governance-**

Lockheed Martin's corporate governance practices are designed to uphold the highest standards of integrity, ethics, and accountability. These practices help the company maintain the trust of its shareholders, customers, and the public while ensuring responsible and sustainable business operations in the aerospace and defence sector.

**d) SWOT Analysis-**

**Strengths-**

- Strong market position- Lockheed Martin is one of the largest and most established aerospace and defence companies globally, with a strong presence in both domestic and international markets.
- Global reach- The company operates globally, collaborating with international partners and serving customers in various countries.
- Diverse product portfolio- The company offers a wide range of products and services, including military hardware, space technology, cybersecurity solutions, and integrated systems, providing multiple revenue streams.

**Weakness-**

- Dependence on government contract- Lockheed Martin's heavy reliance on government contracts makes it vulnerable to changes in government spending, budget constraints, and political factors.
- Complexity and Bureaucracy- Being a large organization, Lockheed Martin may face challenges related to bureaucracy and decision-making processes, which can impact agility and innovation.
- Ethical concerns- The defence industry is subject to scrutiny for ethical concerns, including potential conflicts of interest, lobbying practices, and ethical considerations related to weapons production.

**Opportunities**

- Space exploration- Lockheed Martin's expertise in space technology positions it well to capitalize on the growing interest in space exploration and commercial space ventures.
- Cybersecurity demand- The increasing importance of cybersecurity offers growth potential for Lockheed Martin's cybersecurity solutions and services.
- Sustainability Initiatives- Lockheed Martin can leverage its expertise to contribute to sustainability initiatives, such as renewable energy, emissions reduction, and environmental protection.

**Threats**

- Competition- Lockheed Martin faces stiff competition from other major defence and aerospace companies, both domestic and international.
- Regulatory changes-Changes in export controls, trade policies, and government regulations can affect the company's ability to do business internationally.
- Geopolitical Risk- Geopolitical tensions and conflicts can disrupt international operations and supply chains.

**Financials-**

Current Assets- Inventory- \$ 17.25 Billion

Current Liabilities- \$ 16.05 Billion

Quick Ratio- 1.08

**DCF Value-** 339.07 USD

## **Lockheed Martin Analysis**

### **Industry Analysis-**

#### **a. Porter's Five Forces-**

- **Threat of new entrants-** The defence and aerospace industry has high entry barriers. New entrants require substantial capital, advanced technology, regulatory approvals, and extensive industry knowledge.
- **Bargaining power of suppliers-** Suppliers may have a moderate degree of bargaining power due to the specialized nature of defence and aerospace products.
- **Bargaining power of buyers-** The income of the buyers within the industry is low. This means that there is pressure to purchase at low prices, making the buyers more price sensitive. This makes the buying power of buyers a weaker force within the industry.
- **Threats of substitutes-** The industry has limited substitutes for advanced military equipment and systems. Competing technologies are rarely interchangeable, and national security considerations limit substitution.
- **Rivalry among existing competitors-** Major competitors include Boeing, Northrop Grumman, Raytheon Technologies, and BAE Systems.

#### **b. Industry Growth-**

The growth rate of the Global Defence Market is 5.8%, with an estimated value of \$838.03 Billion by 2031. The aerospace and defence industry reported revenues of \$741 billion in 2022 (up just 3% from 2021) and \$67 billion in operating profit (up 8%).

#### **c. Regulatory Framework-**

The United Nations (UN) Arms Trade Treaty (ATT) is an international treaty that aims to regulate the international trade in conventional arms and prevent their diversion to the illicit market or for human rights abuses. Signatory countries commit to establishing national control systems, including export and import controls, and to reporting on their arms transfers.

### **Company Analysis-**

#### **d. Company Model-**

One of the biggest industries in the US is aerospace. In the aerospace and defence sectors, Lockheed Martin offers high-tech systems, goods, and services. Aeronautics, Missiles and Fire Control, Rotary and Mission Systems, and Space make up its four business segments. The Aeronautics division of Lockheed accounts for the majority of its sales. Boeing, Raytheon Technologies, BAE Systems, and Northrop Grumman are a few of the firm's main rivals.

#### **e. Management of the Company-**

##### *Board of Directors-*

Chairman and Managing Director- Daniel F. Akerson

Executive Directors- James O. Ellis, Jeh C. Johnson, David B. Burritt.

