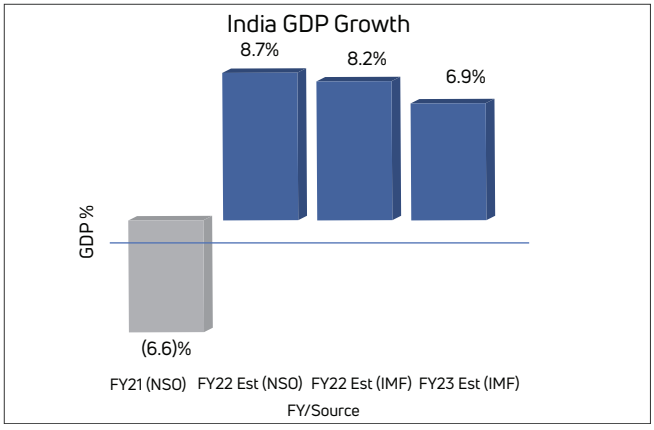
Management Discussion and Analysis

ECONOMY OVERVIEW

INDIA



GDP Growth: The estimates for the Indian economic growth is as above:

National Statistical Office (NSO): GDP estimates released by the NSO show that the Indian economy grew at 8.7% YoY as the fourth quarter of FY 2021-22 grew at 4.1% as compared to fourth quarter of preceding year. The second advance GDP estimates released in February 2022 reaffirmed a resilient and strong recovery of India's economy with the real GDP for FY 2021-22 estimated to exceed the output of the most recent pre-pandemic year of 2020. These estimates are driven by a revival in services, full recovery in manufacturing and sustained growth in agriculture sectors.

International Monetary Fund (IMF): Import and export volumes estimates based on the volumes computed from the current price data, deflated by the WEO price indexes and the NSO price indexes is as below:

Particulars	FY 2021-22	FY 2020-21
Import of Goods and services	22.1%	(13.8)%
Export of Goods and services	20.9%	(6.1)%

Inflation: As per the Monetary Policy Committee (MPC) of RBI, the risks to the near-term inflation outlook are rapidly materialising, as reflected in the inflation print for March 2022 and the developments thereafter. The MPC expects inflation to rule at elevated levels, warranting resolute and calibrated steps to anchor inflation expectations and contain second round effects. Accordingly, in 2022, MPC increased the policy repo rate by 40 bps to 4.4%. Consequently, the standing deposit facility ("SDF") rate stands adjusted to 4.2% and the marginal standing facility ("MSF") rate and the Bank Rate to 4.7%. The MPC also decided to remain accommodative while focusing on withdrawal of accommodation to ensure that inflation remains within the target going forward, while supporting growth.

Automobile Industry: The automobile industry recovered substantially in FY 2021-22 due to increased general economic activity. According to data released by SIAM, the rate of change in industry volumes is depicted in the below table:

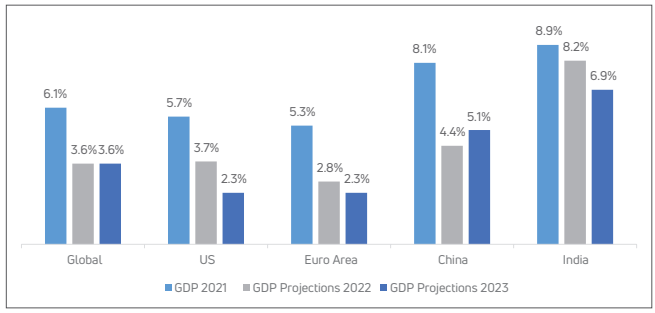
Segment	FY 2021-22	FY 2020-21
Domestic Industry	15.4%	(6.1)%
Commercial Vehicle	26.0%	(20.8)%
Passenger Vehicle	13.2%	(2.2)%

The pre-pandemic FY 2019-20 level was surpassed by the GDP level in FY 2021-22. It crossed not just in aggregate but in all components of the total aggregate demand. On the supply-side, the GVA data showed that in FY 2021-22 the output of all sectors, except the "trade, transport, communication and broadcasting services" had surpassed the FY 2019-20 levels. In terms of quarterly data, output had exceeded pre-pandemic level in aggregate since the second quarter of FY 2021-22 and in the fourth quarter of FY 2021-22 for all sectors, including "trade, transport, communication and broadcasting services".

Distinct month-on-month improvements have been absorbed since December 2021. By February 2022, almost all indicators had moved above pre-pandemic levels, except a few, mainly automobile related, where activity has relapsed due to semi-conductor shortages.

During FY 2021-22, the Indian automotive sector continued to be impacted by several challenges, including the COVID-19 pandemic, the global semiconductors shortage and other supply shortages. Despite the turbulent year, some recovery was observed in the economy at the end of FY 2021-22.

WORLD



Source: IMF

Economic Growth: The Russian invasion of Ukraine is anticipated to have a significant impact on the post-pandemic global economic recovery. Global economic growth for 2022 has been marked down to 3.6%, according to the WEO Update (April 2022 WEO), 0.8% lower than what was projected in the January 2022. The uncertainty on the evolution of both growth and inflation in the past three to four quarters has increased considerably. The prolonged war and its repercussions brought to light the adverse impact of monetary policy tightening that once began in several countries, especially on the growth front. The conflict's extended course and the widespread scale of damage, as well as the broad economic sanctions imposed on Russia by the Western countries since February 2022, have had global ramifications. The supply chain disruptions amplified an already stressed global supply system caused by the COVID-19 pandemic, causing prices of a

number of goods to surge quickly and become volatile on the international markets. In comparison to February 2022, energy prices and the prices of some food goods have risen dramatically. In February-March 2022, crude oil prices increased by roughly 30% on worldwide markets.

Commodities:

Crude oil - Crude oil prices increased approximately 51.4% YOY in 2021, following a spike in October and early November. They resurrected in early 2022, breaking through the US$90 per barrel barrier for the first time in seven years in late January, as demand remained strong and supply faced capacity limits and rising geopolitical tensions. Crude oil prices soared to a 14-year high of US$133 per barrel in the first week of March 2022, with the Russia-Ukraine conflict raising the risk of outright supply losses and OPEC plus providing no respite. Following then, prices have remained erratic, ranging about US$110 per barrel. Despite the volatility, Brent crude oil prices increased by 38% in the first quarter of calendar 2022.

Metals - Between September 2021 and March 2022, base metal prices grew by 25%, according to Bloomberg's base metal spot index. Metal prices have been rising steadily since December 2021, supported by stronger demand predictions as well as limited supplies due to interruptions in a few major metal exporting countries. Most metals reached multi-year highs as a result of the war, with aluminium and nickel leading the way. During the fourth quarter of 2021 and January 2022, gold prices gradually increased and remained around US$1,800 per troy ounce. Bullion prices soared in February as a result of greater flight to safety, before reversing some of their gains in the latter half of March 2022.

China: Chinese equity prices have slumped, particularly in the tech sector, amid new outbreaks of COVID-19 and worsening investor sentiment during 2022, in part reflecting the impact of continued regulatory uncertainty and rising geopolitical risks. Financial stability risks have risen amid ongoing stress in the battered real estate sector, a major source of China's economic growth and household wealth in the past decade. Credit availability has deteriorated for some corporate borrowers, notably home builders, whose offshore US dollar bonds have slumped by more than 50% since the second half of 2021. Amid property market pressures and signs of slowing growth, Chinese authorities have taken steps to ease property sector financing controls, lower policy interest rates, and increase fiscal spending; pledging to stabilise the financial markets and the uncertainty of the tech firms supporting investments.

United States: Real GDP is anticipated to grow by 5.6% in 2021. Supply disruptions will gradually ease, facilitating a rebuild of business inventories and stronger consumption growth in the near-term. With the continued recovery in the labour market, nominal wage growth will pick up further. While price inflation is projected to moderate in some sectors as supply disruptions abate, higher wages, along with recent increases in housing rents and shipping rates, will lead to stronger overall consumer price growth than prior to the pandemic.

Europe: The market capitalization of European banks declined sharply after the Russian invasion of Ukraine. While banks with large exposures to Russia and Ukraine experienced the largest declines, an index of European bank equity prices fell over 20% after February 2022, reflecting in part concerns about a deterioration of the economic and profitability prospects. By contrast, equity prices of US banks dropped only about 8% at the worst point.

Meanwhile, the increase in European bank credit default swap ("CDS") spreads has been more modest, suggesting that investors expect the impact of the war and sanctions on banks' balance sheet and capital to be manageable after a strong rebound in 2021 with GDP growth of 5.2%. With the rapid reopening of the economy, supply chain bottlenecks and the rebound in energy prices are pushing up inflation. Although inflation dynamics vary across the euro area, this is not expected to last, with inflation returning to levels below the ECB objective by the end of 2022.

United Kingdom: In line with the earlier forecast, after a brief contraction at the end of 2021, the economy accelerated following the easing of restrictions from the Omicron wave early in 2022. The growth momentum has however slowed down during the course of the year, as the squeeze on consumer incomes and the impact of higher energy and commodity prices caused by the conflict in Ukraine is felt across. Overall growth for 2022 is estimated to reach 3.9%.

(Source: RBI, World bank, IMF, Oecd, DEA, KPMG, etc.)

The global economic recovery has lost momentum in the second half of 2021 due to resurfacing of COVID-19 infections, it's new variant Omicron, supply disruptions and bottlenecks, elevated inflationary levels and changes in the monetary policy stances, rise in the counterparty risk and actions across advanced economies and emerging market economies.

Automotive Operations

Automotive operations of the Company include:

- all activities relating to the development, design, manufacture, assembly and sale of vehicles as well as related spare parts and accessories
- distribution and service of vehicles and
- financing of the Company's vehicles in certain markets.

The automotive operation is further divided into four reporting segments:

(i) Tata and other brand vehicles - Commercial vehicles;

(ii) Tata and other brand vehicles – Passenger vehicles;

(iii) Jaguar Land Rover; and

(iv) Vehicle Financing.

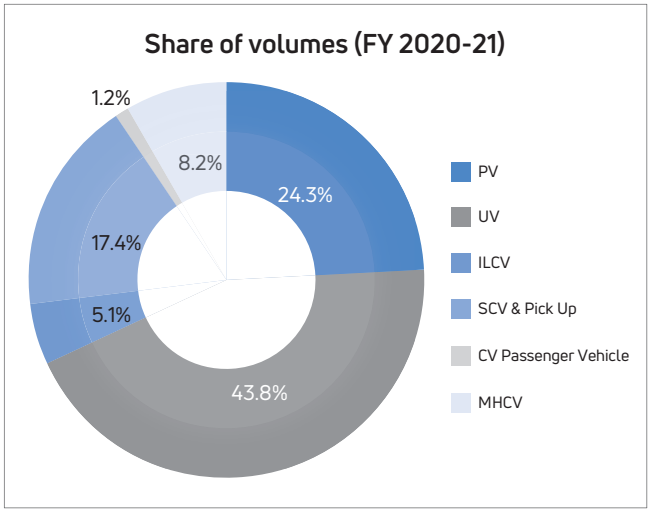
Overview of Automotive Operations

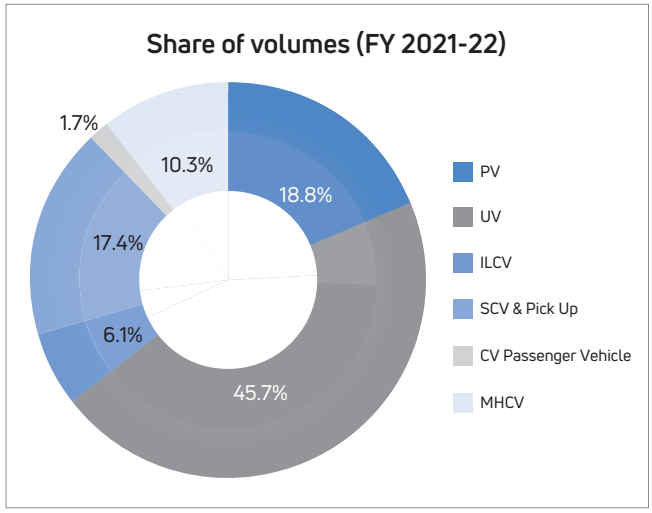
The total vehicle sales worldwide (including international business sales, Jaguar Land Rover sales and (excluding China joint venture) for FY 2021-22 and FY 2020-21 is set forth in the table below:

Category	FY 2021-22 Units	FY 2020-21 Units
Passenger cars	1,94,185	2,03,361
Utility vehicles	4,72,154	3,66,909
Intermediate and Light Commercial Vehicles	63,097	42,386
SCV & Pick Up	1,80,222	1,46,174
CV Passenger Vehicle	17,699	10,377
Medium and Heavy Commercial Vehicles	1,06,547	68,576
Total	**10,33,904**	**8,37,783**

We sold 7,39,722 units of Tata Commercial Vehicles and Tata Passenger Vehicles and 2,94,182 units (excluding wholesales from the China Joint Venture) of Jaguar Land Rover vehicles in FY 2021-22.

In India, we sold 6,93,036 and 4,63,736 units during FY 2021-22 and FY 2020-21, respectively (constituting 67.0% and 55.4% of total sales in FY 2021-22 and FY 2020-21, respectively). In North America, we sold 79,360 units and 93,759 units in FY 2021-22 and FY 2020-21, respectively (constituting 7.7% and 11.2% of total sales in FY 2021-22 and FY 2020-21, respectively).





Tata and other brand vehicles

The following table sets forth our total wholesale sales worldwide of Tata Commercial Vehicles and Tata Passenger Vehicles:

	FY 2021-22		FY 2020-21	
	Units	%	Units	%
Tata Passenger Vehicles	3,72,157	50.3%	2,22,638	45.4%
Tata Commercial Vehicles	3,67,565	49.7%	2,67,513	54.6%
Total	**7,39,722**	**100.0%**	**4,90,151**	**100.0%**

We sold a total of 7,39,722 units in FY 2021-22, of which 6,93,036 units were sold by Tata and other brand vehicles in India and 46,686 units outside India. There were 4,90,511 units sold overall in FY 2020-21, with 4,63,736 units in India and 26,415 units outside India.

We maintained our leadership position in the Commercial Vehicle category in India, which was characterized by increased competition during the year. The Passenger Vehicle market was also subject to competitive pressures.

The following table sets forth our market share in various categories in the Indian market based on wholesale volumes:

Category	FY 2021-22	FY 2020-21
Passenger Cars	9.8%	8.8%
Utility Vehicles	15.1%	7.4%
Total PV	**12.5%**	**8.2%**
Medium and Heavy Commercial Vehicles	58.2%	58.1%
Intermediate and Light Commercial Vehicles	49.0%	45.9%
SCVs and Pickups	39.1%	37.5%
CV Passenger Vehicles	44.8%	40.6%
Total CV	**44.9%**	**42.4%**
Total Four-Wheel Vehicles	**18.8%**	**14.1%**

Source: Society of Indian Automobile Manufacturers Report and our internal analysis.

The following table sets forth our total domestic i.e. India wholesales and retails of Tata Commercial Vehicles and Tata Passenger Vehicles:-

	Wholesale Volume (in units)			Retail Volume (in units)		
	FY 2021-22	FY 2020-21	% change	FY 2021-22	FY 2020-21	% change
Tata Commercial vehicles	3,22,682	2,41,668	33.5	3,19,141	208,437	53.1
Tata Passenger vehicles	3,70,354	2,22,074	66.8	3,63,061	228,863	58.6
Total	**6,93,036**	**4,63,742**	**49.4**	**6,82,202**	**437,300**	**56.0**

Passenger Vehicles in India

Industry sales of Passenger vehicles increased by 13.6% to 29,60,047 units in FY 2021-22 from 26,04,855 units in FY 2020-21. The following table sets forth the breakup of the wholesale sales in various categories.

Category	Industry Sales			Tata Passenger Vehicles Sales		
	FY 2021-22 (in units)	FY 2020-21 (in units)	% change	FY 2021-22 (in units)	FY 2020-21 (in units)	% change
Passenger Cars	14,67,061	15,41,968	(4.9)	1,44,226	1,35,680	6.3
Utility Vehicles	14,92,986	10,62,887	40.5	2,26,128	86,394	161.7
Total	**29,60,047**	**26,04,855**	**13.6**	**3,70,354**	**2,22,074**	**66.8**

Utility Vehicles excludes Van sales

Industry-wide sales of Passenger Cars in India decreased by 4.9% in FY 2021-22, which when compared to the 9.0% decline in FY 2020-21, is lower. Utility Vehicles sales increased by 40.5% in FY 2020-21 which has almost quadrupled with respect to the 11.6% increase in FY 2020-21. The overall industry sales are on the rise since FY 2020-21. Our Passenger Vehicle sales in India increased by 66.8% from 2,22,074 units in FY 2020-21 to 3,70,354 units this fiscal year, reflecting a strong response for the New Forever Range. Retail sales marginally outnumbered wholesale sales, thereby reaffirming strong demand for the New Forever Range and thin pipeline inventory at our dealers.

We sold 1,44,226 units in the Passenger Car category (Tata-brand vehicles in India) in FY 2021-22, compared to the 1,35,680 units in FY 2020-21, an increase of 6.3%. During FY 2021-22, we launched Tigor and Tiago CNG variant. Our market share for Passenger Cars in India rose 9.8% in FY 2021-22, as compared to 8.8% in FY 2020-21.

In the Utility Vehicles category, we sold 2,26,128 units in FY 2021-22, an increase of 161.7% from 86,394 units in FY 2020-21, representing a strong demand for Tata Nexon and Tata Harrier. Our market share of Utility Vehicles in India has doubled and is now at 15.1% in FY 2021-22, during which period we launched Tata Punch.

Tata Motors continued to remain market leader in electric vehicles in India in FY 2021-22 with an 87% share due to a strong response for Nexon EV.

Commercial Vehicles in India

Industry sales of commercial vehicles rose by 26.1% to total 718,155 units in FY 2021-22 compared to the sales of 569,307 units in FY 2020-21. The following table sets forth the breakup of the wholesale sales in various categories.

Category	Industry Sales			Tata Commercial Vehicle Sales		
	FY 2021-22 (in units)	FY 2020-21 (in units)	% change	FY 2021-22 (in units)	FY 2020-21 (in units)	% change
Medium and Heavy Commercial Vehicles (MHCV)	1,51,546	1,00,712	50.5	88,191	58,528	50.7
Intermediate and Light Commercial Vehicles (ILCV)	1,09,997	82,386	33.5	53,847	37,826	42.4
SCVs and Pickups	4,23,560	3,65,347	15.9	1,65,822	1,36,835	21.2
CV Passenger Vehicles	33,052	20,862	58.4	14,822	8,479	74.8
Total	**7,18,155**	**5,69,307**	**26.1**	**3,22,682**	**241,668**	**33.5**

The Commercial Vehicle industry continued to be impacted in FY 2021-22, despite the increase in the total sales figures, as the economy's gradual recovery post the Covid-19 pandemic.

