

Influence of Economic Trends on MRF Ltd. Financial Performance: A Comprehensive Study

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GOA UNIVERSITY

GOA BUSINESS SCHOOL

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Examined by:

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= MRF =

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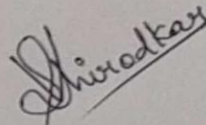
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DECLARATION BY STUDENT

I hereby declare that the data presented in this Internship report entitled, "Influence of Economic Trends on MRF Ltd. Financial Performance: A Comprehensive Study" is based on the results of investigations carried out by me in the Management Department at the Goa Business School, Goa University/MRF LTD Usgao Ponda Goa, under the mentorship of Dr. Suraj Velip and the same has not been submitted elsewhere for the award of a degree or diploma by me. Further, I understand that Goa University or its authorities/Goa Business School will be not be responsible for the correctness of observations / experimental or other findings given the internship report/work.

I hereby authorize the University/ Goa Business School authorities to upload this dissertation on the dissertation repository or anywhere else as the UGC regulations demand and make it available to any one as needed.



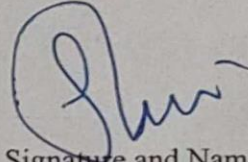
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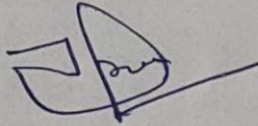
COMPLETION CERTIFICATE

This is to certify that the internship report “**Influence of Economic Trends on MRF Ltd. Financial Performance: A Comprehensive Study**” is a bonafide work carried out by Ms. Vrundali, Vijaykumar, Shirodkar under my mentorship in partial fulfilment of the requirements for the award of the degree of **MBA** in the Discipline of Management Studies at the Goa Business School, Goa University.



Signature and Name of Mentor
Dr. Suraj Velip

Date: 03/05/2024



Signature of Dean of School/HoD
Date: 03/05/2024
Place: Goa University/Goa Business School

School/Department Stamp





MRF

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CIN : L25111TN1960PLC004306

INTERNSHIP CERTIFICATE

This is to certify that ~~Mr.~~/Ms. Vrundali Vijaykumar Shirodkar Student of the Goa Business School, Goa University, undergoing MBA Finance has successfully completed Internship between 15th January 2024 to 4th May 2024 at MRF Limited in Accounts Department. He actively participated in the activities during the period of internship and learned the skills needed for various activities such as checking of Engineering/Freight/RM/Service Bills, Monthly Budget, Accounts Schedules, Direct Taxation, Asset Capitalization, Salary Processing etc.

Yours Faithfully

(Krishna Warriar)
Chief HR Manager
MRF Limited

Place : Usgao – Goa

Date : 04.05.2024

Registered Office : No. 114, Greams Road, Chennai - 600 006.
Website: www.mrftyres.com

Executive Summary

This report presents a comprehensive analysis of the economic influences on the financial performance of MRF Ltd., a leading company in the rubber industry. By examining various economic trends and their impact on MRF Ltd.'s operations, the report aims to provide actionable insights and recommendations to enhance the company's resilience and profitability.

The analysis begins by exploring the dynamics of exchange rates, trade activities, and interest rates from 2018 to 2022. Key findings reveal a consistent depreciation trend in the Indian currency, posing risks to MRF Ltd.'s profitability due to its heavy reliance on imported raw materials. Fluctuations in exchange rates could lead to increased procurement costs, impacting the company's bottom line. Additionally, correlations between raw material consumption and net profit underscore the importance of efficient resource utilization for enhancing profitability.

Based on these findings, several actionable recommendations emerge for MRF Ltd. to navigate economic dynamics effectively. Firstly, the company should consider implementing hedging strategies to mitigate currency risk and stabilize procurement costs. Secondly, proactive monitoring of trade activities and diversification of the supplier base can help mitigate supply chain disruptions and ensure continuity in raw material sourcing. Thirdly, while interest rate fluctuations may have a limited direct impact on operational metrics, adjusting financing strategies during favourable interest rate periods can optimize borrowing costs and enhance financial flexibility.

Furthermore, the report highlights the importance of proactive risk management, including diversification of supplier bases, implementation of hedging mechanisms against currency fluctuations, and exploration of alternative financing options. By aligning operational strategies with macroeconomic trends, MRF Ltd. can optimize resource allocation, mitigate risks, and capitalize on emerging opportunities for sustainable growth.

The report also reflects on the intern's experience at MRF Ltd., detailing various tasks handled and challenges faced during the internship. Tasks included verifying bills for accuracy, generating monthly reports, and navigating the SAP system for bill processing and asset management. Challenges such as managing large data sets, resolving billing discrepancies, and adapting to organizational processes contributed to the intern's professional growth and learning.

In conclusion, the report emphasizes the importance of agility, foresight, and proactive risk management for MRF Ltd. to navigate economic realities effectively and sustain long-term growth. By leveraging insights gleaned from the analysis and adopting a proactive approach to risk management, MRF Ltd. can position itself for success in an ever-changing economic landscape.

Influence of Economic Trends on MRF Ltd. Financial Performance: A Comprehensive Study

1 Industry Overview of India's Tyre Market:

1.1 Introduction:

India's tyre market, a critical component in the automotive ecosystem, has witnessed remarkable growth, achieving a volume of 196.3 million units in 2023. This growth trajectory is poised to continue with a projected Compound Annual Growth Rate (CAGR) of 3%, reaching an impressive 253.9 million units by 2032. Delving into the financial nuances of this market offers a comprehensive understanding of its dynamics.

1.2 Market Drivers:

1.2.1 Automobile Production Dynamics:

The substantial increase in automotive manufacturing is the main factor behind the growth of the tyre industry. Government programs that promote self-reliance and strengthen the automobile manufacturing sector, such as the Atmanirbhar Bharat Abhiyan, have made the industry a major benefit.

1.2.2 Income-Driven Demand Surge:

As income levels rise, so does the demand for vehicles. This trend extends beyond urban landscapes, with rural areas experiencing a notable increase in personal transportation needs. This income-driven demand is a substantial force propelling the tyre market.

1.2.3 Logistical Advantage:

An integral aspect contributing to the financial robustness of Indian tyre manufacturers lies in reduced logistics costs. This advantage has positioned these manufacturers as formidable

global contenders, resulting in increased exports and emphasizing the industry's competitiveness on the global stage.

1.3 Financial Landscape:

1.3.1 Steady Revenue Growth:

Projections indicate a steady revenue growth with a CAGR of 3%. This underscores the market's resilience and its readiness for sustained expansion.

1.3.2 Key Players:

Dominance within the market is exemplified by major players such as MRF Limited, CEAT Limited, JK Tyre & Industries Ltd., and Apollo Tyres Ltd. A financial professional can glean strategic insights by scrutinizing the competitive landscape and market positioning of these key players.

1.4 Segmentation Insights:

1.4.1 Diverse Consumer Preferences:

The segmentation of the market highlights the nuanced preferences of a diverse consumer base. Two-wheelers, replacement tyres, and radial tyres emerge as dominant segments, offering a comprehensive view of consumer choices.

1.4.2 Regional Dynamics:

Regional variations play a pivotal role, with West and Central India emerging as significant markets. Understanding the economic dynamics of these regions provides financial professionals with valuable insights into the industry's pulse.

1.5 Investment Implications:

1.5.1 Stable Returns:

The anticipated CAGR of 3% signifies a market poised for stable returns. This presents an enticing prospect for investors seeking avenues with sustained growth potential.

1.5.2 Innovation Opportunities:

The industry's embrace of automation and a manufacturing renaissance opens doors for innovation-driven investments in tyre manufacturing. Financial professionals can explore these opportunities for strategic investment and potential long-term gains.

2 COMPANY PROFILE

2.1 Historical Background

In 1946, K.M. Mammen Mapillai established a toy balloon manufacturing plant in a shed at Tiruvottiyar, Madras (Chennai). The company began as a toy balloon producer in south India and has since grown to become one of India's largest and most renowned businesses.

The business produced a range of items, including balloons, squeaky toys, industrial gloves, and contraceptives, despite its modest size and lack of machinery. MRF opened its initial office at 334 Thambuchetty Street in Madras (now Chennai), Tamil Nadu, India.

In 1952, MRF entered the tread rubber manufacturing business. The first machine, a rubber mill, was then put at the plant. MRF quickly became the sole Indian-owned business producing quality extruded, non-blooming, and cushion-backed tread rubber, allowing it to compete with the MNCs operating in India at the time. Within four years, in 1956, MRF had a 50% market share in India's tread rubber industry.

MRF began manufacturing tyres in 1961, following its success with tread rubber. MRF formed a technological relationship with the Mansfield Tire & Rubber Company in the USA. At the same time, it became a public business. It established a pilot factory for tyre manufacturing at Tiruvottiyar, Madras (now Chennai).

In 1967, MRF became the first Indian business to sell tyres to the United States. MRF was a pioneer in manufacturing and marketing nylon tyres in India, marking a significant milestone.

In 1986, MRF received the National Institute of Quality Assurance's highest honour. MRF earned 6 Quality Improvement Awards from B. F. Goodrich Tyre Company in the USA after competing against 20 tyre businesses globally.

In 1979, MRF's revenue surpassed INR 1 billion. It took MRF 33 years to reach this milestone in turnover. Within the next five years, it quadrupled its revenue.

In the late 1980s, MRF tyres were chosen for installation on the Suzuki 800, India's first small contemporary automobile. In 1987, MRF became India's largest tyre business in terms of turnover.

K.C. Mammen Mapallai received the Padma Shri Award for National Recognition in 1993, making him the only industrialist from South India to get this accolade. MRF is the first tyre firm in India to reach the INR10 billion mark. The firm has received recognition from the Far Eastern Economic Review as one of the top ten corporate groups in India and Asia, as well as from A&M magazine readers as one of India's most admired marketing companies.

In 1995, the firm earned the Top Export Award from the India Rubber Industries Association. CAPEXILL awarded the firm a Certificate of Merit for its export performance over the year. For the fourth consecutive year, MRF received the Far Eastern Economic Review Award for excellence. Credit Analysis and Research Ltd (CARE) has granted MRF Ltd a 'PR1+' credit rating (superior) for its projected Rs 100 crore commercial paper (CS) program.

In 1999, "Business World" magazine recognised MRF as the most ethical corporation. MRF is the industry leader due to its experienced personnel, reliable infrastructure, and high-quality products.

MRF won the JD Power Award for the first time in 2001. MRF's revenue surpassed Rs. 5000 crores in 2008. The Japanese Institute of Management recognized both the Goa and Arkonam facilities with the renowned TPM award. MRF is India's foremost tyre manufacturer, known for its quality and innovation.

Founded in 1946 as a toy business, the company presently boasts 10 manufacturing sites in India

2.2 Plant locations:

1. Tiruvottiyur - Chennai, Tamil Nadu.
2. Kottayam: Vadavathoor, Kerala.
3. Goa: Usgao, Ponda, Goa
4. Arakonam - Icchiputhur, Tamil Nadu.
5. Medak: Sadasivapet, Medak, Telangana
6. Puducherry - Eripakkam Village, Nettapakkam Commune
7. Ankenpally - Sadasivapet, Medak, Telangana.
8. Perambalur Redial Plant - Trichy, Tamil Nadu.
9. Perambalur Bias Plant - Trichy, Tamil Nadu
10. Dahej Plant - Gujrat

Among these, the Medak facility has the biggest output capacity. This factory produces over 50,000 per day.

2.3 Profile of MRF LTD

Types of business	Public limited
Nature of business	Manufacturing, export and import
Products	Tyres, conveyor belts, retreads and industrial paints, coatings and toys.
Founded	1946
Founder	K.M. Mammem Mappillai
Headquarters	Chennai, India
Revenue	Rs 22826 Cr as of 31 st March 2023
Number of employees	3300
Website	www.mrftyres.com

2.4 MRF Ltd Goa Unit



Located in the picturesque village of Usgaon, Ponda, Goa, the MRF Ltd Goa facility has stood as a symbol of excellence since its inauguration on September 29, 1973. The inauguration was graced by the presence of notable figures including Smt. Shashikala Kakodkar, the then Chief Minister of Goa, Shri S. K. Banerjee, former Lt. Governor of Goa, and Mr James Hoffman, President of Mansfield Tyre & Rubber Co., USA.

Led by facility Manager Mr. Gautam Raj, the MRF Goa unit sprawls across 32 hectares of land, amidst lush green fields and rolling hills. The facility boasts a substantial built-up area of 43,000 square meters, with a dedicated space of 17,600 square meters for the F620 facility.

The Goa unit is divided into two distinct manufacturing units. Unit one specializes in crafting bias tyres, while unit two focuses on producing tubes.

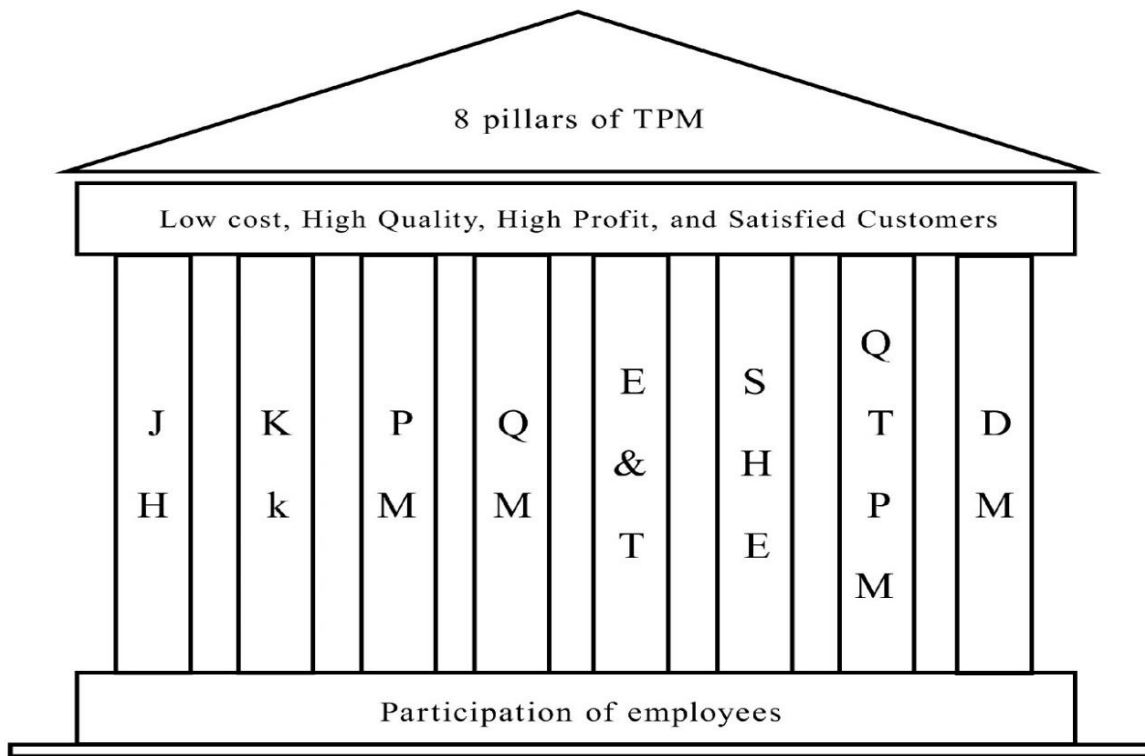
Employing a workforce of approximately 1,390 skilled workers, 999 contract workers, and 313 managers and staff, the MRF Goa unit operates round the clock, with labourers working diligently in three shifts.

Impressively, the facility has a commendable manufacturing capacity of 7,000 tyres per day, contributing significantly to its annual revenue of 2900 crores.

Notably, the MRF Goa unit is recognized for its commitment to quality, holding the prestigious ISO 9001 certification, and ensuring stringent quality standards are maintained throughout its operations.

In 2004, MRE Ltd. Goa successfully adopted Total Productive Maintenance (TPM) to optimise resource use and improve product quality.

2.5 TPM at MRF



1. The Goal of JH Pillar (Jishu Hazen) is to restore machines to their original state.
2. The KK Pillar: This pillar seeks to do away with losses.
3. Planned Maintenance (PM) Pillar Pillar wants to have no machine failures.
4. QM Pillar: Having no product defects is the aim of the Quality Maintenance pillar.
5. E&T: To develop a skilled labour force, the Education and Training Pillar is implemented.

6. SHE Pillar: The Safety, Health, and Environment Pillar aims to provide a healthy atmosphere and zero accidents.
7. OTPM Pillar - Office TPM Pillar aims to reduce manual labour and enhance data retrieval, inventory management, and office cleanliness.
8. DM Pillar: The goal of the Development Maintenance Pillar is to guarantee that brand-new equipment is produced and meets quality standards at 100% right away.

2.6 Quantifying Success: Achievements and Outcomes of the TPM Initiative

MRF Ltd. Goa obtained the following outcomes after adopting the TPM Program for 4 years.

- The productivity of labour rose by 22%.
- 52% fewer complaints from customers
- Production expenses dropped by 6.2%.
- The cost of power dropped by 18%.
- The cost of fuel dropped by 18%
- The cost of maintenance was reduced by 32%.
- Accident rates dropped to 88%.

The business was recognized for its achievements in 2008 with the TPM Excellent Award.

2.7 Awards Won by MRF Ltd. Goa

MRF has a long history of being recognised for its quality and customer satisfaction. Here are some of their most notable awards:

- J.D. Power Leader: MRF holds the record for the most J.D. Power awards in India for customer satisfaction in car and tractor tyres.