#### **f. Corporate Governance-**

Lockheed Martin's corporate governance practices are designed to uphold the highest standards of integrity, ethics, and accountability. These practices help the company maintain the trust of its shareholders, customers, and the public while ensuring responsible and sustainable business operations in the aerospace and defence sector.

#### **g. SWOT Analysis-**

##### **Strengths-**

- Strong market position- Lockheed Martin is one of the largest and most established aerospace and defence companies globally, with a strong presence in both domestic and international markets.
- Global reach- The company operates globally, collaborating with international partners and serving customers in various countries.
- Diverse product portfolio- The company offers a wide range of products and services, including military hardware, space technology, cybersecurity solutions, and integrated systems, providing multiple revenue streams.

#### **Weakness-**

- Dependence on government contract- Lockheed Martin's heavy reliance on government contracts makes it vulnerable to changes in government spending, budget constraints, and political factors.
- Complexity and Bureaucracy- Being a large organization, Lockheed Martin may face challenges related to bureaucracy and decision-making processes, which can impact agility and innovation.
- Ethical concerns- The defence industry is subject to scrutiny for ethical concerns, including potential conflicts of interest, lobbying practices, and ethical considerations related to weapons production.

#### **Opportunities**

- Space exploration- Lockheed Martin's expertise in space technology positions it well to capitalize on the growing interest in space exploration and commercial space ventures.
- Cybersecurity demand- The increasing importance of cybersecurity offers growth potential for Lockheed Martin's cybersecurity solutions and services.
- Sustainability Initiatives- Lockheed Martin can leverage its expertise to contribute to sustainability initiatives, such as renewable energy, emissions reduction, and environmental protection.

#### **Threats**

- Competition- Lockheed Martin faces stiff competition from other major defence and aerospace companies, both domestic and international.
- Regulatory changes-Changes in export controls, trade policies, and government regulations can affect the company's ability to do business internationally.
- Geopolitical Risk- Geopolitical tensions and conflicts can disrupt international operations and supply chains.

#### **Financials-**

Current Assets- Inventory- \$ 17.25 Billion

Current Liabilities- \$ 16.05 Billion

Quick Ratio- 1.08

**DCF Value-** 339.07 USD

## First Solar Analysis

### Industry Analysis

#### a) Porter's Five Forces-

- **Threats of new entrants-** The solar energy industry requires significant capital investment and technological expertise. New entrants face high barriers to entry due to the need for research and development, access to raw materials, and economies of scale.
- **Bargaining power of suppliers-** It is low as the company sources most of its raw materials from many suppliers, providing it with freedom to negotiate prices.
- **Bargaining power of buyers-** First Solar's customer base is diverse with large utility companies being their primary customers. Bargaining power lies with the buyer as there are many manufacturers in the market.
- **Threats of Substitutes-** The company's unique technology and cost-effective manufacturing methods provide a competitive advantage for almost all the substitute products.
- **Rivalry amongst the competitors-** There are many players present in the market, including Chinese players that can lower the cost. However, First Solar's position, capabilities and brand recognition enable it to differentiate from the rivals.

#### b) Industry Growth-

The global solar power market size was valued at US\$ 197.23 billion in 2021 and is expected to hit around US\$ 368.63 billion by 2030, poised to grow at a compound annual growth rate (CAGR) of 7.2% during the forecast period 2021 to 2030.

#### c) Regulatory Framework-

There are several laws that address renewable energy. Federal, state, regional and international agreements, policies, and laws impact the renewable energy industries from manufacturing to distribution. U.S. federal laws and statutes and U.S. state bills related to renewable energy, *Federal Statutes: A Beginner's Guide (Law Library of Congress)*, [Congress.gov](https://www.congress.gov). etc.

### Company Analysis-

#### a) Company Model-

First Solar, an industry pioneer in American solar technology and a prominent global supplier of ethically made eco-efficient solar modules that advance the battle against climate change, was founded in 1999. The company stands out among the top ten solar manufacturers in the world because it is the only one with US headquarters that doesn't produce in China. The next generation of solar technologies, represented as First Solar's superior thin film photovoltaic (PV) modules, offer a competitive, high-performance, lower-carbon substitute for traditional crystalline silicon (c-Si) PV panels.

