

# **Industry Report on the Passenger Vehicle Industry in India**

**Hyundai Motor India Ltd.**

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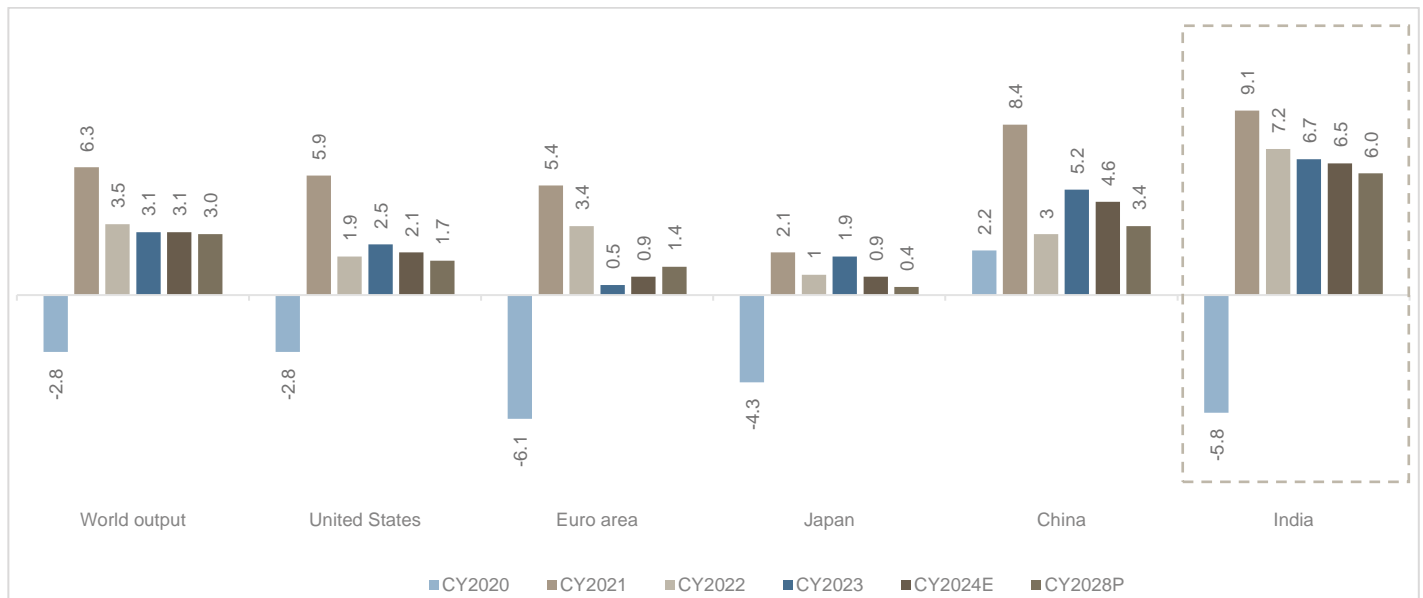
# Macroeconomic Overview of Global and Indian economy

## Overview of the Global Economy

### Review and Outlook of Global GDP

The global economy continues to recover from the challenges heaped by the Covid-19 pandemic, Russia's invasion of Ukraine, Red Sea Crisis and considerable tightening of global monetary conditions to address elevated inflation. However, a return to pre-pandemic growth trajectory seems increasingly challenging, particularly in the case of emerging and developing economies due to the convergence of several forces that are holding back a steady recovery. Some of these are long-term fallouts of the pandemic, the war in Ukraine, and increasing geoeconomic fragmentation. Other cyclical factors include elevated central bank policy rate to control inflation in several large emerging market and developed economies, a withdrawal of fiscal support amid high debt levels, and extreme weather events. However, India witnessed strong growth momentum despite these geopolitical tensions and uncertainties in the global economic environment. Major push to the economic growth has been fuelled by investments and key sectors such as information technology, services, agriculture, and manufacturing.

### Gross Domestic Product (GDP) growth of key economies (%)



Note: On Calendar Year (CY) basis

\* Euro area comprises 19 member countries of the EU

Source: International Monetary Fund (IMF; World Economic Outlook – January 2024 update), CRISIL MI&A

As per World Economic Outlook by International Monetary Fund (IMF):

- The global GDP growth is estimated at 3.1% in the CY2024 with the forecast 0.2% higher than the previous estimates due to the upgrades for China, the United States (US), large emerging markets and developing economies. The forecast for CY2024 is however, below the historical (CY2000-2019) annual average of 3.8% with elevated central bank policy rates to fight inflation, a withdrawal of fiscal support by major economies amid high debt weighing on economic activity and low underlying productivity growth
- In the case of advanced economies which include the US, Japan and Euro area, growth is projected to decline slightly from 1.6% in CY2023 to 1.5% in CY2024. Compared to earlier outlook of 1.4%, a marginal upward revision of 0.1% for CY2024 is due to stronger growth momentum in the US that is partly offset by weaker growth in the Euro zone.

- The growth rate in emerging market and developing economies which include China, India, is expected to remain at 4.1% in CY2024 and to rise to 4.2% in CY2025, an upward revision of 0.1% point in CY2024 since previous estimates reflects upgrades for several region. Emerging and developing economies are expected to experience stable growth through CY2024 and CY2025 albeit with some regional differences.

GDP growth rate of the US was revised down from 2.5% in CY2023 to 2.1% in CY2024. There was an upward revision of 0.6% for CY2024 from the previous estimates, largely due to stronger than expected growth outcome for CY2023.

GDP growth for the Euro zone is projected to recover from its low rate of an estimated 0.5% in CY2023 which was due to high exposure to the war in Ukraine, to 0.9% in CY2024. Stronger household consumption due to the decrease in energy prices and drop in inflation is supporting real income growth and is expected to drive the recovery. Growth is revised downward by 0.3% for CY2024 as compared to previous estimates of IMF, largely on account of carryover from the weaker than expected outcome for CY2023.

Among other advanced economies, growth in the United Kingdom is projected to rise modestly from an estimated 0.5% in CY2023 to 0.6% in CY2024, due to the lagged effect of high energy prices. Output in Japan is projected to remain above potential, however it is expected decelerate from an estimated 1.9% in CY2023 to 0.9% in CY2024. This is due to fading of the one-off factor that supported activity in 2023, including depreciation of the Yen, pent up demand, and a recovery in business investment following earlier delays in implementing projects.

Growth in emerging and developing countries of Asia is expected to decline from an estimated 5.4% in CY2023 to 5.2% in CY2024, with an upgrade of 0.4% for CY2024 over previous IMF estimates, attributable to China's economic recovery. Growth in China is projected at 4.6% in CY2024 due to carryover from stronger than expected growth in CY2023 and increased government spending on capacity building against natural disasters. India is the fifth largest economy and among the fastest growing major economies. Growth in India is projected to remain strong at 6.5% in CY2024 with an upgrade of 0.2% over previous IMF estimates due to resilience in domestic demand.

Economic activity in major developed countries was also resilient, with economic momentum continuing in the US and the Euro zone avoiding a contraction in the fourth quarter of CY2023. Growth picked up in the fourth quarter of CY2023 in China as well. However, the slowdown in the UK economy accelerated in the fourth quarter of CY2023, with a recession now being recorded. Japan's economy too slowed down in the fourth quarter of CY2023.

Meanwhile, inflation has declined faster than expected. Global headline inflation in the fourth quarter of CY2023 is estimated to be about 0.3% lower than the previous IMF estimates on a quarter over quarter seasonally adjusted basis. Diminished inflation reflects the fading of relative price shocks notably energy prices. In near term, inflation expectations have fallen in major economies with long term expectations remaining anchored.

## **Review and Outlook of GDP and Inflation in Key Economies**

There is regional divergence on the inflation front in the United States, the disinflation process remains uneven. As of February 21, 2024, S&P Global Ratings does not expect the Federal Reserve to cut rates before June. Inflation in the euro area eased further in February but remains above the European Central Bank's target. On the other hand, inflation in Japan continued to ease, but remained above the Bank of Japan's target. China's prices rose in February after four months of deflation, led by an increase in non-food prices.

**Consumer price inflation (on-year, %)**

	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24
US	3.2	3.7	3.7	3.2	3.1	3.4	3.1	3.2
UK	6.8	6.7	6.7	4.6	3.9	4.0	4.0	-
Euro zone	5.3	5.2	4.3	2.9	2.4	2.9	2.8	2.6
Japan	3.3	3.2	3.0	3.3	2.8	2.6	2.2	-
China	(0.3)	0.1	0.0	(0.2)	(0.5)	(0.3)	(0.8)	0.7
India	7.4	6.8	5.0	4.8	5.5	5.6	5.1	5.1

Source: Statistical Bureau, respective countries

**GDP growth (Q-o-Q SA annualised, %)**

	Q2-CY22	Q3-CY22	Q4-CY22	Q1-CY23	Q2-CY23	Q3-CY23	Q4-CY23
US	(0.6)	2.7	2.6	2.2	2.1	4.9	3.2
UK	0.1	(0.1)	0.1	0.2	0.0	(0.1)	(0.3)
Euro area	0.8	0.5	0.0	0.0	0.1	(0.1)	0.0
Japan	4.8	(0.7)	1.8	4.0	4.2	(3.2)	0.4
China	0.4	3.9	2.9	4.5	6.3	4.9	5.2
India	9.1	5.2	4.0	12.8	6.2	4.3	6.2

Source: Statistical Bureau, respective countries

**US Inflation Remains Sticky; Labour Market Continues to be Robust**

- According to a Bureau of Economic Analysis (BEA) second advance estimate, US GDP grew an annualized and seasonally adjusted 3.2% in the fourth quarter of 2023, slightly lower than 3.3% as per the BEA's previous estimate. Consumer expenditure grew 0.7% month-on-month in December 2023, up from 0.4% in the previous month.
- The US labour market remained robust, adding 275,000 non-farm payroll jobs in February 2024, which was up from 229,000 in January 2024 and above the average monthly gain of 230,000 in the previous twelve months. However, the unemployment rate rose to 3.9% in February 2024.
- US inflation remained sticky at 3.2% in February 2024 from 3.1% in the previous month, driven by slowing pace of deflation in energy prices. The energy prices went down 1.9% year-on-year in February 2024 compared with a 4.6% fall in January 2024. However, food inflation slowed down significantly to 2.2% in February compared to 2.6% in January. Core inflation (all items except food and energy) eased marginally to 3.8% in February 2024 compared to 3.9% in January 2024.
- Goods and services trade deficit in February 2024 widened to USD 68.9 billion (seasonally adjusted), compared with USD 64.2 billion in January 2024, as exports rose 1.8% month-on-month versus imports growth of 0.8%.
- Given the resilience of economic activity and the uneven disinflation process, S&P Global Ratings does not expect a rate cut before the Federal Reserve's June 2024 meeting.