- Export Excellence: MRF has been recognized for its export achievements by organizations like CAPEXIL and the All-India Rubber Industries Association.
- Brand Trust: MRF has been ranked among India's most trusted brands according to Brand Trust Report studies.
- Product Innovation: MRF's Perfinza tyre won the Product of the Year award from Car India magazine.
- Global Recognition: MRF has also been awarded by Ford for excellence and achieved a strong brand rating from Brand Finance.

2.8 Vision of the MRF

MRF will be a strong global company, satisfying clients globally through

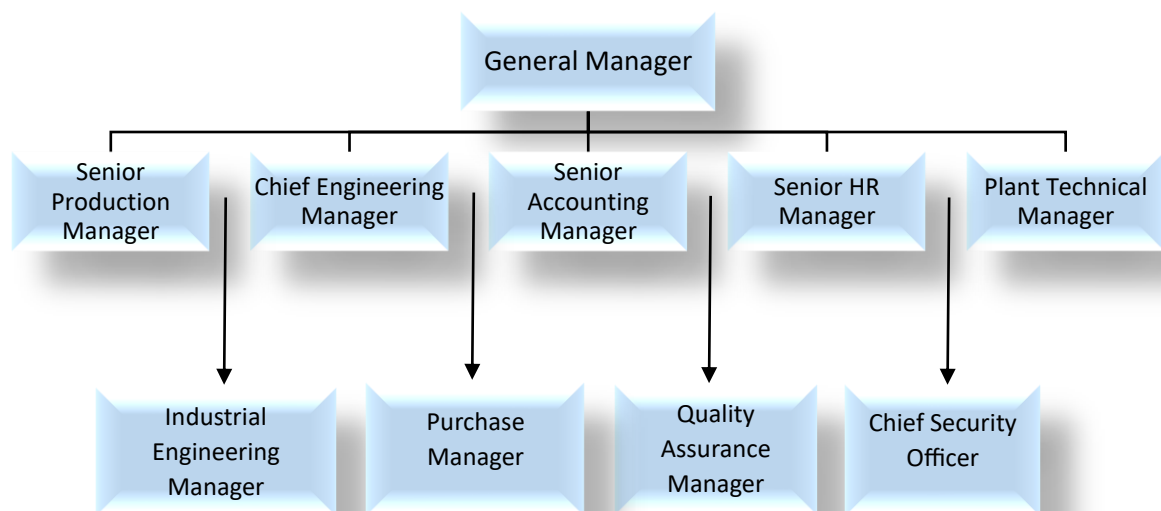
- Technological leadership
- Manufacturing Excellence
- World-class systems.

Driven by a motivated, high-performing workforce to achieve profitable growth.

2.9 Board of Directors

K.M. MAMMEN Chairman & Managing Director		
ARUN MAMMEN Vice Chairman & Managing Director		
RAHUL MAMMEN MAPPILLAI Managing Director		
SAMIR THARIYAN MAPPILLAI Whole-Time Director		
VARUN MAMMEN Whole-Time Director		
ASHOK JACOB V. SRIDHAR VIJAY R. KIRLOSKAR RANJIT I. JESUDASEN Dr. SALIM JOSEPH THOMAS	JACOB KURIAN Dr. CIBI MAMMEN AMBIKA MAMMEN VIMLA ABRAHAM VIKRAM TARANATH HOSANGADY	RAMESH RANGARAJAN DINSHAW KEKU PARAKH ARUN VASU* VIKRAM CHESETTY* PRASAD OOMMEN*
Company Secretary S. DHANVANTH KUMAR		
Auditors M M NISSIM & CO LLP, Mumbai SASTRI & SHAH, Chennai		
Registered Office: No.114, Greams Road, Chennai - 600 006.		

2.10 Organisational Structure



2.11 MRF Automotive Care Innovations:

Discover a comprehensive range of automotive services and products at MRF Tyre Tok, a unique establishment offering MRF tires, tubes, and cutting-edge car services. From utilizing robotic technology for precise wheel alignment to addressing your car's air conditioning needs, MRF Tyre Tok serves as a convenient one-stop destination for all your car requirements. Meanwhile, MRF Muscle Zone stands out as a contemporary tyre care facility dedicated to commercial vehicles. Providing services like wheel balancing and nitrogen filling, it ensures top-notch maintenance. In Ernakulam, the MRF Tyre Drome takes automotive care to the next level, featuring services such as robotic wheel alignment, diagnostic wheel balancing, and automated vehicle wash with robotic under-chassis cleaning, prioritizing safety and comfort on every journey. Additionally, MRF has introduced a revolutionary approach to tyre maintenance with FASST (Friendly After Sales Service Team) for passenger vehicles and two-wheelers. Already established in Pune, Indore, Nagpur, Jaipur, and Delhi, the company plans to expand these innovative service centres to major cities, promising unparalleled tyre care services for consumers nationwide.

2.12 MRF's Dynamic Motorsport Dominance:

MRF has been into Formula 3 cars since 1997. They teamed up with Maruti to create Formula Maruti Racing, an Indian single-seater event. MRF Challenge, a Formula 2000 series, happens at various tracks. The latest season featured races in Chennai, Bahrain, Doha, and Noida. Notably, Freddie Hunt and Mathias Lauda, sons of F1 champions, raced in the series. MRF-backed Indian drivers like Narain Karthikeyan and Karun Chandok.

In rallying, MRF sponsors teams in the Asia-Pacific Rally Championship and Indian National Rally Championship. MRF Skoda, partnering with Škoda, dominates the Asia-Pacific Rally Championship. They also take on challenging events like Raid De Himalaya.

MRF joined the European Rally Championship in 2020 with drivers like Craig Breen. In 2021, Breen was replaced by Hyundai drivers, and MRF expanded to other championships. In 2022, they entered Norbert Herczig, Simone Campedelli, and Efren Llarena, who won Rallye Azores.

MRF is active in motocross, hosting a national championship, and supports karting in India, being the first Indian tyre company with FIA-approved karting tyres.

2.13 MRF Funskool

In 1987, Funskool India was founded through a collaboration with Hasbro Toys, US. Specializing in the production and promotion of toys and board games, Funskool operates a manufacturing facility in Goa, India. The company holds licenses for manufacturing toys and games from Disney, Warner Brothers, Rummikub, and Dora. Additionally, Funskool has formed strategic partnerships with well-known toy brands such as Hasbro, Lego, Hornby, Ravensburger, Tomy Toys, LeapFrog, Siku, Jumbo, and New Bright for manufacturing and marketing their products in India.

2.14 MRF's Cricketing Legacy

2.14.1 MRF Pace Foundation: Nurturing Cricket Excellence

The MRF Pace Foundation, situated in Chennai, stands as a premier training ground for fast bowlers, established with the guidance of former Australian pace maestro Dennis Lillee. This acclaimed program has shaped the careers of renowned Indian players like Javagal Srinath, Irfan Pathan, and Zaheer Khan, along with international stars such as Glenn McGrath and Brett Lee. Even cricket icon Sachin Tendulkar began his journey as a fast bowler under its wings. In a significant transition in 2012, Glenn McGrath assumed the role of director, succeeding the legendary Dennis Lillee.

2.14.2 Cricket Endorsements: Aligning with Legends

MRF takes pride in sponsoring the cricket bats wielded by legends such as Sachin Tendulkar, Brian Lara, and Steve Waugh. Presently, the brand is endorsed by cricket luminaries Jerome Chinia and Virat Kohli. In the past, MRF has associated itself with stellar names in the cricketing world, including Gautam Gambhir and AB de Villiers.

2.14.3 Sponsorship Mastery: Beyond the Cricket Field


MRF's influence extends beyond the cricket pitch. In the IPL of 2010, they sponsored innovative moored balloons equipped with high-definition cameras, capturing live cricket

action spectacularly. The brand globally partnered with the International Cricket Council for the prestigious 2015 Cricket World Cup. Further diversifying its presence, MRF became a sleeve sponsor for esteemed Premier League clubs like Newcastle United and West Ham United in 2017, while also securing the position of the official tyre partner for West Bromwich Albion. This strategic move reflects MRF's commitment to enriching the cricketing experience both on and off the field.

2.15 Product Profile

MRF produces four categories of goods, which include:

2.15.1 Tyres



MRF PERFINZA

New sizes were introduced in the premium and luxury MRF Perfinza series of tyres for Audi, BMW, Jaguar, Mercedes-Benz and Volvo cars in 245/50 ZR18, 245/40 ZR18 and 235/55 ZR17 sizes.

MRF MARKUS

New sizes were introduced in the premium SUV tyre brand MRF Markus for the premium SUV's of Audi, BMW, Mercedes-Benz, Volvo, Jeep, Hyundai and VW in 225/50 R18, 225/55 R18 and 235/50 R18 sizes.

MRF CITIBUS

MRF Citibus was introduced exclusively for the Force Traveller and Toyota Innova. The tyre delivers outstanding comfort, superior grip in all road conditions and high mileage.



**110/90-18
MRF MOGRIP METEOR M TT**

Block pattern rear tube-type tyre developed for Royal Enfield Classic 350.



**110/90-10
MRF ZAPPER TL**

Tubeless rear tyre for Yamaha Fascino125 BS6 scooter.



**110/70-12, 90/90-12, 100/80-12
MRF ZAPPER N TL**

Tubeless tyre developed for Electric Scooters.



MRF SUPER MILER 99 PLUS

Steer-axle tyre with a superior compound for cooler running and higher tread mileage. Strong casing for better retreadability. Specially designed shoulder and tread for faster heat dissipation. Available in 10.00-20 and 295/95-D20 sizes.



MRF SUPER LUG FIFTY PLUS R

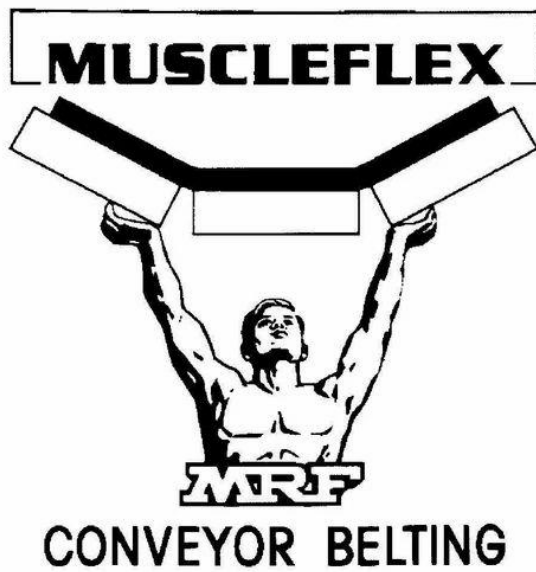
7.00-15 and 195/80 D15 tyres were launched under the Super Lug Fifty Plus R brand, improving on overall tyre life and load carrying capability.



MRF SAVARI EXTRA

MRF Savari Extra is a long-life tyre for SCV's with a premium skid depth and dual tread compound for cooler running. The footprint has been optimised for even wear. The sipe integrated 5-rib pattern delivers excellent dry and wet traction.

2.15.2 Conveyor Belts



2.15.3 Tubes



2.15.4 Pretread's



2.15.5 Industrial Paints and Coatings



MRF Corp Limited attracted 300 new clients and opened dealerships in previously unrepresented areas this year. The company successfully launched Aquafresh for interior walls, offering better performance at a lower cost than premium emulsions. The new Tinting System

offers over 1100 unique tints. MRF Vapocure franchisees have rejuvenated their companies by providing treatments for both OEM and decorative markets.

2.15.6 Toys



2.15.7 Sports Goods



2.16 Area of Operation

MRF operates both in the domestic and foreign markets. It exports its goods to more than 70 nations.

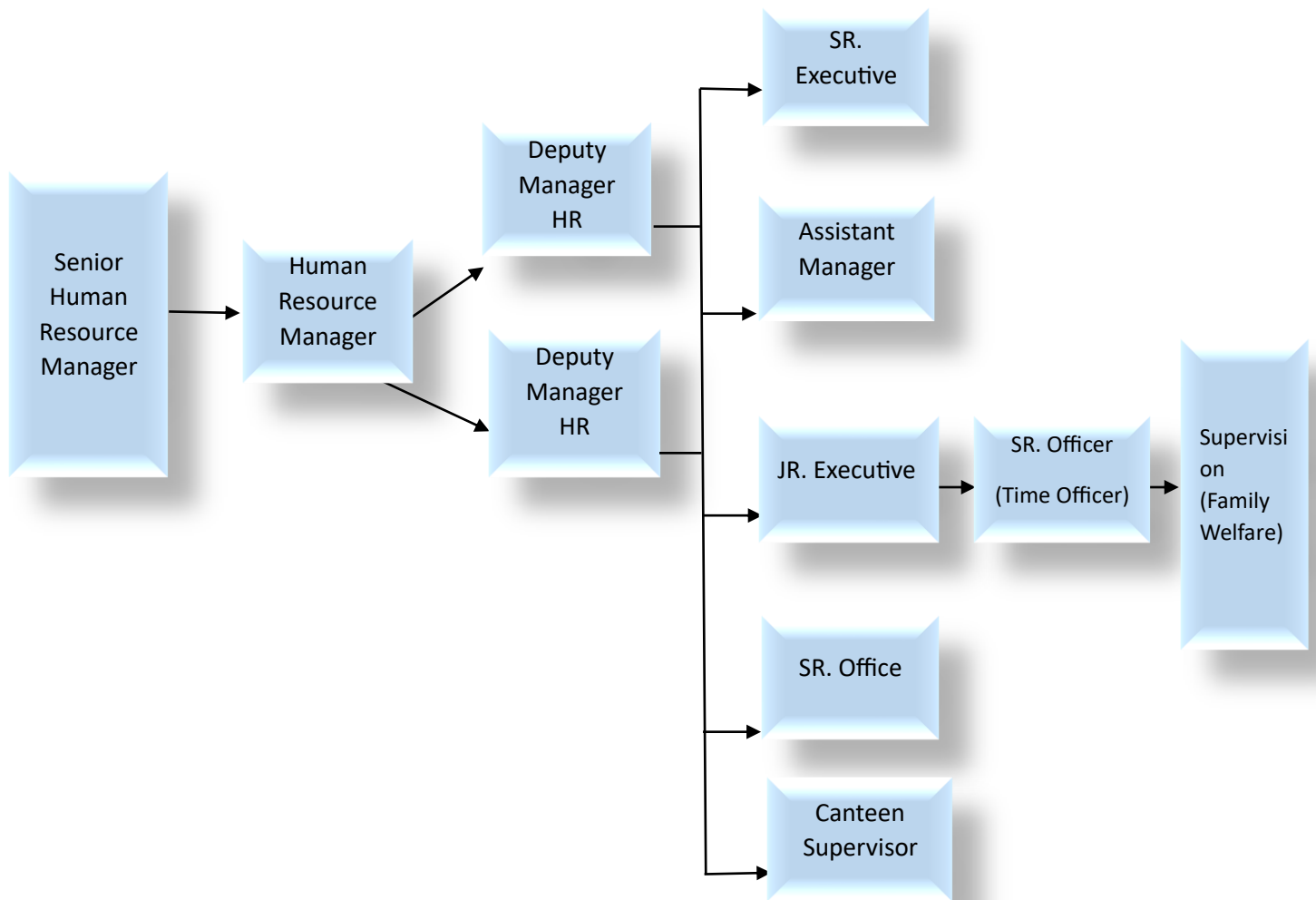
2.17 MRF LTD's Competitors

- Apollo Tyres Ltd.
- JK Tyre & Industries Ltd
- CEAT Ltd
- Balkrishna Industries Ltd
- TVS Srichakra Ltd
- Goodyear
- Falcon Tyres Ltd

- Govind Rubber Ltd
- PTL Enterprise Ltd

Despite fierce competition, MRF Ltd is ranked first in the tyre sector.

2.18 Human Resources Department Responsibilities in a Labor-Intensive Enterprise



2.18.1 Recruitment:

The HR Department focuses on attracting and hiring capable individuals who are not only literate but also dedicated to their work. This involves implementing effective recruitment processes to ensure a skilled and flexible workforce.

2.18.2 Training:

To enhance the capabilities of employees, the HR Department provides training programs. These programs are designed to equip individuals with the necessary skills for their current roles and to prepare them for future responsibilities.

2.18.3 Discipline Management:

Continuous monitoring of employee discipline is a key responsibility. In instances of indiscipline or absenteeism, the HR Department follows a structured approach, issuing warning

letters, show cause notices, charge sheets, or, in severe cases, termination. On the flip side, outstanding performance is duly recognized through appreciation letters or public acknowledgements.

2.18.4 Welfare:

Compliance with the Factory Act and other relevant laws is paramount in implementing welfare measures. The HR Department oversees various welfare policies, covering aspects such as housing, transportation, education, medical benefits, rest and recreation, cooperative societies, paid leave, insurance schemes, provident funds, gratuity, pensions, legal and financial advice, club memberships, and more.

2.18.5 Salary Administration:

Ensuring timely and accurate salary payments is a critical function. The HR Department guarantees that employees receive their salaries on schedule, maintaining accuracy in the process.

2.18.6 Canteen Management:

A well-equipped cafeteria serves as a hub for healthful meals. The HR Department oversees the cleanliness and management of the canteen, ensuring that all employees, including trainees, have access to nutritious food.

2.18.7 Transportation Services:

A well-organized transportation system with nine buses is in place to facilitate the movement of workers to and from various locations in Goa. The system is meticulously scheduled, ensuring employees on different shifts can report to duty on time and return home safely.

2.18.8 Industry Relations:

Maintaining positive relations within the industry is a key goal. The HR Department actively works towards preserving correct working relationships, fostering a conducive environment, and striving for optimal productivity.