MHCVs in India

In India, we saw a significant increase of 50.5% in the sale of medium and heavy commercial vehicles in FY 2021-22 compared to FY 2020-21. There were 88,191 units sold by the Company in FY 2021-22, compared to the sales of 58,528 units in FY 2020-21 in this segment, an increase of 50.7%. The quarter-on-quarter improvement was observed due to an increase in infrastructure projects, housing construction and the mining segments in India.

ILCVs in India

Our sales in the ILCVs in India increased to 53,847units in FY 2021-22, compared to the 37,826 units in FY 2020-21, representing an increase of 42.4%.

SCVs and Pickups in India

Our sales in SCVs and Pickups segment in India increased by 21.2% from 1,36,835 units in FY 2020-21 to 1,65,822 units in FY 2021-22. Among all segments in commercial vehicles, the SCV and pickup category experienced increased demand from e-commerce players a primarily due to necessity for last-mile distributions.

CV Passenger Vehicles in India

Our sales in CV Passenger Vehicles segment in India increased by 74.8% in FY 2021-22 compared to FY 2020-21, from 8,479 units in FY 2020-21 to 14,822 units in FY 2021-22, largely due to increased demand for public transport due to the recommencement of face-to-face learning in school and colleges and return to office work.

Tata Commercial Vehicles and Tata Passenger Vehicles — Exports

With a global presence in more than 46 countries, including all South Asian Association for Regional Cooperation (SAARC) countries, South Africa, Africa, Middle East and Southeast Asia, we offer a range of products including M&HCV trucks, LCV trucks, buses, pickups and small commercial vehicles. As international business is an integral part of our business portfolio, ever since our inception back in 1961, we strive to maintain, improve and expand our relations with the nations of the world.

Our overall Commercial Vehicle sales in international markets increased by 71.53% to 34,791 units in FY 2021-22, compared to the 20,283 units sold in FY 2020-21. SAARC countries witnessed an increase in volume by 23% over the last financial year despite foreign exchange shortages in Sri Lanka and a liquidity crunch in Nepal, which emerged in the latter half of the year impacting the momentum. Middle-East volume grew by 101% while the African markets grew by 21% over last fiscal year. Democratic Republic Congo achieved highest ever retail of 569 units in FY 2021-22. The new Intra range was introduced in Bangladesh, Kenya & Tanzania in FY 2021-22. Passenger Vehicles exports on the other hand, were at 1,803 units this year, compared to the 566 units sold in FY 2020-21.

Tata Daewoo Commercial Vehicle Co. Ltd or TDCV, our subsidiary company that engages in the design, development, and manufacturing of MHCVs and LCVs, witnessed an increase in overall sales by 84.4% to 9,454 units in FY 2021-22 from 5,127 units in FY 2020-21, primarily due to product range expansion and recovery of domestic as well global market demand. In December 2021, TDCV added a new product range in the LCV segment with the launch of "The CEN" and in January 2022, TDCV strengthened its existing product range by launching new Xeneration models "Maxen" for the HCV segment and "Kuxen" for the MCV segment. All product launches helped generate robust growth of 87.7% in the domestic market from 3,942 units in FY 2020-21 to 7,400 units in FY 2021-22. The export market also exhibited growth in spite of various supply constraints and witnessed an increase of 73.3% from 1,185 units in FY 2020-21 to 2,054 units in FY 2021-22

Tata Commercial Vehicles and Tata Passenger Vehicles — Sales and Distribution

Our sales and distribution network in India as at March 2022 comprised approximately over 6,300 touch points for sales and service for our Passenger Vehicles and Commercial Vehicles businesses. We use a network of service centers on highways and a toll-free customer assistance center to provide 24-hour roadside assistance including replacement of parts, to vehicle owners. We have a toll-free roadside assistance hotline for 24/7 assistance, along with network of service centers along highways that we offer to our vehicle owners. A customer relations management system is maintained at all our dealerships across India to better support users as well as distributors that work with us, across the globe.

Our Commercial Vehicles and Passenger Vehicles have an established market in several countries in Africa, the Middle East, Southeast Asia, South Asia, Australia, Latin America and the Commonwealth of Independent States (CIS) countries. We export our vehicles and maintain a network of distributors in all such countries. These distributors have created a network of dealers and branch offices and facilities for sales and after-sales servicing of our products in their respective markets. We have also stationed overseas resident sales and service representatives in various countries to oversee our operations in the respective territories.

Tata Commercial Vehicles and Tata Passenger Vehicles— Competition

Improved infrastructure and robust growth prospects as compared to other mature markets have attracted strong international companies to India that have either formed joint ventures with local partners or have established independently owned operations in India. Global competitors bring with them their international experience, global scale, advanced technology, and significant financial resources, and as a result, competition is likely to further intensify in the future.

We have designed our products to suit the requirements of the Indian market based on specific customer needs, such as safety, driving comfort, fuel-efficiency and durability. By moving to Bharat Stage VI (BSVI) successfully we have demonstrated our ability to compete with the global players successfully. We believe that our vehicles are suited to the general conditions of Indian roads and the local climate. We also offer a wide range of optional configurations

to meet the specific needs of our customers. We intend to develop and are developing products to strengthen our product portfolio in order to meet the increasing customer expectation of owning world-class products.

Tata Commercial Vehicles and Tata Passenger Vehicles—Seasonality

Demand for our vehicles in the Indian market is subject to seasonal variations. Demand generally peaks in the last quarter of each financial year, i.e., between January and March each year, although there tends to be a decrease in demand in February just before release of the Government of India's fiscal budget. Demand is usually at a moderate level from April to July but gains momentum again from September onwards, due to the festival season, with a decline in December due to year-end.

Tata Commercial Vehicles and Tata Passenger Vehicles—Challenges

Tata Commercial Vehicles - Elevated levels of inflation continue to be a challenge with commodity prices increasing and impacting margins. Other macroeconomic factors, such as fuel price increases and rate hikes are also a key concern as these play an important role in determining freight rates and therefore, transporter profitability. While freight rates have been improving, going forward too, it would need to keep pace with the fuel price increases and impending rate hikes.

Further, although the semiconductor availability is gradually improving, it continues to be below requirement. We continue to debottleneck by reducing semiconductor intensity, evaluating alternate options, localizing and strategically building-up inventory.

Tata Passenger Vehicles - Business environment continues to be challenging, with inflation and commodity price increases impacting profitability and consumer spending power. Semiconductor & other supply constraints are restricting our ability to tap the full demand potential. We will aim to mitigate this risk by innovating and fast tracking our cost reduction efforts to improve profitability

Tata and other brand vehicles – Vehicle Financing

Through our wholly-owned subsidiary TMF Holdings Ltd and its step-down subsidiaries Tata Motors Finance Ltd ("TMFL") and Tata Motors Finance Solutions Ltd ("TMFSL"), we provide financing services to purchasers of our vehicles through independent dealers, who act as our agents for financing transactions, and through our branch network.

TMF group disbursed ₹16,329 crores and ₹13,258 crores in vehicle financing during FY 2021-22 and FY 2020-21, respectively. Approximately 27% and 33%, of our commercial vehicle unit sales in India were made by the dealers through financing arrangements with the Company's captive financing subsidiary during FY 2021-22 and FY 2020-21, respectively. As at March 31, 2022, and 2021, TMF group's customer finance receivable portfolio comprised 787,224 and 718,149 contracts, respectively.

Our portfolio contains ways to follow specified internal procedures, including quantitative guidelines, for s election of our finance customers and assist in managing default and repayment risk. We originate all the contracts through our authorized dealers and direct marketing agents with whom we have agreements. All our marketing, sales and collection activities are undertaken through dealers or by the TMF group.

Based on the evaluation of market conditions and funding requirements, TMFL securitizes or sells our finance receivables. The sell down happens either through Securitization Pass Through Certificates ("PTC") or through direct assignment route. Securitization PTC is backed by credit enhancement where certain percentage of losses are protected to the extent of credit enhancement.

The PTC route is one of the most prominent sources of fund raising in the market. We also do securitization by way of direct assignment where there is no support provided to the pool in the form of credit enhancement. Majorly, these assets are Priority Sector Loan assets because of which demand for direct assignment is good with Public Sector Banks. The constitution of these pools is based on criteria that are decided by credit rating agencies and/or based on the advice that we receive regarding the marketability of a pool. TMFL undertakes these securitizations of our receivables due from purch asers by means of private placement.

Loan contracts of Micro, Small and Medium Enterprises continued to remain stressed during most part of FY 2021-22 because of the pandemic, leading to elevated levels of GNPA. However, with strong recovery of Collection performance in Q4 of the financial year with Maturity Efficiency at 100.2%, GNPA % reduced from 10.4% in Q3 FY 2021-22 to 8.8% as on March 31, 2022. TMF has re-calibrated its collection strategy and organisation to aggressively reduce GNPA over the next six quarters. The steps include (a) Increase in collection personnel by 1,100 to intensify recovery efforts; (b) Increase repossession of assets in a calibrated manner; (c) Existing GNPA customers will be offered settlements basis their eligibility; (d) Leverage digital payment solutions like NACH, RTGS and other online modes and increase digital collection coverage by over 40% of total collections; (e) Strong pre-delinquency management team and call centres for securing prompt payments from customers; and (f) Continue to strengthen data analytics based risk management processes and increase straight through processing.

TMFL acts as the collection agent on behalf of the investors, representatives, special purpose vehicles or banks, in whose favor the receivables have been assigned, for the purpose of collecting receivables from the purchasers on the terms and conditions contained in the applicable deeds of securitization, in respect of which pass-through certificates are issued to investors in case of special purpose vehicles. TMFL also secures the payments to be made by the purchasers of amounts constituting the receivables under the loan agreements to the extent specified by rating agencies by any one or all of the following methods:

1. furnishing collateral to the investors, in respect of the obligations of the purchasers and the undertakings to be provided by TMFL;
2. furnishing, in favor of the investors, certain percentage of the future principal in the receivables as collateral, for securitizations done through FY 2021-22, either by way of a fixed deposit or bank guarantee or subordinate tranche to secure the obligations of the purchasers and our obligations as the collection agent, based on the quality of receivables and rating assigned to the individual pool of receivables by the rating agencies; and
3. by way of over-collateralization or by investing in subordinate pass-through certificates to secure the obligations of the purchasers.

JAGUAR LAND ROVER

Total wholesale and retail volume of Jaguar Land Rover vehicles (excluding Chery Jaguar Land Rover) with a breakdown between Jaguar and Land Rover brand vehicles, in FY 2021-22 and FY 2020-21 are set forth in the table below:

	Wholesale Volume (in units excluding CJLR)			Retail Volume (in units including CJLR)		
	FY 2021-22	FY 2020-21	% change	FY 2021-22	FY 2020-21	% change
Jaguar	**49,510**	**67,333**	**(26.5)**	**77,381**	**97,669**	**(20.8)**
UK	13,822	22,305	(38.0)	17,016	22,529	(24.5)
North America	11,469	13,450	(14.7)	13,785	18,186	(24.2)
Europe	15,178	20,693	(26.7)	17,841	20,578	(13.3)
China	2,887	4,603	(37.3)	21,858	28,181	(22.4)
Overseas	6,154	6,282	(2.0)	6,881	8,195	(16.0)
Land Rover	**244,672**	**280,299**	**(12.7)**	**299,000**	**341,919**	**(12.6)**
UK	43,371	59,195	(26.7)	46,422	60,466	(23.2)
North America	67,881	80,309	(15.5)	77,520	92,619	(16.3)
Europe	49,983	55,913	(10.6)	54,227	58,682	(7.6)
China	38,529	42,542	(9.4)	73,927	83,025	(11.0)
Overseas	44,908	42,340	6.1	46,904	47,127	(0.5)
Jaguar Land Rover	**294,182**	**347,632**	**(15.4)**	**376,381**	**439,588**	**(14.4)**
UK	57,193	81,500	(29.8)	63,438	82,995	(23.6)
North America	79,350	93,759	(15.4)	91,305	110,805	(17.6)
Europe	65,161	76,606	(14.9)	72,068	79,260	(9.1)
China	41,416	47,145	(12.2)	95,785	111,206	(13.9)
Overseas	51,062	48,622	5.0	53,785	55,322	(2.8)
CJLR	53,468	65,279	(18.1)			

Jaguar Land Rover's performance on a wholesale basis:

Wholesales (excluding our China Joint Venture) for the FY 2021-22 were 294,182, down 15.4% compared to FY 2020-21. This reduction was seen in all markets as Jaguar Land Rover felt the impact of semiconductor and supply constraints on production which limited availability of products to our customers. Given these restrictions on availability, we have been able to increase our revenue per unit reflecting the prioritisation of higher margin products giving us a strong mix, particularly in the Range Rover and Defender families.

Jaguar Land Rover's performance on a retail basis:

Retail sales for FY 2021-22 were 376,381, down 14.4% compared to FY 2020-21. This reduction was seen in all markets as Jaguar Land Rover felt the impact of semiconductor and supply constraints on production which limited availability of products to our customers. Given these restrictions on availability, we have been able to increase our revenue per unit reflecting the prioritisation of higher margin products giving us a strong mix, particularly in the Range Rover and Defender families. Demand remains strong with the order bank growing to a new record 168,471 units at March 31, 2022. Orders for the New Range Rover have grown to 45,584, while demand for the Defender remains strong with 40,618 orders.

Retails by powertrain

Jaguar Land Rover continued to roll out electrification technology across its model range in FY 2021-22. The electrified mix, which includes mild hybrid, plug-in hybrid and battery electric vehicles ("BEV"), rose from 51% in FY 2020-21 to 66% in FY 2021-22. During the year we launched the New Range Rover followed by the recently announced New Range Rover Sport, both of which offer extended range plug-in hybrid options today and will offer full BEV options from 2024.

Jaguar Land Rover's Sales & Distribution

As at March 31, 2022, Jaguar Land Rover distributed its vehicles in 119 markets for Jaguar and 123 markets for Land Rover globally. Sales locations for vehicles are operated as independent franchises. Jaguar Land Rover is represented in its key markets through its National Sales Company's ("NSC's") as well as third party importers. Jaguar Land Rover has regional offices in certain select countries that manage customer relationships and vehicle supplies and provide marketing and sales support to its regional importer markets. The remaining importer markets are managed from the United Kingdom.

Jaguar Land Rover products are sold through a variety of sales channels: through its dealerships for retail sales; for sale to fleet customers, including daily rental car companies, commercial fleet customers, leasing companies and governments. Jaguar Land Rover does not depend on a single customer or small group of customers to the extent that the loss of such a customer or group of customers would have a material adverse effect on its business.

Jaguar Land Rover wholesaled 6,497 vehicles to Russia in FY 2021-22, around 2% of its wholesales (excluding CJLR) in FY 2021-22. The impact on revenues as a result of sanctions in Russia has been modest. It is Jaguar Land Rover's corporate policy to operate its business in accordance with all applicable export controls and sanctions. Jaguar Land Rover has suspended vehicle imports to Russia to comply with recent export restrictions. We continue to import a restricted range of safety-related parts to Russia for the repair of vehicles in market in compliance with relevant sanctions and export controls measures in place.

As at March 31, 2022, the Jaguar Land Rover global sales and distribution network comprised 19 NSCs, 80 importers, one export partner and 2,782 franchise sales dealers in 1,477 sites, of which 1,305 are joint Jaguar and Land Rover dealers.

Jaguar Land Rover — Competition

Jaguar Land Rover operates in a globally competitive environment and faces competition from established premium and other vehicle manufacturers who aspire to move into the premium performance car and premium SUV markets, some of which are much larger than they are. Jaguar vehicles compete primarily against other European brands such as Audi, Porsche, BMW and Mercedes Benz as well as Tesla. Land Rover and Range Rover vehicles compete largely against SUVs from companies such as Audi, BMW, Infiniti, Lexus, Mercedes Benz, Porsche, Volvo and Volkswagen.

Jaguar Land Rover — Seasonality

Jaguar Land Rover volumes are impacted by the biannual change in age related registration plates of vehicles in the United Kingdom, where new age related plate registrations take effect in March and September each year. This has an impact on the resale value of the vehicles because sales are clustered around the time of the year when the vehicle registration number change occurs. Seasonality in most other markets is driven by the introduction of new model year vehicles and derivatives. Furthermore, Western European markets tend to be impacted by summer and winter holidays, and the Chinese market tends to be affected by the Lunar New Year holiday in either January or February, the PRC National Day holiday, and the Golden Week holiday in October. The resulting sales profile influences operating results on a quarter to quarter basis.

Jaguar Land Rover — Challenges

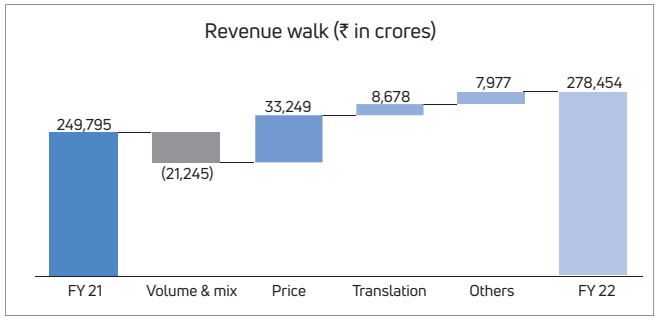
Full year performance in FY22 was significantly impacted by the constraint on production and sales resulting from the global chip shortage. The ongoing supply challenges are compounded by the conflict in Ukraine and China covid lockdowns. We expect the global semiconductor shortage to continue through the next fiscal year with gradual improvement. We continue to engage with Tier 1 and chip suppliers to increase supply of chips and mitigate other supply chain disruptions. Further, inflation represents an increasing headwind for the business and we expect our Refocus actions to help mitigate this in the coming year.

Other Operations

In addition to our automotive operations, we are also involved in other business activities, mainly Information Technology services. The Company's revenue from other operations before inter-segment eliminations was ₹3,809 crores in FY 2021-22, an increase of 45.8% from ₹2,612 crores in FY 2020-21. The increase in revenue of Tata Technologies is due to due to relaxation in regulatory and health guidelines that enabled improved business activities coupled with new business opportunities in South East Asia. Revenues from other operations represented 1.4% and 1.0% of our total revenues, before inter-segment eliminations, in FY 2021-22 and FY 2020-21, respectively.

A. OPERATING RESULTS

All financial information discussed in this section is derived from our Audited Consolidated Financial Statements.