## **Euro Zone Avoids Contraction; Inflation Softens**

- Euro zone GDP held steady with 0.0% growth on-quarter (seasonally adjusted) in the fourth quarter of 2023, against a 0.1% contraction in the previous quarter. Fourth quarter performance was mixed, with Italy (0.2%) and Spain (0.6% provisional) growing on-quarter while Germany (-0.3% estimated) contracted and French growth remained at 0.0%.
- The HCOB Eurozone Composite Purchasing Managers' (PMI) Output Index, which is a weighted average of the HCOB Manufacturing PMI Output Index and HCOB Services PMI Business Activity Index, rose to eight months high of 49.2 in February 2024 from 47.6 in January 2024. Given that the neutral threshold is 50, the February reading indicates that the euro area economy has almost stabilised.
- According to the flash estimate from Eurostat, inflation in the Euro area softened marginally to 2.6% in February 2024 from 2.8% in January 2024, driven by moderation across most categories. Inflation eased in the food related category (3.9% versus 5.6% in January 2024) while energy prices declined less sharply (-3.7% versus -6.1% in January 2024). 'Core' inflation, except food and energy, eased further to 3.1% from 3.3% in January. Within core, inflation in non-energy industrial goods eased (1.6% versus 2.0% in January 2024) while services inflation remained steady at 4.0%.
- The European Central Bank held the policy rates steady at its March meeting for the fourth consecutive time, as inflation remains above its target despite some easing.
- Euro zone merchandise exports increased 0.9% while imports fell by 0.4% in February 2024 compared to January 2024 which led to a trade surplus of EUR 15.3 billion in February 2024.

## **Slowdown in the UK Deepens; Inflation Remains Steady**

- The UK's real GDP contracted 0.3% in the fourth quarter of CY2023, a sharper fall compared to the 0.1% contraction recorded in the third quarter. From an output perspective, all three major sectors contracted. Output in the construction sector contracted the most (1.3%), followed by the production sector (1.0%) and the services sector (0.2%). A decline in a manufacturing output was the main driver of the contraction in the production sector, while a contraction in wholesale and retail trade was primarily responsible for declining output in the services sector.
- Inflation rose by 3.4% in February 2024, as compared to 4% in January 2024. Housing and household services, and motor fuels exerted the highest upward pressure on the annual inflation rate, whereas food contributed to the largest downward pressure. Core inflation rose by 4.5% in February 2024, down from 5.1% in January 2024. At its meeting that ended January 31, the Bank of England held its policy rate steady at 5.25%.
- Goods and services trade deficit narrowed to GBP 3.5 billion (seasonally adjusted) in February 2024 from GBP 2.3 billion in January 2024.

## **Slowdown in Japan Continues**

- The Japanese economy contracted by an annualized (and seasonally adjusted) 0.4% in the fourth quarter of CY2023, as better performance than the 3.2% contraction was recorded in the third quarter of CY2023.
- The au Jibun Bank Japan Manufacturing Purchasing Manager Index (PMI) fell to 47.2 in February from 48.0 in January, marking the ninth straight month of contraction in manufacturing activity and the sharpest contraction since August 2020. Conversely, services activity continued expand in February, as indicated by the au Jibun Bank Japan Services Business Activity Index, though the index moderated to 52.9 in February from 53.1 in January 2024.

- Inflation in Japan rose by 2.8% in February 2024 from 2.2% in January 2024, accelerating for the first time in four months and reaching the highest since last November 2023. The rise is mainly due to base effect, as energy subsidies introduced by the government in February 2024 are losing their effect. Inflation slowed down in food at 4.8% in February 2024 vs 5.7% in January 2024 while inflation in all items except food and energy - 'core' inflation grew to a four month high of 2.8% in February 2024 from 2% in January 2024. Inflation in transport declined marginally (2.9% vs 3.0%) and in communication (1.4% vs 2.1) while that in housing remained steady (0.6% vs 0.7%).
- During its March meeting, the Bank of Japan ended the negative interest rate and yield curve control policy in place since 2016, stating that it will maintain the key short-term interest rate between 0-0.1%. The Bank's decision was based on healthy wage growth in the economy (corporates have been revising up wage growth rates) and the fact that despite easing, inflation remains above the 2% target.
- Japan trade deficit decreased to JPY 379.358 billion in February 2024, compared with a deficit of JPY 928.908 billion in February 2023, as exports grew 7.8% year-on-year, while imports increased at a softer 0.5%. The first rise in 11 months, to JPY 8628.57 billion, as domestic demand started to recover. In 2023, Japan logged a trade shortfall of JPY 9.29 trillion, the third successive year of gap.

## Inflation Returns in China

Manufacturing activity in China continued to contract in February 2024. The official National Bureau of Statistics (NBS) Manufacturing Purchasing Managers' Index stood at 49.1%, compared with 49.2% in January. On the other hand, non-manufacturing activity continued to expand. The NBS Non-Manufacturing Business Index picked up to 51.4% from 50.7%. After four consecutive months of deflation, February saw the return of inflation in China (0.7% in February, versus -0.8% in January). Deflation in the food-related category eased (-0.1% vs -3.6% in January), while inflation in non-food items inched up (1.1% versus 0.4%). 'Core' inflation, except food and energy, inched up as well (1.2% versus 0.4%). The People's Bank of China kept its one-year Loan prime rate unchanged at 3.45% in its February announcement, however, it has been attempting to increase liquidity in the system and aid recovery.

Additionally:

- China's total trade surplus stood at USD 125 billion in the first 2 months of 2024 compared with USD 116.9 billion during the same period of CY2023. China exports have benefited from the global tech cycle recovery.
- China exports rose by 7.1% growth in combined figures of January and February compared to same period of CY2023. Growth was led by robust exports to some of China's emerging market trade partners such as Africa, Latin America, India and Russia.
- China's export to Russia increased by 12.5% in the first 2 months of 2024, but the growth is lower than same period of CY2023. Moscow became China's 10th largest trading partner in CY2023 with record USD 240 billion worth of good shipped between the two countries.
- Strong demand from emerging markets supported China's trade surge at the beginning of 2024. Shipment to Africa, Latin America and India rose by 21%, 20.6% and 12.8% respectively.
- Strong export growth to India reflects strong domestic economy. Export to Africa and Latin America indicates growing trade ties between China and these emerging economies, amid a broad global geopolitical shift.
- China's shipments to the United States also increased, up 5% from year earlier. However, its export to other traditional trading partners, such as the European union, Japan and Australia, registered decline.

- China's imports also picked up during the first two months of this year in volume terms. Imports rose by 3.5 per cent year on year compared to the same period last year, with the figures combined to smooth out the impact of the Lunar New Year holiday.

## India to be the Fastest Growing Large Economy

India's growth trajectory continues as in the first three quarters of fiscal 2024, India's GDP expanded at 7.8% in the first quarter, 7.6% in the second quarter and 8.4% in the third quarter. Core sector growth in February 2024 was the fastest in three months and manufacturing activity at five months high. Economic growth was encouraged by investment and manufacturing activity.

Core inflation eased to 3.5% in February 2024, from 3.7% in January 2024. This, some experts said, was the lowest reading since January 2015. Consumer Price Index based retail inflation was near steady at 5.1% in February 2024, remaining within Reserve Bank of India's (RBI) tolerance range of 2-6% for the sixth consecutive month. Food inflation, accounts for nearly half of the overall consumer price basket, rose to 8.7% in February 2024, up from 8.3% in January, but easing from 9.5% in December 2023.

Investments rose to 31.7% of GDP in the first three quarters of fiscal 2024. The National Statistical Office (NSO) reported that manufacturing output rose by 5% in February 2024 which is slightly lower as compared to 5.9% in February 2023. Industrial production expanded by 5.7% in February 2024. Mining production surged by 8% while power output grew by 5.7% in February 2024. India's merchandise trade deficit widened to USD 18.71 billion in February 2024 from USD 17.49 billion in January 2024, as imports surpassed exports in value terms against the backdrop of the Red Sea conflict.

Data released by the NSO in February 2024 revealed that the economy is expected to grow by 7.6% in fiscal 2024 as against the previous estimates of 7.3%. The Indian economy is expected to grow at a higher rate than estimated in fiscal 2024, with GDP growth in the third quarter of the fiscal at 8.4% on the back of lower base, tax collections and healthy growth in the manufacturing sector and construction activities.