2.18.9 Reception Services:

At the forefront of the organization, the HR Department manages the welcome desk, handling various tasks such as providing information to visitors, issuing visitor cards, sending communications, and ensuring a warm and comfortable reception for all guests.

2.19 Family Welfare:

Distinguishing itself as the only corporation in Goa with a dedicated family section, the HR Department ensures that welfare measures extend beyond employees to benefit their families. This includes initiatives such as summer camps, family counselling, and family medical coverage under ESI. The goal is to promote overall well-being for both employees and their families.

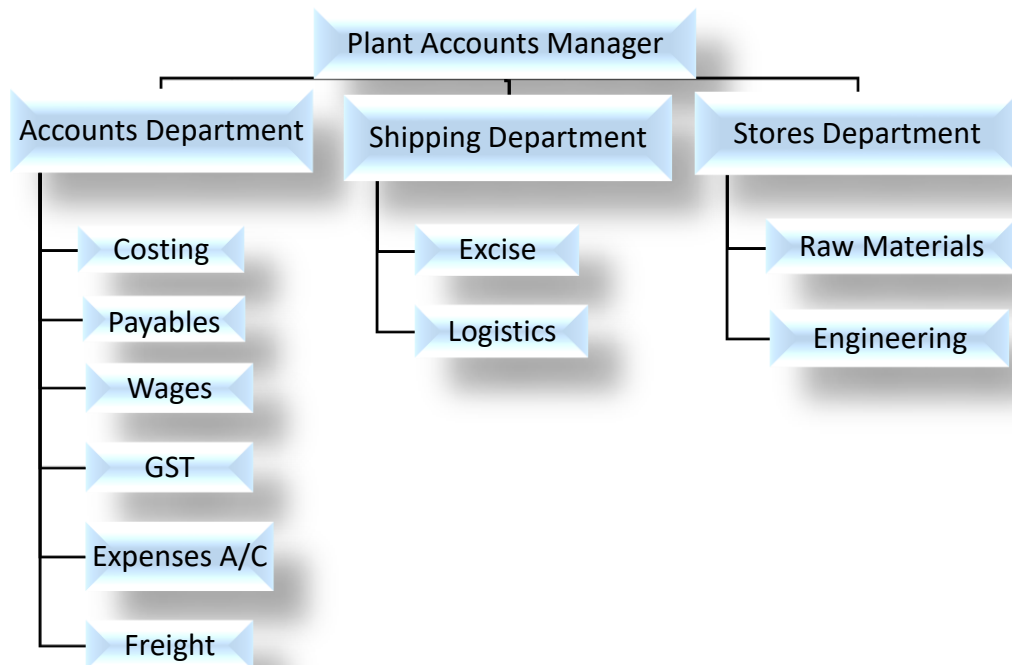
In the vibrant community of Goa, the MRF Company stands out for its commitment to holistic well-being and community engagement. This forward-thinking company conducts a range of impactful community programs, including health checks, 4ips, yoga sessions, and environmental care, demonstrating a dedication to the health and happiness of both workers and staff.

Recognizing excellence in sports and academics, the MRF Company presents the Ravi Mammen scholarship for budding sports enthusiasts and the KC Mammen scholarship for high-achieving students among its workforce. These initiatives showcase the company's recognition of diverse talents and a commitment to nurturing both physical and intellectual pursuits.

Marking significant moments on the calendar, the MRF Company celebrates Women's Day and Children's Day, underlining its dedication to inclusivity and the well-being of its diverse community. These events serve as a testament to the company's understanding of the importance of recognizing and appreciating the contributions of women and the significance of nurturing the potential of the younger generation.

Within its organizational structure, the MRF Company proudly supports five trade unions at its Goa unit, including the MRF Employees Union, Goa MRF Union, and MRF Workers' Union. This collaborative approach emphasizes the company's commitment to maintaining open and respectful relationships with its workforce.

2.20 Accounts / Finance Department



The accounting department appears to be the backbone of any corporation. This department is crucial for payments in several sectors, including IT, science, and management.

2.20.1 Payment of Bills:

The accounting department must check and pay all invoices, from transportation to telephone bills.

2.20.2 Payment Freight and penalty recovery from the carrier for failure to deliver raw materials within the stipulated time frame:

Raw materials are obtained from suppliers, and transporters bring them to plants. MRF engages in contracts with recognized carriers based on paying them a predetermined freight rate under agreed-upon terms and circumstances. Freight charges are established for licensed carriers; the HO Logistics department sets these rates. Once GRN is issued for the supplies, the freight is

accounted for and payments are paid to the carrier. If the raw material does not arrive on time for the stated destinations, the penalty is being collected from the carriers for the delay in delivery at the destinations beyond the scheduled time provided in the agreement for the truck sizes.

2.20.3 The main process used in the department:

1. As soon as the material arrives at the plant, the store department produces the goods receipt note (GRN).
2. GRN, invoice copy, and weighed slip are submitted to the accounts department.
3. The accounting department confirms that the quantity on the bill and GRN match the PO quantity.
4. To make payments, invoices are accounted for utilizing MIRO (SAP software).
5. Vendor payments are disbursed on the due date specified in the PO.

2.20.4 Engineering Bill Payment:

When engineering spares are purchased, a GRN is generated for the obtained spares, and the invoices are forwarded to the accounts departments together with the delivery challan received from the vendor. Payments are distributed to vendors once invoices are accounted for using MIRO (SAP software).

2.20.5 Wages:

The department's division pays all of the workers' salaries. The salaries are computed using a price-based approach. It also contains numerous plans for staff and employees' salaries and earnings, such as PF, ESI, and bonuses. Workmen's salaries are determined by the amount of output they produce. If the workers surpass the production, they are paid more for each additional unit of production (piece rate system). Staff salaries are based on the amount of time they spend working.

2.20.6 The additional facilities include the following:

- 7 days per year are paid holidays.
- 3 days of limited holidays every year.
- 28 days of privileged holidays annually.
- 12 days' sick leave (casual).

The corporation pays the workers' hold-up salaries. This is given to workers when machinery fails due to power outages, breakdowns, or other causes. Wherein the workers are not judged to be defective. (At this point, keeping in mind the TPM policy, the manager uses this time to give them seminars on safety, enhancing productivity, etc.)

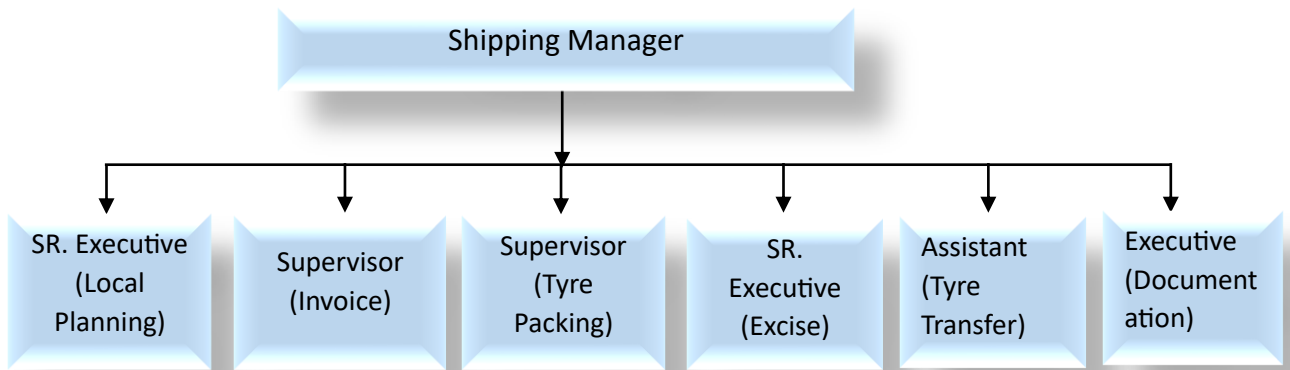
2.20.7 Cost Accounting

2.20.7.1 Cost accounting's key duties include creating the following reports:

1. Every year, a revenue and capital budget is developed.
2. Every month, a revenue expenditure report is submitted.
3. Material utilization loss report.
4. Power and fuel report.
5. Scrap report
6. The financial schedule is constructed using a trial balance.
7. Costing schedule.
8. Asset capitalization.

All financial accounting vouchers must be kept on file for 16 years and then destroyed if no issues arise from the income tax agency.

2.20.8 Shipping Department



2.21 The functions of the shipping department:

2.21.1.1 Accounting of items:

All items moved into the shipping department are finished products that must be sent from the unit to depots.

2.21.1.2 Product packaging:

The product must be packed in sets of tyres, tubes, and flaps by industry standards before being sent to clients. Ensure that all items are properly wrapped and meet the customer's requirements.

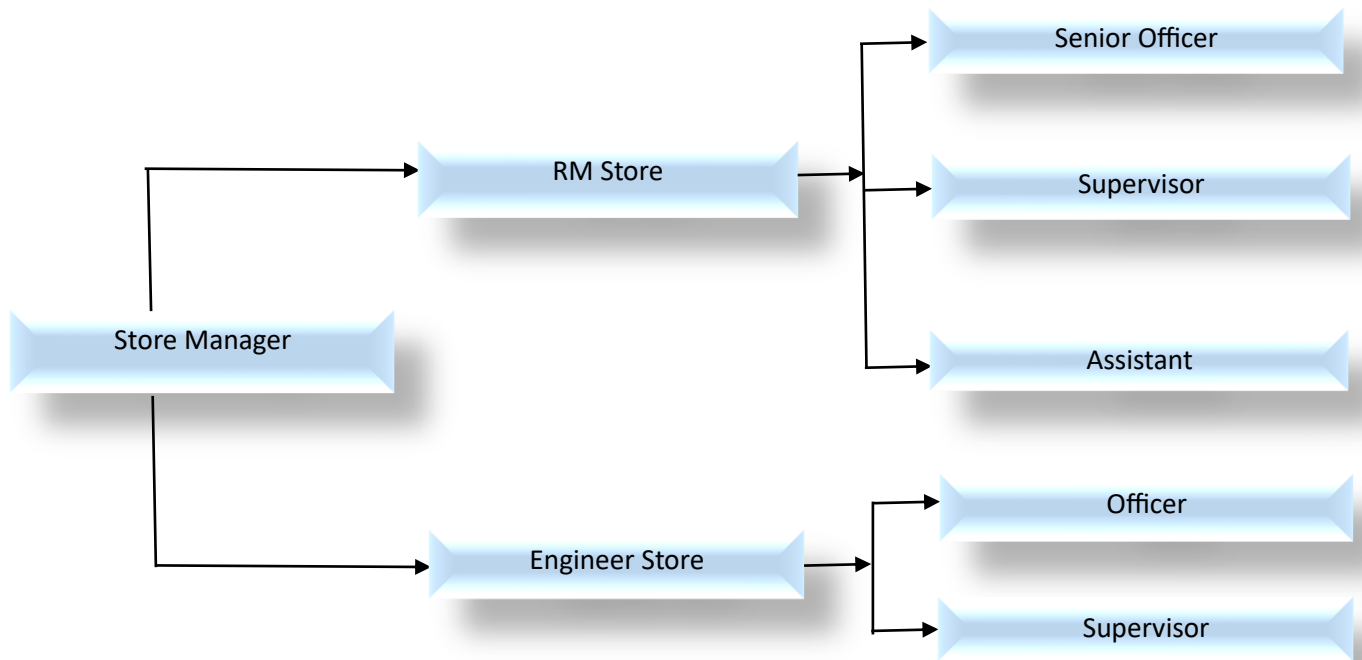
2.21.1.3 Dispatch:

The completed goods are sent to MRF's 73 depots across India.

2.21.1.4 Excise processes:

The department must adhere to the central excise processes.

2.22 Stores Department



The primary job of the store department is to accept items and store them in various bins and cabins based on their codification numbers. Checking and then moving them to the inspection room. The corresponding manager arrives with the demand, inspects the items, and the store department distributes them.

The store department has all of the machine's spare components operating in the unit, ready to be used as needed. All objects are coded and organized in precise order and placement. The department keeps track of the products that come in and out of the department. Raw materials and other resources are brought in according to the timetables established by the Head Office.

2.22.1 The store department's primary functions:

- Storing raw materials, engineering materials, and stationary objects.
- Maintaining stock levels to ensure consistent manufacturing material supply.
- Inform the purchasing department to order the necessary supplies.

- Proper raw material unloading and storage procedures.
- Return unneeded materials and dispose of rubbish at the scrapyard.
- Returnable material outside parties (RMOP) refers to things sent for repair to other parties.

2.22.2 Procedure for Receiving Material:

- Check the purchase order in SAP.
- Check delivery challans.
- Check the quantity against the delivery challan.
- Accept and store the goods in the examined area.
- Prepare goods received note (GRN) based on the delivery challan.
Inform the department and record the BIN number on the material receipt card (TAG).
- Store goods according to their BIN number and location.

2.22.3 Procedure for Issuing Raw Materials

- Check the reservation number.
- Enter the reservation number into the computer.

- Verify the bin location and availability.
- Post reservation quantity.
- Manually enter the location code on the reservation slip.

2.23 Sales Performance

MRF Ltd. has been showing positive signs in terms of sales.

2.23.1 Revenue Growth:

MRF's core business operations have seen a 10% increase in sales compared to the same period last year. This means they're selling more tyres, tubes, and other products.

2.23.2 Market Demand:

This sales growth indicates that there's a continued strong demand for MRF's products in the market. This is a good sign for the company's future performance.

3 PESTLE analysis for MRF Ltd

3.1.1 Political:

Government policies on infrastructure development and the automotive industry affect MRF's business.

Political stability and trade relations influence the company's expansion plans and access to raw materials.

3.1.2 Economic:

Economic growth rates impact consumer spending on automobiles and replacement tyres, affecting MRF's sales.

Exchange rate fluctuations can affect import costs for raw materials like rubber and chemicals.

3.1.3 Social:

Changing consumer preferences towards fuel-efficient or eco-friendly vehicles may affect demand for MRF's products.

Demographic shifts, such as urbanization and an increasing middle-class population, impact tyre demand.

3.1.4 Technological:

Advances in tyre technology, such as run-flat tyres or smart tyres, may require MRF to invest in R&D to stay competitive.

Automation and digitalization in manufacturing processes can improve efficiency and reduce costs.

3.1.5 Legal:

Compliance with environmental regulations regarding tyre disposal and recycling.

Adherence to labour laws and safety standards in manufacturing facilities.

3.1.6 Environmental:

Environmental concerns around tyre disposal and pollution necessitate sustainable practices in manufacturing and recycling.

Climate change impacts weather patterns and may affect demand for seasonal tyres.

This analysis provides insight into various external factors that can impact MRF Ltd's business operations and strategic decision-making.

4 Introduction

In recent years, MRF Ltd has experienced a notable upswing in sales, seemingly marking a period of success in the corporate landscape. However, a more nuanced examination reveals a perplexing contradiction – a simultaneous decline in overall profitability, sounding an alarm. At the heart of this financial challenge lies the fluctuating costs of raw materials, which, in turn, are intricately woven into the broader economic fabric encompassing interest rates, exchange rates, and trade dynamics. This scenario prompts a critical investigation into how these economic variables collectively influence the profitability of MRF Ltd.

As MRF Ltd navigates the dynamic terrain of corporate finance, the juxtaposition of rising sales and diminishing profits highlights a substantial challenge posed by the unpredictable trajectory of raw material costs. This challenge is further compounded by the company's heavy dependence on imported inputs. To gain a comprehensive understanding of the financial intricacies at play, this study embarks on a detailed exploration of MRF Ltd's financial trajectory. Special attention is directed toward examining the impact of interest rates, exchange rates, and trade dynamics on the company's profitability. By delving into these economic intricacies, we aim to decipher the underlying factors contributing to the current financial challenges faced by MRF Ltd. In this research endeavour, our objective is not only to uncover the complexities of MRF Ltd's financial landscape but also to provide valuable insights for strategic decision-making and sustainable growth. By unravelling the dynamic relationship between the company's profitability and economic variables, we aspire to equip stakeholders with knowledge that can inform proactive measures and fortify MRF Ltd against the uncertainties inherent in today's economic environment.

5 Literature Review

The interaction between economic variables and corporate financial performance has become a focal point of recent research. This exploration is particularly crucial for MRF Ltd., a company facing declining profits despite a surge in sales due to escalating raw material prices. Understanding the direct influences of interest rates, exchange rates, and trade dynamics is imperative in deciphering the complexities faced by MRF Ltd.

Interest Rates and Corporate Performance:

(Egbunike & Okerekeoti, 2018) and (Hatmanu et al., 2020) provide insights into the influence of interest rates on corporate performance, emphasizing how fluctuations in interest rates can significantly affect borrowing costs and investment decisions. For MRF Ltd., conducting a comprehensive study on the alignment of interest rate movements with its financial challenges is crucial, highlighting the relevance of this variable.

Exchange Rates and Global Dynamics:

(Cheung & David Chinn, 2001) shed light on global trade dynamics intertwined with exchange rates, highlighting the vulnerability of companies heavily reliant on imported raw materials to

exchange rate fluctuations. MRF Ltd.'s intricate global supply chain demands a closer examination of exchange rate movements and their impact on the company's financial performance.

Trade Dynamics and Corporate Profitability:

(Pacini et al., 2017) and (knio et al., 2023) stress the need to analyse how trade dynamics, including international trade policies and market access, affect corporate profitability. This holds particular relevance for MRF Ltd. as it navigates global dependencies. Unravelling the complexities of diminishing profits requires a thorough examination of these trade dynamics.