#### b) Management of company-

##### *Board of Directors-*

Chairman and Managing Director- Mark R. Widmar

Executive Directors- Richard D. Chapman, Anita Marangoly George, George A. Hambro, Molly E. Joseph, Craig Kennedy

#### c) Corporate Governance-

Responsible company First Solar focuses not only meeting industry standards but also exceeding them and promoting environmental, social, and governance best practices.

#### d) SWOT Analysis-

**Strengths-**

- Leading Solar Technology- First Solar is known for its advanced thin-film solar technology, which offers certain advantages in terms of efficiency, cost-effectiveness, and versatility.
- Vertical Integration- The company has control over its supply chain, from manufacturing solar panels to project development, which can enhance efficiency and quality control.
- Strong Financial Position- The company has a history of financial stability and strong revenue growth, which can support its investment in research and development.

**Weakness-**

- Cost Competitiveness- First Solar faces competition from other solar panel manufacturers using different technologies. Cost competitiveness can be a challenge in a price-sensitive market.
- Limited Product Portfolio- The company's focus on thin-film technology may limit its product offerings compared to competitors with broader portfolios that include various solar technologies.
- Dependence on Solar Market- The company's performance is closely tied to the solar energy market, making it vulnerable to market fluctuations and policy changes.

**Opportunities**

- Growing Solar Market- The increasing adoption of solar energy as a clean and sustainable power source presents significant growth opportunities for First Solar.
- Government Incentives- Ongoing and new government incentives and policies supporting renewable energy adoption can boost the demand for First Solar's products and services.
- Technological Innovation- Investing in research and development to improve solar panel efficiency and energy storage solutions can help the company maintain a competitive edge.

**Threats**

- Economic Conditions- Economic downturns and financial instability can affect the financing and investment climate for solar projects.
- Technological Disruption- Rapid advancements in solar technology or the emergence of disruptive technologies could pose a threat to First Solar's existing business model.

**Financials-**

Current Ratio- 4.21

Debt/Equity Ratio- 0.07

DCF Value- 218.46

## **NVIDIA**

### **INDUSTRY ANALYSIS: SEMI CONDUCTORS AND CHIP MAKING**

#### **A. Industry: Porter's Five-Forces for the Semiconductor, Chipmaking Technology Industry in the USA:**

1. Threat of New Entrants: The semiconductor industry requires significant capital investment, specialized knowledge, and established manufacturing capabilities.
2. Bargaining Power of Buyers: Large electronics manufacturers exert considerable bargaining power due to high-volume purchases.
3. Bargaining Power of Suppliers: Suppliers of raw materials and equipment have moderate bargaining power.
4. Threat of Substitutes: There are limited substitutes for semiconductor products in many applications.
5. Intensity of Competitive Rivalry: The semiconductor industry is intensely competitive. Major players, including NVIDIA, Intel, and AMD, compete globally for market share, leading to constant innovation and price competition.

#### **B. Growth Trends of NVIDIA in the Semiconductor Industry:**

The company's GPUs are widely used in AI and deep learning applications, contributing to strong demand. NVIDIA continues to dominate the gaming GPU market, with innovations like ray tracing technology. Growing demand for high-performance computing in data centers has boosted NVIDIA's revenue.

Customer base includes gamers, data center operators, AI researchers, and automotive manufacturers. Strong partnerships with leading technology companies enhance NVIDIA's customer reach. Around the world in 2023, over 6,733 companies have started using NVIDIA as 3d-rendering tool. Companies using NVIDIA for 3d-rendering are majorly from United States with 3,089 customers. 59.90% of NVIDIA customers are from the United States. Nvidia's largest US customers are Amazon, Microsoft, Google, Meta, and Dell.

#### **C. Growth of the Semiconductor Industry**

The semiconductor industry has exhibited consistent growth, driven by the proliferation of connected devices, the expansion of AI applications, and the demand for high-performance computing. Increasing integration of semiconductor components in various industries, including automotive, healthcare, and IoT, contributes to sustained growth.

#### **D. Competition Analysis for the Semiconductor Industry and NVIDIA:**

NVIDIA is a leader in discrete GPUs, particularly for gaming. The GeForce series is widely popular among gamers for its performance and cutting-edge features like ray tracing. In the data center segment, NVIDIA's Tesla GPUs are employed for high-performance computing and AI workloads. NVIDIA has formed strategic partnerships with major technology companies, enhancing its ecosystem. For instance, collaborations with AWS and Microsoft Azure strengthen its presence in the cloud computing space. Intel and AMD remain formidable competitors, continually innovating to challenge NVIDIA's market dominance in GPUs.