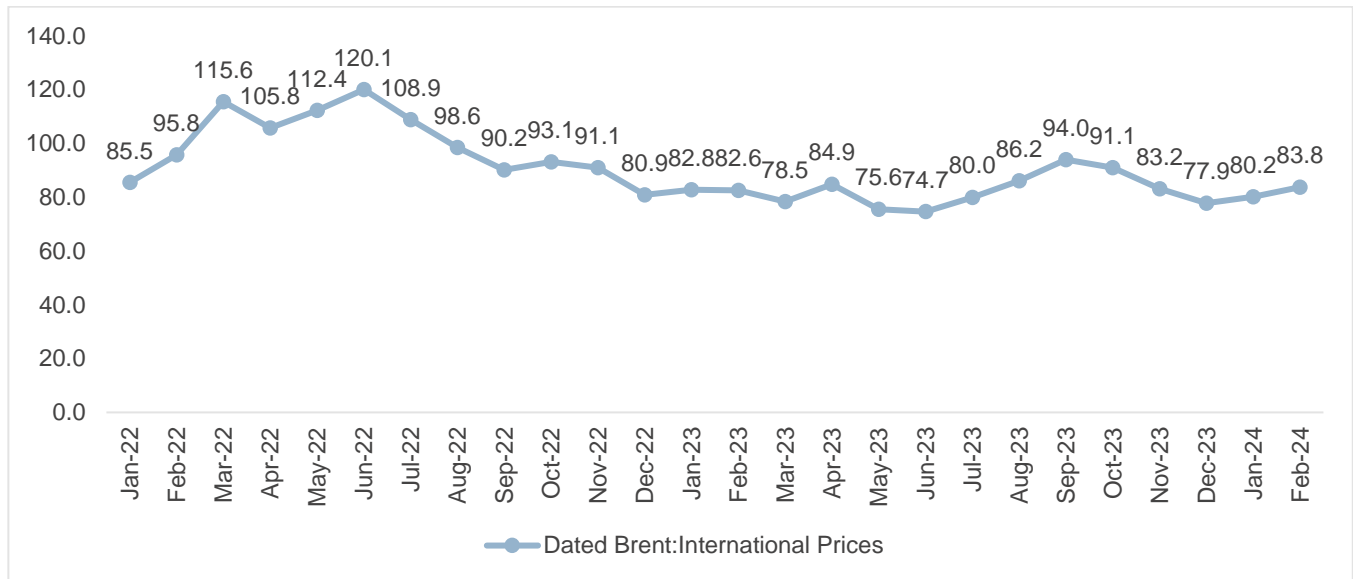
As per CRISIL MI&A, India's economy is expected to grow at 6.8% in fiscal 2025 up from 6.5% projected earlier. This will be driven by expected easing of domestic financial conditions, disinflation leading to increasing purchasing power of consumers and growth in private capital expenditure.

## Energy Prices Increase, as Oil Prices Inch Up Further

Energy prices witnessed a 4.4% growth in February 2024 as compared to January 2024. The growth caused Brent crude prices to average USD 83.8 per barrel in February 2024, which grew from USD 80.2 per barrel in January 2024. The decision of multiple companies and fleet operators to avoid the Suez Canal amid the persistent Houthi attacks in Red Sea have pushed average benchmark prices upwards. Prices rose primarily because of heightened uncertainty about global oil shipment as attacks to vessels around the critical Red Sea shipping channel intensified.



**Brent crude prices (USD/barrel)**



Sources: CRISIL MI&A

In February 2024, Brent crude prices rose to 4.5%, a pickup from the 3.0% increase in January 2024. Brent crude prices averaged USD 83.8/barrel in February, up from USD 80.2/barrel on average in January on the back of continued geopolitical uncertainty, leading to the rerouting of barrels. The prices remained below the September level of USD 94.0/barrel. Australian coal prices declined 0.6% to USD 124.2/metric tonne from USD 124.9/metric tonne.

The Organisation of Petroleum Exporting Countries (OPEC) and its allies OPEC+ led by Saudi Arabia and Russia agreed to extend Voluntary oil output cuts by 2.2million barrel per day into the second quarter of 2024. The decision of the OPEC+ coupled any further escalation in the Red Sea crisis will be the key factors affecting crude oil

prices. Global energy prices increased 1.1% in February 2024, slower than the 1.6% rise in January 2024.

**Global trade environment**

The value of global merchandise trade has experienced continuous decline since mid-2022. However, trade in services-maintained growth throughout most of the period.

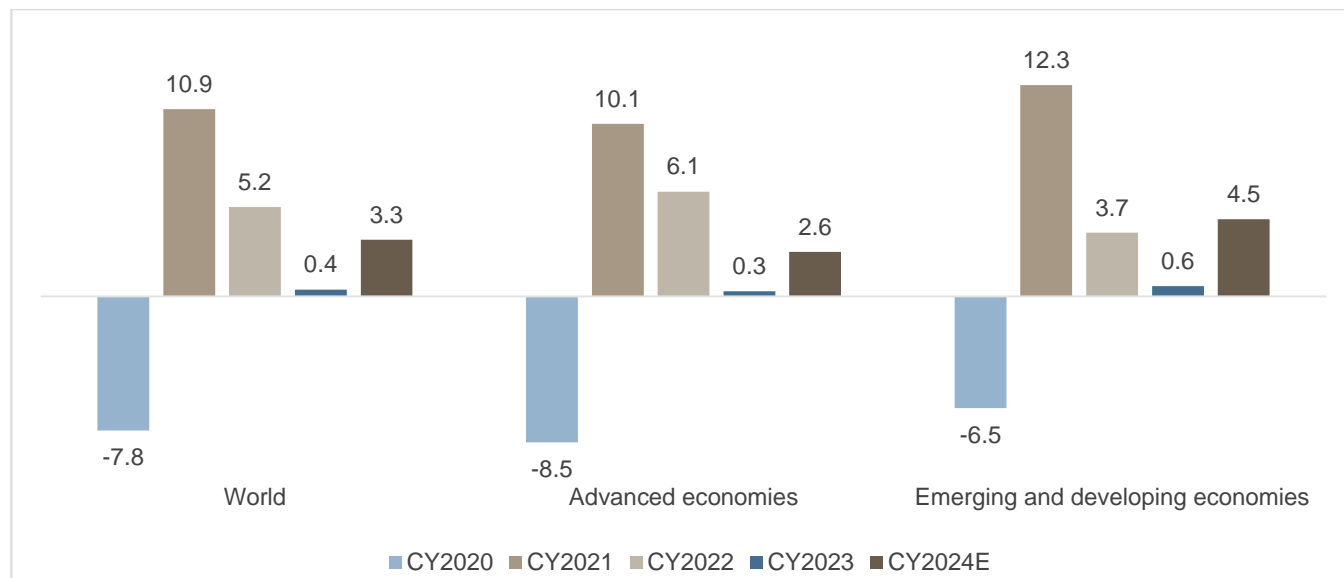
The decline in the value of global trade throughout 2023. was primarily driven by reduced demand in developed countries and trade weaknesses within East Asia and Latin America regions. Lower commodity prices further contribute lowering the value of international trade in 2023. However, trade in services saw growth for most of 2023. Among services tourism and travel related services rebounded strongly. Both merchandise and services trade stabilised quarter-over quarter, indicating the end to the decline in global trade of goods, and the end of the strong upward trend in trade in services.

The volume of trade stayed modestly throughout 2023. The slightly positive trend in the volume of international trade suggests a resilient global demand for imported products. A weak United States Dollar also supported global trade volumes during 2023.

The Global trade growth is projected at 3.3% in 2024. The projections for 2024 are more optimistic even as overall moderating global inflation and improving economic growth forecast suggest a reversal of the downward trends. The global trade outlook for 2024 remains subject to significant uncertainties. Persistent geopolitical tensions, rising

shipping costs, and high levels of debt weighing on economic activity in many countries may have negative influence on global trade.

**IMF world trade growth projection**



Advanced economies – US, Japan, Euro area; emerging market and developing economies – China, India, Russia, Brazil, Mexico, South Africa  
 Note: Average annual % change of export and import trade in goods and services has been considered  
 Source: IMF (World Economic Outlook – January 2023 update), CRISIL MI&A

**Key Events and their Impact on Global Economy**

**Red Sea Attacks Disrupt Global Trade**

In the past few months, global trade has been held back by disruption at two critical shipping routes. Attacks on vessels in the Red Sea reduced traffic through the Suez Canal - the shortest maritime route between Asia and Europe - through which about 15% of global maritime trade volume normally passes. Several shipping companies diverted their ships around the Cape of Good Hope. This led to increase delivery times especially for companies with limited inventories. A severe drought at the Panama Canal has forced authorities to impose restrictions that have substantially reduced daily ship crossing, slowing down maritime trade through another key chokepoint that usually accounts for 5% of global maritime trade. In the first 2 months of 2024, Suez Canal trade dropped by 50% from year earlier while trade through the Panama Canal fell by 32%, disrupting supply chains and distorting key macroeconomic indicators.

**Commodity Price Spikes Amid Geopolitical and Weather Shocks**

The conflict of Gaza and Israel could escalate further into the wider region, which produces about 35% of the world’s oil export and 14% of gas exports. Risks due to continued attacks in the Red Sea and the ongoing war in Ukraine are generating fresh adverse supply shocks to global recovery, with spike in food, energy, and transportation costs. Container freight cost have sharply increased since October 2023 till January 2024 as the situation in Middle East remains volatile. Further geoeconomic fragmentation could also constrain the cross-border flow of commodities causing additional price volatility. Extreme weather shocks, including floods and droughts, together with the El Nino phenomenon, may cause food prices to hike that may lead to food insecurity and put risk to global disinflation process.

## Tighter Monetary Policy Stance

A slower than expected decline in core inflation in major economies owing to persistent labour market tightness and supply chain disruptions could impact rise in interest rate expectation and fall in asset prices. Such developments could increase financial stability risks, tighten global financial conditions, and strengthen the US dollar, with adverse consequence for trade and growth.

Key global central banks have raised rates at a rapid pace in 2023, as several advanced economies were plagued by inflation. In the current cycle, the US Fed and Bank of England have raised rates by 525 bps, while the European Central Bank has raised rates by 450 bps. In the last few months, however, these central banks have held interest rates steady as inflation moves closer to the 2% target. The Fed is at a turning point and has indicated that it will cut rates by a cumulative 75 bps in 2024.