Synthesis of Literature:

Drawing insights from (Pacini et al., 2017), (Egbunike & Okerekeoti, 2018), Wong and Chan (2019), and Gupta and Sharma (2021), this literature review establishes a foundation for the comprehensive study of MRF Ltd.'s financial performance. By analysing findings from diverse perspectives, the study aims to disentangle the intricate web of economic trends impacting the company's profitability. Understanding the specific dynamics of interest rates, exchange rates, and trade policies is imperative for steering MRF Ltd. towards informed financial decisions amidst a challenging landscape.

Additionally, the study (Neumeyer & Perri, 2005) adds a broader perspective, accentuating the heightened business cycle fluctuations in emerging economies. Furthermore, investigations into the interplay between macroeconomic factors and firm performance in the Nigerian manufacturing sector contribute nuanced findings (Egbunike & Okerekeoti, 2018). A sector-specific approach, as advocated in the study on consumer goods manufacturing firms in Nigeria, underscores the diverse effects of macroeconomic factors on firms, necessitating a keen understanding of managerial decisions in navigating this intricate interplay.

In synthesis, these studies collectively offer valuable insights for MRF Ltd., presenting a holistic view of the multifaceted relationships between economic trends and corporate performance. This comprehensive exploration lays the groundwork for understanding the intricacies faced by MRF Ltd. in its pursuit of financial sustainability.

6 Objective

To investigate and understand the direct influence of economic trends, including interest rates, exchange rates, and trade dynamics on MRF Ltd.'s financial performance.

7 Research Gap

While prior research has extensively examined the broader influence of economic indicators such as interest rates, exchange rates, and trade dynamics on corporate performance, there is a notable dearth of understanding the direct repercussions of these economic trends on MRF Ltd.'s financial outcomes. Particularly, scant attention has been paid to how fluctuations in these economic variables specifically affect MRF Ltd.'s financial performance, given its substantial dependence on imported inputs. This gap in the literature inhibits a comprehensive understanding of the unique challenges and opportunities faced by MRF Ltd. in navigating dynamic economic conditions. Therefore, this study seeks to address this gap by conducting a focused investigation into the direct impact of economic trends on MRF Ltd.'s financial performance, aiming to provide valuable insights for both the company and similar businesses operating in volatile economic environments.

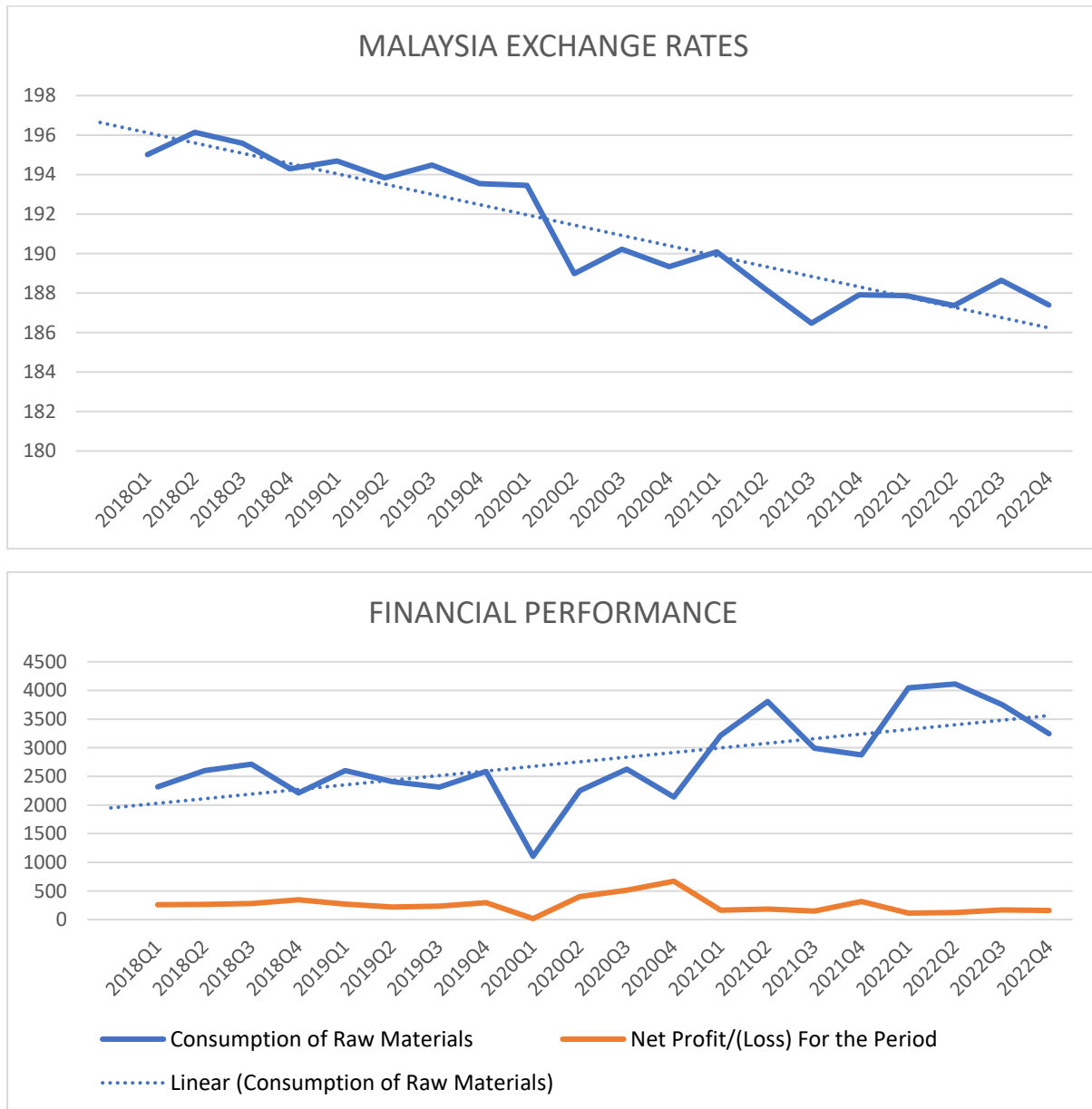
8 Methodology

In this study, we will employ a mixed-method approach to comprehensively analyse the influence of economic trends on MRF Ltd.'s financial performance. Firstly, a quantitative analysis will be conducted, utilizing financial data from MRF Ltd. and relevant economic indicators. Correlation analysis will be employed to quantify the relationship between MRF Ltd.'s financial performance metrics (e.g., profitability, revenue growth) and economic indicators (e.g., interest rates, trade dynamics). Additionally, qualitative insights will be gathered through interviews with industry experts and stakeholders to provide a nuanced understanding of how economic trends impact MRF Ltd.'s operations. The integration of quantitative and qualitative methods will allow for a holistic assessment, facilitating the formulation of practical recommendations to address the company's financial challenges in the context of evolving economic conditions.

9 Data Analysis

9.1 Trend / Line Chart Analysis

Malaysia

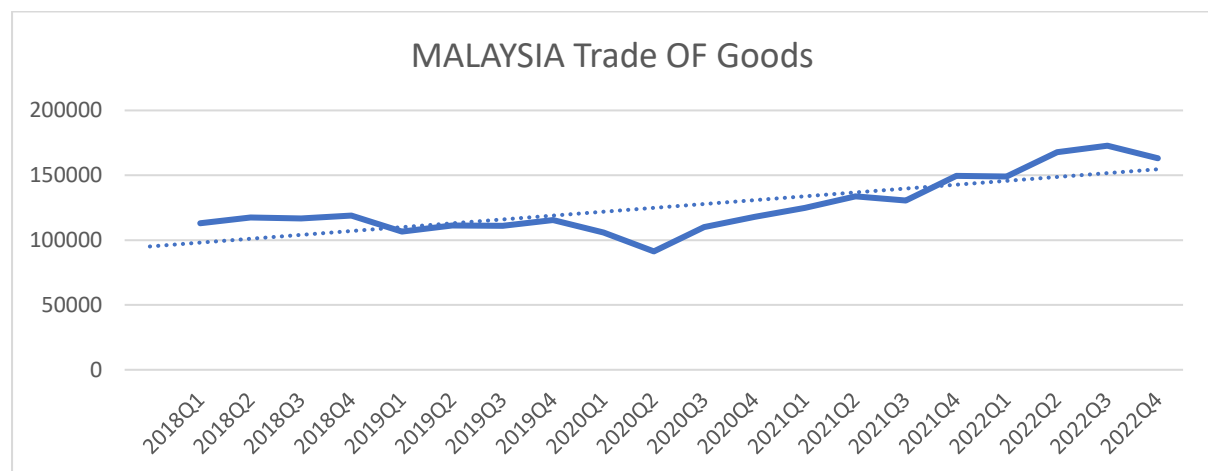


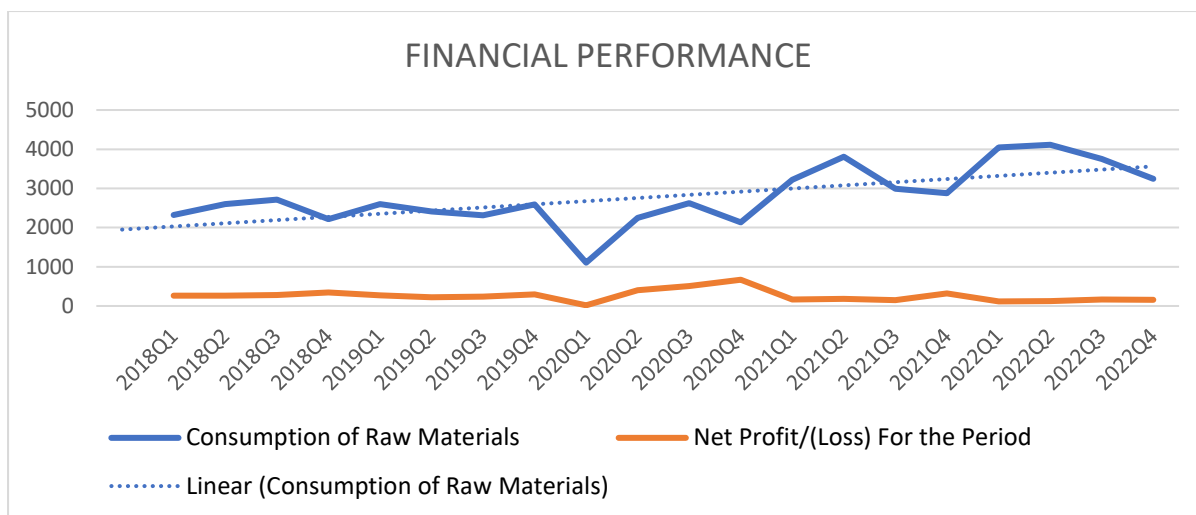
The charts presented offer insights into two key aspects of the economic landscape: the exchange rate dynamics of Malaysia and the operational performance of MRF Ltd, a company operating in the tyre sector.

Regarding exchange rate trends, Malaysia's currency depicted by the blue line demonstrates a consistent decline over the observed period. This decline indicates a weakening of the Malaysian currency relative to the US Dollar, potentially influenced by various macroeconomic factors such as trade balances, shifts in monetary policy, and broader global market sentiment.

In contrast, MRF Ltd's operational performance, represented by the consumption of raw materials (depicted by the blue line) and net profits (shown in yellow), exhibits an upward trajectory. These trends suggest positive momentum in the company's operational activities, with increasing demand for its products and improved profitability over time.

Upon comparison, it becomes evident that the movements in Malaysia's exchange rate do not mirror the performance trends of MRF Ltd. While the exchange rate consistently declines, the consumption of raw materials and net profits of MRF Ltd show upward trends. This indicates that the operational performance of the company is not significantly influenced by fluctuations in Malaysia's exchange rate.

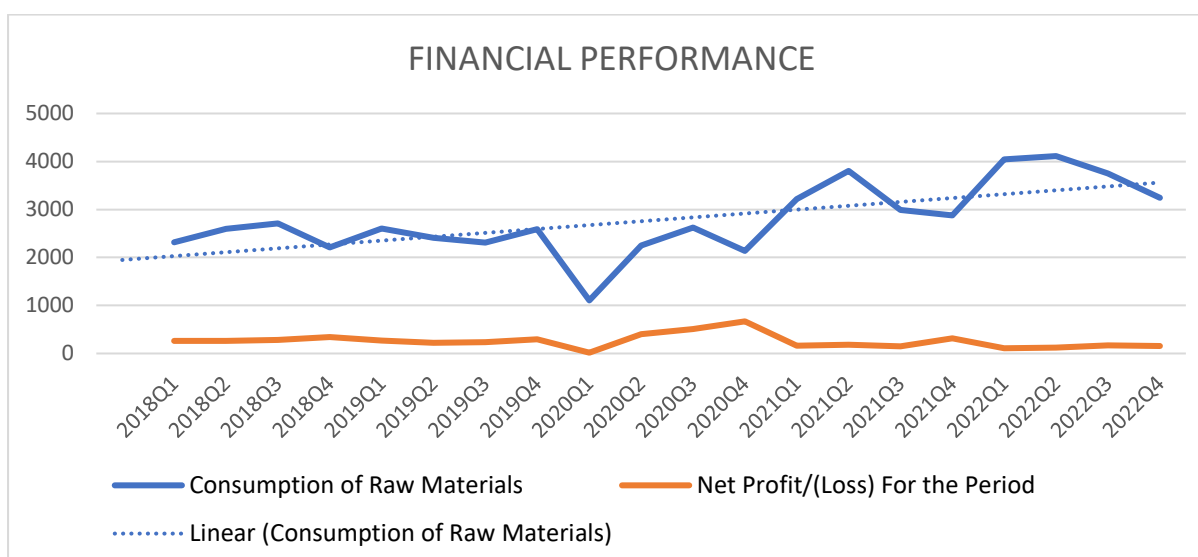
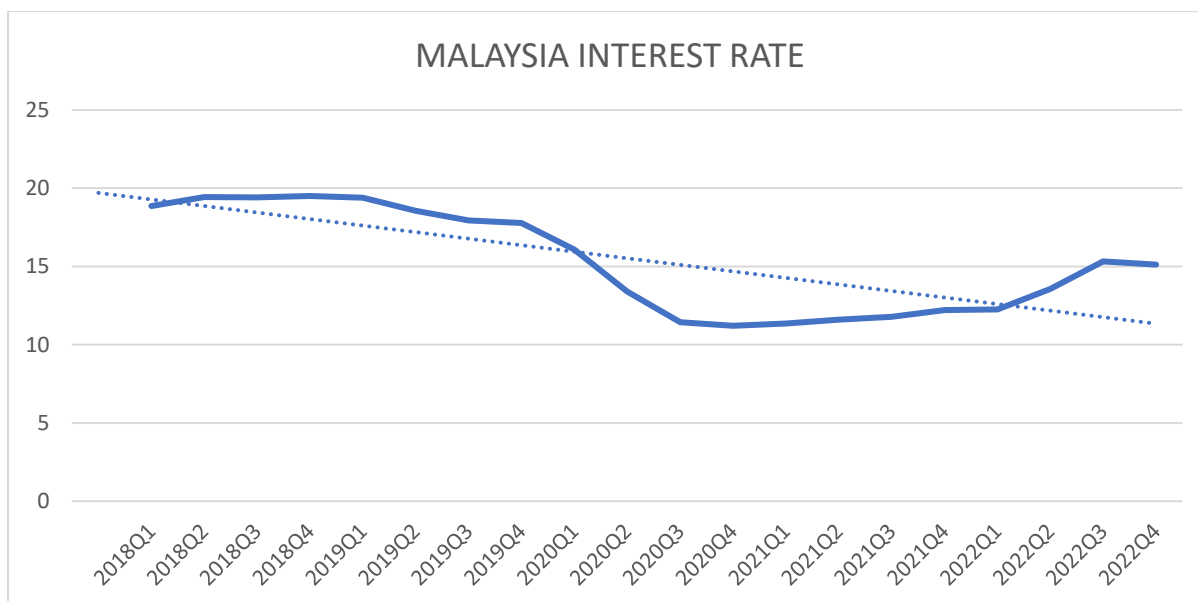




The analysis of two distinct charts, one portraying Malaysia's trade of goods and the other depicting the financial performance of MRF Ltd., reveals compelling insights. Both charts exhibit an upward trend, indicating positive momentum in their respective metrics. Notably, the consumption of raw materials and the trade of goods in Malaysia display a striking similarity in their trends, suggesting a potential correlation between the two.

Examining MRF Ltd.'s financial performance, represented by net profit, unveils a predominantly stable trajectory. However, there are instances where the net profit experiences a decline concurrent with increases in both the consumption of raw materials and the trade of goods in Malaysia. This observation implies a potential influence of Malaysia's trade dynamics on MRF Ltd.'s financial outcomes.

Such interconnectivity underscores the importance of monitoring external economic factors, such as trade activities in key markets, to comprehend and anticipate their impact on the financial performance of corporations like MRF Ltd. This holistic understanding enables informed decision-making and proactive strategies to mitigate risks and capitalize on opportunities in a dynamic global landscape.



The charts depict two critical aspects of MRF Ltd's financial performance: the consumption of raw materials and net profit, juxtaposed against Malaysia's interest rate fluctuations.

In observing the charts, it's apparent that MRF Ltd's consumption of raw materials exhibits a fairly consistent upward trend over time. This suggests a growing demand for raw materials, which could be attributed to various factors such as increased production or expansion efforts.