#### **E. Regulatory Framework of the Semiconductor Industry in the USA:**

The semiconductor industry is subject to various regulations, including intellectual property laws, export controls, and environmental regulations. Government policies related to trade and tariffs can impact the industry's global supply chain and market dynamics. Regulations governing data security, particularly in AI and autonomous vehicles, are becoming increasingly important for semiconductor companies. It's essential to note that the semiconductor industry is dynamic, and conditions may change. For the most current information, it is recommended to refer to industry reports, financial statements, and regulatory updates.

### **Company: NVIDIA**

#### **A. Business Model:**

NVIDIA's business strategy is based on the design and manufacture of sophisticated graphics processing units (GPUs) for a variety of applications such as gaming, data centres, artificial intelligence (AI), and automotive technologies. The firm makes money by selling GPUs, with its GeForce line appealing to gamers and its Quadro and Tesla lines targeting professional and enterprise sectors. NVIDIA has expanded its business beyond hardware sales by selling software and services such as CUDA for parallel computing and AI development, as well as solutions for deep learning and autonomous cars. Collaborations with industry leaders and smart acquisitions add to NVIDIA's diversified business model, placing the firm as an important participant in the growing landscape of graphics and AI technologies.

#### **B. Competitive Advantage:**

NVIDIA's competitive advantage stems from its pioneering focus on graphics processing units (GPUs) and their versatile application beyond traditional gaming. One unique selling point is NVIDIA's dominance in the field of GPU-accelerated computing for artificial intelligence (AI) and deep learning. The company's CUDA parallel computing platform has become a standard for developers working on AI applications, allowing them to leverage the massive parallel processing power of GPUs. For example, in medical imaging, NVIDIA's GPUs are employed for faster and more accurate analysis of medical data, contributing to advancements in diagnostics.

The specialization in AI for various sectors, beyond just gaming, gives NVIDIA a distinctive edge in an increasingly AI-driven technological landscape. The company's ability to pioneer and dominate GPU applications in emerging fields like AI serves as a unique and powerful competitive advantage.

#### **C. Management of Company:**

NVIDIA's management team is led by Jensen Huang, the co-founder, and CEO since the company's inception in 1993. Huang is widely recognized for his visionary leadership and technical expertise. Under his guidance, NVIDIA has experienced significant growth, particularly in the areas of GPU technology and AI. The company's management has been praised for its ability to adapt to industry trends and capitalize on emerging opportunities.

Colette Kress serves as NVIDIA's Executive Vice President and Chief Financial Officer. Kress has been instrumental in managing NVIDIA's financial resources. Jeff Herbst is the Vice President of Business Development at NVIDIA. Debora Shoquist serves as the Executive Vice President of Operations at NVIDIA. She is responsible for overseeing the company's operations, including manufacturing, supply chain, and logistics. Tony Tamasi is the Senior Vice President of Content and Technology at NVIDIA. He is involved in fostering relationships with developers, and partners to ensure the optimization of NVIDIA's technologies

#### **D. Corporate Governance:**

NVIDIA has a robust corporate governance structure designed to ensure accountability, transparency, and ethical business practices. The company adheres to industry best practices and complies with relevant regulations. NVIDIA regularly updates its governance policies and practices, providing shareholders with comprehensive information about its corporate governance framework. The company maintains a commitment to shareholder rights, effective risk management, and ethical conduct throughout its operations.

NVIDIA has a strong commitment to transparency, regularly communicating with stakeholders through various channels. The company provides detailed financial reports, including quarterly and annual statements, offering insights into its financial performance. Additionally, NVIDIA conducts investor relations activities, such as earnings calls and conferences, to keep the investment community informed.

#### **E. Intangibles of Company:**

NVIDIA's intangible assets include its intellectual property, brand reputation, and strategic partnerships. The company is renowned for its innovation in GPU technology, holding numerous patents that contribute to its competitive advantage. The NVIDIA brand is synonymous with high-performance graphics and AI solutions, enhancing customer trust and loyalty. Strategic alliances with key industry players further strengthen the company's market position and contribute to its intangible assets.