Overview

In FY 2021-22 income from operations including finance revenues increased by 11.3% to ₹278,454 crores from ₹249,795 crores in FY 2020-21. This increase was mainly attributable to increased vehicle volumes, mainly for Tata Commercial Vehicles and Passenger Vehicles and favorable currency translation from GBP to INR which was offset by lower sales volumes at Jaguar Land Rover.

The net loss (attributable to shareholders of our Company) was ₹11,441 crores in FY 2021-22, compared to a loss of ₹13,451 crores in FY 2020-21. In FY 2020-21, we have taken a charge of ₹14,994 crores for our Jaguar Land Rover business due to the Reimagine strategy, reversal of impairment charge and onerous contract of ₹1,959 crores for our passenger vehicle business of Tata Motors Ltd. Excluding the exceptional items, loss before tax was ₹6,448 crores in FY 2021-22, as compared to profit before tax of ₹2,908 crores in FY 2020-21. This loss was due to lower sales at Jaguar land Rover due to semi-conductor chip shortages and commodity price increase across all segments.

Automotive operations

Automotive operations is our most significant segment, accounting for 99.2% and 99.4% of our total revenues in FY 2021-22 and FY 2020-21, respectively. In FY 2021-22, revenue from automotive operations before inter-segment eliminations was ₹275,780 crores compared to ₹248,181 crores in FY 2020-21.

	FY 2021-22	FY 2020-21	Change %
Total revenue (₹ in crores)	2,75,780	248,181	11.1
Earning before other income (excluding incentives), finance costs, foreign exchange gain/(loss) (net) and tax (₹ in crores)	1,424	8,541	(83.3)
Earning before other income (excluding incentives), finance costs, foreign exchange gain/(loss) (net) and tax (% to total revenue)	0.5%	3.4%	

Our automotive operations segment is further divided into four reporting segments: Tata Commercial Vehicles, Tata Passenger Vehicles, Jaguar Land Rover and Vehicle financing.

Category	Total Revenues (₹ crores)		Earning before other income (excluding incentives),finance costs, foreign exchange gain/(loss) (net)and tax (₹ crores)		Earning before other income (excluding incentives), finance costs, foreign exchange gain/(loss) (net) and tax (% of revenue)	
	FY 2021-22	FY 2020-21	FY 2021-22	FY 2020-21	FY 2021-22	FY 2020-21
Tata Commercial Vehicle	52,287	33,104	210	(305)	0.4	(0.9)
Tata Passenger Vehicle	31,515	16,606	(660)	(1,564)	(2.1)	(9.4)
Jaguar Land Rover	187,697	193,823	(439)	7,691	(0.2)	4.0
Vehicle Financing	4,585	4,490	2,466	2,794	53.8	62.2
Unallocable	314	283	(62)	(75)	(19.9)	(26.5)
Intra- segment elimination	(618)	(125)	(90)	-	(14.6)	-
Total	**275,780**	**248,181**	**1,424**	**8,541**		

In FY 2021-22, Jaguar Land Rover contributed 68% of our total automotive revenue compared to 78% in FY 2020-21 (before intra-segment elimination) and the remaining 32% was contributed by Tata and other brand vehicles and Vehicle Financing in FY 2021-22, compared to 22% in FY 2020-21.

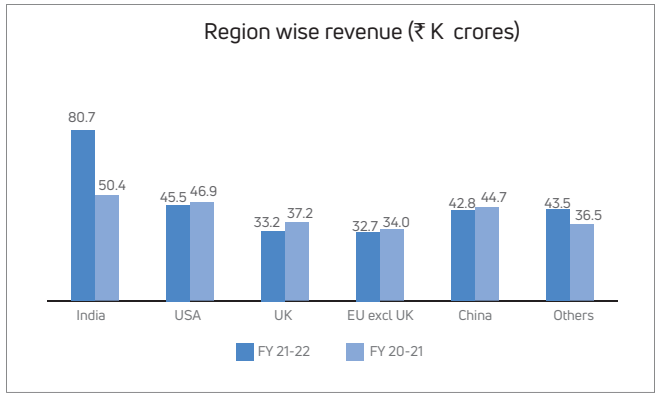
Other operations

Our other operations business segment mainly includes information technology services, machine tools and factory automation solutions. The following table sets forth selected data regarding our other operations for the periods indicated and the percentage change from period to period (before inter-segment eliminations).

Particulars	FY 2021-22	FY 2020-21	Change (%)
Total revenue (₹ in crores)	3,809	2,612	45.8%
Earning before other income, interest and tax (₹ in crores)	625	319	95.9%
Earning before other income, interest and tax (% of revenue)	16.4%	12.2%	

Geographical Breakdown

In FY 2021-22, volume and percentage of revenues in India have improved from FY 2020-21 levels. As a result of lower sales by Jaguar land Rover, there is a reduction in revenue across most geographical markets in FY 2021-22. Due to the ongoing global semiconductor chip shortage, Jaguar Land Rover wholesale volumes declined in all regions including in China (down 12.2% year-on-year), Europe (down 14.9%), North America (down 15.4%) and in the UK (down 29.8%). Overseas market increased by 5% year-on-year. In addition to the COVID-19 pandemic, other factors impacting automotive industry sales during FY 2021-22 included regulatory and emissions challenges as well as continuing trade tensions and other geopolitical pressures. The following chart sets forth our revenue from key geographical markets:



The "EU excluding UK" market is geographic Europe, excluding the United Kingdom and Russia. The "Others Rest of World" market is any regions not included above.

The following table sets forth selected items from our consolidated statements of income for the periods indicated and shows these items as a percentage of total revenue:

Particulars	FY 2021-22 (%)	FY 2020-21 (%)	Difference (Bps)
Revenue from operations	100	100	-
Expenditure:			
Cost of material consumed (including change in stock)	65.0	63.4	(160)
Employee Cost	11.1	11.1	-
Product development/ Engineering expenses	3.3	2.1	(120)
Other expenses (net)	16.9	16.4	(50)
Amount transferred to capital and other accounts	(5.2)	(5.1)	(10)
Total Expenditure	91.1	87.8	(330)
Profit before other income, Depreciation and amortization, Finance costs, Foreign exchange (gain)/loss, exceptional item and tax	8.9	12.2	(330)
Other Income	1.1	1.1	-
Profit before Depreciation and Amortization, Finance costs, Foreign exchange (gain)/loss, exceptional item and tax	10.0	13.3	(330)
Depreciation and Amortization	8.9	9.4	50
Finance costs	3.3	3.2	(10)
Foreign exchange (gain)/loss (net)	-*	(0.7)	(70)
Exceptional Item (gain)/loss (net)	0.2	5.5	530
Profit/(loss) before tax	(2.5)	(4.2)	170
Tax expense / (credit)	1.5	1.0	(50)
Profit/(loss) after tax	(4.0)	(5.2)	120
Share of profits/(loss) of equity accounted investees (net)	-*	0.2	(20)
Profit/(loss) for the year	(4.1)	(5.4)	140
EBITDA	9.6	12.2	(260)
EBIT	0.7	2.6	(190)

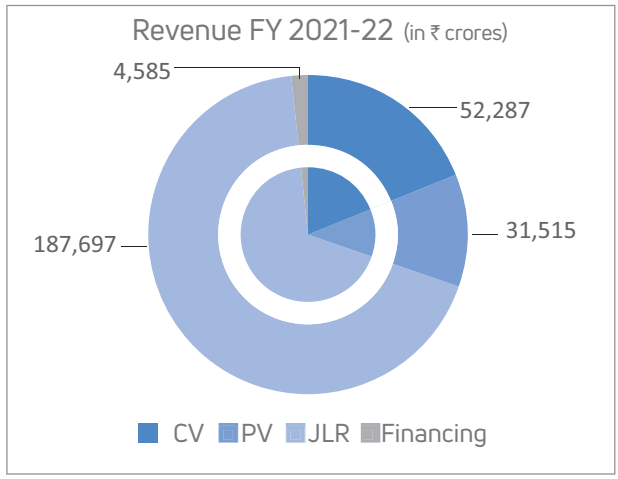
Less than 0.0%

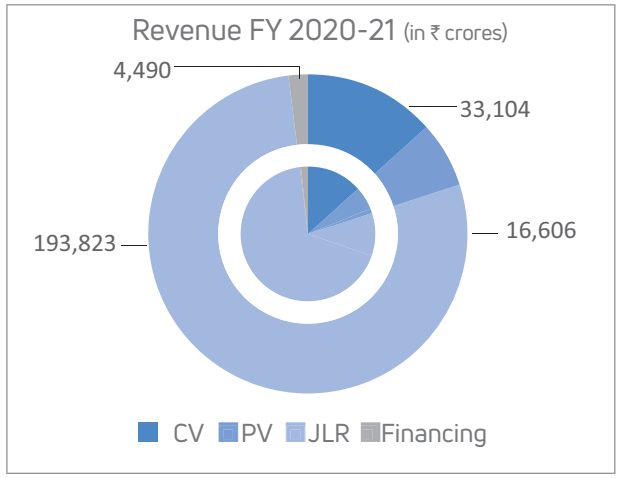
EBITDA is defined to include the product development expenses charged to P&L, revaluation of current assets and liabilities and realized FX and commodity hedges but excludes the revaluation of foreign currency debt, MTM on FX and commodity hedges, other income (except government grant) as well as exceptional items.

EBIT is defined as reported EBITDA plus profit from equity accounted investee less depreciation and amortization.

REVENUE ANALYSIS:

Our total consolidated revenue from operations including finance revenue, increased by 11.5% to ₹278,454 crores in FY 2021-22 from ₹249,795 crores in FY 2020-21. Revenue from the sale of vehicle increased to ₹227,179 crores in FY 2021-22, compared to ₹206,419 crores, an increase of 10.1%. We sold 1,033,904 vehicles in FY 2021-22, compared to 837,783 vehicles in FY 2020-21.





The revenue of our Tata brand vehicles including vehicle finance increased by 62.8% to ₹88,701 crores in FY 2021-22 from ₹54,484 crores in FY 2020-21, mainly due to increased volumes both in commercial vehicles and passenger car segment. The revenue from Tata commercial vehicle was ₹52,287 crores in FY 2021-22, compared to ₹33,104 crores in FY 2020-21, an increase of 57.9%. Our revenues from sales of vehicles and spare parts of Commercial Vehicles manufactured in India increased by 57.0% to ₹46,171 crores in FY 2021-22 from ₹29,415 crores in FY 2020-21. The revenue from Tata Passenger Vehicles was ₹31,515 crores in FY 2021-22, compared to ₹16,606 crores in FY 2020-21, an increase of 89.8%. Our revenues from sales of vehicles and spare parts of Passenger Vehicles manufactured in India increased by 86.5% to ₹30,883 crores in FY 2021-22 from ₹16,559 crores in FY 2020-21.

The revenue from Passenger Cars in India has decreased by 18.6% to ₹4,744 crores in FY 2021-22 from ₹5,832 crores in FY 2020-

21. However, revenue from Electric vehicle increased to ₹1,349 crores in FY2021-22 from ₹571 crores in FY 2020-21 and Utility Vehicles increased by 37.7% to ₹8,988 crores in FY2021-22 from ₹6,534 crores in FY 2020-21. The increase in Passenger Vehicles was mainly on account of pent-up demand, better products and safety features of our New forever range of vehicles.

The revenue from Commercial Vehicle in ILCVs category increased by 54.0% to ₹6,233 crores in FY 2021-22 from ₹4,047 crores in FY 2020-21. The SCVs and Pickups category in India increased by 27.9% to ₹6,169 crores in FY 2021-22 from ₹4,824 crores in FY 2020-21. Revenues from MHCVs category increased by 57.6% to ₹21,759 crores in FY 2021-22 from ₹13,808 crores in FY 2020-21 and CV Passenger Vehicles category revenue increased by 83.6% to ₹1,978 crores in FY 2021-22 from ₹1,078 crores in FY 2020-21. The revenue of commercial vehicle at overall level increased, due to an increase in infrastructure projects, housing construction and the mining segments in India. increased demand from e-commerce players due to the necessity of last-mile distributions.

Revenue attributable to TDCV, increased by 61% to ₹5,352 crores in FY 2021-22 from ₹3,316 crores in FY 2020-21. TDCV witnessed an increase in overall sales by 84.4% to 9,454 units in FY 2021-22 from 5,127 units in FY 2020-21. In South Korea, TDCV's sales increased by 33.8% from 3,701 units in FY 2020-21 to 4,953 units in FY 2021-22. Due to its product range expansion, the variety of options to choose from increased the total domestic sales increased by 87.7% from 3,942 units in FY 2020-21 to 7,400 units in FY 2021-22. With the economy in its recovery phase, the export market experienced significant increase of 73.3% from 1,185 units in FY 2020-21 to 2,054 units in FY 2021-22.

Revenue from our Vehicle Financing operations increased marginally by 2.1% to ₹4,585 crores in FY 2021-22, compared to ₹4,490 crores in FY 2020-21. This is mainly due to growth in average loan book.

The revenue of our Jaguar Land Rover business decreased by 3.2% to ₹1,87,796 crores in FY 2021-22 from ₹1,93,823 crores in FY 2020-21. This was partially offset by a favorable translation of ₹7,524 crores from GBP to Indian rupees in FY 2021-22. Excluding currency translation, the revenue of Jaguar Land Rover decreased by 6.5% to GB£18,320 million in FY 2021-22 from GB£19,731 million in FY 2020-21. Jaguar Land Rover wholesale volumes declined across all key regions in FY 2021-22, down 15.4% year on year compared to FY 2020-21, except in Overseas where wholesales grew 5% year-on-year. The reduction in revenue was much lower than the decline in wholesales, reflecting the strong favorable sales mix, higher average revenue per vehicle and much lower variable marketing incentive spending during the year. Jaguar brand vehicles sales were 49,510 units in FY 2021-22 from 67,333 units in FY 2020-21, a decrease of 26.5%, and Land Rover vehicles sales from 280,299 units in FY 2020-21 to 244,672 units in FY 2021-22, a decrease of 12.7% (volumes excluding the China Joint Venture).

Revenue from other operations (before inter-segment eliminations) increased by 45.8% to ₹3,809 crores in FY 2021-22 compared to ₹2,612 crores in FY 2020-21. This is mainly on account of increase in revenue of Tata Technologies post recovery from the COVID-19 pandemic.

Cost and Expenses

Raw Materials, Components and Purchase of Products for Sale (including change in inventories of finished goods and work-in-progress)

Material costs increased by 14.3% to ₹1,80,886 crores in FY 2021-22 from ₹1,58,292 crores in FY 2020-21, in line with increase in revenue. As a percentage of revenue material costs are 65.0% in FY 2021-22, compared to 63.4% in FY 2020-21, mainly due to a change in product mix. and increase in commodity prices.

Material costs for Tata Commercial Vehicles and Tata Passenger Vehicles increased by 75.0% to ₹65,856 crores in FY 2021-22 from ₹37,603 crores in FY 2020-21, due to increased volumes. The material costs as a percentage of total revenue increased to 78.3% in FY 2021-22, compared to 75.6% in FY 2020-21, primarily due to a change in product mix and increase in commodity prices especially steel and other precious metal.

For our India operations, material costs of Passenger Vehicles decreased to ₹4,413 crores in FY 2021-22, compared to ₹5,258 crores in FY 2020-21, in line with decrease in revenues. Electric Vehicles increased to ₹1,199 crores in FY 2021-22, compared to ₹504 crores in FY 2020-21 and Utility Vehicles increased by 41.3% to ₹7,451 crores in FY 2021-22, compared to ₹5,273 crores in FY 2020-21. The increase in material costs is mainly due to increased sales volumes and increased commodity prices.

Material costs for ILCVs category increased by 73.3% to ₹5,404 crores in FY 2021-22, compared to ₹3,119 crores in FY 2020-21 and for SCVs and Pickups increased by 39.0% to ₹5,444 crores in FY 2021-22, compared to ₹3,917 crores in FY 2020-21 mainly due to increase in volumes and increase in commodity prices. Material costs for MHCVs category increased by 76.4% to ₹17,978 crores in FY 2021-22, compared to ₹10,191 crores in FY 2020-21 and for CV Passenger Vehicles category substantially increased to ₹1,707 crores in FY 2021-22, compared to ₹828 crores in FY 2020-21 mainly due to increase in volumes and increase in commodity prices. The material costs as a percentage of revenue marginally increased to 86.6% in FY 2021-22, compared to 85.3% in FY 2020-21.

Material costs increased by 52% to ₹3,522 crores in FY 2021-22, compared to ₹2,319 crores in FY 2020-21 for TDCV, primarily due to higher volumes, both in the domestic (South Korea) market and exports. As a percentage of total revenue, material costs decreased marginally due to 62.5% in FY 2021-22, compared to 69.9% in FY 2020-21, primarily due to product mix (introduction of LCVs).

At our Jaguar Land Rover operations, material costs in FY 2021-22 decreased by 5.0% to ₹1,14,339 crores, from ₹1,20,335 crores in FY 2020-21. The decrease was partially offset by an unfavourable currency translation from GBP to Indian rupees of ₹4,708 crores. Excluding currency translation, material costs attributable to our Jaguar Land Rover operations decreased by 9.0% to GB£11,235 million in FY 2021-22 from GB£12,335 million in FY 2020-21, mainly due to a 15.4% decrease in sales volume and change in product mix. Material costs at our Jaguar Land Rover operations as a percentage of revenue decreased to 61.0% in FY 2021-22, from 62.5% in FY 2020-21 (in GBP terms).

Employee Costs

Our employee costs went up in FY 2021-22 to ₹30,809 crores from ₹27,648 crores in FY 2020-21, including the foreign currency translation impact from GBP to Indian rupees as discussed below.

Our permanent employee headcount decreased by 2.2% as at March 31, 2022, to 73,608 employees from 75,278 employees as at March 31, 2021, primarily due to voluntary early separations that commenced in third quarter of FY 2020-21 at Tata Motors and Jaguar Land Rover. However, the average temporary headcount has increased to 40,717 employees in FY 2021-22 from 28,291 employees in FY 2020-21, due to increase in productions, mainly at Tata Commercial and Passenger vehicles.

The employee costs for Tata Commercial Vehicles and Tata Passenger Vehicles increased by 11.8% to ₹6,169 crores in FY 2021-22 from ₹5,517 crores in FY 2020-21, mainly due to yearly increments and increase in temporary headcount. The employee costs as a percentage of revenue decreased to 6.0% in FY 2021-22 from 9.0% in FY 2020-21, mainly due to increase in revenue.