## Faltering Growth in China

With a substantial share of economies' exports absorbed by China, a weaker-than-expected recovery in China would have significant cross-border effects, especially for commodity exporters. Fixed investment has weakened, which indicates weakness in external demand. Unintended fiscal tightening in response to local government financing constraints is also possible, which will also reduce household consumption due to subdued confidence. Risks to the outlook include ongoing weakness in the Chinese real estate market, which could pose a larger-than-expected drag on growth and potentially lead to financial stability risks.

## India-US Trade Talks

The US had communicated in August 2021 to India that it is not interested in a free trade agreement (FTA). India was pulled out of the US's Generalised System of Preferences (GSP) that granted some tariff relief to its exports by the Trump government in 2019.

The government will have to work on market access issues on both sides, lowering of non-tariff barriers, mutual recognition pacts and adopting common quality standards can also help Indian exports in the interim. There is a possibility that even these issues, which include providing access to US agricultural products or easing import duties on automobiles, etc.

The strong momentum witnessed in the India-US bilateral trade in goods and services has continued to rise and has likely surpassed USD 200 billion in calendar year 2023 despite the challenging global trade environment. The bilateral goods and services trade between US and India has almost doubled since 2014, it shows accelerated growth benefitting both countries that was also highlighted in the latest India - United States Trade Policy Forum in January 2024.

Beyond trade, India and the US have strong ties in various policy areas. They regularly collaborate on initiatives such as the Indo-Pacific Economic Framework for Prosperity (IPEF), aimed at countering China's influence in South and Southeast Asia. The two nations have also resolved seven disputes at the World Trade Organization (WTO), underlining their deepening cooperation.

## Trade Deficit Narrows

The global economy is set for broadly steady expansion in 2024, IMF World economic outlook Jan 2024 projected global growth of 3.3% in 2024 and 3.6% for 2025. Major economies had witnessed downturn in merchandise trade during 2023. The notable exception is the Russian Federation, for which import grew by 6% in 2023. However, this increase must be due to currency fluctuation and the very low base of 2022. Russian federation saw a sharp decline in export level in 2023 largely tied to energy markets. On the other hand, Brazil and European union recorded small positive growth rates in export during 2023. Quarter-over-quarter statistics indicate return to growth

in some major economies, including China and India. Overall, the comparison of annual and quarterly growth suggests significant improvement in trends for several economies, however the overall statistics for 2023 remain negative.

The decline in global trade has been more pronounced for developing countries. During 2023, imports and exports of developing countries declined by an average of 5 and 7 per cent, respectively. Conversely, trade for developed countries decreased by about 4 per cent for imports and 3 per cent for exports. Quarter-over-quarter figures indicate a positive trend for developing countries, while trade of developed countries has remained stable. Regarding South-South trade (developing countries excluding East Asia), the stronger-than-average decline during much of 2023 reversed in Q4 2023, with a quarter-over-quarter growth of about 3 per cent.

Most regions have undergone negative trade growth in 2023. The exception was a significant increase in intra-regional trade for the African region. Notably, during 2023 the region comprising the Russian Federation and Central Asian economies registered a strong decrease in exports but also a strong increase in imports. East Asian trade exhibited notable weakness throughout 2023, also in relation of intra-regional trade. During the last quarter, trade remained weak in Latin America and in the region comprising the Russian Federation and the Central Asian economies. Conversely, trade growth was positive for Africa and East Asia.

## **WTO Negotiation: India Secures Multilateral Victory, Upholds Principle of Fair Trade**

The WTO is a system of rules that aims for fair and open competition. The WTO has 164 members countries, which represents over 98% of global trade.

By January 2023, a total of 61 WTO members that were participating in the Joint statement initiative on service domestic regulation (JSI on SDR) had submitted requests for certification of their updated General Agreement on Trade in Services (GATS.)

India along with South Africa, has achieved a breakthrough in World Trade Organisation negotiations on domestic service regulations. After objections to certification requests for updated GATS, India withdrew objections following consultations. India emphasized adherence to multilateral processes, ensuring non-discrimination principles.

India's key objective was reiterated during meeting and outlined in the revised certification requests of the WTO member involved. WPDR agreed on the course of action for those WTO members aiming to include regulations on domestic matters in their GATS schedules as additional commitments. This outcome addressing a topic mandated by multiple parties within multilateral forum, reaffirmed India's commitment to preserving the multilateral nature of WTO.

## **Regional Comprehensive Economic Partnership (RCEP)**

RCEP is a multilateral FTA between Australia, China, Japan, New Zealand, South Korea, and member states of the Association of Southeast Asian Nations (ASEAN, composed of Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Vietnam). The 15-member states account for ~30% of the world's population and nearly 30% of global GDP. RCEP is the world's largest free trade agreement by members' GDP.

RCEP countries have agreed to progressively abolish 90% of all tariffs on goods between participating members. The agreement also simplifies customs procedures and rules of origin laws between countries. Rules of origin restrictions generally tend to constrain the development of regional supply chains, which means the new provision will reduce the potential regulatory friction for firms and countries in terms of trade.

On November 2019, India decided to opt out of RCEP in the middle of the negotiations. India has trade deficit with 11 out of the 15 RCEP countries and the content of the RCEP deal did not provide protection for the Indian

economy. India's reservations were related to tariff commitments, investments, electronic commerce, rules of origin and auto trigger mechanisms. Further, given the economic slowdown then, the Indian government faced tremendous pressure from different sections of the industry and political organisations to not join the RCEP. Various ministries such as agriculture, steel, chemical and MSME had also opposed the deal.

Joining the RCEP would have made India a part of the rule making body of what was supposed to be the largest trade agreement in the world. The RCEP was also expected to push India to pursue much needed domestic reforms to make the manufacturing sector more competitive. India already had bilateral FTAs with ASEAN, Korea, Japan and negotiations were underway with Australia and New Zealand. India, therefore, had familiarity with these economies. However, the inclusion in the RCEP of China, with whom India had a trade deficit USD 54.7 billion in 2018 - that accounted for half of the country's total trade deficit - was a cause of concern for India's negotiators.

Japan and the other RCEP member states have strongly desired India to come back and join the RCEP. From a Japanese perspective, India's return to RCEP would contribute to strengthening the Australia-India-Japan security network vis-à-vis the rising Chinese military presence in the Indo-Pacific region. Hence, the Japanese government has consistently encouraged India to return to the RCEP framework, stating that joining RCEP would provide India with greater market access and would help the entire region prosper.

## Overview of the Indian Economy

### Review of GDP Growth Over Fiscals 2019-2024 and Outlook for Fiscals 2024-2029

India ranks as the world's 5<sup>th</sup> largest economy and is the fastest growing among major economies. The Indian economy logged 4.3% CAGR between fiscals 2019 and 2024 (till Q3). This was a sharp deceleration from a robust 6.7% CAGR between fiscals 2017 and 2019, which was driven by rising consumer aspiration, rapid urbanisation, the government's focus on infrastructure investment and growth of the domestic manufacturing sector. Economic growth was supported by benign crude oil prices, soft interest rates and low current account deficit. The Indian government also undertook key reforms and initiatives, such as implementation of the Goods and Services Tax (GST), Insolvency and Bankruptcy Code, Make in India, financial inclusion initiatives, and gradual opening of sectors such as retail, e-commerce, defence, railways, and insurance for foreign direct investments (FDIs).

A large part of the lower growth between fiscals 2019 and 2023 was because of the economy contracting 5.8% in fiscal 2021 owing to the fallout of Covid-19. The pandemic's impact was more pronounced on contact-sensitive services and social distancing norms-affected services such as entertainment, travel, and tourism, with many industries in the manufacturing sector also facing issues with shortage of raw materials/components as lockdown in various parts of the world upended supply chains.

Over the period, India's economic growth was led by services, followed by the industrial sector. In parts, though, growth was impacted by demonetisation, the non-banking financial company (NBFC) crisis, slower global economic growth, and the pandemic.

As lockdowns were gradually lifted, economic activity revived in the second half of fiscal 2021. After a steep contraction in the first half, owing to rising number of Covid-19 cases, GDP- gross domestic product moved into positive territory towards the end of fiscal 2021. Subsequently, in fiscal 2022, India's real GDP grew 9.7% from the low base of fiscal 2021.

India's GDP exceeded expectations during first three quarters of fiscal 2024. According to the National Statistics Office (NSO), second advance estimates (SAE), real GDP accelerated to 8.4% on-year in the third quarter of fiscal

2024 from 8.1% in the second quarter. Growth of the past two quarters were revised up (second quarter was revised to 8.1% from 7.6%, and first quarter to 8.2% from 7.8%)