#### **F. SWOT of Company:**

<b>Strengths:</b> <ul style="list-style-type: none"><li>• Dominance in GPU market, particularly for gaming and AI applications.</li><li>• Pioneering role in GPU-accelerated computing and AI development.</li><li>• Strong financial performance and consistent revenue growth.</li></ul>	<b>Weaknesses:</b> <ul style="list-style-type: none"><li>• Dependency on certain markets, making the company susceptible to economic downturns in those sectors.</li><li>• Some products subject to cyclical demand patterns.</li></ul>
<b>Opportunities:</b> <ul style="list-style-type: none"><li>• Continued expansion in AI applications, especially in data centres and autonomous vehicles.</li><li>• Growth potential in new markets and industries.</li></ul>	<b>Threats:</b> <ul style="list-style-type: none"><li>• Intense competition from other technology giants.</li><li>• Market fluctuations and economic uncertainties affecting demand for high-end GPUs.</li></ul>

### **3. Financials of NVIDIA**

#### **1. DCF: \$190.8**

#### **2. Key Financial Ratios:**

<b>NVIDIA</b>	
Ratio as of	<b>Mar-22</b>
Price to Book	40.65
Price to Earnings	109.89
Current Ratio	2.79
Quick Ratio	2.23

Interest Coverage Ratio	43.39
Debt Equity Ratio	0.40
Return on Asset	22.20%
Return on Capital Employed	27.20%
Return on Equity	40.22%
Net Margin	31.60%

## **CARVANA**

### **INDUSTRY: CAR DEALERSHIP**

#### **A. Porter's Five Force Analysis**

- i. **Bargaining power of suppliers:** The automotive industry is highly capital-intensive, with suppliers having a significant amount of bargaining power. Suppliers of key components, such as engines, transmissions, and electronics, have a particularly strong position.
- ii. **Bargaining power of buyers:** Buyers in the automotive industry have a high degree of bargaining power. This is because there are a large number of buyers to choose from, and because buyers have the option to delay or forgo purchases altogether.
- iii. **Threat of new entrants:** There are a number of barriers to entry into the automotive industry, including high capital requirements, complex manufacturing processes, and established brand loyalty. As a result, the threat of new entrants is relatively low.
- iv. **Threat of substitutes:** There are a number of substitutes for automobiles, such as public transportation, bicycles, and motorcycles. However, automobiles are the most convenient and versatile form of transportation for many people. As a result, the threat of substitutes is moderate.
- v. **Competitive rivalry:** The automotive industry is highly competitive, with a number of major players vying for market share. This competition is intensified by the fact that there are a number of different types of vehicles available, and by the fact that buyers are sensitive to price.

#### **B. Industry Growth**

In 2022, the US automobile market sold 15.3 million new vehicles, down 8% from 2021. However, the market is expected to rebound in 2023, with sales forecast to reach 16 million vehicles. Over the next five years, the US automobile market is expected to grow at an average annual rate of 2%.

The global automobile market is also expected to experience growth in the coming years. In 2022, global automobile sales totaled 80.6 million vehicles, down 1% from 2021. However, the market is expected to rebound in 2023, with sales forecast to reach 82.5 million vehicles. Over the next five years, the global automobile market is expected to grow at an average annual rate of 3%.

#### **C. Competition Analysis**

The major competitors in the US automobile industry include

General Motors, Ford Motor Company, Toyota Motor Corporation, Honda Motor Company, Nissan Motor Company, Volkswagen Group, Tesla, Inc.

These companies compete on a variety of factors, including price, performance, fuel efficiency, features, and brand loyalty. The top three automakers in the US market in 2022 were General

Motors with 15.2% market share, Ford Motor Company with 12.2% market share, and Toyota Motor Corporation with 10.9% market share. The major automakers use a variety of competitive strategies to differentiate themselves from their rivals.

Automakers can differentiate their products by offering unique features or designs. For example, Tesla is known for its electric vehicles with advanced technology features.

#### **D. Regulatory Framework: USA**

Key regulations and policies affecting the automobile industry in the United States include:

Federal Motor Vehicle Safety Standards (FMVSS): The FMVSS are a set of federal regulations that establish minimum safety standards for motor vehicles and equipment. Corporate Average Fuel Economy (CAFE) standards: The CAFE standards are a set of federal regulations that establish minimum fuel efficiency standards for new passenger vehicles. The CAFE standards are administered by the Environmental Protection Agency (EPA). Regulatory changes in the United States can have a significant impact on Force Motors Ltd., as the company exports a significant portion of its vehicles to the US market. For example, the CAFE standards have required Force Motors to develop more fuel-efficient vehicles. The company has also invested in developing electric vehicles to comply with the EPA's greenhouse gas emissions standards.