Employee costs at Tata Motors Ltd, the parent company increased by 7.4% to ₹3,466 crores in FY 2021-22 from ₹3,226 crores in FY 2020-21, mainly due to annual increments and increase in production. Employee costs of Tata Motors Passenger Vehicles increased by 28.4% to ₹977 crores in FY 2021-22 from ₹761 crores in FY 2020-21, mainly due to annual increments and increase in production. The permanent headcount decreased by 1.7% as of March 31, 2022, to 36,660 employees from 37,301 employees as of March 31, 2021, due to voluntary early separations commenced in the third quarter of FY 2020-21 at Tata Motors.

Employee costs at TDCV were increased to ₹787 crores in FY 2021-22, compared to ₹687 crores in FY 2020-21 primarily due to reintroduction of overtime allowance and corresponding higher provision requirement for Severance Pay and wage negotiations during FY 2021-22.

The employee costs at Jaguar Land Rover increased by 10.5% to ₹23,058 crores (GB£2,265 million) in FY 2021-22 from ₹20,873 crores (GB£2,141 million) in FY 2020-21. The increase was also due to an unfavourable foreign currency translation impact from GBP to Indian rupees of ₹1,005 crores. In FY 2020-21, furlough grant of ₹1,824 crores (GB£188 million) was received under the UK government's Coronavirus Job Retention Scheme. compared to ₹136 crores (GB£14 million) in FY 2021-22. The average headcount reduction of 10.1% (FY 2021-22 average 36,031 vs FY 2021-22 average 37,543). The employee costs as a percentage of revenue increased to 12.3% in FY 2021-22 from 10.9% in FY 2020-21 (in GBP terms) due to lower revenues and reduction in the furlough grant.

Product development/Engineering expenses

Product development/Engineering expenses represent research costs and costs pertaining to minor product enhancements, refreshes, and upgrades to existing vehicle models. These represented 3.3% and 2.1% of total revenues ₹9,210 crores and ₹5,227 crores for FY 2021-22 and FY 2020-21, respectively. The increase is attributable to spend on pre-capitalization on various projects.

Other Expenses

Other expenses increased by 15.2% to ₹47,134 crores in FY 2021-22 from ₹40,922 crores in FY 2020-21. There was an unfavourable foreign currency translation of GBP to Indian rupees of ₹1,588 crores. As a percentage of total revenues, these expenses increased to 16.9% in FY 2021-22 from 16.4% in FY 2020-21.

The major components of expenses are as follows:

	FY 2021-22	FY 2020-21	Change %	% to revenue	
	₹ in crores	₹ in crores		FY 2021-22	FY 2020-21
Freight, transportation, port charges, etc.	6,278	5,716	9.8%	2.3%	2.3%
Works operation and other expenses	15,556	14,230	9.3%	5.6%	5.7%
Publicity	4,864	4,385	10.9%	1.7%	1.8%
Provision and write off of sundry debtors, vehicle loans and advances (net)	1,427	979	45.8%	0.5%	0.4%
Warranty charges	8,775	7,609	15.3%	3.2%	3.0%
Processing charges	1,406	966	45.6%	0.5%	0.4%
Stores, spare parts and tools consumed	1,446	1,279	13.1%	0.5%	0.5%
Power and fuel	2,178	1,113	95.7%	0.8%	0.4%
Information technology/computer expenses	3.544	2,720	30.3%	1.3%	1.1%
Engineering expenses	3,031	3,308	8.4%	1.1%	1.3%
MTM (gain)/loss on commodity derivatives	(1,371)	(1,382)	(0.8)%	(0.5)%	(0.6)%
TOTAL	**47,134**	**40,922**	**15.2%**	**16.9%**	**16.4%**

1. Freight and transportation expenses increased by 9.8% to ₹6,278 crores in FY 2021-22. This increase was also due to an unfavourable currency translation of ₹200 crores from GBP to INR. At Jaguar Land Rover freight and transportation expenses decreased marginally from GB£499 million in FY 2020-21 to GB£485 million in FY 2021-22, mainly due to lower sales volumes offset by increase in crude oil prices. For Tata Passenger and Commercial vehicles (India Operations), expenses increased by 58.8% from ₹787 crores in FY 2020-21 to ₹1,250 crores in FY 2021-22 on account of higher production and sales, for both commercial vehicles and passenger vehicles due to increase demand.
2. Our works operation and other expenses represented 5.6% and 5.7% of total revenue in FY 2021-22 and FY 2020-21, respectively. Other expenses mainly relate to volume-related expenses at Jaguar Land Rover and Tata Motors Limited. On absolute terms, the expenses increased to ₹15,556 crores in FY 2021-22 from ₹14,230 crores in FY 2020-21, mainly on account of miscellaneous contract job/outsourcing expenses and software maintenance/AMC expenses. This increase was also due to an unfavourable currency translation of ₹1,048 crores from GBP to INR.
3. Publicity expenses were almost constant at 1.7% and 1.8% of our total revenues in FY 2021-22 and FY 2020-21, respectively. This was also due an unfavourable currency translation of ₹1,048 crores from GBP to INR. The publicity expenses at TML increased to ₹640 crores in FY 2021-22, compared to ₹444 crores in FY 2020-21. The publicity expenses at Jaguar Land Rover increased marginally to GB£402 million (2.2% of the revenue) in FY 2021-22, compared to GB£397 million (2.0% of revenue) in FY 2020-21. Marketing activity was limited early in the year due to the ongoing impact of the COVID-19 pandemic, though routine product and brand campaigns increased expenditure through to the end of March 31, 2022, particularly in China, US, and UK. In addition to routine product and brand campaigns, we incurred expenses relating to new product introduction campaigns in FY 2021-22, mainly the new Range Rover at Jaguar Land Rover and the Punch, Tiago and Tigor CNG, Ace EV at Tata Motors India operations.
4. The allowances for finance receivables related to Vehicle Financing segment. These mainly reflect provisions for the impairment of vehicle loans of ₹1,308 crores for FY 2021-22, compared to ₹958 crores in FY 2020-21. The increase was mainly due to reduced collection efficiency owing to restrictions of field operations workforce getting touch with customers on accounted of lockdown in the country in the first quarter of FY 2021-22. This resulted in significant increase in delinquencies leading to roll- forward of customer accounts into higher buckets and accordingly lead to increase in the provision. The allowances for trade and other receivables were ₹151 crores in FY 2021-22, compared to ₹50 crores in FY 2020-21. The increase in provision is mainly on loans and advances given to channel partners. Further, there was a net provision of GB£3 million in FY 2021-22 as compared to net reversal of GB£3 million in FY 2020-21 at Jaguar Land Rover.
5. Warranty and product liability expenses represented 3.2% and 3.0% of our total revenues in FY 2021-22 and FY 2020-21, respectively. The warranty expenses at Jaguar Land Rover increased to GB£748 million (4.1% of the revenue) in FY 2021-22, compared to GB£706 million (3.6% of revenue) in FY 2020-21, mainly based on historical warranty claim experience, frequency and extent of vehicles faults historically as well as recall campaigns. For Tata Motors' Indian operations, these represent 1% and 0.9% of the revenue for FY 2021-22 and FY 2020-21, respectively, due to quality improvements and product mix.
6. Engineering expenses decreased by 8.4 % to ₹3,031 crores in FY 2021-22, compared to ₹3,308 crores in FY 2020-21. These expenses represent 1.1% and 1.3% of our total revenues in FY 2021-22 and FY 2020-21, respectively and are attributable mainly to decreased expenditure at Jaguar Land Rover. A significant portion of these costs are capitalized and shown under the line item "expenditure capitalized" discussed below.
7. There has been MTM gain of ₹1,371 crores in FY 2021-22, compared to ₹1,382 crores in FY 2020-21.

Expenditure Capitalized

This represents employee costs, stores and other manufacturing supplies and other work expenses incurred mainly toward product development projects. Considering the nature of our industry, we continually invest in the development of new products to address safety, emission, and other regulatory standards. The expenditure capitalized increased by 12.0% to ₹14,397 crores in FY 2021-22 from ₹12,849 crores in FY 2020-21. The increase includes a favourable foreign currency translation impact from GBP to Indian rupees of ₹603 crores pertaining to Jaguar Land Rover.

Other income

There was a net gain of ₹3,054 crores in FY 2021-22, compared to ₹2,643 crores in FY 2020-21, representing increase of 15.5%.

- Interest income increased to ₹625 crores in FY 2021-22, compared to ₹493 crores in FY 2020-21, mainly increased in short term fixed deposit at Tata Motors Limited (including Passenger and Electric Vehicles) and Jaguar Land Rover. Further, at Tata Motors Limited, most of the dealers were Cash and carry, reducing the credit period.
- Incentive from government has increased to ₹2,125 crore in FY 2021-22, compared to ₹1,918 crores in FY 2020-21. Government incentive includes exports and other incentives of ₹633 crores and ₹1,492 crores received by foreign subsidiaries on Tax credit on qualifying expenditure for research and development in FY 2021-22.
- Marked-To-Market (MTM) gain on investments fair value through profit or loss of ₹53 crores in FY 2021-22, compared to ₹20 crores in FY 2020-21.

- Profit on sale of investments measured at fair value through profit or loss was ₹217 crores in FY 2021-22, compared to ₹194 crores in FY 2020-21.

Depreciation and Amortization

Our depreciation and amortization expenses increased by 9.9% in FY 2021-22, the breakdown of which is as follows:

Particulars	FY 2021-22 (₹ in crores)	FY 2020-21 (₹ in crores)
Depreciation	11,068	10,873
Amortization	12,652	11,502
Amortization of Leased Assets (RTU)	1,116	1,172
Total	**24,836**	**23,547**

The increase in depreciation and amortization expenses is mainly due to an unfavourable foreign currency translation from GBP to Indian rupees of ₹953 crores. This is further increased due to Job 1 programs in the year, New Range Rover and at TML due to Capitalization of Punch and other smaller projects and reversal of impairment losses as at March 31, 2021, for passenger vehicles.

Finance Cost (interest expenses)

Our interest expense (net of interest capitalized) increased by 15.2% to ₹9,312 crores in FY 2021-22 from ₹8,097 crores in FY 2020-21. As a percentage of total revenues, interest expense represented 3.3% and 3.2% in FY 2021-22 and FY 2020-21, respectively. The interest expense (net) for Jaguar Land Rover was GB£369 million (₹3,757 crores) in FY 2021-22, compared to GB£251 million (₹2,425 crores) in FY 2020-21. The increase in interest expense primarily reflects interest accrued on increased indebtedness which included the new EURO500 million and US$500 million unsecured bonds issued in FY 2021-22, partially offset by repayment of GB£400 million bond and GB£125 million of the UKEF-backed loan which amortized over the course of the year. For Tata Commercial Vehicles and Tata Passenger Vehicles, interest expense increased by 16.8% to ₹2,792 crores in FY 2021-22 from ₹2,392 crores in FY 2020-21, mainly due to higher borrowings and lower interest capitalisation and warranty discounting. For the Vehicle Financing business, interest expense decreased by 14.1% to ₹2,817 crores in FY 2021-22 from ₹3,278 crores in FY 2020-21, mainly due to lower cost of borrowings.

Foreign Exchange (Gain)/Loss (net)

We had a net foreign exchange loss of ₹79 crores in FY 2021-22, compared to a gain of ₹1,732 crores in FY 2020-21.

- Jaguar Land Rover recorded an exchange gain of ₹61 crores in FY 2021-22, compared to ₹1,787 crores in FY 2020-21. There was a net exchange loss on senior notes and other borrowings of GB£141 million in FY 2021-22, compared to a gain of GB£314 million in FY 2020-21, due to GBP weakening against USD and EUR in FY 2021-22. There is a gain of GB£48 million in FY 2021-22, compared to GB£151 million in FY 2020-21, due to fluctuations in foreign currency exchange rates on derivatives contracts that are not hedge accounted and natural hedges of debt, mainly reflecting a stronger U.S. dollar and Euro. Furthermore, this also includes a gain on revaluation of other assets and liabilities of GB£12 million in FY 2021-22, compared to GB£64 million in FY 2020-21.
- For our India operations, we incurred a net exchange loss of ₹166 crores in FY 2021-22, compared to ₹25 million in FY 2020-21, mainly attributable to foreign currency denominated borrowings.
- There was a net exchange gain on revaluation of foreign currency loans at our subsidiary TML Holdings Pte. Limited of ₹22 crores in FY 2021-22, compared to loss of ₹25 crores in FY 2020-21.

Exceptional Item (Gain)/Loss (net)

(₹ in crores)

Particulars	FY 2021-22	FY 2020-21
Employee separation cost	10	460
Defined benefit pension plan amendment past service cost	-	85
Write off/provision (reversal) for tangible/ intangible assets (including under development)	-	114
Charge associated with change in JLR Strategy	-	14,994
Impairment losses/(Reversal) in Passenger Vehicle Business	-	(1,182)
Provision/(Reversal) for Onerous Contracts and related supplier claims	-	(663)
Provision for costs of closure of operation of a subsidiary	(21)	(47)
Reversal for Impairment in subsidiaries	(86)	-
Provision Related to Russia market	429	-
Profit on sale of business	(3)	-
Cost of demerger of PV Undertaking	301	-
Total	**629**	**13,761**

FY 2021-22

Reversal for Impairment in subsidiaries

As a result of change in market conditions and demand forecast, we performed an impairment assessment for assets forming part of wholly owned subsidiaries Tata Motors European Technical Centre PLC and Trilix S.r.l. The recoverable amount of these assets were estimated to be lower than their carrying value and this resulted in an impairment charge of ₹298 crores and ₹56 crores in TMETC and Trilix, respectively during the year ended March 31, 2020.

As part of slump sale, the investments in wholly owned subsidiaries of the Company engaged in designing services namely TMETC and Trilix have been transferred to TMPVL, a wholly owned subsidiary of the Company, with effect from January 1, 2022. These subsidiaries are being transferred to TPEML, a wholly owned subsidiary of the Company. Considering the business plans for these subsidiaries,

the Company reassessed the recoverable value of assets belonging to its subsidiaries TMETC and Trilix and accordingly provision for impairment toward the assets is reversed amounting ₹38 crores and ₹48 crores, respectively during the year ended March 31, 2022.

Cost of demerger of PV undertaking

Expenses in relation to transfer chargesof land at Sanand and Pune for PV undertaking and stamp duty as per the scheme of arrangement.

Provision Related to Russia Market

₹429 crores (GB£43 million) is in relation to customer liabilities arising from sanctions imposed against Russia by many countries, preventing the shipment of vehicles and certain parts to the market.

FY 2020-21

Defined Benefit Pension Plan Amendment Past Service Cost

Jaguar Land Rover had recognised a past service cost due to the requirement to equalise male and female members' benefits for the inequalities within guaranteed minimum pension earned in the year ended March 31, 2019. This assessment has been updated during the year ended March 31, 2021 based on new information and accordingly, a charge of ₹85 crores (GB£9 million) has been recognised.

Charge associated with Change in Jaguar Land Rover Strategy

Project Reimagine was approved by the Jaguar Land Rover board on February 11, 2021, which targets the production of more sustainable and fully electric luxury vehicles including the goal of having a fully electric fleet of luxury vehicles by the end of the decade and 100% of sales from pure battery electric vehicles by 2036, as well as striving toward achieving net zero carbon emissions across its supply chain, among other environmentally driven strategies by 2039. This revised strategy, particularly the cancellation of the MLA-Mid architecture, resulted in a charge being recognised comprising the following: a) Asset write-downs of GB£952 million (₹9,606 crores) in relation to models cancelled. b) Restructuring costs of £534 million (₹5,388 crores) includes costs of GB£562 million (₹5,312 crores) accruals to settle legal obligations on work performed to date and provisions for redundancies and other third-party obligations and defined benefit past service cost of GB£9 million (₹76 crores).

Impairment losses/(Reversal) in Passenger Vehicle Business

As at March 31, 2021, the Company identified certain triggers for reversal of the previously recorded impairment based on both external and internal indicators. Accordingly, the Company reassessed its estimate and determined the recoverable value for this CGU considering the significant improvement in absolute and relative performance and outlook of the business when compared with the assumed performance at the time when the impairment loss was recorded. Based on this reassessment, the Company has reversed the initially recognised impairment for this CGU.

Provision for Onerous Contracts and related supplier claims

As at March 31, 2021, the Company has reassessed the onerous provision created and based on the revised volume outlook a reversal of provision aggregating ₹777 crores have been accounted. During the year the Company has also made provision for estimated supplier claims of ₹114 crores, which are under negotiations with supplier. The provision as at March 31, 2022 was ₹111 crores.

Tax expenses / (credit)

Our income tax expenses is ₹4,231 crores in FY 2021-22, compared to ₹2,542 crores in FY 2020-21, resulting in consolidated effective tax rates of 60.4% and 24.3%, for FY 2021-22 and FY 2020-21, respectively. Tax rates applicable to individual entities decreased to 13.5% for FY 2021-22, compared to 18.0% in FY 2020-21.

Tax rates applicable to individual entities decreased from 18.0% in FY 2020-21 to 13.5% in FY 2021-22, mainly on account of fewer subsidiaries and Joint Operations opting for lower tax regime. Additionally, it has also been lower for Jaguar Land Rover, representing its blended average rate in its various countries of operations. There is significant increase in tax expense as referred to above due to the following reasons:

- During the year FY 2021-22, deferred tax assets not recognized of ₹3,528 crore (FY 2020-21: ₹3,682 crore) mainly comprised of Jaguar Land Rover ₹3,380 crore (FY 2020-21: ₹2,719 crore) and pertaining to other entities of ₹131 milion (FY 2020-21: ₹ 103 milion . Further, the Minimum Alternate Tax credit of ₹17 crore (FY 2020-21: ₹72 crore) has not been recognized in the case of a few Subsidiaries and Joint Operations due to uncertainty of realization. The deferred tax assets not recognized in TML for FY 2020-21 was ₹788.
- There is tax charge on Undistributed Earnings of Subsidiaries amounting to ₹407 crore in FY 2021-22, compared to ₹311 crore in FY 2020-21, due to increased in profitability.
- During FY 2021-22, Tata Motors Ltd has transferred its Passenger Vehicle Business to a subsidiary on a slump sale basis as defined under Section 2(42C) of the Indian Income-tax Act, 1961. This has resulted in a capital gains tax of ₹1,283 crore. However, due to set-off of brought forward Unabsorbed depreciation against the capital gains, there is no capitals gains tax is payable on the same
- Business losses for Tata Motors Limited was offset against the capital gains on sale of PV Business and thus resulted in utilization of tax losses amounting to ₹725 crore in FY 2021-22. The loss utilized in FY 2020-21 was ₹347 crores.
- During the year, Jaguar Land Rover had written down its tangible assets under construction of ₹430 crore in FY 2020-21, which does not qualify for tax relief.