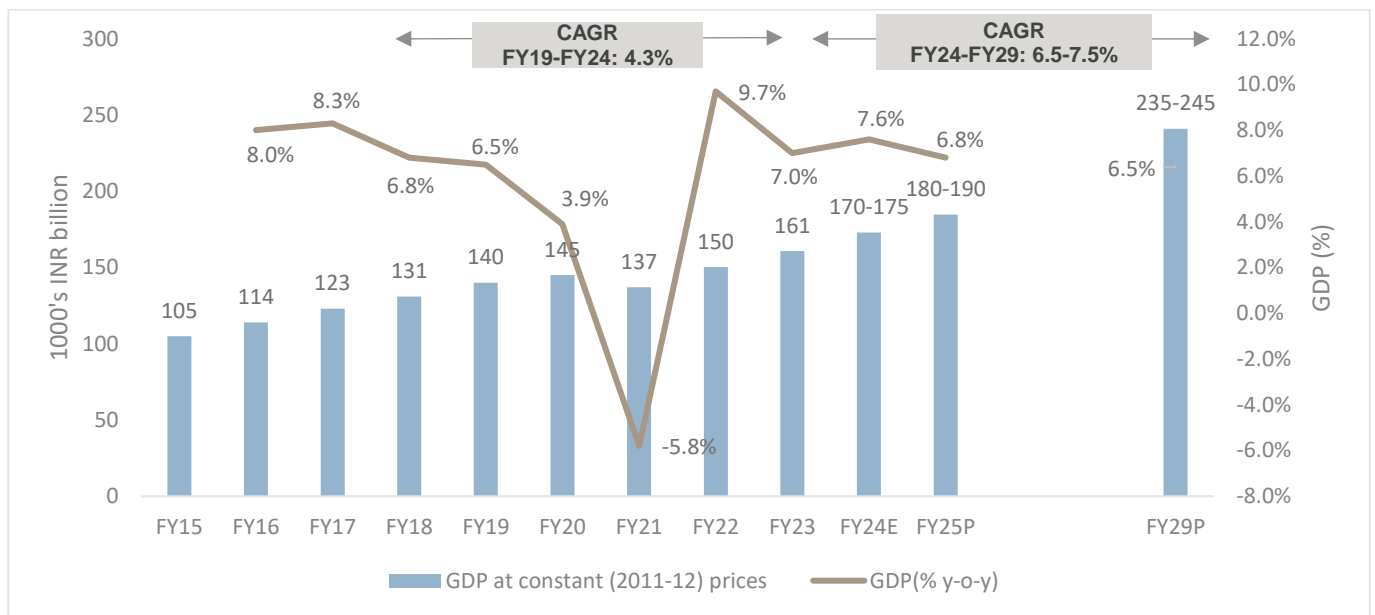
NSO now pegs GDP growth at 7.6% in fiscal 2024 compared with 7.3% as per the first advance estimates. Based on this second advance estimate, growth in the fourth quarter of this fiscal is estimated to slow to 5.9%. Additionally, the estimate for fiscal 2023 was revised to 7.0%, while for fiscal 2022 it was revised to 9.7%.

Growth surpassed forecasts in the second quarter of fiscal 2024, driven by strong government spending and a sharp rise in manufacturing and construction growth. Globally, growth in major economies such as the US and China beat estimates, and has contributed to better export earnings for India.

After a strong GDP estimate in the past three fiscals, CRISIL MI&A expects GDP growth to moderate to 6.8% in fiscal 2025. Fiscal consolidation will reduce the fiscal impulse to growth. Rising borrowing costs and increased regulatory measures could weigh on demand and net tax impact on GDP is expected to normalize. Exports could be impacted due to uneven growth in key trade partners and any escalation of the Red Sea crisis. On the other hand, another spell of normal monsoon and easing inflation could revive rural demand.

Reducing the fiscal 2024 deficit will reduce the government's direct support for economic growth, but investing in high-quality spending could still boost investment and rural incomes. CRISIL MI&A anticipates a return to normal levels of indirect tax impact on GDP. However, uneven economic growth in major trade partners like the US and EU, along with escalating tensions in the Red Sea, may hinder exports.

**India's GDP growth trend and outlook**



Note: E - estimated and P - projected

Source: National Statistical Office (NSO), IMF, CRISIL MI&A estimates

In the third quarter of fiscal 24, fixed investments posted the highest growth on-year (10.6%) among the sub-categories from the demand side, while private consumption (3.5%), despite a modest uptick, remained sluggish. The drag from net exports eased in the third quarter. From the supply side, growth was highest for manufacturing (11.6%), followed by construction (9.5%) and services (7.0%), while growth in agriculture contracted in the third quarter (-0.8%).

Similarly, growth in the current fiscal year 2024 has been driven by fixed investments (10.2% growth), while private consumption at 3.0% trailed overall GDP growth. On the supply side, industry grew the most (9%), followed by

services (7.5%), while agriculture (0.7%) lagged. A sharp rise in net tax growth contributed to the divergence between GDP and GVA (Gross Value Added) this fiscal and was a key factor behind the upward revision of GDP growth.

## Near-term Review and Outlook on GDP

### Services, Industrial and Agriculture Sector

In fiscal 2020, the services sector accounted for 55.3% of India's GDP compared with 52.4% in fiscal 2015. However, its share dipped to 53.6% in fiscal 2021 owing to the pandemic. Fiscal 2022 saw marginal improvement in the share of the services sector with gradual normalisation of market operations.

The industrial sector, which is the second-largest contributor, maintained its share in GDP of ~31%, logging 7.1% CAGR between fiscals 2015 and 2019. Industrial contribution declined in fiscal 2020, with slowdown in economic development. Before overall economic activity slowed down in fiscal 2020, India's industrial sector output growth was supported by the Make in India initiative, rising domestic consumption and GST implementation. The initiatives improved India's position on the World Bank's Ease of Doing Business index to 63 in fiscal 2019 from 142 in fiscal 2014.

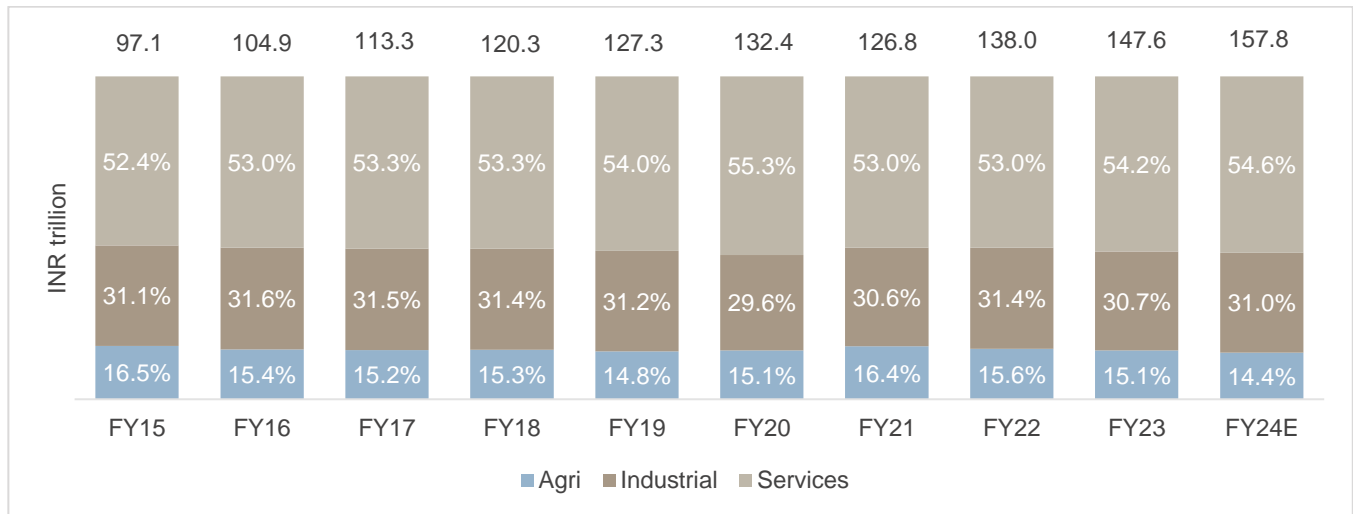
The pandemic and subsequent lockdown exacerbated the economic slowdown in fiscal 2021. The services segment was the worst affected and declined 8.2% year-on-year mainly due to the decline in Trade, Hotels, Transport, and Communication services (THTC) by 19.7% and decline in Public Administration, defence and other services by 7.6%, followed by industrial, which declined 0.9% on-year. Agriculture was the only sector that grew 4.1% on-year and restricted the fall in GDP.

In fiscal 2021, the agriculture sector's share in Gross Value Added (GVA) at constant prices expanded, while the share of the services and industrial sectors contracted.

In fiscal 2022, agriculture GVA grew at a rate of 3.5% and the industrial sector grew by 12% on a low base of fiscal 2021. Whereas the service sector grew by 8.8% year-on-year. This helped GDP to grow by 9.1%

Agriculture GVA continued to grow at a steady 4.0% in fiscal 2023. Faster GDP growth in fiscal 2023 saw the share of agriculture increase in the fiscal. The share of industrial sector in GDP grew 4% in fiscal 2023, strongly due to utility services with 8% growth, which was higher than all other industrial sectors. Mining grew by 5%, while manufacturing and construction added marginal growth momentum from a high base of fiscal 2022. The high base of fiscal 2022 led to moderate growth of the industrial sector in fiscal 2023. The services sector grew 9% in fiscal 2023. Trade, hotels, transport, and communication services (THTC) saw strong on-year growth of 14% in fiscal 2023.

**Share of sector in GVA at constant prices**



Source: RBI; CRISIL MI&A Consulting  
Note: FY24E (estimated) figures are basis GVA up till Q3FY24

The Agri sector is expected to grow at ~1.8% on-year in fiscal 2024, thereby contributing to 14.4% of the GVA. The services sector is expected to provide a thrust to the economy with 7.7% growth and 54.6% GVA share while the industry sector will maintain 31% share.

Services growth picked up (7.0% in Q3 vs 6.0% in Q2). Growth in THTC picked up (6.7% in Q3 vs 4.5% in Q2), spurred by the festive season. Financial, real estate and professional services also picked up to 7.0% from 6.2%, supported by a pick-up in services export growth (5.5% in Q3 vs 4.6% in Q2) and a favourable base effect. Financial services also benefited from healthy credit momentum. Public administration, defence and other services grew 7.5% vs 7.7%.

Agriculture and allied GVA contracted 0.8% in the third quarter (compared with 1.6% growth in second quarter). While partly the result of a highly unfavourable base, it was also due to a fall in kharif output as per the government's second advance estimates. CRISIL MI&A expects the contribution of services to increase and the Agri sector to lose some ground during the year due to higher growth in services.

**Manufacturing sector**

Among major producing sectors, the highest growth was in manufacturing, at 11.6% on-year in the third quarter of fiscal 2024, albeit some moderation from the 14.4% in the previous quarter. Construction GVA grew at a healthy pace despite some moderation (9.5% vs 13.5%) and was supported by continued government capital expenditure (capex) in infrastructure.