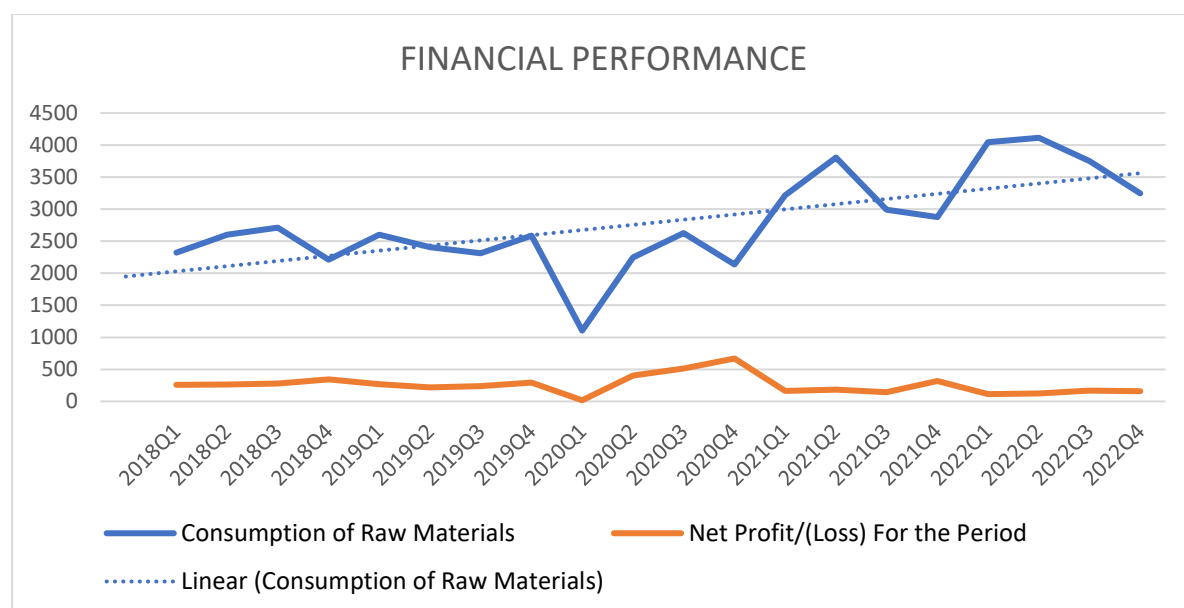
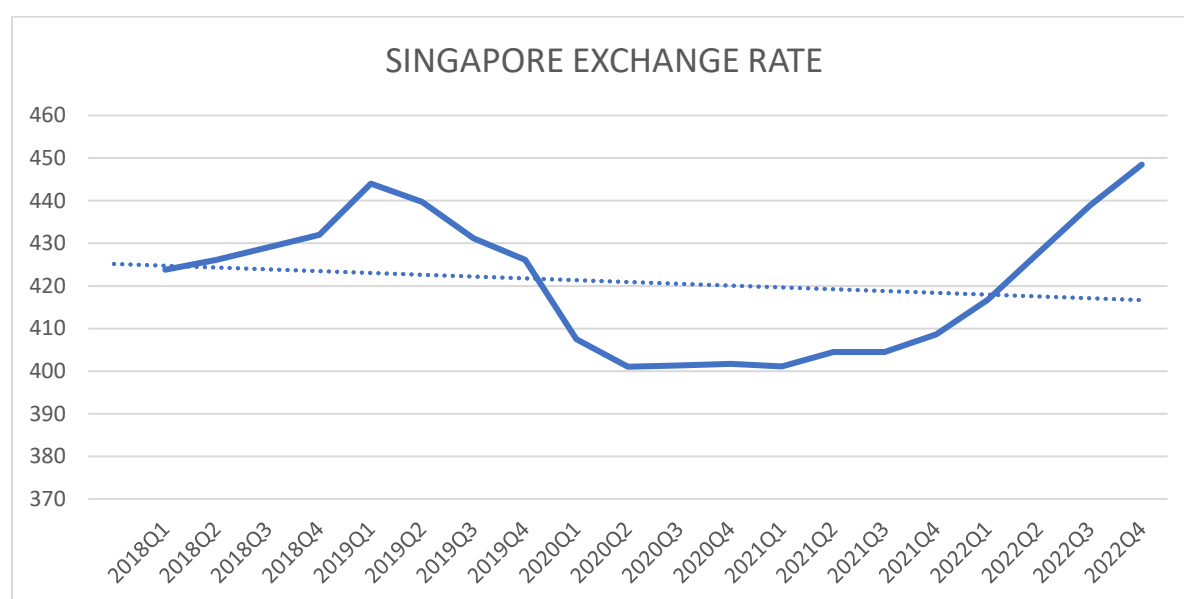
On the other hand, the company's net profit shows some fluctuations but generally maintains an upward trajectory, indicating overall financial health and profitability.

However, when considering Malaysia's interest rate movements, there isn't a clear parallel with MRF Ltd's financial performance trends. While Malaysia's interest rates may influence the cost

of borrowing or financing for the company, there doesn't seem to be a direct correlation between interest rate changes and the operational performance of MRF Ltd.

Thus, while MRF Ltd may indeed source raw materials from Malaysia, the company's financial performance appears to be driven by factors beyond just interest rate dynamics in Malaysia. Other elements such as market demand, operational efficiency, and strategic decision-making likely play more significant roles in shaping the company's financial outcomes.

Singapore



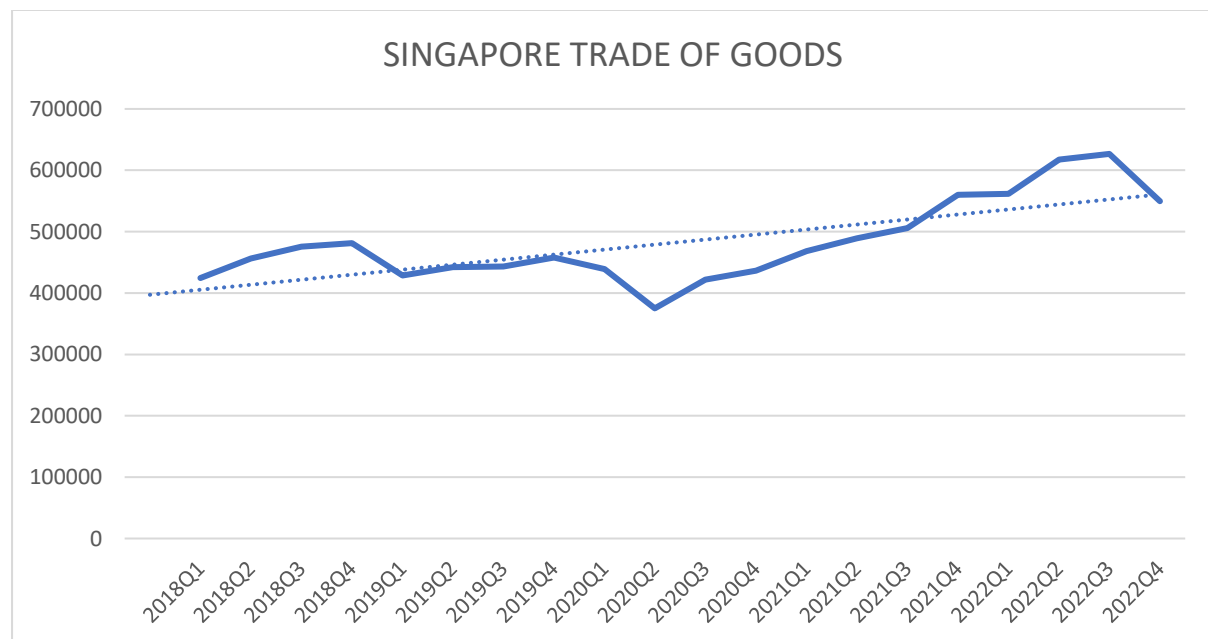
The provided chart illustrates the exchange rate dynamics of Singapore over quarters, juxtaposed against MRF Ltd's operational performance.

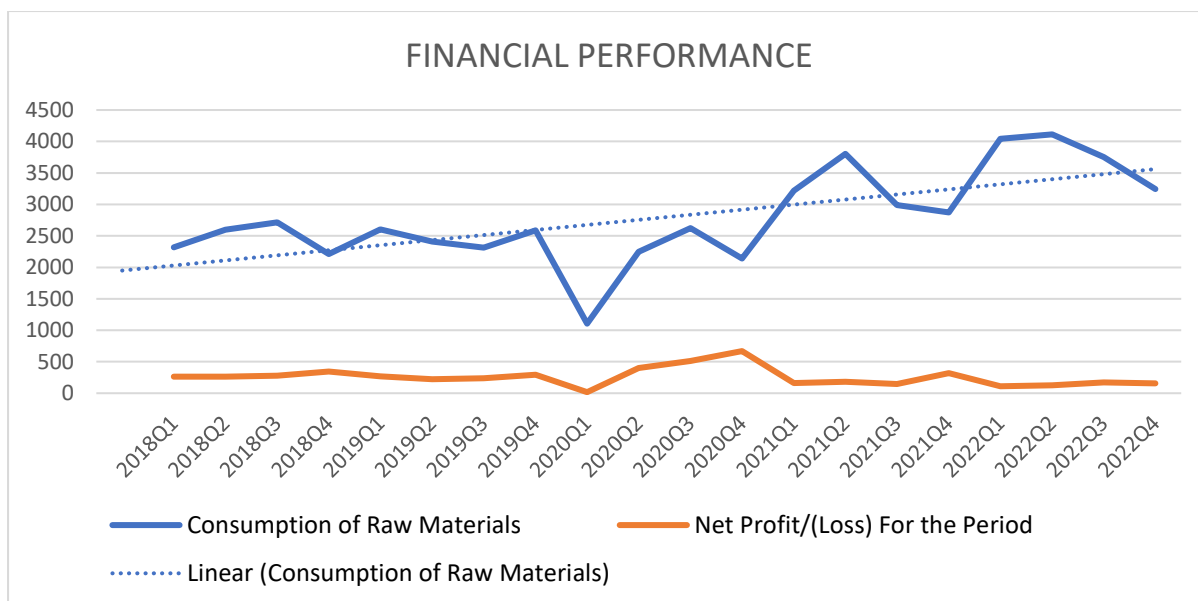
Observing the exchange rate trends, it's evident that Singapore's currency fluctuates over time, experiencing both peaks and troughs. These fluctuations may reflect shifts in economic conditions, monetary policies, and global market sentiments.

Considering MRF Ltd's operational performance, particularly its purchase of raw materials from Singapore, there isn't a direct correlation between Singapore's exchange rate movements and the company's financial performance, as depicted by the consumption of raw materials and net profit.

While fluctuations in the exchange rate could potentially impact the cost of importing raw materials, the overall operational performance of MRF Ltd, as depicted by the consumption of raw materials and net profit, doesn't seem to mirror the trends in Singapore's exchange rate.

Therefore, it's unlikely that Singapore's exchange rate has a significant influence on MRF Ltd's financial performance.

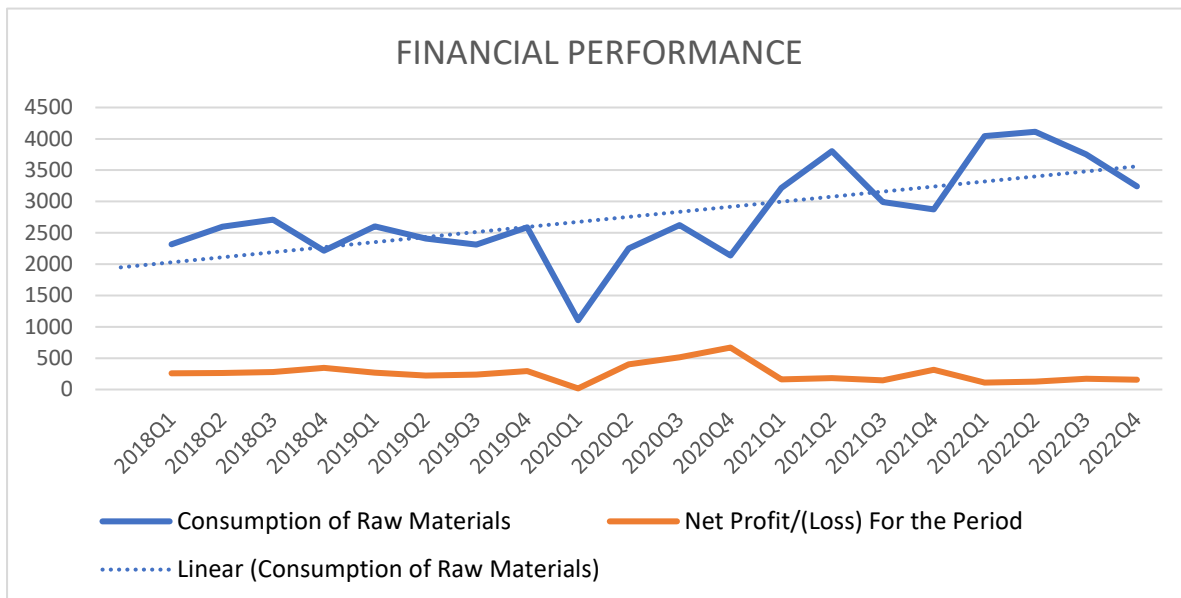
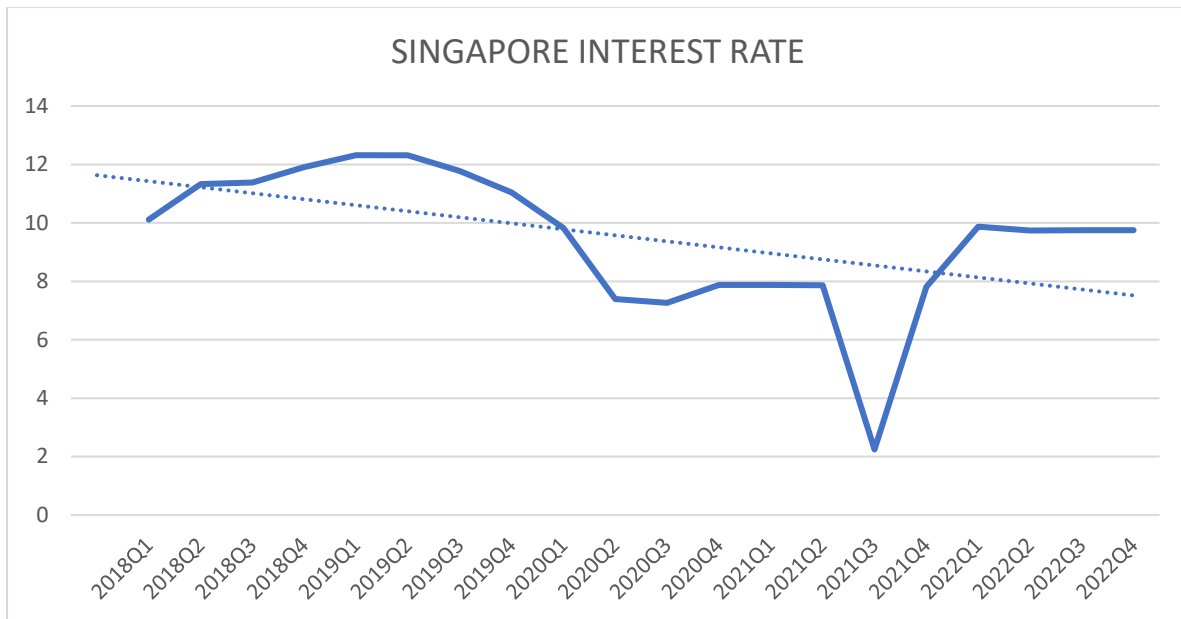




The analysis of two distinct charts, one illustrating Singapore's trade of goods and the other showcasing MRF Ltd.'s financial performance, provides insightful observations. Both charts exhibit an upward trend, indicating positive momentum in their respective metrics. Notably, the consumption of raw materials by MRF Ltd. and Singapore's trade of goods show similar upward trajectories, implying a potential correlation between the two.

Examining MRF Ltd.'s financial performance, particularly its net profit, reveals a generally stable trend. However, there are instances where net profit dips simultaneously with increases in both the consumption of raw materials and Singapore's trade of goods. This suggests a plausible influence of Singapore's trade dynamics on MRF Ltd.'s financial outcomes.

This correlation underscores the importance of monitoring external economic factors, such as trade activities in key markets like Singapore, to anticipate their impact on companies like MRF Ltd. Such insights enable proactive strategies to mitigate risks and leverage opportunities in an ever-evolving global market.