### **Company: Carvana**

#### **A. Business Model**

Carvana is an online used car retailer. The company's business model is to acquire used cars from auctions and other sources, and then sell them to consumers online. Carvana's primary revenue streams are Vehicle sales and revenue from financing the purchase of used cars for its customers. Other services include other services, such as extended warranties and insurance products.

#### **B. Competitive Advantage**

Technology: Carvana has a proprietary technology platform that allows the company to efficiently acquire, inspect, and sell used cars online.

Brand recognition: Carvana is a well-known and respected brand in the online used car market.

Cost efficiency: Carvana's business model is more efficient than traditional used car dealerships, as Carvana does not have to maintain physical dealerships or sales teams.

These advantages are sustainable because Carvana is investing heavily in its technology platform and brand recognition. The company is also expanding its geographic reach and product offerings.

#### **C. Management of Company**

Carvana's top management team includes: Ernie Garcia III: Co-founder and CEO, Ryan Keeton: Co-founder and President, Amy O'Brien: CFO, Alison Seligson: COO, George Chamberlin: CTO

These executives have a combined experience of over 100 years in the automotive industry. They have a proven track record of success in building and growing businesses. Garcia and Keeton are the co-founders of Carvana and have been with the company since its inception. They have a deep understanding of the used car market and have played a key role in developing Carvana's business model. O'Brien is responsible for Carvana's financial

operations. She has over 20 years of experience in the automotive industry and has held senior financial positions at several major automakers. Seligson is responsible for Carvana's customer operations. Chamberlin is responsible for Carvana's technology platform. The Carvana management team is highly experienced and qualified. They have a proven track record of success in building and growing businesses.

#### **D. Corporate Governance**

There have been some recent concerns about Carvana's corporate governance practices. In 2022, the company was sued by shareholders who alleged that the board of directors had failed to adequately oversee the company's business. The lawsuit is still ongoing. Carvana has also been criticized for its lack of transparency on certain issues. For example, the company has not disclosed the names of its largest shareholders or the amount of money it has spent on advertising. Overall, Carvana's corporate governance practices are generally considered to be good. However, the company could improve its transparency on certain issues. In 2022, the company was accused of accounting irregularities by a short-seller. Carvana denied the allegations, but the SEC is currently investigating the matter.

#### **E. SWOT Analysis**

<b>Strengths</b> <ul style="list-style-type: none"> <li>Strong brand recognition</li> <li>Efficient technology platform</li> <li>Innovative business model</li> </ul>	<b>Weaknesses</b> <ul style="list-style-type: none"> <li>Recent corporate governance concerns</li> <li>Lack of transparency on certain issues</li> <li>Relatively new company</li> </ul>
<b>Opportunities</b> <ul style="list-style-type: none"> <li>Expanding into new markets</li> <li>Offering new products and services</li> <li>Partnering with other companies</li> </ul>	<b>Threats</b> <ul style="list-style-type: none"> <li>Economic downturn</li> <li>Increased competition from traditional used car dealerships and online retailers</li> <li>Regulatory changes.</li> </ul>

#### **3. Financial Analysis:**

##### **1. DCF: \$2,946.66**

##### **2. Key Financial Ratios**

<b>Marathon Petroleum Corporation March-2023</b>	
Price to Book	-10.7
Price to Earnings	-3.10
Current Ratio	1.8
Quick Ratio	0.40
Interest Coverage Ratio	-1.41
Debt Equity Ratio	NA
Return on Asset	-14.25%
Return on Capital Employed	NA
Return on Equity	NA
Net Margin	-11.80

#### **4. Asset Allocation Process**

Asset allocation is equity based for the fund, determined by our team of analysts based on market conditions and fund objectives.

## **5. Portfolio Evaluation**

Performance evaluation will be conducted rigorously to assess the effectiveness of the investment strategies employed for the Global Pension Guard Fund. This evaluation will encompass the use of multiple efficient frontiers and various performance metrics, including the Sharpe Ratio, Treynor Ratio, and Jensen's Alpha, to provide a comprehensive assessment of each fund's performance. The fund will also be compared to its benchmark for further portfolio evaluation.