Profit/(loss) after tax

Our consolidated net loss in FY 2021-22, excluding shares of non-controlling interests, is ₹11,442 crores, decreased from ₹13,451 crores in FY 2020-21. This was mainly the result of the following factors:

- Earnings before other income (excluding Incentives), finance cost, foreign exchange gain/(loss) (net), exceptional items and tax for Jaguar Land Rover is loss of ₹439 crores in FY 2021-22,

compared to profit of ₹7,691 crores in FY 2020-21. In FY 2020-21 Jaguar Land Rover charged ₹15,350 crores as exceptional item of which ₹14,994 crores under Reimagine strategy in fourth quarter. Considering the Remagine strategy charge Jaguar Land Rover had loss of ₹7,303 crores in FY 2020-21. Loss for FY 2021-22 was mainly due to reduced revenues.

- Loss before other income (excluding Incentives), finance cost, foreign exchange gain/(loss) (net), exceptional items and tax for Tata Passenger Vehicles amounted to ₹660 crores in FY 2021-22, compared to ₹1,564 crores in FY 2020-21, due to increased sales volume mainly for Utility Vehicles .
- Earnings before other income (excluding Incentives), finance cost, foreign exchange gain/(loss) (net), exceptional items and tax for Vehicle Financing amounted to ₹2,466 crores in FY 2021-22, compared to ₹2,794 crores in FY 2020-21. This is mainly due to increase in provision for credit loss on finance receivables during the FY 2021-22.
- Earnings before other income (excluding Incentives), finance cost, foreign exchange gain/(loss) (net), exceptional items and tax for Tata Commercial Vehicles amounted to ₹210 crores in FY 2020-21, compared to loss of ₹305 crores in FY 2020-21, primarily due to higher volumes and product mix.

Share of profit/(loss) of Equity-Accounted Investees and Non-controlling Interests in Consolidated Subsidiaries, net of tax

In FY 2021-22, our share of equity-accounted investees reflected a loss of ₹74 crores, compared to ₹379 crores in FY 2020-21. Our share of profit (including other adjustments) in the China Joint Venture in FY 2021-22 was loss of ₹206 crores, compared to ₹363 crores in FY 2020-21. The decrease in losses was mainly due to profits of ₹131 crores in other immaterial associates mainly in Tata Autocomp Systems Ltd. and Tata Hiatchi Construction Machinery Company Ltd. in FY 2021-22, compared to loss of ₹16 crores in FY 2020-21. The profits was mainly due to increase in sales volumes and better business performance.

The share of non-controlling interests in consolidated subsidiaries was increased to ₹133 crores in FY 2021-22 from ₹56 crores in FY 2020-21, mainly due to increased profits of Tata Technologies.

B. BALANCE SHEET

Below is a discussion of major items and variations in our consolidated balance sheet as at March 31, 2022 and 2021, included elsewhere in this annual report.

₹ in crores

		As at March 31,		Change	Translation of JLR	Net Change
		2022	2021			
ASSETS						
(a)	Property, plant and equipment, right of use and intangible assets	148,299	158,868	(10,568)	(1,613)	(8,955)
(b)	Goodwill	807	804	3	-	3
(c)	Investment in equity accounted investees	4,349	4,201	149	(43)	192
(d)	Financial assets	122,867	128,862	(5,781)	(769)	(5,012)
(e)	Deferred tax assets (net)	3,871	4,520	(650)	(45)	(604)
(f)	Current tax assets (net)	1,457	1,869	(412)	(3)	(409)
(g)	Other assets	13,205	7,693	5,298	(129)	5,427
(h)	Inventories	35,240	36,089	(848)	(373)	(475)
(i)	Assets classified as held-for-sale	524	221	303	-	303
	TOTAL ASSETS	**330,620**	**343,127**	**(12,506)**	**(2,976)**	**(9,530)**
EQUITY AND LIABILITIES						
	EQUITY	48,832	56,820	(7,988)	(605)	(7,383)
	LIABILITIES					
(a)	Financial liabilities:	235,953	234,453	1,501	(1,867)	(3,368)
(b)	Provisions	23,722	26,455	(2,733)	(282)	(2,451)
(c)	Deferred tax liabilities (net)	1,558	1,556	2	(14)	17
(d)	Other liabilities	19,297	22,756	3,459	(193)	(3,266)
(d)	Current tax liabilities (net)	1,254	1,086	(167)	(16)	183
(e)	Liabilities directly associated with Assets held-for-sale	3	-	3	-	3
	TOTAL LIABILITIES	281,788	286,306	4,518	(2,372)	(2,146)
	TOTAL EQUITY AND LIABILITIES	**330,620**	**343,127**	**(12,506)**	**(2,976)**	**(9,530)**

Our total assets were ₹3,30,620 crores and ₹3,43,127 crores as at March 31, 2022 and 2021, respectively. The decrease by 4.0% in assets as at March 31, 2022 considers an unfavourable foreign currency translation from GBP into Indian rupees as described below.

Our total current assets was flat at ₹146,978 crores as at March 31, 2022, compared to ₹146,888 crores as at March 31, 2021.

Cash and cash equivalents increased by 20.4% to ₹38,159 crores as at March 31, 2022, compared to ₹31,700 crores as at March 31, 2021, which is partially offset by unfavourable foreign currency translation of ₹348 crores from GBP to Indian rupees. We hold cash and cash equivalents principally in Indian rupees, GBP, Chinese Renminbi, EURO and USD. Out of cash and cash equivalents as at March 31, 2022, Jaguar Land Rover held the GB£2,591 million equivalent of ₹25,765 crores, which consists of surplus cash deposits for future use. As at March 31, 2022, we had short-term deposits of ₹2,038 crores, compared to ₹14,346 crores as of March 31, 2021, a decrease of 85.8%, due to decrease in the value of deposits invested over a term of three months or longer mainly at Jaguar Land Rover.

As at March 31, 2022, we had finance receivables, including the non-current portion (net of allowances for credit losses), of ₹33,231 crores, compared to ₹34,715 crores as at March 31, 2021, a decrease of 4.3%, due to higher direct assignment offsetting the growth in disbursements in the current fiscal year. Gross finance receivables were ₹35,039 crores as at March 31, 2022, compared to 35,963 crores as at March 31, 2021. Vehicle financing is integral to our automotive operations in India.

Trade receivables (net of allowance for doubtful receivables) were ₹12,442 crores as at March 31, 2022, representing a decrease of ₹237 crores or 1.9% over March 31, 2021. The decrease was partially due to unfavourable foreign currency translation of ₹97 crores from GBP to Indian rupees. Trade receivables at Tata and other brand vehicles (including vehicle finance) increased by 23.9% to ₹4,748 crores as at March 31, 2022, from ₹3,833 crores as at March 31, 2021, primarily on account of higher sales volume due to pent up demand. The trade receivables of Jaguar Land Rover were ₹7,183 crores as at March 31, 2022, compared to ₹8,501 crores as at March 31, 2021, a decrease of 15.5%. The past dues for more than six months (gross) decreased from ₹1,679 crores as at March 31, 2021 to ₹1,414 crores as at March 31, 2022. These mainly represent dues from government-owned transport undertakings and Passenger Vehicle dealers, for which we are pursuing recovery.

As at March 31, 2022, inventories were at ₹35,240 crores, compared to ₹36,089 crores as at March 31, 2021, a decrease of 2.4%. The decrease in finished goods inventory was ₹3,428 crores from ₹27,313 crores as at March 31, 2021 to ₹23,885 crores as at March 31, 2022, mainly due to a decrease in volumes at Jaguar Land Rover. This decrease was also due to unfavourable currency translation of ₹373 crores from GBP to Indian rupees. In terms of number of days to sales, finished goods represented 31 inventory days in sales in FY 2021-22, compared to 40 inventory days in FY 2020-21.

Our investments (current and non-current investments) increased to ₹25,030 crores as at March 31, 2022, from ₹20,419 crores as at March 31, 2021, representing an increase of 22.6%. Our investments mainly comprise mutual fund of ₹21,972 crores as at March 31, 2022, compared to ₹19,051 crores as at March 31, 2021. Investments attributable to Jaguar Land Rover were ₹16,518 crores as at March 31, 2022, compared to ₹16,095 crores as at March 31, 2020, an increase of 2.6% mainly on account of mutual fund. Tata Motors Limited (Parent) on Standalone basis has investments in mutual funds of ₹5,143 crores as at March 31, 2022, compared to ₹1,578 crores as at March 31, 2021.

Our other assets (current and non-current) increased by 64.6% to ₹13,205 crores as at March 31, 2022, from ₹7,907 crores as at March 31, 2021. The increase is mainly attributable to pension assets of ₹3,782 crores which was liability in FY 2020-21 on the UK defined benefit pension scheme at Jaguar Land Rover consequent to changes in actuarial assumptions causing the defined benefit schemes moved to a net asset position as at March 31, 2022, from net liability position as at March 31, 2021.

Our other financial assets (current and non-current) decreased to ₹8,979 crores as at March 31, 2022 from ₹11,088 crores as at March 31, 2021. Derivative financial instruments (representing options and other hedging arrangements, mainly related to the Jaguar Land Rover business) decreased to ₹3,936 crores as at March 31, 2022, from ₹6,113 crores as at March 31, 2021, predominantly due to weakening of the GBP compared to EURO and therefore the increasing fair value of derivative contracts. This decrease is also due to decrease in recoverable from suppliers to ₹1,291 crores as at March 31, 2022 from ₹1,546 crores as at March 31, 2021.

Income tax assets (both current and non-current) decreased by 22.0% to ₹1,457 crores as at March 31, 2022, from ₹1,869 crores as at March 31, 2021 mainly decrease at Jaguar Land Rover.

Property, plants and equipment (net of depreciation) marginally increased by 1.6% from ₹79,640 crores as at March 31, 2021, to ₹80,900 crores as at March 31, 2022. The increase is partly offset by unfavourable foreign currency translation of ₹819 crores from GBP to Indian rupees. After adjusting for the foreign currency translation impact, increase of ₹2,079 crores is mainly due to higher addition during the year as compared to previous year.

Goodwill as at March 31, 2022, was ₹807 crores, compared to ₹804 crores as at March 31, 2021. The increase was attributable to a favourable translation impact pertaining to software consultancy and the services of our subsidiary, Tata Technologies Limited.

Intangible assets decreased by 11.1% from ₹64,360 crores as at March 31, 2021, to ₹57,184 crores as at March 31, 2022. This decrease is mainly due to amortization charge for the year and lower capitalization of product development costs. This decrease was also due to an unfavourable foreign currency translation of ₹687 crores from GBP to Indian rupees. As at March 31, 2022, there were product development projects in progress amounting to ₹6,722 crores compared to ₹12,587 crores as at March 31, 2021.

The carrying value of investments in equity-accounted investees increased by 3.5% to ₹4,349 crores as at March 31, 2022, from ₹4,201 crores as at March 31, 2021. The value of investments in

equity-accounted investees decreased due to losses for the year FY 2021-22 from the associates and joint ventures, which was more than offset by favorable currency translation of ₹218 crores.

A deferred tax liability (net) of ₹1,561 crores was recorded in our income statement and ₹1,140 crores in other comprehensive income which mainly includes asset of ₹834 crores toward post-retirement benefits and liability of ₹2,031 million toward cash flow hedges in FY 2021-22. The net deferred tax asset of ₹1,381 crores was recorded as at March 31, 2022, compared to ₹2,964 crores as at March 31, 2021.

Accounts payable (including acceptances) were ₹69,750 crores as at March 31, 2022, compared to ₹76,040 crores as at March 31, 2021, a decrease of 8.3%, reflecting a decrease in operations at Jaguar land Rover and a favourable foreign currency translation of ₹626 crores from GBP to Indian rupees.

Other financial liabilities (current and non-current) were ₹19,754 crores as at March 31, 2022, compared to ₹16,282 crores as at March 31, 2021 (net of favourable currency translation impact of ₹212 crores), reflecting liabilities towards vehicles sold under repurchase arrangements, derivative instruments, and interest accrued but not due on loans and lease liabilities. Liability toward vehicles sold under repurchasing arrangements decreased to ₹2,658 crores as at March 31, 2022 from ₹3,623 crores as at March 31, 2021, mainly due to decrease in the repurchase business at Jaguar Land Rover. This decrease was offset by Derivative financial instruments (representing options and other hedging arrangements, mainly related to Jaguar Land Rover) which increased by 75.4% to ₹7,859 crores as at March 31, 2022, from ₹4,480 crores as at March 31, 2021 and issue of Compulsory Convertible Preference (CCPS) shares of TPEML amounting to ₹1,250 crores.

Provisions (current and non-current) decreased by 7.5% to ₹23,722 crores as at March 31, 2022, from ₹26,455 crores as at March 31, 2021. This decrease is mainly due to utilisation of restructuring provision of ₹1,952 crores made at Jaguar Land Rover under the Reimagine strategy towards settling legal obligations on work performed to date and other third-party obligations in FY 2020-21 and a favourable foreign currency translation impact of ₹292 crores from GBP to Indian rupees. Provisions for warranties decreased by 4.7% or ₹871 crores to ₹17,733 crores as at March 31, 2022, compared to ₹18,604 crores as at March 31, 2021 mainly at Jaguar Land Rover primarily due to lower sales. Furthermore, provisions for residual risk for Jaguar Land Rover decreased to ₹315 crores (GB£32 million) as at March 31, 2022, compared to ₹667 crores (GB£66 million) as at March 31, 2021. This is primarily driven primarily by the resilience and recovery observed in the US economy and secondary vehicle market across FY 2021-22 following the anticipated impact of the COVID-19 pandemic, further supported by Jaguar Land Rover's wider demand-led recovery.

Other liabilities (current and non-current) decreased by 15.2% to ₹19,297 crores as at March 31, 2022, compared to₹22,756 crores as at March 31, 2021. Employee benefit obligations decreased to ₹324 crores as at March 31, 2022, compared to ₹4,092 crores as at March 31, 2021, mainly pertaining to the Jaguar Land Rover pension plan consequent to changes in actuarial assumptions causing the defined benefit schemes to move to net asset position as at March 31, 2022.

Our total debt was ₹1,39,677 crores as at March 31, 2022, compared to ₹1,35,905 crores as at March 31, 2021, an increase of 2.8%, partially offset by favourable currency translation of ₹943 crores from GBP to Indian rupees. Short-term debt (including the current portion of long-term debt) decreased to ₹41,918 crores as at March 31, 2022, compared to ₹42,792 crores as at March 31, 2021. Long-term debt (excluding the current portion) increased by 5.0% to ₹97,759 crores as at March 31, 2022 from ₹93,113 crores as at March 31, 2021. Long-term debt (including the current portion) increased by 7.1% to ₹122,299 crores as at March 31, 2022, compared to ₹114,242 crores as at March 31, 2021.

Total equity was ₹48,832 crores as at March 31, 2022, and ₹56,820 crores as at March 31, 2021, respectively.

Equity attributable to shareholders of Tata Motors Limited decreased to ₹44,561 crores as at March 31, 2022, compared to ₹55,247 crores as at March 31, 2021. This decrease was mainly due to losses of ₹11,442 crores and ₹13,451 crores in FY 2021-22 and FY 2020-21, respectively. Further, hedging reserve loss of ₹6,938 crores compared to gain of ₹4,147 crores, currency translation reserve loss of ₹111 crores compared to gain of ₹3,853 crores also contributed to this decrease which was offset by a gain in pension reserve of ₹6,176 crores in FY 2021-22, compared to loss ₹5,901 crores in FY 2020-21.

C. CASH FLOW

The following table sets forth selected items from consolidated cash flow statement:

(₹ in crores)

	FY 2021-22	FY 2020-21
Cash from operating activity	14,283	29,001
Profit for the year	(11,309)	(13,395)
Adjustments for cash flow from operations	37,975	44,593
Changes in working capital	(10,474)	(93)
Direct taxes paid	(1,910)	(2,105)
Cash from investing activity	(4,775)	(26,126)
Payment for Assets	(14,938)	(19,855)
Net investments, short term deposit, margin money and loans given	9,478	(6,719)
Dividend and interest received	685	447
Net Cash from / (used in) Financing Activities	(3,380)	9,904
Dividend Paid (including paid to minority shareholders	(100)	(30)
Interest paid	(9,251)	(8,123)
Net Borrowings (net of issue expenses)	5,971	18,057
Net increase / (decrease) in cash and cash equivalent	6,128	12,778
Cash and cash equivalent, beginning of the year	31,700	18,468
Effect of exchange fluctuation on cash flows	332	454
Cash and cash equivalent, end of the year	38,159	31,700
Free Cash Flow*	(9,254)	322

*Free cash flow means cash flow from operating activities less payment for property, plant and equipment and intangible assets,

add proceeds from sale of property, plant and equipment, less interest paid, add interest received, add dividend from equity accounted investees of core auto entities and less Investment in Equity Accounted investees of core auto entities.

Cash and cash equivalents increased by ₹6,459 crores in FY 2021-22 to ₹38,159 crores from ₹31,700 crores in FY 2020-21, partially offset by an unfavourable currency translation of ₹538 crores from GBP to Indian rupees. The increase in cash and cash equivalents (excluding currency translation) resulted from the changes to our cash flows in FY 2021-22 when compared to FY 2020-21 as described below.

Net cash provided by operating activities totalled ₹14,283 crores in FY 2021-22, a decrease of ₹14,718 crores, compared to ₹29,001 crores in FY 2020-21. The net loss for the FY 2021-22 is ₹11,309 crores, compared ₹13,395 crores in FY 2020-21. The cash flows from operating activities before changes in operating assets and liabilities is of ₹26,666 crores in FY 2021-22, compared to ₹31,198 crores in FY 2020-21. The changes in operating assets and liabilities resulted in a net outflow of ₹10,474 crores in FY 2021-22, compared to of ₹93 crores in FY 2020-21.

In FY 2021-22, the net outflow in vehicle finance receivables was ₹76 crores compared to ₹4,387 crores in FY 2020-21. For Tata Commercial Vehicles and Tata Passenger Vehicles there was an inflow of ₹3,755 crores in FY 2021-22 on account of changes in operating assets and liabilities, compared to ₹4,226 crores in FY 2020-21. For Jaguar Land Rover brand vehicles, there was a net outflow of cash on account of changes in operating assets and liabilities accounting to ₹13,815 crores in FY 2021-22, compared to ₹527 crores in FY 2020-21. This is mainly due to decrease in operations at Jaguar Land Rover in FY 2021-22 compared to FY 2020-21.

Income tax paid has decreased to ₹1,910 crores in FY 2021-22, compared to ₹2,105 crores in FY 2020-21, which was primarily attributable to tax payments by Jaguar Land Rover's foreign subsidiaries in their respective tax jurisdictions.