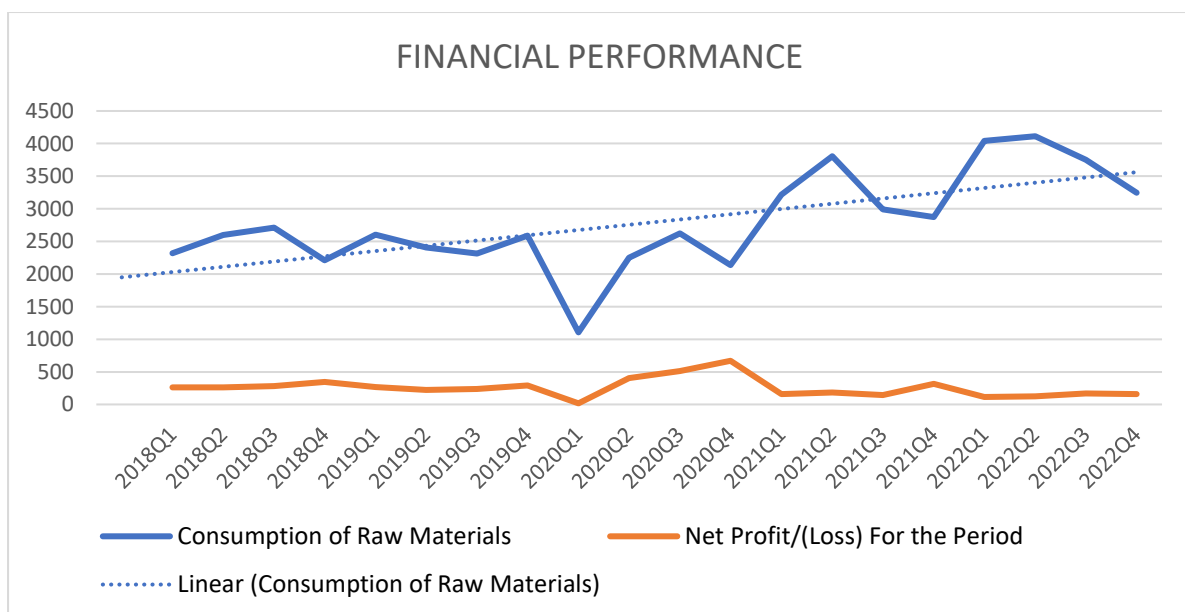
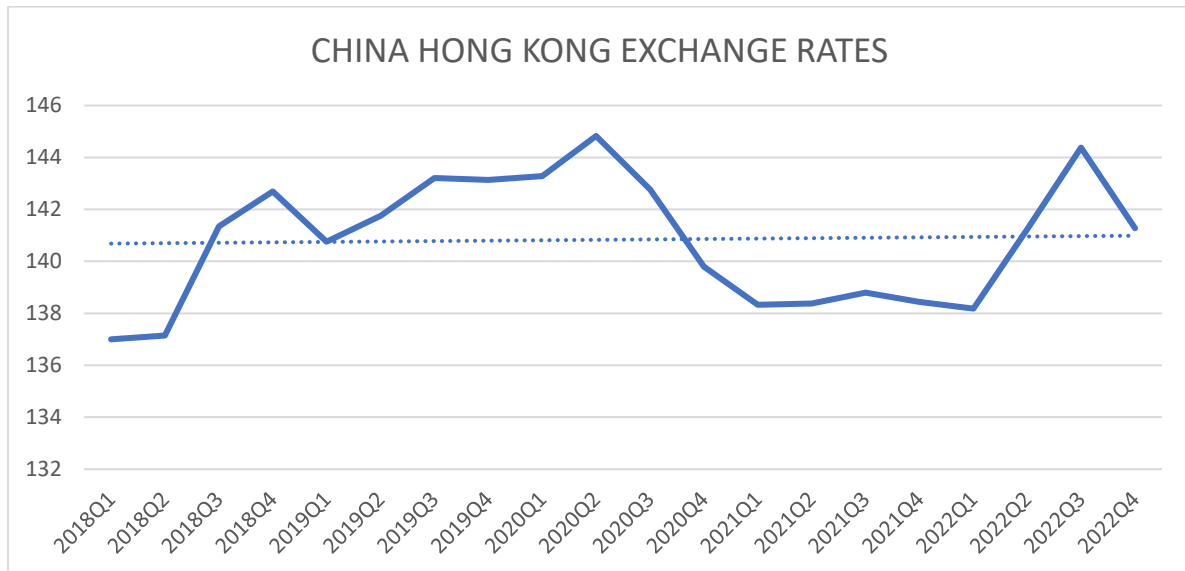


The interest rate chart for Singapore indicates fluctuations over time, with periods of both decrease and increase. Such changes can significantly impact borrowing costs, investment decisions, and overall economic activity within Singapore.

In assessing MRF Ltd.'s financial performance, particularly its purchasing of raw materials from Singapore, there's no direct correlation observed between the trends in Singapore's interest rates and MRF Ltd.'s operational metrics. While fluctuations in interest rates could potentially influence borrowing costs or investment decisions for MRF Ltd., the trends in raw material

consumption and net profit do not necessarily mirror the movements in Singapore's interest rates.

China - Hongkong

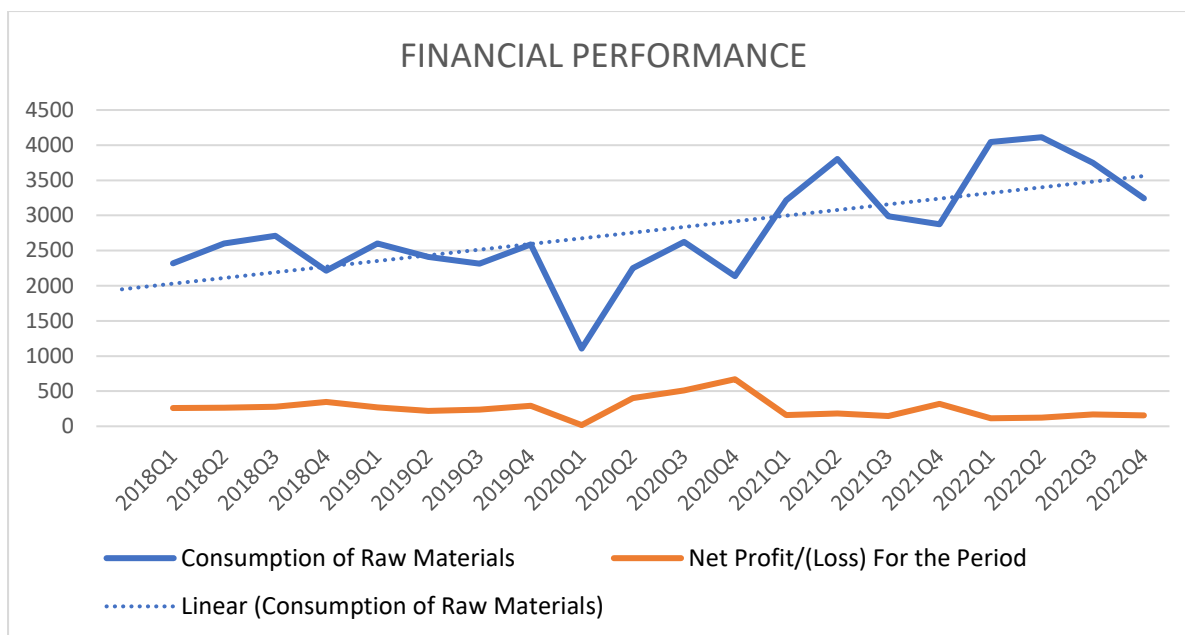


The analysis of both charts, depicting MRF Ltd.'s consumption of raw materials and China-Hong Kong exchange rates, reveals a noteworthy observation. While the charts represent different metrics, they exhibit a similar downward trend over the observed quarters.

This parallel movement suggests a potential correlation between China-Hong Kong exchange rates and MRF Ltd.'s raw material procurement costs. As the exchange rates decline, indicating a weaker Hong Kong dollar relative to the Chinese yuan, the cost of purchasing raw materials from China may decrease for MRF Ltd. Conversely, an increase in exchange rates could lead to higher raw material procurement expenses.

Therefore, monitoring China-Hong Kong exchange rates is crucial for MRF Ltd. to anticipate fluctuations in raw material costs and assess their impact on the company's financial performance.

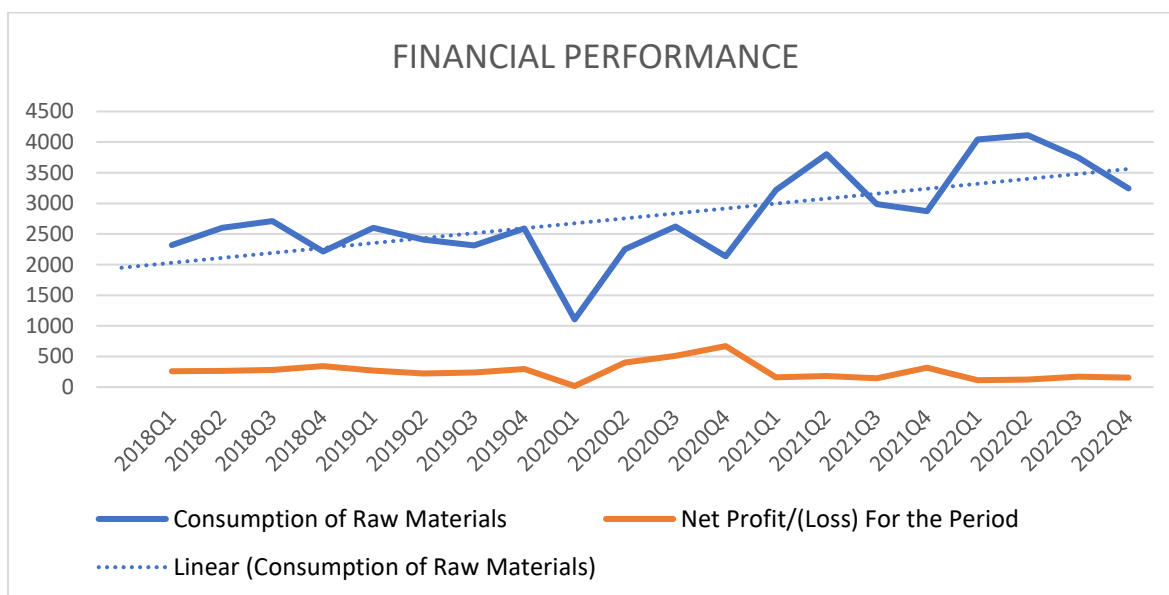




The analysis of two distinct charts, one illustrating China-Hong Kong's trade of goods and the other showcasing MRF Ltd.'s financial performance, presents intriguing insights. Both charts exhibit an upward trend, suggesting positive momentum in their respective metrics. Particularly noteworthy is the similar upward trajectory observed in the consumption of raw materials by MRF Ltd. and China-Hong Kong's trade of goods, hinting at a potential correlation between the two.

Examining MRF Ltd.'s financial performance, particularly its net profit, reveals a predominantly stable trend. However, there are instances where net profit experiences decline concurrently with increases in both the consumption of raw materials and China-Hong Kong's trade of goods. This suggests a possible influence of China-Hong Kong's trade dynamics on MRF Ltd.'s financial outcomes.

This correlation highlights the significance of monitoring external economic factors, such as trade activities in key markets like China-Hong Kong, to anticipate their impact on companies like MRF Ltd. Such insights facilitate proactive strategies to manage risks and capitalize on opportunities in an evolving global market.

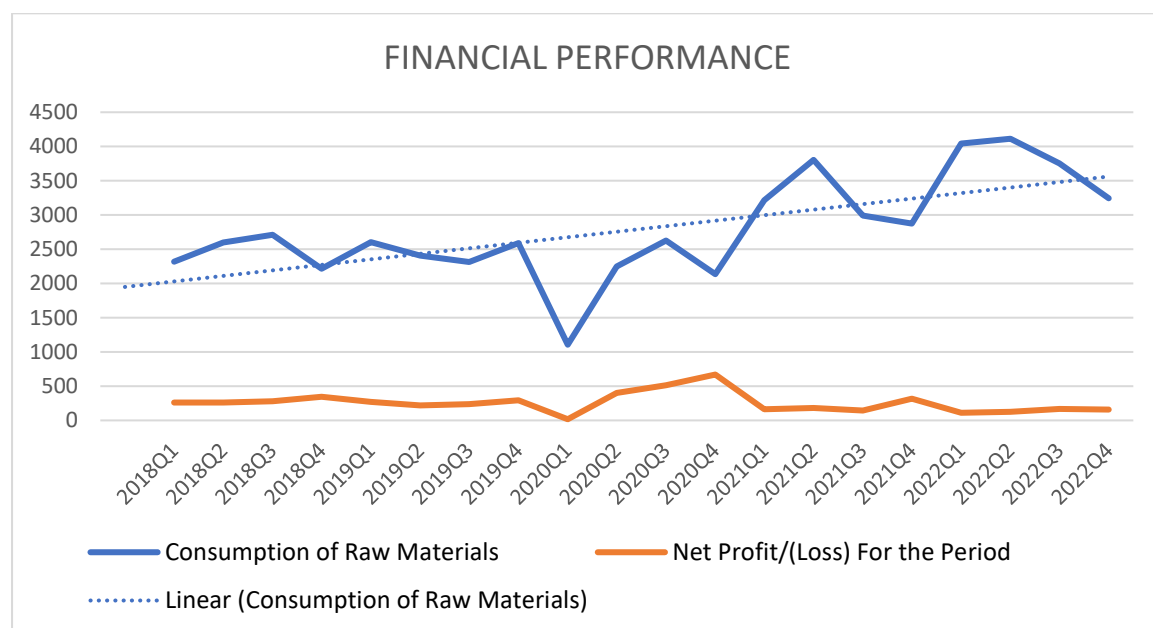
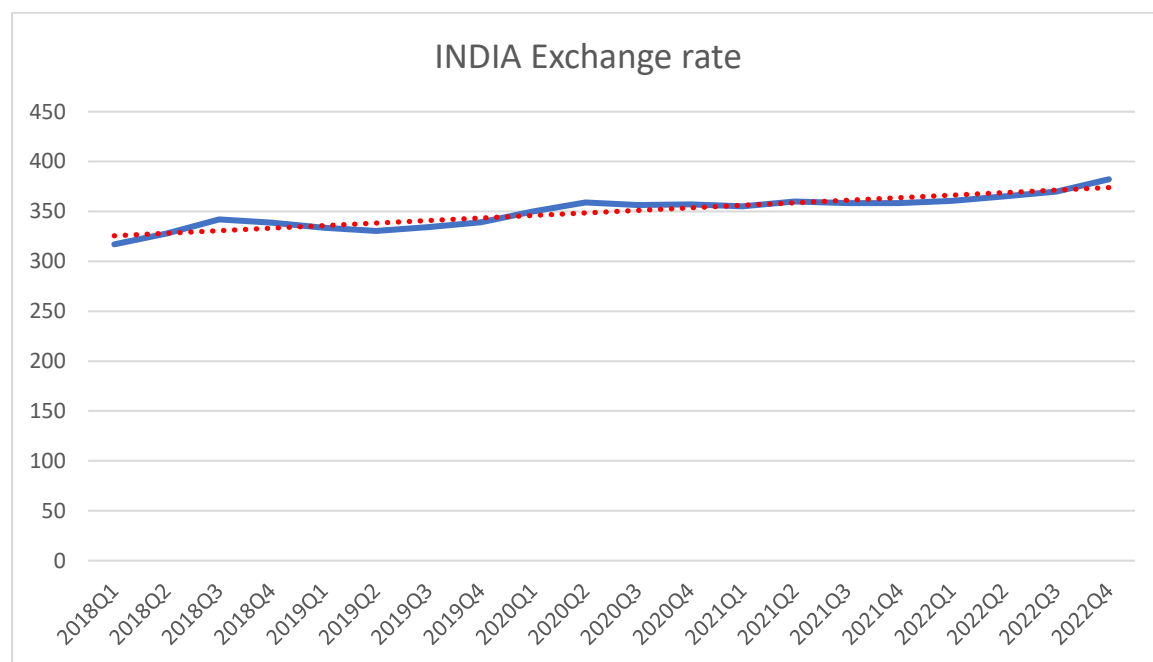


The comparison between the interest rate dynamics of China and Hong Kong, alongside MRF Ltd.'s financial performance, offers significant insights. Both China and Hong Kong exhibit fluctuating interest rate trends over time, indicating economic volatility in the regions.

Given that MRF Ltd. purchases raw materials from these countries, the interest rate movements could indeed impact the company's financial performance. Fluctuations in interest rates may affect borrowing costs, currency exchange rates, and overall economic conditions, subsequently influencing the cost of imported raw materials and, consequently, the company's profitability.

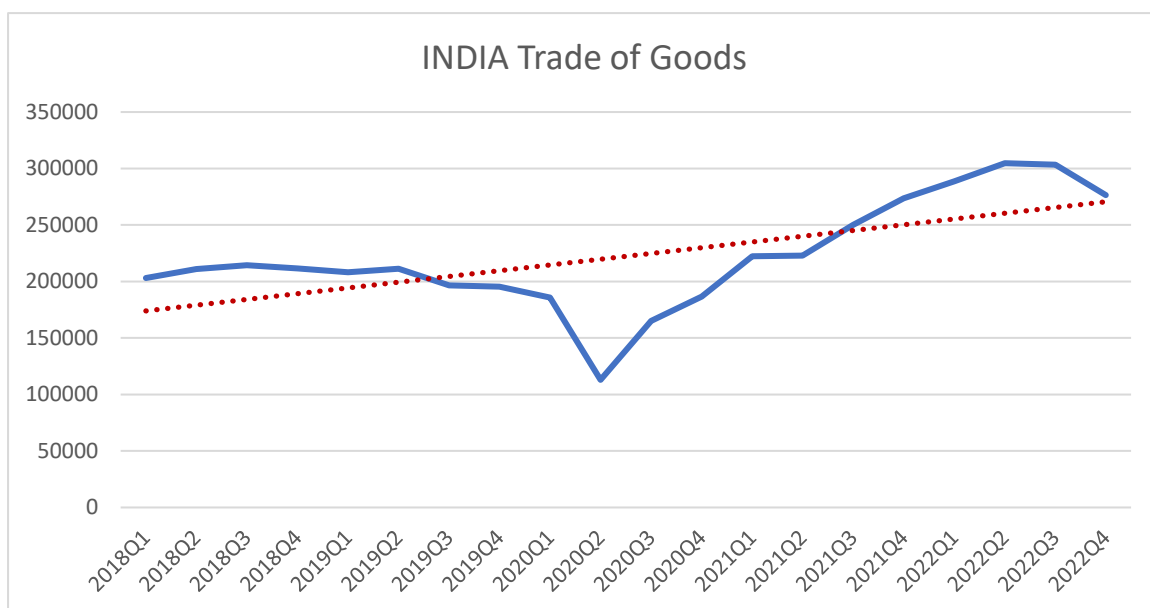
While the interest rate trends of China and Hong Kong show some similarities, they also display distinct patterns at times. Despite this, monitoring these external economic factors remains crucial for MRF Ltd. to assess potential risks and opportunities in the global market landscape.