**Outlook on GDP**

After a strong GDP growth in the past three fiscals, GDP growth is expected to moderate to 6.8% in fiscal 2025. The transmission of past rate hikes by the RBI to the broader lending rates continues. Rising borrowing costs and regulatory measures to clamp down risky lending could moderate domestic demand next fiscal. On the other hand, another spell of normal monsoon and easing inflation can revive rural demand.

The lowering of fiscal deficit will mean curtailed fiscal impulse to growth, but good quality of spending would provide some support to the investment cycle and rural incomes. CRISIL MI&A also expects a normalisation of the net indirect tax impact on GDP witnessed in the current fiscal. Uneven economic growth in key trade partners such as



the United States (US) and the European Union, and an escalation of the ongoing Red Sea tensions can act as drag on exports.

## **Risks to Growth**

### **Weak monsoon**

Rainfall over the country during monsoon season (June-September), 2023 was 94% of its long period average (LPA). Deficient rainfall has a significant impact on the rural demand.

### **Inflation pressure**

Retail inflation data released in February 2024 showed core Consumer Price Index (CPI) inflation eased to a 3-month low of 5.1% in January from 5.7% in December. Headline consumer price inflation (CPI) stayed put at 5.1% in February as the food gauge surged higher.

### **External drag on growth**

Global growth is likely to slow down this year because of higher interest rates. Central banks in key advanced economies have maintained policy interest rates in their latest meetings. This, coupled with the improving inflation outlook, will allow the RBI to initiate rate cuts in fiscal 2025. Geopolitical tensions like conflict of Gaza and Israel, continued attacks in the Red Sea will continue to disrupt global trade.

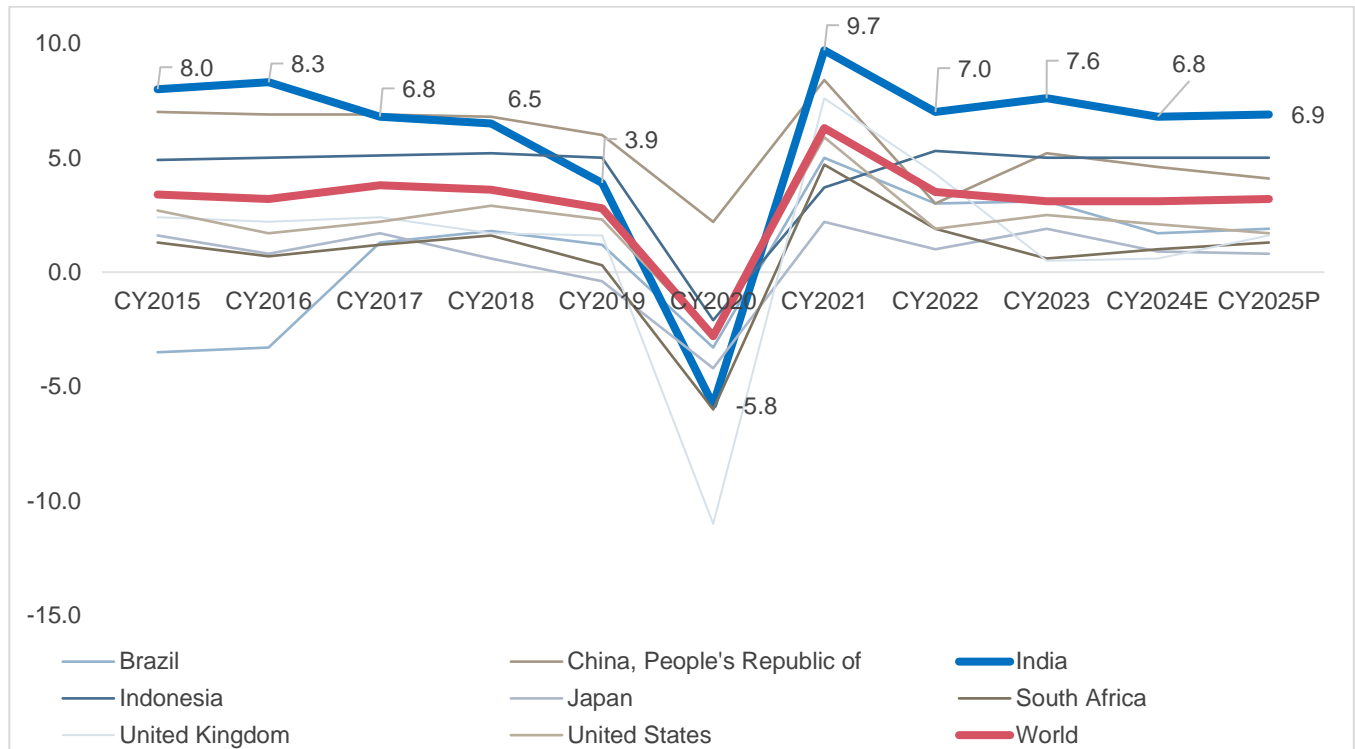
### **Impact of higher interest rates**

The transmission of past rate hikes by the Monetary Policy Committee (MPC) is still playing out amid tight liquidity conditions, which suggests a further rise in market lending rates in the near term. This will moderate domestic demand. The RBI's move to increase risk weights on the consumer credit exposure of banks and non-banking financial companies (NBFCs) is also expected to mildly affect overall credit growth next fiscal.

### **India to remain a growth outperformer globally**

Despite slowdown in the near term, India's growth is expected to outperform over the medium run. CRISIL MI&A expects GDP growth to average 7.0% between fiscals 2025 and 2029, compared with 3.2% globally as estimated by the IMF. India's economic outlook remains positive, supported by structural reforms aimed at positioning it as one of the fastest-growing major economies. According to Finance Ministry, India is expected to become the 3<sup>rd</sup> largest economy in the world with a GDP of USD 5 trillion by fiscal 2028.

**India is one of the fastest growing emerging economies (GDP growth, % year-on-year)**



E: estimated; P: projected

Note: GDP growth based on constant prices

Source: IMF (World Economic Outlook – January 2024 update), CRISIL MI&A

**Drivers for India's economic growth:**

- Capital will continue to be the biggest contributor to growth. As the government pursues fiscal consolidation, its role in boosting overall capex will partly diminish compared with the past few years. Nevertheless, it is expected that private sector will gradually play a larger role than in the recent past.
- The government's future capital expenditures are expected to be supported by factors such as tax buoyancy, simplified tax structures with lower rates, tariff structure reassessment, and tax filing digitization.
- Medium-term growth is anticipated to be bolstered by increased capital spending on infrastructure and asset development projects, leading to enhanced growth multipliers.
- Strong domestic demand is expected to drive India's growth over peers in the medium term.
- Investment prospects are optimistic, given the government's capex push, progress of Production-Linked Incentive (PLI) scheme, healthier corporate balance sheets, and a well-capitalised banking sector with low non-performing assets (NPAs).
- India is also likely to benefit from diversification of the supply chain from incoming FDI flows, as global supply chains get reconfigured with focus shifting from efficiency towards resilience and friend shoring.
- Rising employment rates and a notable increase in private consumption, buoyed by growing consumer confidence, are poised to drive GDP growth in the upcoming months.

## Near Term Review and Outlook on Inflation

Consumer price inflation (CPI) remained steady at 5.1% in February 2024, same as January, primarily due to a notable increase in food prices. Although core inflation dropped to its lowest level in 52 months at 3.4%, it couldn't fully counterbalance the upward pressure from food prices.

The inflation rate for food rose to 8.7% in February 2024 from 8.3% in January, with vegetables being the main contributor. Despite a favorable kharif harvest easing food grain inflation, vegetables, particularly in the TOP (tomato, onion, potato) category, continued to drive inflation upwards. On the bright side, disinflation in non-food CPI components, which decreased to 2.9% in February from 3.1% the previous month, helped prevent a further increase in the headline inflation rate.

### Food inflation

After a brief period of relaxation, food inflation swiftly increased to 8.7% from 8.3% in February 2024, persisting above the 6% threshold since July 2023. This upsurge was fueled by soaring prices of vegetables and meat, as well as a reduced rate of deflation in edible oils. Although pulse inflation remained elevated at around 19%, it showed a slight easing compared to the previous month.

In February 2024, inflation in vegetables climbed to 30.2% from 27.1% in January, particularly intensifying in key vegetables such as tomatoes, garlic, cabbage, and cauliflower. Potato prices, after experiencing deflation for 12 consecutive months, turned positive due to the base effect. However, inflation eased in onions and leafy vegetables. Foodgrain inflation decreased by 30 basis points to 9.8% in February 2024, with moderation observed in both cereals and pulses. This moderation was attributed to cooling inflation in arhar and moong. Meat and fish inflation surged to 5.2% from 1.2% the previous month, driven by rising inflation in chicken and eggs. Although edible oil prices continued to decline year-on-year (-14%), the pace of decline slowed compared to the previous month. Spices inflation decelerated to 13.5% from 16.3% in January and 19.7% in December.

### Fuel inflation

Fuel prices fell 0.8% on-year in February 2024 compared to a 0.6% fall in the previous month. Fuel inflation has been negative for the last six months due to the central government's subsidy on cooking gas. It is likely to come down further due to recent cut in cooking gas prices. The fast decline in fuel prices was due to softer inflation in dung cake (5.4% vs 6.2%) and kerosene by non-PDS (Public Distribution System) sources (11.1% vs 11.5%). Inflation remained unchanged in electricity (10.4%) and LPG (-13.3%) while it hardened in fire and woodchips (3% vs 2.7%).

### Core inflation

Core inflation inched down to 3.4% in February 2024 from 3.5% previous month as inflation eased in all major core inflation categories. Inflation eased a tad in education to 4.8% from 4.9% while other essentials categories such as health (4.5% vs 4.9%) and housing (2.9% vs 3.2%) saw a sharper fall in inflation rate. Core goods and services inflation softened to 2.5% and 3.3%, respectively. Inflation moderated in rent (2.8% vs 3.1%).