Net cash used in investing activities totalled of ₹4,775 crores in FY 2021-22, compared to ₹26,126 crores for FY 2020-21, a decrease of ₹21,351 crores mainly on account of lower capital expenditure and net investments in deposits in the current fiscal year.

The following table sets forth a summary of our cash flow on property, plants and equipment and intangible assets for the periods indicated.

	FY 2021-22 (₹ in crores)	FY 2020-21 (₹ in crores)
Tata Commercial Vehicles and Tata Passenger Vehicles	2,902	1,719
Jaguar Land Rover	11,974	18,123

Jaguar Land Rover had negative free cash flow of GB£1.2 billion in FY 2021-22, after total investment spending of £2 billion. In FY 2021-22, payments for capital expenditures at Jaguar Land Rover decreased by 52.2% to ₹11,974 crores from ₹18,123 crores in FY 2021-22. Investment spending in FY 2021-22 was GB£2.0 billion (11.1% of revenue), lower than the GB£2.3 billion (11.9% of revenue) in the prior fiscal year, due to continued Charge+ savings. Of the GB£2 billion investment spending, £839 million was expensed through profit and loss statement and the remaining GB£1,197 million was capitalised. Total research and development accounted for GB£1.3 billion, of which GB£839 million was expensed through profit and loss statement and remaining GB£455 million was capitalized.

In FY 2021-22, payments for capital expenditures at Tata Commercial Vehicles and Tata Passenger Vehicles increased to ₹2,902 crores from ₹1,719 crores in FY 2020-21. These capital expenditures are mainly related to new products under development.

Our net investment in short-term deposit margin moneys and loans resulted in an inflow of ₹9,478 crores in FY 2021-22, compared to outflow of ₹6,719 crores in FY 2020-21. This is mainly due to higher realisation of fixed deposit in FY 2021-22, compared to FY 2020-21.

Net cash outflow from financing activities totalled ₹3,380 crores in FY 2021-22, compared to inflow of ₹9,904 crores in FY 2020-21. Net Borrowings (net of issue expenses) done during FY 2021-22 of ₹5,971 crores, compared to ₹18,057 crores during FY 2020-21. For Tata Commercial Vehicles and Tata Passenger Vehicles excluding vehicle finance, the short-term debt (net) decreased by ₹647 crores, whereas long-term debt (net) decreased by ₹2,997 crores, due to additional repayments. There was a decrease in debt (short-term and long-term) of ₹59 crores in FY 2021-22 at Vehicle Financing, compared to an increase of₹7,188 crores in FY 2020-21.

For Jaguar Land Rover, short term debt increased to GB£1,779 million in FY 2021-22 (GB£1,206 million in FY 2020-21) and Long-term debt (excluding lease liabilities) increased to GB£5,248 million in FY 2021-22 (GB£4,972 million in FY 2020-21), including the new EURO500 million and US$500 million unsecured bonds issued in FY 2021-22, partially offset by repayment of GB£400 million bond and GB£125 million of the UKEF-backed loan which amortized over the course of the year as well as favourable revaluation of foreign currency debt as a result of the stronger Pound at March 31, 2022, compared to March 31, 2021. Lease obligations payments totalled GB£71 million in FY 2021-22 compared to GB£80 million in FY 2020-21.

Interest paid in FY 2021-22 was ₹9,251 crores, compared to ₹8,123 crores in FY 2020-21. For Jaguar Land Rover, interest paid was ₹3,454 crores in FY 2021-22, compared to ₹2,493 crores in FY 2020-21 primarily because of the higher indebtedness as well as lower yield on cash balances, resulting from central

banks interest rate cuts to help tackle the economic effects of the COVID-19 pandemic. For Tata Commercial Vehicles and Tata Passenger Vehicles, interest paid was ₹2,744 crores in FY 2021-22, compared to ₹2,735 crores in FY 2020-21. For Vehicle Financing, interest paid was ₹3,053 crores in FY 2021-22, compared to ₹2,892 crores in FY 2020-21. Despite decrease in debt of Tata Commercial Vehicles and Tata Passenger Vehicles, interest expenses marginally increased on account of discounting charges which increased to ₹521 crores in FY 2021-22 compared to ₹426 crores in FY 2020-21.

D. KEY FINANCIAL RATIOS

Key financial ratios along with the details of significant changes (25% or more) in FY 2021-22 compared to FY 2020-21 is as follows:

Sr. No.	Particulars	FY 2021-22	FY 2020-21	Change	Formulae	Reason for change
1	Debtors turnover ratio (in times)	21.84	20.61	5.9%	Revenue / Average Trade receivables	
2	Inventory Turnover (in times)	5.07	4.30	17.9%	Raw Material/Average inventory	
3	Interest coverage ratio (in times)	0.19	1.49	(87.3)%	EBIT / Interest expense	Due to lower Earnings before other income (excluding Incentives), finance costs, foreign exchange gain/(loss) (net), exceptional items and tax at both Tata Motors and Jaguar Land Rover, the interest coverage ratio is low.
4	Current Ratio (in times)	0.98	0.93	5.4%	Current assets / Current liabilities	
5	Debt Equity ratio (in times)	3.13	2.46	27.2%	Debt / shareholders' equity	Since the Consolidated debt has increased by 2.8% in FY 2021-22 compared to FY 2020-21 and the Shareholders equity has been reduced due to losses for the year, the debt equity ratio is high.
6	Operating Profit Margin (%)	8.70	11.86	(26.7)%	(EBITDA + Forex gain/ loss -Other income) / Revenue	Due to lower Earnings before other income (excluding Incentives), finance costs, foreign exchange gain/(loss) (net), exceptional items, depreciation and tax at both Tata Motors and Jaguar Land Rover, the operating profit margin is low.
7	Net Profit Margin (%)	(4.06)	(5.36)	24.3%	Profit/(Loss) / Revenue	
8	Debt Service Coverage Ratio (in times)	0.04	0.50	(92.0)%	PBT / (Repayment of borrowing + Interest)	Due to lower Earnings before exceptional items, tax at both Tata Motors and Jaguar Land Rover and higher repayment of debt, the Debt Service Coverage ratio is low.
9	Long term debt to Working Capital (in times)	5.42	9.62	(43.7)%	Long term Borrowings / Working Capital	Due to increase in working capital on account of decrease in trade payables, this ratio is low.

E. LIQUIDITY AND CAPITAL RESOURCES

We finance our capital expenditures and research and development investments through cash generated from operations, cash and cash equivalents, and debt and equity funding. We also raise funds through the sale of investments, including divestments in stakes of subsidiaries on a selective basis.

The key element of the financing strategy is maintaining a strong financial position that allows us to fund our capital expenditures and research and development investments efficiently even if earnings are subject to short-term fluctuations. Our treasury policies for liquidity and capital resources are appropriate for automotive operations and are set through business specific sensitive analysis and by benchmarking our competitors. These are reviewed periodically by the Board.

(i) Principal Sources of Funding Liquidity

Our funding requirements are met through a mixture of equity, convertible or non-convertible debt securities and other long- and short-term borrowings. We access funds from debt markets through commercial paper programs, convertible and non-convertible debentures, and other debt instruments. We regularly monitor funding options available in the debt and equity capital markets with a view to maintain financial flexibility.

See Note 42(b) to our audited consolidated financial statements included elsewhere in this annual report for additional disclosures on financial instruments related to liquidity, foreign exchange and interest rate exposures and use of derivatives for risk management purposes.

The following table sets forth our short- and long-term debt position:

(₹ in crores)

	As of March 31,	
	2022	2021
Short-term debt (excluding current portion of long-term debt)	41,918	21,663
Current portion of long-term debt	24,539	21,129
Long-term debt net of current portion	97,759	93,113
Total Debt	**1,64,216**	**1,35,905**

During FY 2021-22 and FY 2020-21, the effective weighted average interest rate on our long-term debt was 5.4% and 5.1% per annum, respectively. The following table sets forth a summary of long-term debt (including current maturities of long-term borrowings) outstanding as of March 31, 2022.

Details of Long-term debt	Currency	Initial Principal amounts (millions)	Redeemable on	Interest Rate	Amount repaid during FY 2021-22 (₹ crores)	Outstanding (₹ crores)	
						31-Mar-22	31-Mar-21
Non-convertible debentures	₹			Various	4,643	14,831	13,740
Collateralized debt obligations	₹			Various	2,050	1,183	2,974
Buyers credit from bank	Various			Various	291	4,058	3,375
Loan from banks / financial institutions	Various			Various	12,061	44,250	40,958
Compulsory convertible Preference shares	₹			Various	326	11	337
Others	₹			Various	-	344	-
Senior Notes							
Tata Motors Limited	US$	250	due 2024	5.750%		1,877	1,816
Tata Motors Limited	US$	300	due 2025	5.875%		2,274	2,181
TML Holdings Pte. Limited	US$	425	due 2026	5.350%		3,199	-
Jaguar Land Rover	US$	500	due 2023	5.625%		3,777	3,646
Jaguar Land Rover	GB£	400	due 2023	3.875%		3,972	4,019
Jaguar Land Rover	GB£	400	due 2022	5.000%	4,023	-	4,023
Jaguar Land Rover	US$	500	due 2027	4.500%		3,762	3,876
TML Holdings Pte. Limited	US$	300	due 2021	5.750%	2,194	-	2,194
TML Holdings Pte. Limited	GB£	98	due 2023	4.000%		960	958
TML Holdings Pte. Limited	US$	300	due 2024	5.500%		2,261	2,176
Jaguar Land Rover	EU€	500	due 2029	5.500%	-	3,757	-
Jaguar Land Rover	US$	700	due 2025	7.750%		5,256	5,073
Jaguar Land Rover	US$	650	due 2028	5.875%		4,874	4,708
Jaguar Land Rover	EU€	500	due 2024	5.875%		4,198	4,266
Jaguar Land Rover	EU€	500	due 2028	4.500%	-	4,189	-
Jaguar Land Rover	EU€	650	due 2024	2.200%		5,473	5,563
Jaguar Land Rover	EU€	500	due 2026	4.500%		3,537	4,021
Jaguar Land Rover	EU€	500	due 2026	6.875%		4,256	4,339
Total Long-term debt					**25,588**	**122,299**	**114,242**

The following table sets forth a summary of the maturity profile for our outstanding long-term debt obligations (including current maturities of long-term borrowings) as of March 31, 2022.

Payments Due by Period[1, 2]	₹ in crores
Within one year	30,774
After one year and up to two years	31,651
After two year and up to five years	58,621
After five year and up to ten years	19,956
Total	**1,41,002**

1. Including interest.

2. As at March 31, 2022, Jaguar Land Rover's long-term debt obligations were senior notes and bank loans of ₹63,910 crores.

The following table sets forth our total liquid assets, namely cash and cash equivalents, short-term deposits and investments in mutual funds and money market funds (under other Investment—Current):

(₹ in crores)

	As of March 31,	
	2022	2021
Total cash and cash equivalent	38,159	31,700
Total short-term deposits	2,038	14,346
Total mutual fund investments	21,972	19,051
Total liquid assets	**62,169**	**65,097**

These resources enable us to address business needs in the event of changes in credit market conditions. Of the above liquid assets, Jaguar Land Rover held ₹43,859 crores and ₹48,184 crores as of March 31, 2022 and 2021, respectively. Most of Jaguar Land Rover's liquid assets are maintained in GBP, USD, EUR and RMB with smaller balances maintained in other currencies to meet operational requirements in those geographic regions.

We expect total product and other investment spending to be around ₹32,000 crores in property, plants and equipment and product development during FY 2022-23.

We will step-up our investments for domestic business to cater to increasing demand, launch new products and technologies and explore new business avenues. Jaguar Land Rover will continue to invest in new products and technologies to meet consumer demand and regulatory including to increase its range of electrified options (notably full battery electric) across its model range and on its vehicle architectures as a part of its Reimagine strategy. Tata Motors Limited (TML) and Tata Motors Passenger Vehicles Limited (TMPVL) expects to meet the investments primarily out of their own operating cash flows. Capital investments in Tata Passenger Electric Mobility Limited (TPEML) will be largely funded from the funds received from TPG Rise Climate in line with the strategy roadmap set. Any additional funding requirements can be met through loans and other debt from time to time. Despite step-up in the investments we are expecting our business to be largely self-sustaining and we aim to get to near zero net auto debt by FY 2023-24.

Auto Free Cash Flow (cash flow from operating activities less payment for property, plant and equipment and intangible assets add proceeds from sale of property, plant and equipment, less interest paid add interest received, add dividend from equity accounted investees core auto and less investment in equity accounted investees of core auto entities and less cash flow of TMF Group i.e., financing business) on consolidated basis was negative at ₹9,472 crores compared to positive ₹5,317 crores in FY 2020-21. This is mainly due to adverse working capital at Jaguar Land Rover on account of constrained volumes due to supply shortages. The following table provides information for the credit rating of Tata Motors Limited for short-term borrowing and long-term borrowing from the following rating agencies as of March 31, 2022: Credit Analysis & Research Limited ("CARE"), Information and Credit Rating Agency of India Ltd. ("ICRA Limited" or "ICRA"), Credit Rating Information Services of India Ltd. ("CRISIL Ltd" or "CRISIL"), Standard & Poor's Ratings Group ("S&P") and Moody's Investors Service ("Moody's"). A credit rating is not a recommendation to buy, sell or hold securities. A credit rating may be subject to withdrawal or revision at any time. Each rating should be evaluated separately of any other rating. The credit rating of Tata Motors as at March 31, 2022 was as follows.

Rating agency	Long-term borrowings	Short-term borrowings
CARE	AA- / Stable	A1+
ICRA	AA- / Stable	A1+
CRISIL	AA- /Stable	A1+
S&P	BB- / Stable	-
Moody's	B1 / Stable	-

As at March 31, 2022, JLR's rating was "B1"/ Stable by Moody's, "B+"/Stable by Standard & Poor's

As at March 31, 2022, for TMFHL and its subsidiaries, CRISIL, ICRA and CARE rating on long- term debt instruments and long-term bank facilities stood at "AA -/ Stable",

We believe that we have sufficient liquidity available to meet our planned capital requirements. However, our sources of funding could be materially and adversely affected by an economic slowdown, as was witnessed in FY 2008-09, arising due to the COVID-19 pandemic, supply chain disruptions or other macroeconomic factors in India, the United Kingdom, the United States, Europe or China, which are beyond our control. A decrease in the demand for our vehicles could affect our ability to obtain funds from external sources on acceptable terms or in a timely manner.

Given the significant uncertainties, we assessed the cash flow projections and available liquidity for a period of eighteen months from the date of these financial statements. Based on this evaluation, our management believes that the Company will be able to continue as a 'going concern' in the foreseeable future. For further details kindly refer note 2 (e) in Significant accounting policies forming part of consolidated financial statement.

Our cash is located in various subsidiaries. The cash in some of these jurisdictions, notably South Africa and Brazil, is subject to certain restrictions on cash pooling, intercompany loan arrangements or interim dividends. However, annual dividends are generally permitted, and we do not believe that these restrictions have, or are expected to have, any impact on our ability to meet our cash obligations.

Long-term funding

To refinance our existing borrowings and support our long-term funding needs, we continued to raise funds during FY 2020-21 and FY 2021-22. Details of major funding during FY 2020-21 and FY 2021-22 are provided below.

During the year ended March 31, 2020, the Company had allotted 20,16,23,407 Ordinary Shares at a price of ₹150 per Ordinary Share aggregating to ₹3,024 crores and 23,13,33,871 Convertible Warrants ('Warrants'), each carrying a right to subscribe to one Ordinary Share per Warrant, at a price of ₹150 per Warrant

('Warrant Price'), aggregating to ₹3,470 crores on a preferential basis to Tata Sons Private Limited. An amount equivalent to 25% of the Warrant Price was paid at the time of subscription and allotment of each Warrant and the balance 75% of the Warrant Price shall be payable by the Warrant holder against each Warrant at the time of allotment of Ordinary Shares pursuant to exercise of the options attached to Warrant(s) to subscribe to Ordinary Share(s), by June 2021. The Company had fully utilized the amount of ₹3,892 crores towards repayment of debt and other general corporate purposes of the Company and its subsidiaries in FY 2020-21. During the year ended March 31, 2021, on exercise of options by Tata Sons Private Limited and on receipt of balance subscription money of ₹2,603 crores, the Company has fully converted 23,13,33,871 convertible warrants into Ordinary Shares, that were issued during the year ended March 31, 2020. The Company has fully utilized the amount as at March 31, 2022, towards refinancing and general corporate purposes.

During FY 2020-21, the Tata Motors raised unsecured term loans amounting to ₹500 crores from Banks for general corporate purpose and funding capital requirements.

During FY 2020-21, Tata Motors Limited raised ₹1,000 crores through secured, rated, listed NCD's. Tata Motors Limited also raised ₹3,000 crores through secured term loan for utilization toward capital expenditure including intangibles, refinancing of existing indebtedness and other general corporate purposes.

During FY 2020-21, Jaguar Land Rover (China) Investment Co. Ltd has signed a RMB 5 billion unsecured three-year revolving loan facility with a syndicate of five Chinese banks (fully drawn at March 31, 2021) which is subject to an annual confirmatory review. In addition, Jaguar Land Rover (China) Investment Co., Ltd entered into a small parts factoring facility in first quarter of FY 2020-21, which was fully drawn as at March 31, 2022 (equivalent to GB£599 million).

In October 2020, Jaguar Land Rover Automotive Plc issued $700 million senior notes due in 2025 at a coupon of 7.75% per annum. In December 2020, Jaguar Land Rover Automotive Plc issued US$650 million senior notes due 2028 at a coupon of 5.875%. The proceeds were for general corporate purposes.

In January 2021, the GB£300 million senior notes with a coupon of 2.750% issued by Jaguar Land Rover Automotive Plc in January 2017 matured and were fully repaid.

During FY 2020-21, TML Holding Pte Limited has issued GB£98 million Credit Enhanced Notes at a coupon rate of 4% and US$ 300 million Senior notes at a coupon rate of 5.5%. The proceeds have been used toward refinancing and meeting general corporate purposes.

During FY 2020-21, TMFHL and its subsidiaries, raised ₹4,836 crores by issuing debentures (including Hybrid and non-hybrid Perpetual NCDs). Total issuance through Hybrid Perpetual NCDs was ₹2,063 crores Bank borrowings continued to be a major source for long-term borrowing and raised ₹ 6,891 crores during FY 2020-21. Out of this, ECB amounted to ₹110 crores.

During FY 2021-22, Tata Motors raised unsecured term loans amounting to ₹1,000 crores from Banks for general corporate purpose and funding capital requirements. During FY 2021-22, Tata Motors Limited prepaid ₹600 crores of secured term loan.