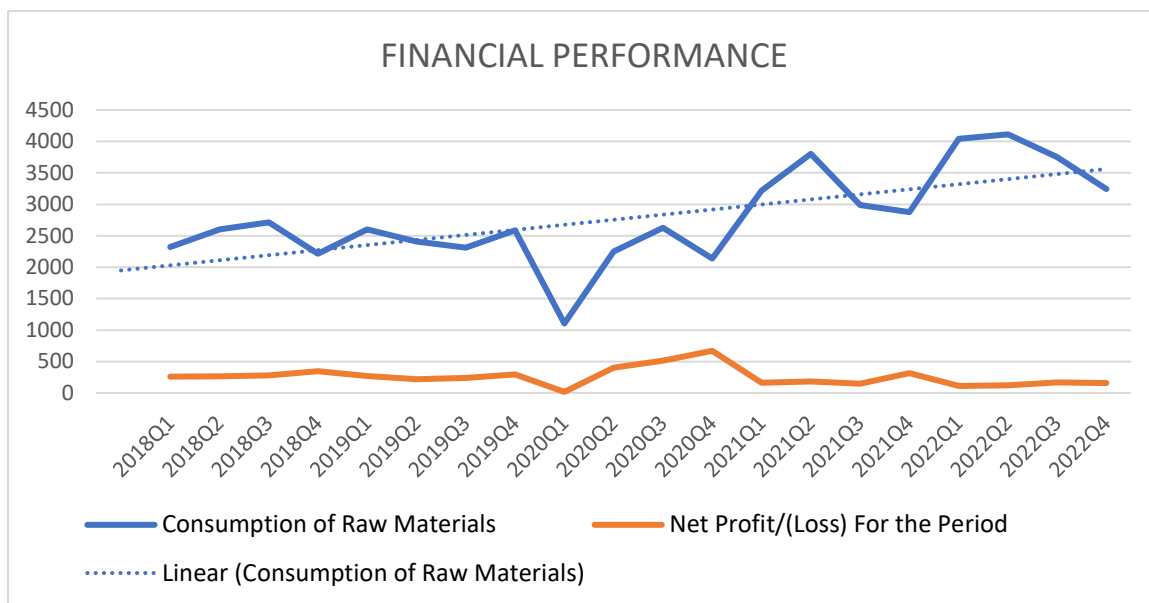
India



These charts show two important things about India's economy. The first one is about how the exchange rate, or the value of Indian money compared to other currencies, changes over time. It seems like in the data we have, the exchange rate doesn't change much over the years. This stability is good because it gives businesses and investors' confidence in the economy.

The second chart is about a specific company called MRF Ltd. It shows how much raw materials the company is using and how much profit or loss they're making each quarter. Even though the exchange rate stays stable, MRF's performance goes up and down. This tells us that even in a stable economy, individual companies face challenges and changes. MRF seems to be handling these ups and downs well, showing their ability to adapt to different situations. These charts together show how the big picture of the economy and the smaller details of individual companies are connected, and how they both affect each other.

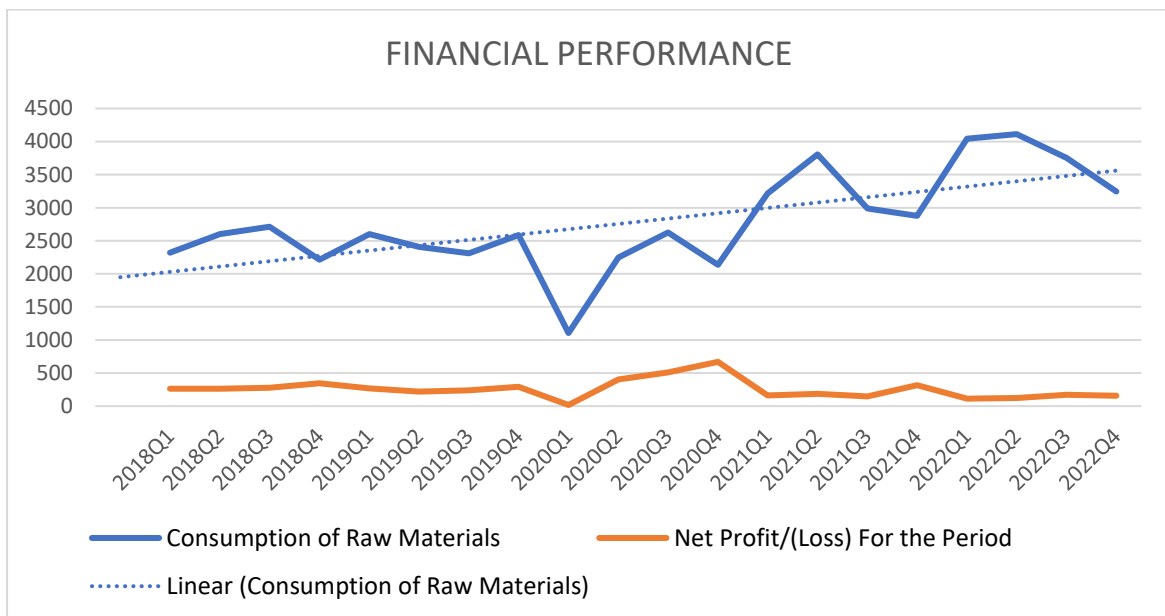
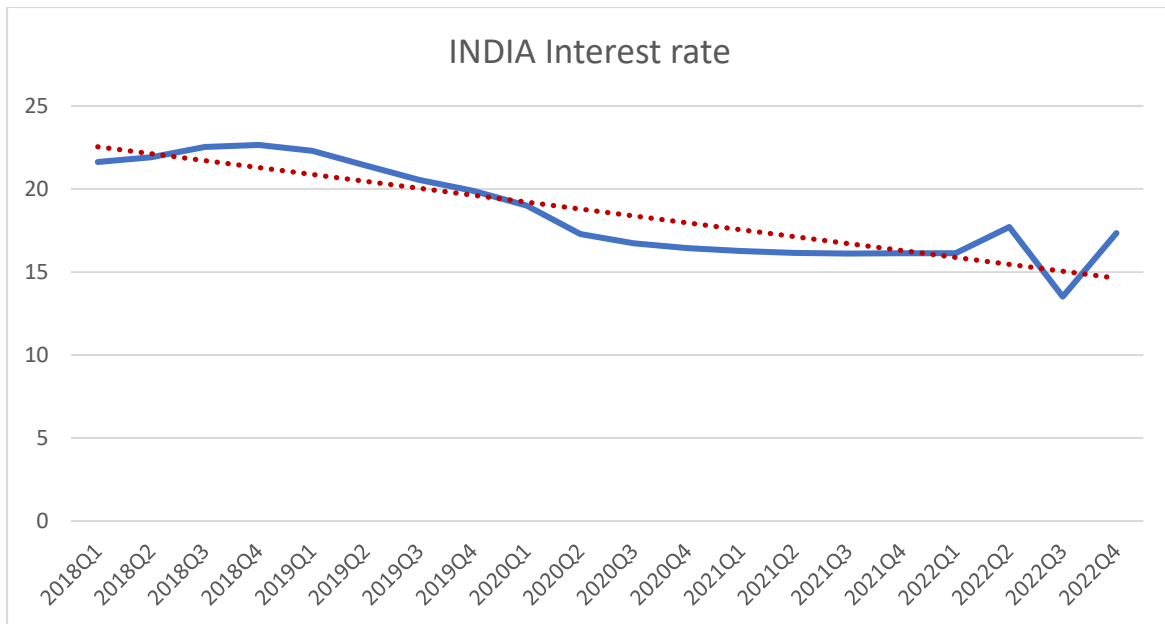




The analysis of the two charts suggests a potential influence of India's trade of goods on MRF Ltd.'s financial performance, particularly due to their raw material purchases from India. Both charts display an upward trend, indicating positive momentum in their respective metrics.

Notably, there is a similarity in the upward trajectory observed in MRF Ltd.'s consumption of raw materials and India's trade of goods. This similarity implies a plausible correlation between the two, suggesting that fluctuations in India's trade dynamics could indeed impact MRF Ltd.'s financial outcomes.

Therefore, monitoring India's trade activities becomes crucial for MRF Ltd. to anticipate potential impacts on its financial performance. This understanding enables the company to adopt proactive strategies, mitigating risks and capitalizing on opportunities arising from changes in India's trade dynamics.

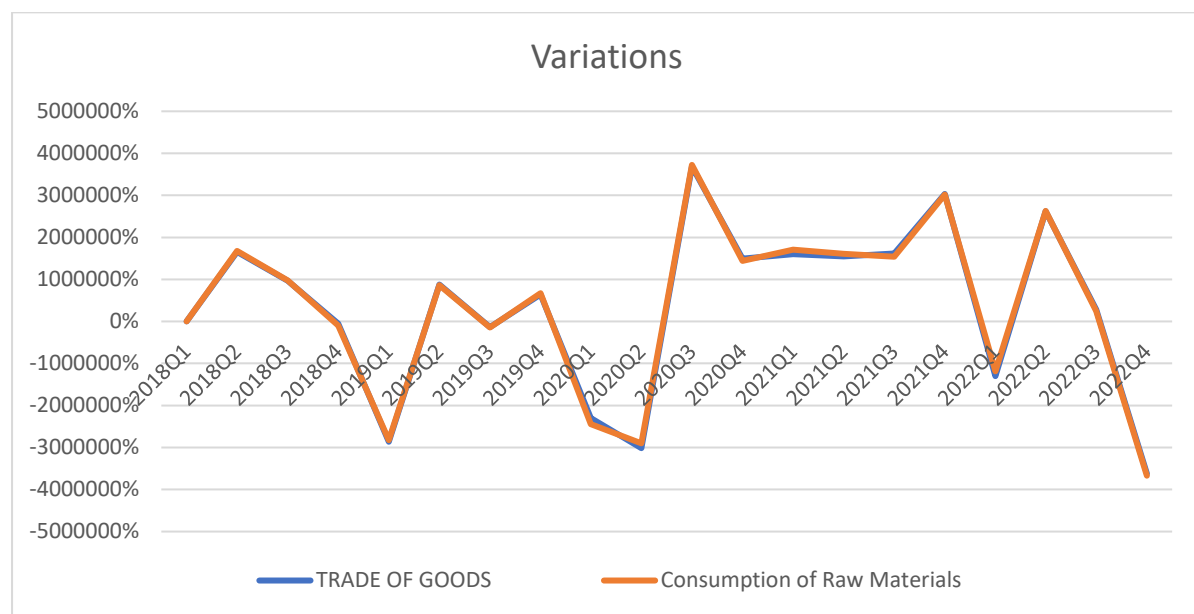


The analysis of both charts, one illustrating MRF Ltd.'s consumption of raw materials and the other showcasing India's interest rates, suggests a potential relationship between the two. While the charts depict different metrics, they exhibit similar cyclical movements over time.

The consumption of raw materials by MRF Ltd. and India's interest rates both display fluctuations over quarters, indicating a shared pattern of variability. This correlation suggests that changes in India's interest rates may influence MRF Ltd.'s financial performance, particularly its raw material costs.

When India's interest rates rise, borrowing costs for businesses like MRF Ltd. may increase, potentially impacting their financial performance by raising the cost of raw material procurement. Conversely, when interest rates decline, borrowing costs may decrease, offering potential cost savings for MRF Ltd.

Variations Chart



Analysis of Trade and Raw Material Consumption

The graph tracks fluctuations in the trade of goods and consumption of raw materials from 2018 to 2022. Notably, trade volumes show peaks and troughs, with a gradual rise until 2019, interrupted by a decline likely due to economic uncertainty. A rebound follows in late 2020 and 2021, possibly due to recovery efforts and supply chain innovations.

Similarly, raw material consumption mirrors trade trends, indicating a close relationship between trade activities and resource utilization. Peaks coincide with economic expansion, while troughs may reflect market corrections or disruptions.

These trends emphasize the dynamic nature of economic activities and the importance of supply chain management in driving growth and sustainability. Stakeholders can leverage this information for strategic decision-making and risk management.

In summary, the variations in trade and raw material consumption offer insights into economic dynamics, guiding stakeholders to navigate evolving market conditions effectively.

Average Trade of Goods of All Countries Chart



Trade Trends: Fluctuations Over Time

The graph shows average trade volumes across multiple countries from 2018 to 2022, revealing dynamic fluctuations. Despite periodic changes, an overall upward trend is evident, particularly from 2018 to 2019. However, growth moderates in later periods, possibly due to trade tensions or economic cycles.

Raw Material Consumption: Reflecting Trade Patterns

Aligned with trade trends, raw material consumption follows a similar pattern, highlighting the symbiotic relationship between economic activity and resource demand. Fluctuations in raw material consumption mirror those in trade, emphasizing the interdependence between trade flows and production processes.

Key Insights: Economic Signals

Peaks in trade volumes and raw material consumption indicate economic expansion, while troughs suggest contraction or market adjustments. These fluctuations underscore the volatility of global markets. The synchronized movements between trade and raw material consumption underscore the interconnectedness of global supply chains.

Conclusion: Strategic Decision-Making

The depicted variations offer valuable insights for strategic decision-making, risk management, and policy formulation. Understanding trade and resource dynamics enables stakeholders to navigate market conditions effectively and seize opportunities.

9.2 Correlation

Pearson's Correlations

Variable		Exchange Rate	Consumption of Raw Materials	Net Profit
1. Exchange Rate	Pearson's r	—		
	p-value	—		
2. Consumption of Raw Materials	Pearson's r	0.158	—	
	p-value	0.518	—	
3. Net Profit	Pearson's r	0.149	0.587	—
	p-value	0.542	0.008	—

The Pearson correlation analysis provides valuable insights into the relationship between three key variables: Exchange rate, Consumption of Raw Materials, and Net Profit. Let's dissect the findings:

Exchange Rate and Consumption of Raw Materials:

The Pearson correlation coefficient between Exchange Rate and Consumption of Raw Materials is 0.158. This suggests a weak positive linear relationship between fluctuations in the exchange rate and the consumption of raw materials.

However, the p-value associated with this correlation is 0.518, indicating that this correlation is not statistically significant. Therefore, while there might be a slight tendency for changes in the exchange rate to coincide with changes in raw material consumption, this relationship is likely due to random chance rather than a true association.

Exchange Rate and Net Profit:

The correlation coefficient between the Exchange Rate and Net Profit stands at 0.149, indicating a similarly weak positive linear relationship between fluctuations in the exchange rate and net profitability.

Similar to the previous correlation, the p-value of 0.542 suggests that this correlation is not statistically significant. Thus, any observed correlation between the exchange rate and net profit may be attributed to random variability rather than a meaningful connection.

Consumption of Raw Materials and Net Profit:

The correlation coefficient between the Consumption of Raw Materials and Net Profit is 0.587, indicating a moderate positive linear relationship between the consumption of raw materials and net profitability.

Importantly, the associated p-value is 0.008, which is below the conventional threshold of 0.05, signifying that this correlation is statistically significant. Thus, the observed relationship between raw material consumption and net profit is likely not due to random chance but instead suggests a meaningful association.

In summary, while statistically significant evidence suggests a moderate positive correlation between the Consumption of Raw Materials and Net Profit, the correlations between the Exchange Rate and both Consumption of Raw Materials and Net Profit are weak and not statistically significant. Therefore, in the context of this analysis, fluctuations in the exchange rate do not appear to have a significant impact on either raw material consumption or net profitability.

Pearson's Correlations

Variable		Trade of Goods	Consumption of Raw Materials	Net Profit
1. Trade of Goods	Pearson's r	—		
	p-value	—		
2. Consumption of Raw Materials	Pearson's r	0.005	—	
	p-value	0.982	—	
3. Net Profit	Pearson's r	-0.022	0.587	—
	p-value	0.929	0.008	—

The Pearson correlation analysis provides valuable insights into the relationship between three key variables: Trade of Goods, Consumption of Raw Materials, and Net Profit. Let's dissect the findings:

Trade of Goods and Consumption of Raw Materials:

The correlation coefficient (Pearson's r) between Trade of Goods and Consumption of Raw Materials is negligibly small at 0.005. This suggests that there is almost no linear relationship between the volume of goods traded and the consumption of raw materials.

Furthermore, the p-value of 0.982 indicates that this correlation is not statistically significant, implying that any observed correlation could likely be due to random chance rather than a true relationship.

Trade of Goods and Net Profit:

The correlation coefficient between the Trade of Goods and Net Profit is also very small, standing at -0.022. This indicates a weak negative linear relationship between the volume of goods traded and net profitability, albeit close to zero.

Importantly, the p-value of 0.929 suggests that this correlation is not statistically significant. Therefore, any observed correlation may be attributed to chance rather than a meaningful association.

Consumption of Raw Materials and Net Profit:

Here, the correlation coefficient is slightly higher at 0.587, indicating a moderate positive linear relationship between the consumption of raw materials and net profitability.

The p-value of 0.008, however, suggests that this correlation is statistically significant at conventional levels (typically $p < 0.05$), implying that the observed relationship is likely not due to random chance.