### Wholesale Price Index (WPI)

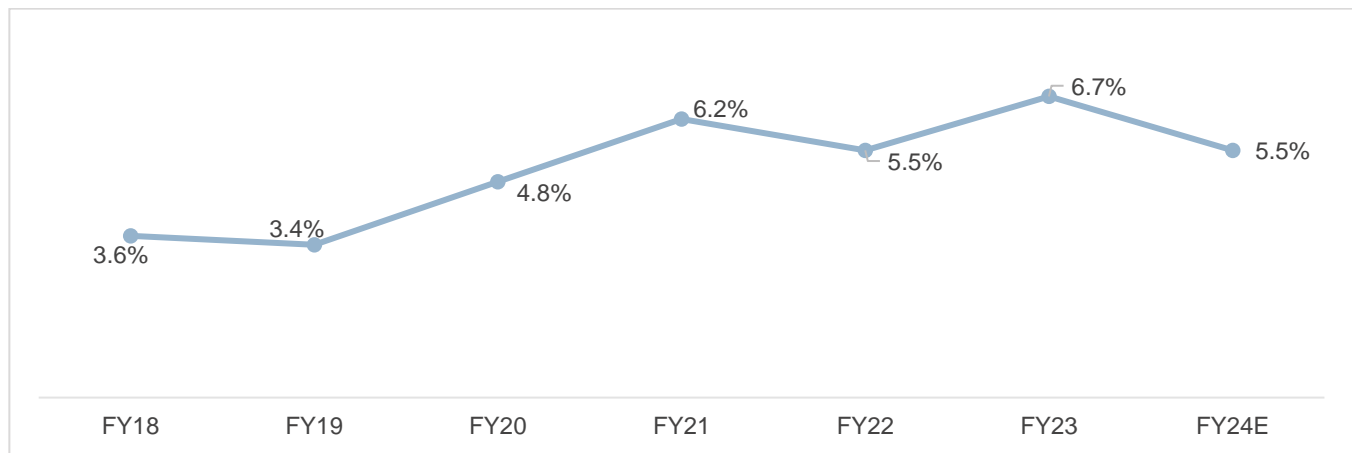
In February, inflation measured by the Wholesale Price Index (WPI) decreased to 0.2% from 0.3% in the previous month, mainly due to softer non-food inflation. However, food inflation increased. Food inflation rose by 30 basis points to 4.1% due to higher food grain prices. While vegetable inflation remained stable at 19.8% compared to January, food grain inflation accelerated to 8.3% from 6.3%. Moreover, inflation rates for pulses and cereals also rose. Crude petroleum prices surged to 16.7% from 4.1%, following an increase in international prices, contributing

to inflation. Inflation also increased in electricity to 3.5% from -0.1%. However, overall fuel and power prices experienced a sharper decline of 1.6% compared to a decrease of 0.5% in the previous month, attributed to softened inflation in coal and mineral oils. The WPI for manufactured products decreased further to -1.3% from -1.1%. Deflation intensified in basic metals, while inflation softened in the 'other manufacturing' category.

**Outlook on inflation**

The trajectory of inflation was largely driven by food prices this fiscal. Despite easing in January, overall food inflation remains elevated. On the positive side, rabi sowing has picked up and exceeded last year’s level, which augurs well for food inflation going forward. CRISIL MI&A expects CPI inflation to average 4.5% in fiscal 2025 against an estimated 5.5% in fiscal 2024. Cooling domestic demand, assumption of a normal monsoon along with a high base for food inflation should help moderate inflation next fiscal. A non-inflationary budget that focusses on asset-creation rather than direct cash support also bodes well for core inflation. However, an unusual weather event could reverse the easing. Similarly, recent developments in the Red Sea and a fading low base effect for commodity prices could put some upside pressure on core inflation and would need monitoring.

**CPI trendline**



Source: Ministry of Statistics and Programme Implementation (MOSPI), CRISIL MI&A Research

We believe slowing inflation, a smaller fiscal deficit and an imminent turn in the US Federal Reserve’s policy rates will create the ground for the Monetary Policy Committee (MPC) to start cutting rates. However, we believe more clarity on the path of disinflation could push this decision at least to June 2024, if not later. While CPI inflation has remained in the Reserve Bank of India’s (RBI) tolerance band of 2-6% since August, it is still shy of the 4% target and that keeps the MPC on watch.

**Factors with a Direct Bearing on Automotive Industry Demand in India**

Fluctuations in crude oil prices and INR USD exchange rates directly affect the auto demand by raising fuel costs and import costs. Monsoon has a direct impact on agriculture related factors like crop yields and food prices, which in turn impact auto demand by shaping consumer spending behaviors and economic stability. Similarly, auto finance rates are pivotal in determining affordability. Moreover, Private Final Consumption Expenditure (PFCE) and per capita income serve as a vital factor in consumer purchasing power, directly influencing affordability and automotive demand.

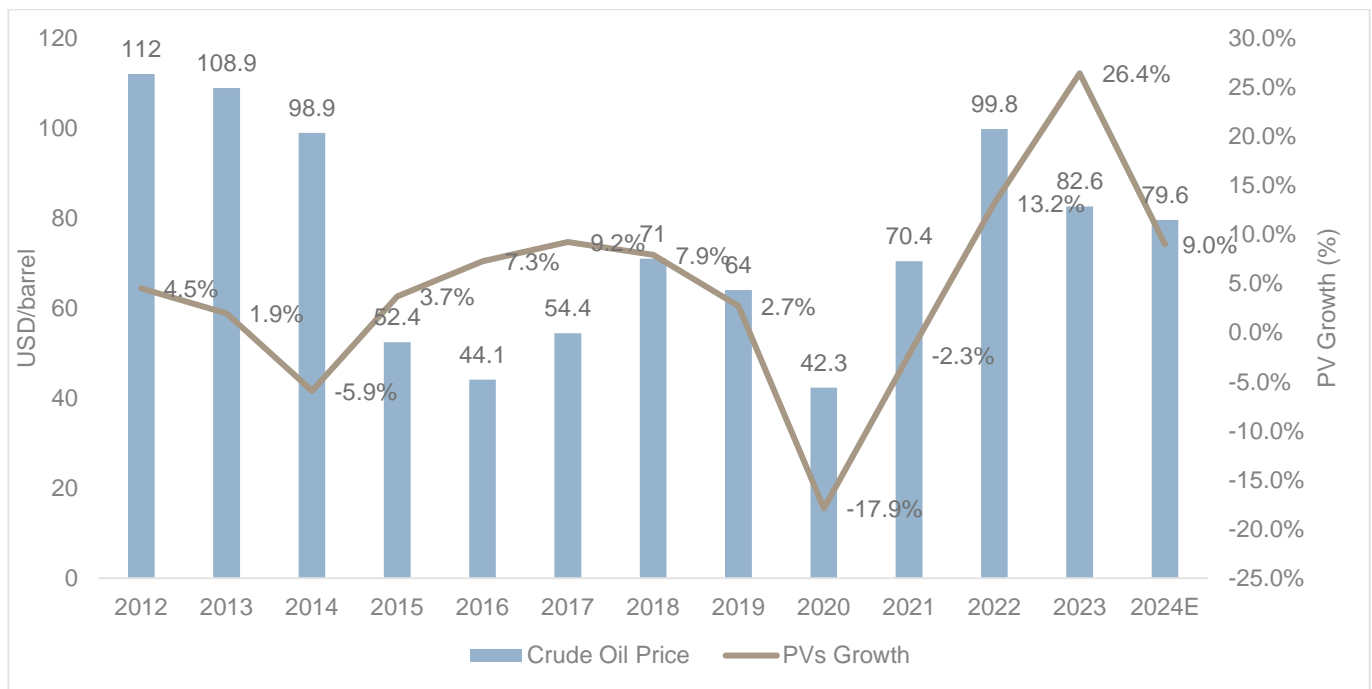
**Crude oil price trend**

Crude oil prices have generally risen since end of 2021. They became even higher with the Russia-Ukraine conflict, which led to the prices averaging USD 100 per barrel (bbl) in 2022. The prices averaged USD 106 per barrel in the first half of 2022 owing to the Russia-Ukraine conflict, which resulted in a significant shift in the overall crude oil

supply chain. However, increasing recessionary fears stemming from inflation coupled with interest rate hikes globally have cast a significant shadow over consumption and economic growth, pushing prices downward to USD 94 per barrel, a decline of 11% in the second half of 2022.

In 2023, with the de-escalation of the crisis and balancing of global crude oil trade, the crude oil price was 82.6 USD/barrel in the year. With the volatile global crude oil prices, CRISIL MI&A expects prices to remain rangebound around USD 75-80 per barrel in 2024. However, any decision by the OPEC to cut production, as well as a further decision on the ban of Russian crude, are key factors to be monitored.

**Crude oil price and Passenger Vehicle Growth trend**



Note: E: Estimated, Price data is for CY: Calendar Year, PV Growth is basis sales volumes quoted by SIAM, for Financial Year and for fiscal 2024 the growth rate is based on actual numbers.

Source: Industry, CRISIL MI&A Research

Global crude oil supply rose by a healthy 4 mbpd, reaching 94 mbpd in 2022. Incremental growth in supply is driven by the US, Saudi Arabia, the United Arab Emirates and Iraq, accounting for ~80% of incremental supply in 2022.

Crude oil supply continued to be impacted in certain regions. Production-led difficulties in Norway, Libya and Nigeria led to a 10% decline in the year. Supply chain and gas leak issues in Kazakhstan resulted in muted output from the region.

Ramping up of newer fields in Norway and increased production in the North American region will aid healthy supply of crude oil. Higher drilling activities coupled with lower logistical issues from the Permian basin and Eagle Ford basin will result in healthy supply growth in the US. However, incremental production cuts by OPEC and Russia continued to impact global crude oil supply in 2023.