### **Global Pension Guard Fund - Portfolio Analysis:**

#### **Holding Period 1:**

**Portfolio Returns:** The portfolio delivered impressive returns of 5.29%, indicating strong performance during this period.

#### **Risk Metrics:**

**Portfolio Variance (Annual):** The portfolio's annual variance stood at 6.51%, indicating moderate risk.

**Portfolio Standard Deviation (SD):** The SD of 25.52% reflects a relatively low level of risk.

#### **Risk-Adjusted Metrics:**

**Sharpe Ratio:** The Sharpe Ratio of 9.207% is exceptionally high, showcasing remarkable risk-adjusted returns.

**Treynor Ratio:** The Treynor Ratio of 64.288% indicates superior returns concerning systematic risk (beta).

**Alpha:** The Jensen's Alpha of 3.436% suggests that the portfolio outperformed expectations, considering its systematic risk.

#### **Individual Holdings in Holding Period 1:**

**MARATHON:** MARATHON contributed positively with a mean return of 0.16% and yearly returns of 59.75%. Its low beta (-0.00069627) indicates less sensitivity to market movements.

**LOCKHEED:** LOCKHEED had negative returns, underperforming the benchmark, with a beta of 0.056200966, suggesting a slightly higher sensitivity to market movements.

**BIOMARINE:** BIOMARINE made a positive contribution with a mean return of 0.08% and yearly returns of 29.63%. Its low beta (0.001413669) implies low market sensitivity.

**FIRST SOLAR:** FIRST SOLAR added significantly to portfolio returns, with a mean return of 0.41% and yearly returns of 150.87%. Its negative beta (-0.003651768) suggests it moved in the opposite direction of the market.

**Benchmark:** The benchmark S&P 500 underperformed the portfolio, indicating strong portfolio management during a period when the benchmark exhibited negative returns.

#### **Holding Period 2:**

**Portfolio Returns:** In this period, the portfolio delivered exceptional returns of 94.409%, signifying outstanding performance.

**Risk Metrics:**

**Portfolio Variance (Annual):** The annual variance increased to 11.66%, indicating higher risk compared to the previous period.

**Portfolio Standard Deviation (SD):** The SD rose to 34.15%, signifying increased volatility.

**Risk-Adjusted Metrics:**

**Sharpe Ratio:** The Sharpe Ratio surged to an extraordinary 276.425%, showcasing exceptional risk-adjusted returns.

**Treynor Ratio:** The Treynor Ratio of 142.052% indicates outstanding risk-adjusted returns concerning systematic risk (beta).

**Alpha:** The Jensen's Alpha of 70.622% suggests significant outperformance against expected returns given its systematic risk.

**Individual Holdings in Holding Period 2:**

MARATHON: MARATHON performed well with a mean return of 0.25% and yearly returns of 92.15%. Its beta (0.731858172) indicates a higher sensitivity to market movements.

FIRST SOLAR: FIRST SOLAR continued to contribute significantly to portfolio returns, with a mean return of 0.43% and yearly returns of 155.77%. Its positive beta (0.112635738) suggests it moved in the same direction as the market.

BIOMARINE: BIOMARINE remained a positive contributor with a mean return of 0.11% and yearly returns of 41.83%. Its beta (0.670037597) indicates moderate market sensitivity.

NVIDIA: NVIDIA made a substantial contribution with a mean return of 0.71% and yearly returns of 259.88%. Its high beta (2.127016019) suggests strong market sensitivity.

**Benchmark:** The benchmark S&P 500 performed positively but still underperformed the portfolio, highlighting the exceptional portfolio management that generated significantly higher returns.

## 6. Costs (Exit Loads)

For Equity-Based Mutual Fund Units Redeemed

Exit Load Applicable: 0.78% of the applicable Net Asset Value (NAV) at the time of redemption.

This exit load is in accordance with industry standards for equity-based mutual funds in the United States.

Investors are advised to review the fund's exit load structure before making any redemption decisions. Please note that exit loads are subject to change as per the mutual fund's regulations and may vary based on specific scheme options.

## 7. Portfolio Manager's Background

Mr. John Smith, CFA

**Education:** Mr. Smith holds a Master's in Finance from a prestigious institution and is a Chartered Financial Analyst (CFA) charter holder.

**Experience:** With over 15 years of experience in the financial industry, Mr. Smith has a proven track record of managing equity-oriented growth funds. He has managed various equity portfolios across market cycles and has consistently delivered strong returns for investors.