In summary, while a statistically significant correlation is observed between the Consumption of Raw Materials and Net Profit, the relationships between the Trade of Goods and both Consumption of Raw Materials and Net Profit are weak and statistically insignificant. These findings suggest that other factors beyond the volume of goods traded may have a more substantial impact on both the consumption of raw materials and net profitability in the context of this analysis. Therefore, further investigation into these additional factors is warranted to gain a comprehensive understanding of the dynamics influencing business performance.

Pearson's Correlations

Variable		Interest Rate	Consumption of Raw Materials	Net Profit
1. Interest Rate	Pearson's r	—		
	p-value	—		
2. Consumption of Raw Materials	Pearson's r	-0.083	—	
	p-value	0.737	—	
3. Net Profit	Pearson's r	-0.128	0.587	—
	p-value	0.601	0.008	—

The Pearson correlation analysis provides valuable insights into the relationship between three key variables: Interest Rate, Consumption of Raw Materials, and Net Profit. Let's dissect the findings:

Interest Rate and Consumption of Raw Materials:

The Pearson correlation coefficient between Interest Rate and Consumption of Raw Materials is -0.083. This indicates a weak negative linear relationship between changes in the interest rate and the consumption of raw materials.

However, the associated p-value of 0.737 suggests that this correlation is not statistically significant. Therefore, any observed correlation between the interest rate and raw material consumption is likely due to random variability rather than a meaningful association.

Interest Rate and Net Profit:

The correlation coefficient between Interest Rate and Net Profit is -0.128. This suggests a weak negative linear relationship between fluctuations in the interest rate and net profitability.

Similarly, the p-value of 0.601 indicates that this correlation is not statistically significant. Hence, any observed correlation between the interest rate and net profit may be attributed to chance rather than a genuine connection.

Consumption of Raw Materials and Net Profit:

The correlation coefficient between the Consumption of Raw Materials and Net Profit is 0.587, indicating a moderate positive linear relationship between the consumption of raw materials and net profitability.

Notably, the p-value associated with this correlation is 0.008, which is below the conventional threshold of 0.05. This suggests that the observed correlation between raw material consumption and net profit is statistically significant, implying a meaningful association between these variables.

In summary, while a statistically significant relationship exists between Consumption of Raw Materials and Net Profit, the correlations between Interest Rate and both Consumption of Raw Materials and Net Profit are weak and not statistically significant. Therefore, based on this analysis, fluctuations in the interest rate do not appear to have a significant impact on either raw material consumption or net profitability.

10 Findings

Understanding Economic Influences on MRF Ltd.'s Financial Performance:

The analysis reveals several key insights into the relationship between economic variables and the financial performance of MRF Ltd. Firstly, despite fluctuations in exchange rates across different regions, the company's operational performance, as indicated by raw material consumption and net profit, remains relatively stable over time. This suggests that MRF Ltd has implemented effective risk management strategies to mitigate the impact of currency fluctuations, potentially through hedging practices or localized procurement approaches. The ability to maintain consistent operational performance amidst currency volatility underscores the company's resilience in navigating international economic conditions.

Secondly, there appears to be a correlation between trade dynamics in key markets and MRF Ltd's financial performance. While fluctuations in trade volumes, particularly in countries where MRF Ltd sources raw materials, may influence profitability to some extent, the overall financial performance of the company remains robust. This implies that while external trade dynamics play a role in shaping financial outcomes, MRF Ltd's internal operational efficiency and market positioning are significant drivers of its financial success. However, further analysis is warranted to understand the specific supply chain dynamics and market dependencies underlying this correlation.

Thirdly, the study did not find a direct impact of interest rate fluctuations on MRF Ltd's financial performance. Despite potential changes in borrowing costs resulting from interest rate movements, the company's raw material consumption and net profit did not show significant correlations with interest rate trends. This suggests that MRF Ltd has effectively managed interest rate risks, possibly through prudent financial management practices or diversified funding sources. The company's ability to maintain stable financial performance amidst fluctuating interest rates underscores its resilience and adaptability in managing external economic factors.

Furthermore, while a statistically significant positive relationship exists between raw material consumption and net profit, correlations between economic variables such as exchange rates, trade of goods, and interest rates with raw material consumption or net profit are weak and not statistically significant. This indicates that while external economic trends may have some influence on MRF Ltd's financial performance, internal operational factors play a more substantial role. The findings suggest that MRF Ltd's strategic decisions and operational efficiency are key drivers of its profitability, highlighting the importance of effective risk management and strategic planning in navigating dynamic economic environments.

In conclusion, while external economic trends may pose challenges to companies like MRF Ltd, the findings of this study suggest that the company's financial performance is primarily driven by internal operational factors and strategic decisions. MRF Ltd's ability to maintain stable financial performance amidst fluctuating economic conditions underscores its resilience and adaptability. Moving forward, further research into specific operational aspects and market dynamics will be essential to enhance understanding and inform strategic decision-making for the company.

11 Limitations of the Study: Understanding Boundaries

Despite the valuable insights provided by our study, it's essential to acknowledge its limitations. Firstly, our analysis relies on historical data, which may not fully capture real-time economic shifts and their immediate impact on MRF Ltd.'s financial performance. This means our findings may not perfectly align with future economic trends.

Secondly, our study focuses primarily on quantitative analysis, overlooking qualitative factors like market sentiment and regulatory changes that could also influence MRF Ltd.'s performance. Additionally, while we identify correlations between variables, we can't infer causality, as other unmeasured factors may play a role.

Lastly, the applicability of our findings may be limited to the specific context of MRF Ltd. and the economic environments studied. Different industries and regions may have unique dynamics that affect the relationship between economic trends and financial performance.

In conclusion, while our study offers valuable insights, it's important to consider these limitations when interpreting the findings and applying them to real-world decision-making. Future research could address these limitations by adopting a more holistic approach that integrates qualitative analysis and considers a broader range of contextual factors.

12 Managerial Implications

Currency Risk Management: MRF Ltd, despite maintaining operational stability amidst exchange rate fluctuations, should prioritize enhancing its currency risk management practices. This entails implementing robust hedging strategies to mitigate potential adverse impacts of

currency volatility on raw material procurement costs. Moreover, diversification of the supplier base or negotiation of favourable pricing agreements could reduce reliance on specific currency movements, thereby enhancing resilience against currency risks.

Trade Dynamics Monitoring: The observed correlation between trade dynamics and financial performance underscores the importance of closely monitoring trade activities in key markets where MRF Ltd sources raw materials. Vigilance regarding changes in trade policies, tariffs, and geopolitical developments is crucial. By staying agile in response to evolving trade dynamics, the company can anticipate disruptions and capitalize on emerging opportunities in global markets.

Financial Structure Optimization: While interest rate fluctuations did not significantly affect MRF Ltd's financial performance during the study period, the company should remain vigilant about interest rate risk management. Regular review of the financial structure to ensure an optimal mix of fixed and variable-rate financing instruments is necessary. Additionally, exploring opportunities for debt refinancing during periods of low interest rates can minimize borrowing costs and enhance financial flexibility.

Operational Efficiency Focus: As internal operational factors emerge as significant drivers of profitability, MRF Ltd should prioritize initiatives aimed at enhancing operational efficiency and cost optimization. Investment in technology-driven solutions to streamline production processes, improve inventory management, and reduce wastage can enhance profitability and resilience to external economic fluctuations.

Supplier Base Diversification: To mitigate supply chain risks associated with dependence on specific markets for raw materials, MRF Ltd should consider diversifying its supplier base. Exploration of alternative sourcing options in geographically dispersed regions can reduce vulnerability to disruptions caused by geopolitical tensions or regulatory changes, enhancing supply chain resilience and ensuring operational continuity.

Research and Development (R&D) Investment: To maintain competitiveness in the market, MRF Ltd should allocate resources towards R&D initiatives focused on product innovation and differentiation. Investment in R&D can facilitate the development of cutting-edge products, enhance product quality, and meet evolving customer preferences, thereby sustaining long-term growth and profitability.

Stakeholder Communication Strengthening: Effective communication with stakeholders, including investors, analysts, and regulatory authorities, is paramount for maintaining transparency and building trust. MRF Ltd should prioritize clear and timely communication of its financial performance, strategic initiatives, and risk management practices. Open dialogue with stakeholders can enhance investor confidence and mitigate concerns related to external economic uncertainties.

In summary, by implementing these strategic recommendations, MRF Ltd can strengthen its financial resilience, capitalize on growth opportunities, and navigate the dynamic economic landscape with confidence. Adopting a proactive approach to risk management, operational efficiency, and stakeholder engagement will position the company for sustained success in the competitive global marketplace.

13 Conclusion

In conclusion, the comprehensive analysis of MRF Ltd's financial performance in the context of economic variables provides valuable insights into the company's resilience and adaptability in navigating dynamic market conditions. Despite facing challenges posed by fluctuations in exchange rates, trade dynamics, and interest rates, MRF Ltd has demonstrated robust operational performance and sustained profitability over the study period.

The findings underscore the importance of effective risk management practices, strategic decision-making, and operational efficiency in driving financial sustainability. While external economic factors may exert some influence on the company's financial outcomes, internal operational factors emerge as primary drivers of profitability.

Moving forward, MRF Ltd should continue to prioritize initiatives aimed at enhancing currency risk management, monitoring trade dynamics, optimizing financial structure, and fostering operational efficiency. Additionally, diversifying the supplier base and investing in research and development will further bolster the company's competitive position and resilience in the global marketplace.

By adopting a proactive approach to addressing both internal and external challenges, MRF Ltd can position itself for sustained growth and profitability in the ever-evolving economic

landscape. Effective stakeholder communication and transparency will remain critical in building trust and maintaining investor confidence amidst market uncertainties.

Overall, the study highlights MRF Ltd's ability to navigate complex economic environments and underscores the importance of strategic foresight, agility, and resilience in achieving long-term financial success. As the company continues to evolve, leveraging insights from this analysis will be instrumental in informing strategic decision-making and driving sustainable growth in the competitive global marketplace.

14 Learnings Derived from the Project

14.1 Macro-Micro Linkage:

This project underscores the critical interplay between macroeconomic indicators (such as exchange rates, interest rates, and trade dynamics) and microeconomic variables (like company financial performance). Understanding these linkages is fundamental for making informed financial decisions that consider broader economic trends.

14.2 Risk Management:

The analysis highlights the importance of proactive risk management strategies in mitigating exposure to external economic uncertainties. Learning to identify and hedge against currency risks, interest rate fluctuations, and supply chain disruptions is essential for safeguarding financial stability and maximizing shareholder value.

14.3 Strategic Sourcing:

Examining the impact of exchange rate dynamics on raw material procurement emphasizes the strategic significance of sourcing decisions. Finance professionals must adeptly assess geopolitical risks, market trends, and currency movements to optimize procurement strategies and maintain cost competitiveness.

14.4 Financial Forecasting:

By correlating macroeconomic trends with company performance metrics, this project reinforces the importance of accurate financial forecasting. Finance professionals must leverage quantitative analysis techniques to anticipate market movements, forecast cash flows, and align financial plans with strategic objectives.

14.5 Adaptive Decision-Making:

The dynamic nature of global financial markets necessitates adaptive decision-making. Learning to interpret and respond to evolving macroeconomic indicators empowers finance professionals to adjust corporate strategies, optimize resource allocation, and capitalize on emerging opportunities in a rapidly changing business landscape.

14.6 Holistic Perspective:

Lastly, this project underscores the value of adopting a holistic perspective that integrates financial analysis with broader economic insights. Finance professionals must possess a comprehensive understanding of macroeconomic forces, industry dynamics, and company-specific factors to drive informed decision-making and create sustainable value for stakeholders.

By internalizing these learnings, finance students and professionals can enhance their analytical capabilities, strategic acumen, and risk management expertise, thereby positioning themselves as effective leaders in today's dynamic financial landscape.

15 Task Handled and Learning derived during an Internship

During my enriching four-month internship at MRF Ltd, I undertook a diverse array of responsibilities, each contributing to my professional growth and understanding of the company's operations. One of my primary tasks involved meticulously verifying bills to ensure accuracy in terms of costs, invoice numbers, and prices. Given the substantial sums involved, particularly in crores of rupees, attention to detail was paramount.

I adeptly handled various types of bills, including those for raw materials such as rubber, chemicals, and gas, as well as engineer bills and contract workmen bills. This multifaceted exposure not only honed my analytical skills but also deepened my understanding of the intricate financial processes within the organization.

Furthermore, I was entrusted with the vital responsibility of generating monthly OT reports for contract workmen, requiring me to meticulously track and document their hours worked. This task instilled in me a sense of accountability and time management, as I navigated the intricacies of payroll management.

A significant aspect of my role involved the SAP system, where I gained hands-on experience in booking bills through Miro entries and facilitating the Goods Receipt Note (GRN) process for raw materials in stores. This exposure to enterprise resource planning software provided invaluable insights into modern business operations and enhanced my proficiency in utilizing technology for streamlined workflows.

Moreover, I had the opportunity to contribute to asset capitalization in SAP, further deepening my understanding of financial reporting and asset management practices.

Overall, my internship experience at MRF Ltd was incredibly enriching, allowing me to apply theoretical knowledge in a practical setting and fostering a holistic understanding of corporate finance and operations. Through hands-on tasks and exposure to industry-leading practices, I have emerged as a more competent and confident professional, ready to tackle future challenges with diligence and expertise.

16 Challenges

During my internship at MRF Ltd, I faced various challenges that enriched my learning. Navigating complex billing systems demanded meticulous attention to detail and adherence to tight deadlines, particularly with bills in crores of rupees. Learning SAP software required adapting to new interfaces and procedures for efficient bill processing. Coordinating with multiple departments for information gathering posed communication and coordination challenges. Ensuring compliance with regulations and company policies while managing assets necessitated navigating legal frameworks effectively. Balancing tasks and meeting deadlines amidst large data sets demanded strong time management and organizational skills. Resolving

billing discrepancies and maintaining quality standards were crucial aspects of the role. Adapting to organizational processes and learning contract workmen reporting added to the learning curve. Despite the challenges, each experience contributed significantly to my professional growth at MRF Ltd.

17 References

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18 Appendix

18.1 Samples of the work done

Tax Invoice (ORIGINAL FOR RECEIPT) e-Invoice

IRN: 16886p0d5a987115d284369db6e5869d11f1b90dec87-758458622d888b3
Ack No: 17242935008969
Ack Date: 24-Apr-24

Southern Rubber
Sri Ram Complex
Hosur Road
RD NO: D13/118 VALD TLL: 31/03/2028
GSTIN: 29ACSF9356H1Z5
State: Karnataka, Code: 29
E-Mail: southernrubber711@gmail.com
Company: (Gsta No)

MRF LIMITED, GOA
P/AC: 1, PONDIA
GOA-403401
RE NO: M200319
GSTIN: 30AAACM154G1Z0
State: Goia, Code: 30
Branch: 1, PONDIA
GOA-403401
RE NO: M200319
GSTIN: 30AAACM154G1Z0
State: Goia, Code: 30

Invoice No: e-Way Bill No: 51124-25 191660518
Delivery Note: 24-Apr-24
Reference No. & Date: M2004
Buyer's Order No: 1690302183
Dispatch Date: 12-Apr-24
Destination: PONDIA
COEMO: 100 of Lakshmi, R-200
Main Vehicle No: 5556069 dt. 24-Apr-24
Terms of Delivery: KA12B2673

SI No.	Description of Goods	HSN/SAC	Quantity	Rate	per	Amount
1	NATURAL RUBBER SHEET KADABA	40012100	15,886.00 kg	183.00	kg	45,75,000.00
	IGST			5 %		2,28,750.00
	Total					48,03,750.00

Amount Chargeable (in words): INR Forty Eight Lakh Three Thousand Seven Hundred Fifty Only

INR 48,03,750.00

Company's PAN: ACSF9356H
Disclaimer: We declare that this invoice shows the actual price of the goods described and that all particulars are true and correct.

Tax Invoice (ORIGINAL)

GOA NATURAL GAS PVT LTD
A Joint Venture of GAIL, Gas Ltd & BPCL
Pondia, Goa-403121
GSTIN: 30AAACM154G1Z0
Website: www.goanaturalgas.com

PARTICULARS **SUPPLIER** **BUYER SOLD TO PARTY** **SHIP TO PARTY/ ADDRESS OF DELIVERY**

PAN No: AAGC76344Q
GSTIN No: 30AAACM154G1Z0
GST No: 30AAACM154G1Z0
STATE: GOA
NATURAL GAS
Nature of Document: Bill of Supply as per GST Law

Name of Customer: MRF Limited - Unit 1
Address: P.R No. 1, Ugaon Ponda Goa-403401
Product Partner (RP) No: 1511000024
Master No: 1511000024
Invoice No: 1511000024
Invoice Date: 24-Apr-2024
Due Date of Payment: 04-Apr-2024
Place of supply: Goa

PRODSCT: NATURAL GAS
HSN CODE: 371111
MODE OF TRANSPORT: Natural Gas Pipeline
Exchange Rate(%)
Date of Exchange Rate: 20-03-2024

Particulars	Quantity	Rate	Amount
Natural Gas (in MMBTU)	15,886.00	183.00	45,75,000.00
IGST		5 %	2,28,750.00
Total			48,03,750.00

Amount Chargeable (in words): INR Forty Eight Lakh Three Thousand Seven Hundred Fifty Only

INR 48,03,750.00

Company's PAN: ACSF9356H
Disclaimer: We declare that this invoice shows the actual price of the goods described and that all particulars are true and correct.

18.2 Photos while you are at work