During FY 2021-22, TMFHL and its subsidiaries (TMF Group), raised ₹5,005 crores by issuing debentures (including Hybrid and non-hybrid Perpetual NCDs). Total issuance through Hybrid Perpetual NCDs was ₹935 crores. Bank borrowings continued to be a major source for long-term borrowing and raised ₹7,975 crores during FY 2021-22.

In July 2021, Jaguar Land Rover Automotive Plc issued $500 million senior notes due in 2029 at a coupon of 5.50% per annum and EUR 500 million senior notes due 2028 at a coupon rate of 4.5%. The proceeds were for general corporate purposes.

In February 2022, the GB£400 million senior notes with a coupon of 5% issued by Jaguar Land Rover Automotive Plc in January 2014 matured and were fully repaid.

In June 2021, TML Holding Pte Limited has issued USD 425 million Senior notes with a coupon rate of 4.35% due in 2026. The proceeds have been used towards refinancing and meeting general corporate purposes.

In June 2021, Tata Motors Limited issued E 30-A Series of 5,000 Rated, Listed, Unsecured, 6.60% Coupon, Redeemable, Non-Convertible Debentures of ₹500 crores, on private placement basis.

In July 2021, Tata Motors Limited issued E 30-B Series of 5,000 Rated, Listed, Unsecured, Redeemable, Non-Convertible Debentures, 6.95% Coupon of ₹500 crores, on private placement basis.

In December 2021, Jaguar Land Rover took GB£625 million five-year amortising loan (backed by a UKEF guarantee). As at March 31, 2022, the total amount outstanding in respect of the five-year amortising loan facilities of GB£625 million taken in October 2019 and above-referenced facility of GB£625 million taken in December 2021, stood at GB£917 million with GB£156 million repayment in FY 2021-22.

The Company at its Board meeting held on October 12, 2021, approved the incorporation of a wholly owned subsidiary ("TML EV Co") to undertake its passenger electric mobility business and executed a Securities Subscription Agreement with India Markets Rio Pte Ltd, an entity affiliated with TPG Rise Climate (the climate investing strategy of TPG's global impact investing platform TPG Rise) for an aggregate investment of ₹7,500 crores in TML EV Co over the period of 18 months from the date of completion of the first tranche. Accordingly, Tata Passenger Electric Mobility Limited (TPEML) is formed on December 21, 2021. The Proposed Transaction involves the primary investment of ₹ 7,500 crores by TPG Rise Climate in TPEML in tranches; and issuance and

allotment of compulsorily convertible preference shares, having face value of ₹ 1,000 each, by TPEML to TPG Rise Climate in lieu of such investment. The investment is by issuance and allotment of compulsorily convertible preference shares, having face value of ₹ 1,000 each, by the Company to TPG Rise Climate. The total amount of investment of ₹7,500 crores is bifurcated into two instruments CCPS A1 and CCPS A2 of investment of ₹5,000 crores and investment of ₹2,500 crores, respectively. The remittance of the first tranche of ₹3,750 crores (50% of each instrument) has been received on March 29, 2022.

We plan to refinance and raise long-term funding through borrowings or equity issuances, based on review of business plans, operating results and covenant requirements of our existing borrowings.

For various repayments made during FY 2021-22, refer "summary of long-term debt outstanding as of March 31, 2022" in Principal Sources of Funding Liquidity.

Short-term funding

We fund our short-term working capital requirements with cash generated from operations, overdraft facilities with banks, short- and medium-term borrowings from lending institutions, banks and commercial paper. The maturities of these short-term and medium-term borrowings and debentures are generally matched to particular cash flow requirements. We had borrowings of ₹14,103 crores and ₹17,379 crores as of March 31, 2022 and 2021, respectively.

In December 2020 Jaguar Land Rover Limited renewed its £113 million committed, secured revolving loan facility for fleet buybacks for another year, with GB£110 million drawn as at March 31, 2021. The fleet buyback facility matured in December 2021. As at March 31, 2022, Jaguar Land Rover Limited had sold receivables of GB£191 million equivalent under the US$500 million committed invoice discounting facility, which was renewed for another two years in March 2021. Under the terms of this facility receivables are accounted as sold (through trade receivables in working capital) and therefore not accounted as debt under Ind AS.

At March 31, 2022 the unutilised working capital limits for Tata Motors Limited were at ₹4,636 crores. Post January 1, 2022, when the transfer of company's passenger vehicle business to Tata Motors Passenger Vehicles Limited became effective, the working capital limits for Tata Motors Limited were reduced to ₹ 7,000 crores and we entered into facility with consortium banks for ₹ 3,000 crores working capital limits for Tata Motors Passenger Vehicles Limited. The balance was fully unutilized as at March 31, 2022. The working capital limits are secured by hypothecation of existing current assets including stock of raw material, stock in process, semi-finished goods, stores and spares not relating to plants and machinery (consumable stores and spares), bills receivables and book debts, including vehicle financing receivables and all other moveable current assets, except cash and bank balances, loans and advances of Tata Motors Limited, both present and future. The working capital limits are renewed annually.

For Jaguar Land Rover, the unutilized revolving credit facility was GB£2,015 million as at March 31, 2022. In April 2021, Jaguar Land Rover Automotive plc concluded negotiations with 20 banks to extend GB£1.3 billion of its committed undrawn revolving credit facility out to March 2024. This GB£1.3 billion facility has increased in value since completion to reach GB£1.5 billion as at March 31, 2022 with the addition of a further 4 banks. In our opinion, our working capital facilities and short-term borrowings are sufficient for the Company's present requirements.

Loan Covenants

Some of our financing agreements and debt arrangements set limits on and/or require prior lender consent for, among other things, undertaking new projects, issuing new securities, changes in management, mergers, sales of undertakings and investments in subsidiaries. In addition, certain negative covenants may limit our ability to borrow additional funds or to incur additional liens, and/or provide for increased costs in case of breach. Certain financing arrangements also include financial covenants to maintain certain debt-to-equity ratios, debt-to-earnings ratios, liquidity ratios, capital expenditure ratios and debt coverage ratios.

We monitor compliance with our financial covenants on an ongoing basis. We also review our refinancing strategy and continue to plan for deployment of long-term funds to address any potential non-compliance. On June 30, 2020, we notified one of our Indian lenders in respect of our ₹2,700 crores loan facility that as at June 30, 2020, the Company had failed to maintain one of the financial ratios under the terms of the loan facility. The Company received confirmation from the lender that it has approved an increase in such threshold and has given a waiver of the Company's failure to maintain the relevant financial ratio for FY 2020-21 and FY 2021-22. Further, the Company has received confirmation from another lender on its ₹3,000 crores loan facility, that it has given a waiver of the Company's failure to maintain this ratio before March 31, 2023. However, these compliances have been met as at March 31, 2022.

In one of our subsidiaries, we could not meet certain covenants and have obtained the waiver for FY 2021-22. The outstanding term loan as at March 31, 2022, is ₹18.75 crores.

Certain debt issued by Jaguar Land Rover is subject to customary covenants and events of default, which include, among other things, minimum liquidity requirement in the case of the UKEF facilities (and the GB£1.5 billion extended revolving credit facility, drawable from July 2022, when the current revolving credit facility matures), restrictions or limitations on the amount of cash that may be transferred outside of the Jaguar Land Rover Group in the form of dividends, loans or investments to TML and its subsidiaries. These are referred to as "restricted payments" in the relevant Jaguar Land Rover financing documentation. In general, the amount of cash which may be transferred as restricted payments from the Jaguar Land Rover Group to the Company and its subsidiaries is limited to 50% of its cumulative consolidated net income (as defined in the relevant financing documentation) from

January 2011. As at March 31, 2022, the estimated amount that is available for dividend payments, other distributions and restricted payments was approximately GB£4 billion.

(ii) Capital Expenditures

Capital expenditures totalled ₹14,907 crores and ₹18,729 crores during FY 2021-22 and FY 2020-21, respectively. Our automotive operations accounted for most of such capital expenditures. We currently plan to invest around ₹32,000 crores in FY 2022-23 in new products and technologies.

Our capital expenditures in India for Commercial Vehicles and Passenger Vehicles business during FY 2021-22 related mostly to (i) the introduction of new products, such as the Tata Punch, Tiago and Tigor CNG, Altroz DCA, Tata 407 CNG, ACE Petrol and wide range of commercial vehicles (ii) the development of planned future products and technologies, and (iii) quality and reliability improvements aimed at reducing operating costs.

Total product and other investment for Jaguar Land Rover in FY 2021-22 was GB£2 billion, primarily reflecting the ongoing launch of the New Range Rover, upcoming new Range Rover sport, as well as towards electrification platforms, architectures and investments in future BEV's as a part of Reimagine Strategy.

We continue to focus on development of new products for our various markets. Through Jaguar Land Rover, we continue to make investments in new technologies through its research and development activities to develop products that meet the requirements of the premium market, including developing sustainable technologies to improve fuel economy and reduce carbon dioxide emissions, such as the expansion of electrification across 12 of Jaguar Land Rover's 13 nameplates, including eight plug-in hybrid and eleven mild hybrid models as well as the all-electric Jaguar I-PACE.

We intend to continue investing in our business units and research and development over the next several years, including capital expenditures for our ongoing projects, new projects, product development programs, mergers, acquisitions and strategic alliances in order to build and expand our presence in the Passenger Vehicle and Commercial Vehicle categories.

F. CRITICAL ACCOUNTING POLICIES

The preparation of financial statements in conformity with Ind AS requires management to make judgments, estimates and assumptions that affect the application of accounting policies and the reported amounts of assets, liabilities, income, expenses and disclosures of contingent assets and liabilities as of the date of this annual report and the reported amounts of revenues and expenses for the years presented. The actual results may differ from these estimates.

Estimates and underlying assumptions are reviewed on an ongoing basis and on each balance sheet date. Revisions to accounting estimates are recognized in the period in which the estimate is revised, and future periods are affected.

In particular, information about significant areas of estimation uncertainty and critical judgments in applying accounting policies that have the most significant effect on the amounts recognized in the financial statements are included in the following notes:

Impairment of Goodwill

CGUs to which goodwill is allocated are tested for impairment annually on each balance sheet date, or more frequently when there is an indication that the unit may be impaired. If the recoverable amount of the CGU is less than the carrying amount of the unit, the impairment loss is allocated first to reduce the carrying amount of any goodwill allocated to that unit and then to the other assets of the unit pro rata on the basis of carrying amount of each asset in the unit. Goodwill impairment loss recognized is not reversed in subsequent period.

Impairment

Property, plants and equipment and intangible assets

On each balance sheet date, we assess whether there is any indication that any property, plants and equipment and intangible assets with finite lives may be impaired. If any such impairment exists, the recoverable amount of an asset is estimated to determine the extent of impairment, if any. Where it is not possible to estimate the recoverable amount of an individual asset, we estimate the recoverable amount of the CGU to which the asset belongs.

Intangible assets with indefinite useful lives and intangible assets not yet available for use are tested for impairment annually on each balance sheet date, or earlier if there is an indication that the asset may be impaired.

The recoverable amount is the higher of fair value less costs to sell and VIU. In assessing VIU, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset for which the estimates of future cash flows have not been adjusted.

If the recoverable amount of an asset (or CGU) is estimated to be less than its carrying amount, the carrying amount of the asset (or CGU) is reduced to its recoverable amount. If this occurs, an impairment loss is recognized immediately in the profit and loss account.

Finance receivables

We provide allowances for losses on portfolio of finance receivables on the basis of expected future collection from receivables. The future collection are estimated on the basis of past collection trend which are adjusted for changes in current circumstances as well as expected changes in collection based on expectations with respect to certain macro-economic factors, such as GDP growth, fuel price and inflation as well as management judgement regarding qualitative factors, including economic uncertainty, observable changes in portfolio performance, and other relevant factors.

Capitalization of internally generated intangible assets

We undertake significant levels of research and development activity and for each vehicle program periodic review is undertaken. We apply judgement in determining at what point in a vehicle programs lifecycle that recognition criteria under accounting standards is satisfied.

Product Warranty

Vehicle warranties are provided for a specified period of time. Our vehicle warranty obligations vary depending upon the type of the product, geographical location of its sale and other factors.

The estimated liability for vehicle warranties is recorded when the products are sold or when new warranty programs are initiated. These estimates are established using historical information on the nature, frequency and average cost of warranty claims and management estimates regarding possible future warranty claims, customer goodwill and recall complains. The timing of outflows will vary depending on when warranty claim will arise, being typically up to six years and for batteries in Electric Vehicles warranty period is typically up to eight years.

We also have back-to-back contractual arrangements with our suppliers in the event that a vehicle fault is proven to be a supplier's fault. Estimates are made of the expected reimbursement claims based upon historical levels of recoveries from supplier, adjusted for inflation and applied to the population of vehicles under warranty as on balance sheet date. Estimated supplier reimbursements are recognized as separate asset. Actual claims incurred in the future may differ from our original estimates, which may materially affect warranty expenses.

Employee Benefits

Employee benefit costs and obligations are dependent on assumptions used in calculating such amounts. These assumptions include salary increases, discount rates, health care cost trend rates, benefits earned, interest costs, expected return on plan assets, mortality rates and other factors.

While we believe that the assumptions used are appropriate, differences in actual experience or changes in assumptions may affect our employee benefit costs and obligations.

Recoverability/recognition of deferred tax assets

Deferred tax assets and liabilities are recognized for the future tax consequences of temporary differences between the carrying values of assets and liabilities and their respective tax bases, and unutilized business loss and depreciation carryforwards and tax credits. Such deferred tax assets and liabilities are computed separately for each taxable entity and for each taxable jurisdiction. Deferred tax assets are recognized to the extent that it is probable that future taxable income will be available against which the deductible temporary differences, unused tax losses, depreciation carryforwards and unused tax credits could be utilized.

INTERNAL CONTROL SYSTEMS AND THEIR ADEQUACY

We have an adequate system of internal controls in place. We have documented policies and procedures covering all financial and operating functions. These controls have been designed to provide a reasonable assurance regarding maintaining of proper accounting controls for ensuring reliability of financial reporting, monitoring of operations, and protecting assets from unauthorized use or losses, compliances with regulations. We have continued our efforts to align all our processes and controls with global best practices.

Some significant features of the internal control of systems are:

- The Audit Committee of the Board of Directors, comprising of independent directors and functional since August 1988, regularly reviews the audit plans, significant audit findings, adequacy of internal controls, compliance with accounting standards as well as reasons for changes in accounting policies and practices, if any;
- Documentation of major business processes and testing thereof including financial closing, computer controls and entity level controls, as part of compliance programme towards Sarbanes-Oxley Act, as required by the listing requirements at New York Stock Exchange;
- An ongoing programme, for the reinforcement of the Tata Code of Conduct is prevalent across the organization. The Code covers integrity of financial reporting, ethical conduct, regulatory compliance, conflicts of interest's review and reporting of concerns.
- State-of-the-art Enterprise Resource Planning, supplier relations management and customer relations management connect our different locations, dealers and vendors for efficient and seamless information exchange. We also maintain a comprehensive information security policy and undertakes continuous upgrades to our IT systems;
- Detailed business plans for each segment, investment strategies, year-on-year reviews, annual financial and operating plans and monthly monitoring are part of the established practices for all operating and service functions;
- A well-established, independent, multi-disciplinary Internal Audit team operates in line with governance best practices. It reviews and reports to management and the Audit Committee about compliance with internal controls and the efficiency and effectiveness of operations as well as the key process risks. The scope and authority of the Internal Audit division is derived from the Internal Audit Charter, duly approved by the Audit Committee; and Anti-fraud programmes including whistle blower mechanisms are operative across the Company.

The Board takes responsibility for the overall process of risk management throughout the organization. Through an Enterprise Risk Management programme, our business units and corporate

functions address risks through an institutionalized approach aligned to our objectives. This is facilitated by internal audit. The Business risk is managed through cross-functional involvement and communication across businesses. The results of the risk assessment are presented to the senior management. The Risk Management Committee reviews business risk areas covering operational, financial, strategic and regulatory risks.

There have been no changes in our internal control over financial reporting that occurred during the period covered by this annual report that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting. Although we have implemented various initiatives for continuous business operation in response to the COVID-19 pandemic, including enabling most of our employees to telework, apart from those who need to work at their office for smooth operations, we believe these initiatives have not had a significant impact on our internal control over financial reporting.

During FY 2021-22, we assessed the effectiveness of the Internal Control over Financial Reporting and has determined that our Internal Control over Financial Reporting as at March 31, 2022 is effective.

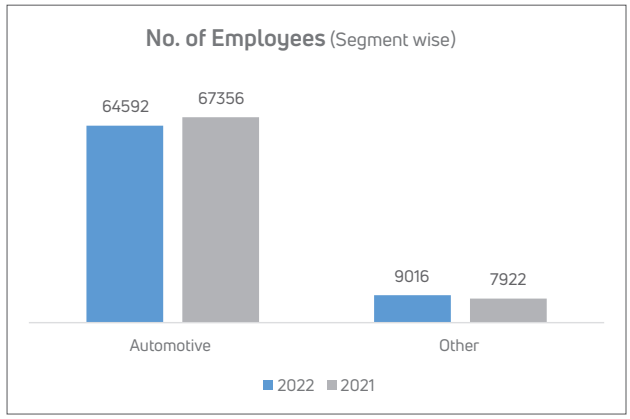
HUMAN RESOURCES / INDUSTRIAL RELATIONS

Our people are our best assets. Their caliber and commitment is our inherent strength. With the singular objective of always being the employer of choice in the Indian auto industry, we are encouraging them to discover and realize their true potential. Acquiring diverse experiences, accomplishing challenging tasks and continually learning and upskilling is enabling them to deliver their best. By identifying, developing and nurturing quality talent at every stage of the employee lifecycle, we are empowering them to become future ready and build rewarding careers. Keeping employee wellbeing foremost, we have embraced the post-pandemic way of life and work. By institutionalizing hybrid mode of working, digitizing processes, refreshing our culture, we are collectively fostering new ways of working. Future ready trails of agility, digital mindset and customer centricity are being consciously imbibed, both in thought and action, at every level across the organization. Richer collaborations and stronger teamwork have accelerated our pursuit of excellence.

Building a strong workforce:

We employed approximately 73,608 and 75,278 permanent employees as at March 31, 2022 and 2021, respectively. The average number of flexible (temporary, trainee and contractual) employees for FY 2021-22, was approximately 40,717 (including joint operations) compared to 28,291 in FY 2020-21. We have a healthier gender diversity with 6.53% of our workforce comprising of women.

The following graph presents the breakdown of persons employed by the Company's business segments as of March 31, 2022 and 2021.