**Expertise:** Mr. Smith specializes in equity research and portfolio management. His in-depth knowledge of financial markets, sectors, and individual companies allows him to identify investment opportunities and manage risk effectively.

**Investment Philosophy:** He follows a disciplined and research-driven investment approach, focusing on fundamental analysis and thorough due diligence. His philosophy revolves around long-term wealth creation and capital appreciation.

**Team Collaboration:** Mr. Smith leads a dedicated team of experienced analysts and researchers who work collaboratively to identify promising investment avenues. This team-driven approach ensures robust decision-making and risk management.

**Commitment to Investors:** He is committed to aligning the fund's objectives with investors' goals. Mr. Smith places a strong emphasis on transparency, communication, and delivering value to shareholders.

**Achievements:** Mr. Smith's expertise has earned him recognition within the industry, and he has received awards for his outstanding contributions to portfolio management.

**Risk Management:** He maintains a keen focus on risk management and employs various strategies to mitigate downside risks while seeking opportunities for capital growth.

**Ethical Standards:** Mr. Smith adheres to the highest ethical standards and follows all regulatory guidelines in the management of the Global Pension Guard Fund.

## **8. Conclusion (Summary of the Report)**

The Global Pension Guard Fund has demonstrated exceptional portfolio management and performance in both Holding Period 1 and Holding Period 2. During Holding Period 1, it achieved strong returns with remarkably low risk, as evidenced by its high Sharpe and Treynor Ratios, and positive Jensen's Alpha. The individual holdings within the portfolio, such as MARATHON, BIOMARINE, and FIRST SOLAR, played a crucial role in delivering positive returns, even when the benchmark (S&P 500) experienced difficulties.

In Holding Period 2, the portfolio's performance was even more impressive, with exceptionally high returns and outstanding risk-adjusted metrics. Despite higher volatility, the fund's Sharpe and Treynor Ratios remained exceptionally high, indicating superior returns relative to systematic risk. The individual holdings, especially FIRST SOLAR and NVIDIA, significantly contributed to the portfolio's success.

Overall, the Global Pension Guard Fund has consistently outperformed its benchmarks, demonstrating robust portfolio management, the ability to adapt to changing market conditions, and a strong focus on generating exceptional risk-adjusted returns for its investors.

## **9. Annexures**

[Global Pension Guard Fund\(global fund\).xlsx](#)

#### **10. References**

1. <https://investor.nvidia.com/financial-info/annual-reports-and-proxies/default.aspx>
2. [https://www.ibef.org/download/1690790945\\_Infrastructure-May-2023.pdf](https://www.ibef.org/download/1690790945_Infrastructure-May-2023.pdf)
3. <https://www.bseindia.com/bseplus/AnnualReport/512599/73441512599.pdf>
4. <https://www.bankofbaroda.in/-/media/project/bob/countrywebsites/india/pdfs/mig0622/ar2021-22-02-08-old2.pdf>
5. <https://in.investing.com/rates-bonds/india-10-year-bond-yield>
6. [www.tradingview.com](http://www.tradingview.com)
7. [finance.yahoo.com](http://finance.yahoo.com)

<b>CONTRIBUTION</b>		
<b>Domestic</b>	<b>Sector</b>	<b>Done by</b>
<b>ITC</b>	FMCG	Vidita
<b>Adani</b>	Infra	Advaita
<b>HAL</b>	Defence	Tiasa
<b>BOB</b>	PSU	Advaita
<b>UCO</b>	PSU	Advaita
<b>Force Motors</b>	Automobile	Aditi
<b>International</b>	<b>Sector</b>	<b>Done by</b>
<b>Biomarin Pharmaceuticals (BMRN)</b>	Pharma	Vidita
<b>Lockheed</b>	Defence	Vidita
<b>Marathon Petroleum</b>	Oil and Gas	Advaita
<b>First Solar</b>	Solar Panels (cyclical)	Vidita
<b>NVIDIA</b>	Semi-Conductor	Advaita
<b>Carvana</b>	Car dealership (cyclical)	Advaita
<b>Excel, simulation, efficient frontier, sharpe, alpha</b>		Tiasa and Aditi
<b>REPORT and INTERPRETATION OF EXCEL</b>		Tiasa, Aditi, Advaita
<b>Domestic Stock Picking</b>		Tiasa and Aditi
<b>International Stock Picking</b>		Advaita