Building an effective organisational culture

Culture is a key enabler to optimise potential, retain and also attract top talent to fuel performance within the organisation. The collective desire to become more agile and future ready necessitated a refresh of the organisational culture. Following an intense process of co-creation wherein thoughts, opinions, perspectives and aspirations of every employee were heard, a new Culture Credo, summaris ed as – More When One with its four culture pillars – Be Bold, Solve Together, Own it & Be Empathetic, was launched. These culture pillars s were further defined through eight distinct leadership behaviours – Agility, Risk taking, Owner's Mindset, Empowerment, Collaboration, Accountability, Embrace Diversity and Passion for Customers. A high impact launch, followed by consistent and conscious efforts to accelerate the Culture Transformation journey with active employee participation has resulted in a remarkable improvement in overall employee engagement scores.

Capability Development

Committed to empowering our employees, we are fostering their development by strengthening their functional, managerial and leadership capabilities to make them future-fit. With volatility rising in the external environment, a holistic approach has been adopted to proactively identify and address all potential capability gaps. Tata Motors Academy designs and creates appropriate functional training modules to address the development needs of the various segments of our workforce. The academy focuses on three functional pillars – Customer Excellence, Product Leadership, Operational Excellence and Management Education. The emphasis of the functional academies is to reinforce knowledge, skills and expertise with a structured and in-depth approach, within the respective function:

- The Product Leadership Academy and Operational Excellence Academy are designing and deploying the courses and learning programmes for our employees in Engineering and Operations, focused on the organisation's technical roadmap on Connected, Electric, Shared & Safe vehicles (CESS).

- The Customer Excellence Academy ensures capability building not only for Tata Motors' front-end functions, but also for our channel partners. These training interventions are planned for Dealer Sales Agents to provide best-in-class experience to our customers. We also launched the 'Re-imagining PV front-end' dealership program, a targeted intervention to train and mobilize the workforce responsible for delivering the last mile customer experience.
- The Tata Motors Academy also provides executive management education opportunities in the areas of B.Tech, M.Tech, and Executive MBA to develop general management and leadership skills.
- By embracing digital, the academy has also embarked upon a decisive journey of digital learning for all its employees. This includes e-learning and virtual classrooms, which augments the offering of functional as well as management education pillars.

Skill Development

The endeavour to deliver high quality products by enhancing our craftsmanship and improving manufacturing and assembly processes continues with a greater thrust. To address the rapid technology disruptions and changing market dynamics, we have developed the 'Future of Workplace' strategy. It provides our workforce with new skills such as High Voltage (Electric Vehicles), Mechatronics (Industry 4.0), Auto Electronics and Vehicle Communication. We are actively reskilling our permanent workforce in these newer technology areas. In parallel, we are also developing a young, skilled, agile and digital enabled workforce through our company's flagship full-time apprenticeship program (new craftsman trades), the introduction of the Bachelor of Vocational Education program and the Earn and Learn NEEM program. We recruit talent from the finest training institutes. Beyond core trade-based skills, we focus and train our technicians in very specific skills to achieve world-class quality, best-in-class know-how and high productivity levels.

Talent Management

Our annual Organisational & Talent Review process and a robust Succession planning exercise ensures that we always maintain a healthy succession pipeline of critical and leadership roles. This enables us to identify, groom and develop potential candidates across the organisation. We launched the Leadership Trails, a comprehensive leadership development programme tailored to the requirements of our leaders and the organisation in partnership with a top ranked global business school. Inner Circle, a developmental programme for our best mid-level and junior management talent has also been introduced in collaboration with a marquee academic institution. To provide employees with growth opportunities across functions, locations and business units, we encourage internal mobility of our talent through job rotations and 'Career Explore' – our internal job posting portal.

Diversity & Inclusion

An equal opportunity employer, Tata Motors is deeply committed to creating a diverse and inclusive workforce. In a significant step forward towards increasing gender diversity on the shop floor, traditionally a male bastion, our TCF assembly at the Pune Plant is now entirely operated and managed by over 1,000 women employees. After ensuring adequate safety measures and compliance with statutory requirements, we invited women workers to opt for the second shift and now have several of them preferring to work in it. "Project EVE" a specially curated, comprehensive development platform for high potential women employees has also been introduced. Employees involved in this program work on challenging projects sponsored and mentored by the Tata Motors Executive Committee. The Second Career Initiative Program (SCIP) is a platform that encourages women, who put their career on pause to restart it with interesting opportunities. We also introduced Paternity Leave and Adoption Leave for our male colleagues to support parenthood. The gender diversity at Tata Motors improved with the Company employing 6.53% women in FY 2021-22 as compared to 5.48% in FY 2020-21.

Industrial Relations

We have labour unions for our technicians at all our plants across India except the Dharwad plant. The Company maintains cordial relations with its employees at its factories and offices and has been supported by the unions in the implementation of several reforms to improve safety, quality, cost erosion and enhance productivity across all locations. Technicians and unions have supported business continuity to achieve productivity levels during challenging times caused by COVID-19 and the semi-conductor supply chain crisis.

Employee wages are paid in accordance with the wage settlements signed that have varying terms (typically three to five years) at different locations. The expiration dates of the wage agreements for various locations/subsidiaries are:

Location/subsidiaries	Wage Agreement valid until
Jaguar Land Rover – UK Plants	31-Oct -23
Mumbai	31-Dec-21*
Pune – Passenger Vehicles	31-Mar-22*
Pantnagar – Commercial Vehicles	31-Mar-22*
Lucknow – Commercial Vehicles	31-Mar-24
Sanand – Passenger Vehicles	30-Sep-24
Pune – Commercial Vehicles	31-Aug-25
Jamshedpur – Commercial Vehicles	31-Mar-26

*Negotiation on-going

The wage settlements of our manufacturing sites at Pantnagar (Commercial Vehicles – Tata Motors Limited), Pune (Tata Motors Passenger Vehicles Limited), Mumbai have expired and negotiations are underway for the new wage agreements. In the interim, wages set out in previous wage agreements will continue until a new settlement is reached.

The Company's wage agreements link an employee's compensation to performance criteria that are based on various factors such as quality, productivity, operating profit and an individual's performance and discipline. As far as possible, we aim for cost neutral settlements, by achieving the critical performance parameters of the business with total employee involvement. We have generally received union support in its implementation of reforms that impact quality, cost erosion and productivity improvements across all locations. We have signed settlements with a variable pay as part of wage cost and have staggered the payment instead of one time pay to be bring more cost effectiveness on account of fixed pay.

JAGUAR LAND ROVER

INVESTING IN OUR PEOPLE AND COMMUNITIES

Our people are our greatest asset and that is evidenced by their support to their communities, both individually and through our collective efforts as a company.

Protecting our people

Throughout our response to the COVID-19 pandemic, the health, wellbeing and safety of our people and partners has been our utmost priority and this has continued as colleagues have been returning to offices and workplaces around the world.

As part of our response to the COVID-19 pandemic, we were one of the first businesses and the largest in the UK, to introduce onsite COVID-19 testing. By April 2022, we had performed 1.68 million temperature tests, 100,000 lateral flow tests, and over 1,000 PCR tests onsite.

Between December 2020 and January 2022, our Nitra facility in Slovakia set up a testing centre for our employees and contractors and performed 47,747 tests. The Slovakian government acknowledged that Jaguar Land Rover's mass testing significantly contributed to managing a critical situation and protected the health of our employees, their families and communities.

Beyond testing, we managed a vaccination program and supplied masks and respirators for our employees. We also created a hub of wellbeing support and information available to all employees throughout the pandemic, including podcasts, resources, and factsheets to help them easily access reliable information at a time of uncertainty.

Hybrid working

Hybrid working reflects our agile working principles and in May 2021, as our employees returned to work in line with the scaling back of COVID-19 restrictions, we formally implemented a hybrid working scheme.

With the trust placed in our people, we have utilized technology to develop a comprehensive scheme that empowers employees with the flexibility to manage their working arrangements and location. As well as enabling greater productivity and efficiency, hybrid working supports wellbeing, by giving employees more control, choice and flexibility over their working day.

We have committed to support our people both in continued onsite COVID-19 testing and a dedicated workspace booking app, to help them get the most from hybrid working arrangements.

Activities within the community

Our team in Nitra, Slovakia established a partnership with Nitra Volunteering Centre in December 2021 and organized a collection for people in need during December.

Our manufacturing facility in Itatiaia, Rio de Janeiro joined forces with Instituto Toré for a one-year community partnership supporting and implementing two significant social responsibility projects in their local area, aimed at delivering education and skills on conservation and sustainable food production.

In December 2021, employees from Jaguar Land Rover's UK sites came together to collect for local foodbanks, with the aim of supporting thousands of families who continued to struggle as a result of the COVID-19 pandemic.

The donation drive saw employees across the business support their local charities and communities, with more than 10,000 items such as tinned food and cereals donated to help local families in need, while employees also showed their support by donating just over £2,000 to an online collection fund.

Diversity & Inclusion

At Jaguar Land Rover we are committed to fostering a more diverse, inclusive and unified culture that is representative of our employees, our customers and the society in which we live; a culture where every one of our colleagues can bring their authentic self to work and feel empowered to reach their full potential.

There are tremendous benefits to an environment where everyone feels valued and included. Diversity of thought and experience will be a key driver of our future success as a business: we cannot underestimate the positive impact that diversity and inclusion can have on how we understand our customers, fuel our innovation and, most importantly, engage and inspire our most important asset, our people.

We have identified three strategic pillars to achieve our goal, which will shape our global Diversity and Inclusion activity over the next five years. How they are implemented around the globe will vary and will be driven by the needs of the countries we operate in.

As part of our strategy, by 2026 we aim to have:

- Globally, at least 30% of all senior leadership positions held by females – we will aim to at least mirror this representation at all levels of our business.
- In the UK at least 15% of all senior leadership positions held by those from Black, Asian, and minority ethnic backgrounds - we will aim to at least mirror this representation at all levels of our business.
- A score of over 80% in our Inclusion Index, measuring the percentage of people who would recommend Jaguar Land Rover as an inclusive employer.

We will continue to measure progress on a number of other metrics as part of our regular employee surveys.

Code of Conduct

Directors and employees are required to comply with the Jaguar Land Rover Code of Conduct, which is intended to help them put the Group's ethical principles into practice. The Code of Conduct clarifies the basic principles and standards they are required to follow and the behaviour expected of them. The Code of Conduct can be found at www.jaguarlandrover.com. Employees, contract staff, third parties with whom the Group has a business relationship (such as retailers, suppliers and agents), and any member of the public may raise ethical and compliance concerns to the Group's global helpline or via group.compliance@ jaguarlandrover.com.

OPPORTUNITIES

The Government of India approved the Production Linked Incentive (PLI) Scheme for Automobile and Auto Component Industry in India for enhancing India's Manufacturing Capabilities for Advanced Automotive Products (AAT) with a budgetary outlay of ₹25,938 crore. The PLI Scheme for Automobile and Auto component industry proposes financial incentives to boost domestic manufacturing and attract investments in the automotive manufacturing value chain. Tata Motors has got approval in PLI scheme.

The Government of India also launched vehicle scrappage policy on August 13, 2021. The policy mandates Commercial vehicles aged >15 years and passenger vehicles aged >20 years will have to be mandatorily scrapped if they do not pass the fitness and emission tests. The policy is expected to reduce pollution, create job opportunities and boost demand for new vehicles. Several incentives have been proposed, including – giving exchange value while purchasing new vehicles, zero registration fees for new vehicle purchased, etc. Further, state governments and auto manufacturers have also been advised to provide certain concessions. The government's plan for strengthening the public transport sector under PPP models is encouraging for the industry. The government of India have undertaken multiple initiatives to promote manufacturing and adoption of electric vehicles in India and has set ambitious targets for 30% EV penetration by FY 2030.

Strong policy support initiatives and government focus on infra spending is creating good opportunities for demand revival and growth. We see significant opportunities to leverage the mega trends shaping the Indian automotive industry by means of increasing digital offerings, strengthening the play in CV passenger segment under own, maintain and operate model, accelerating CNG and EV penetration in CV's, stepping up new product launches in EV's and expanding EV ecosystem in India.

Jaguar Land Rover new Reimagine strategy paves the way for a future of modern luxury by design with quality and sustainability permeating through every facet of Jaguar Land Rover business. Jaguar Land Rover's Reimagine strategy and Refocus programme have set the company on an exceptional journey of transformation with quality and sustainability at the centre, simplification of processes, rapid electrification of vehicles, creating unique customer experiences and a positive societal impact. This strategy aims to launch Jaguar as a pure electric brand from 2025 by introducing the first Land Rover all electric model by 2024 with an additional five all electric Land Rover models launched by 2026, Launch the modular longitudinal architecture and electrified modular architecture (native BEV architecture) for Land Rover products and a BEV only architecture dedicated to Jaguar. In 2021, we introduced the New Range Rover, as the embodiment of modern luxury, with breath-taking modernity to its exterior and a highly sophisticated, reductive interior with an intuitive approach to relevant technology. The New Range Rover indicates a philosophy that will be embedded across our products and our customer experiences, generating a key differentiator for Jaguar and Land Rover, as part of our transformation into modern luxury brands.

FY 2021-22 saw the full global roll-out of New Defender and the launch of New Range Rover. Demand for both of these products has led to a record-breaking order book of 168,471 at the end of the year, with Defender making up 24%, i.e. 40,618 orders out of the total orders and New Range Rover accounting for 27%, i.e. 45,584 orders. The recent reveal of New Range Rover Sport aims to repeat the success of the previous two product launches, and a positive customer response to this exciting new model is seen.

Collaborations and partnerships are at the heart of the Reimagine strategy. In February 2022, a new partnership with NVIDIA, was announced, that will jointly develop AI-powered autonomous driving and connected services for all future vehicles built on NVIDIA DRIVETM. JLR also became exclusive partner with BNP Paribas for financial services across nine European markets and revealed the integration of Amazon Alexa on all new and existing Jaguar and Land Rover vehicles fitted with its advanced Pivi Pro infotainment system.

OUTLOOK:

Long-Term

There are various positive & negative factors affecting the automobile industry. Basis these recent developments, Automobile Industry has the potential to contribute about 12% of the total GDP of the nation and create around 65 million employment opportunities, as per the original Automotive Mission Plan 2016-26.

A report by India Energy Storage Alliance estimated the EV market to increase at a CAGR of 36% until 2026. The EV battery market is also expected to expand at a CAGR of 30% during the same period. Cumulative investment of ₹ 12.5 trillion (US$ 180 billion) in vehicle production and charging infrastructure would be required until 2030 to meet India's EV ambitions. With the government's aim to move towards a completely Aatmanirbhar Bharat, the Ministry of Heavy Industries has sanctioned 2877 public EV charging stations in 68 cities all over India, under the Scheme for Faster Adoption and Manufacturing of Electric Vehicles in India Phase-II (FAME India Phase II) to be set up by Oil Marketing Companies in prominent cities and highways. The government also announced

a battery-swapping policy in the Union Budget 2022-23, which will allow drained batteries to be swapped with charged ones at designated charging stations, thus making EV's more viable for potential customers.

The Government aims to develop India as a global manufacturing and research and development (R&D) hub. It has set up National Automotive Testing and R&D Infrastructure Project (NATRiP) centres as well as the National Automotive Board to act as facilitator between the Government and the industry. Under (NATRiP), five testing and research centres have been established in the country since 2015.

Continued investment, by Jaguar Land Rover, in new products, services, technologies and manufacturing capabilities is key for the long term success of the Company. With an aim to redefine modern luxury, and the growing worldwide customer appetite for electric vehicles, JLR is accelerating the Reimagine strategy's transformation into a business that will deliver double-digit EBIT margins within five years and achieve net zero carbon through the company's entire value chain, including its products, supply chain and operations, by 2039.

The New Range Rover introduces plug-in hybrid electric propulsion with a segment-leading official electric-only range of over 100km. From 2024, a pure-electric New Range Rover will join the family.

Over the next four years, Land Rover aspires to welcome six, all electric variants across two architectures – the flexible Modular Longitudinal Architecture (MLA) and the Electric Modular Architecture (EMA). We expect 60% of the global Land Rover sales to be purely-electric by 2030.

From 2025, new Jaguar and Land Rover vehicles will be built on the NVIDIA DRIVE™ software-defined platform – delivering a wide spectrum of active safety, automated driving and parking systems, as well as AI features inside the vehicle.

Short-Term

To help the automotive industry overcome the cost disabilities, economies of scale, and facilitate growth of the industry by building a robust supply chain, in areas of Advanced Automotive Technologies [AAT], government has launched the PLI scheme for automobile and the auto component industry, for the next 5 years-starting FY 2022-23 with an outlay of 26,000 crores. This scheme will facilitate the automotive industry to move up the value chain into higher value-added products, apart from generating employment. The scheme will also provide incentive of up to 18 per cent, to encourage industry to make fresh investments in indigenous supply chain of AAT products.

According to a recent survey of ACMA leadership, despite prevalent concerns of the third wave of the pandemic, the industry is cautiously optimistic about the prospects of the Indian economy and the automobile sector. Auto component manufacturers have recovered and investment cycle has commenced. An estimated 60 percent of the manufacturers are equipped to be part of the EV supply chain, while the rest would be ready in the next two-odd years.

According to NITI Aayog and Rocky Mountain Institute (RMI), India's EV finance industry is likely to reach ₹ 3.7 lakh crore (US$ 50 billion) by 2030. IBEF has also predicted that the Indian auto industry is expected to record strong growth in 2022-23, after recuperating from the effects of COVID-19 pandemic.

For Jaguar Land Rover, supply constraints, particularly semiconductors, restricted the ability to produce as many vehicles as planned for, in FY 2021-22. These supply chain challenges limited their capacity to build cars in line with the customer demand which led to a downfall in the wholesale volumes. The shortage of semiconductors is likely to continue in the coming year with gradual improvement throughout FY 2022-23. In response to these challenges, JLR is focusing on the production of higher margin products and closely monitoring the supply chain. JLR is engaged in strategic discussions with key component suppliers and chip producers to secure long-term supply agreements for future product programmes, to increase the company's resilience.

The rising inflationary pressure, with rising commodity prices and the highly volatile gas prices across Europe in the fourth quarter has an impact on the business, leading to increased material costs. In the short term, there is a level of protection through the commodity hedging programme. The impact of changes in material costs on the margins is closely monitored to minimise passing the cost increase onto our customers.

Cautionary Statement

Statements in the Management Discussion and Analysis describing our objective, projections, estimates and expectations may be "forward looking statements" within the meaning of applicable securities laws and regulations. Actual results could differ materially from those expressed or implied. Important factors that could make a difference to our Company operations include, among others, economic conditions affecting demand/supply and price conditions in the domestic and overseas markets in which we operate, changes in government regulations, tax laws and other statutes and incidental factors.