Rising crude oil prices typically lead to higher fuel costs. Impacting consumer preferences towards more fuel-effective vehicles. Increased production cost for automakers and potential shift in consumer spending due to inflation and economic conditions further influence automotive demand.

Crude oil has for long held sway in satiating the world's energy needs. However, certain factors will impact the long-term oil demand going forward. Factors such as slowing global GDP, structural changes, aggressive push

towards electric vehicles (EVs), significant increase in efficiencies, and an ageing population, which has the propensity to consume less crude oil-based products and services, will likely weaken demand.

**INR USD exchange rate for next one year**

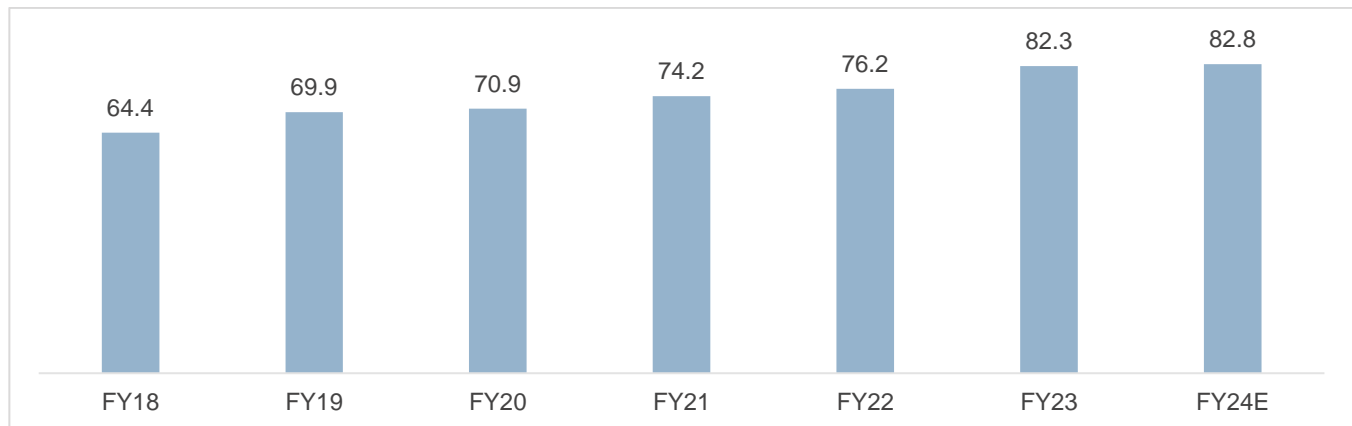
The rupee exchange appreciated slightly to 82.96/USD in February 2024 from 83.12/USD in January 2024. Strong capital inflows kept the rupee resilient in February, despite the dollar index gaining strength and a widening trade deficit. In fact, on a monthly average basis, the rupee appreciated 0.2% compared with January.

The rupee remained one of the better-performing emerging market currencies in the first two months of 2024, appreciating against the dollar by 0.2% on average month-on-month. The year-on-year rate of depreciation was also lower at 0.4% on average during January and February.

CRISIL MI&A expects the rupee to average to 83.5 against the dollar by March 2025 compared with ~83 in fiscal 2024. While a narrower current account deficit is expected to support the local currency, volatile external financing conditions could exert some pressure.

The INR/USD exchange rate impacts auto demand by affecting import costs. A weaker INR raises input costs and fuel prices, which reduces domestic demand while enhancing export competitiveness. While increase in fuel prices directly impacts the consumer demand, rise in input costs may not always have a direct impact, as OEMs do not always pass these costs to the consumers. Any price increase that is passed on by the OEMs, directly affects the consumer’s purchasing decision.

**Rupee-dollar exchange rate**



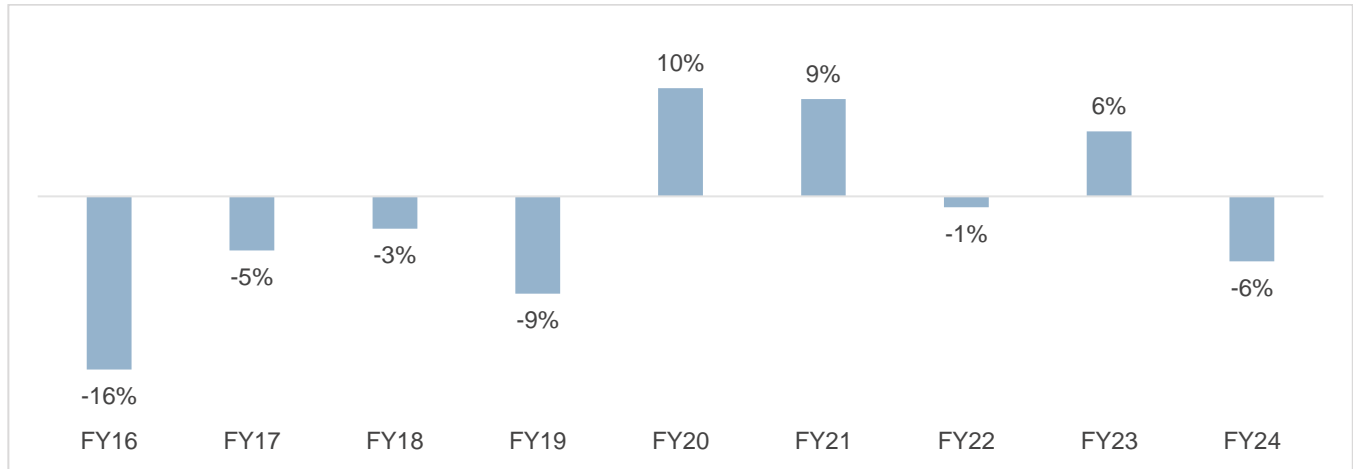
Source: RBI, CRISIL MI&A

**Agricultural Variables**

With 86% of land holdings, small and marginal farmers dominate the Indian agricultural landscape. These farmers rely on monsoon for irrigation; hence, its timely arrival and adequacy are needed for a good crop. Any negative impact on crop supply due to low rainfall has a cascading effect on the Indian economy, as it leads to higher food prices and subsequently lower discretionary spending. As per the India Meteorological Department (IMD), monsoon deviation was 6% in fiscal 2023.

Monsoon has been favorable over the past few years with deviation in the acceptable range. Fiscal 2024 witnessed an uneven spread of rainfall during the initial months. Rabi output was favorable last fiscal, supporting farmer income during the early months of fiscal 2024. In the current fiscal, kharif sowing was initially delayed owing to delay in monsoon. However, sowing has picked up in recent months. Moreover, higher minimum support price (MSP) this fiscal and good price in the mandis have maintained on-ground positivity.

**Rainfall Deviation Trend**



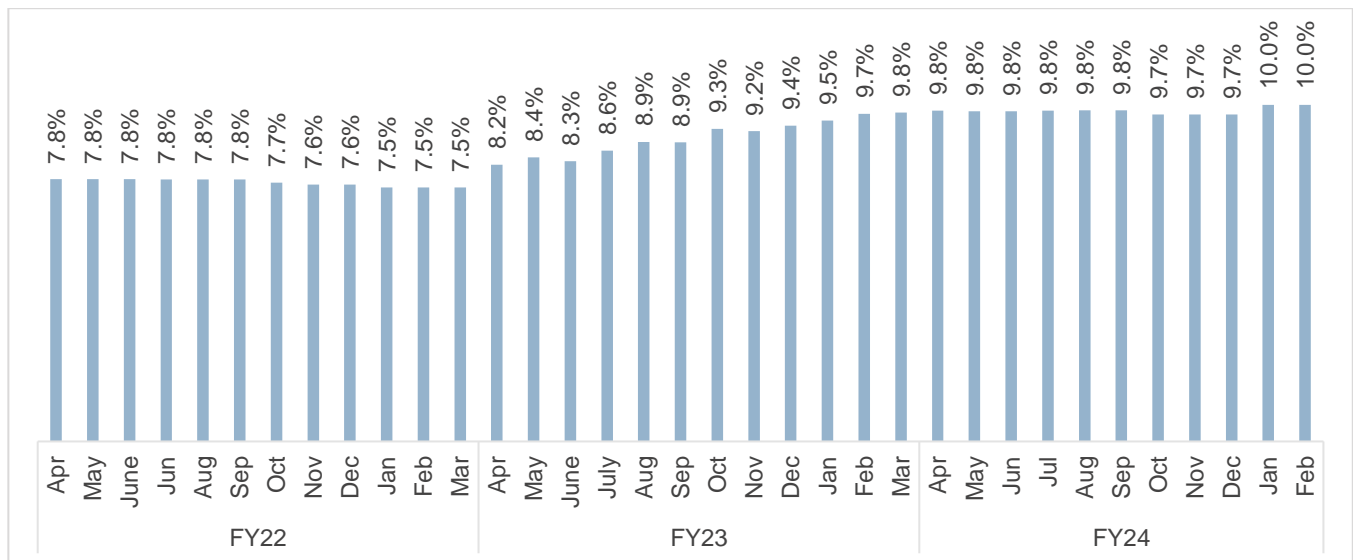
Source: IMD, CRISIL MI&A

Note: When the rainfall averaged over the country is within  $\pm 10\%$  from its long period average (LPA) or 90% to 110% of LPA, the rainfall is said to be "normal". The LPA for the June to September period is 868.6mm.

**Auto finance rates**

The sharp rise in repo rates has increased the financing rates across auto segments. The PV segment is currently witnessing interest rates of nearly 10%. Interest rates have reached the pre-pandemic levels and are expected to remain firm in the short term. Demand for cars- durable goods most often purchased on credit and higher interest rates makes auto loans more expensive impacting purchasing decisions of customers.

**Average auto finance rates offered by banks**



Source: Industry, CRISIL MI&A

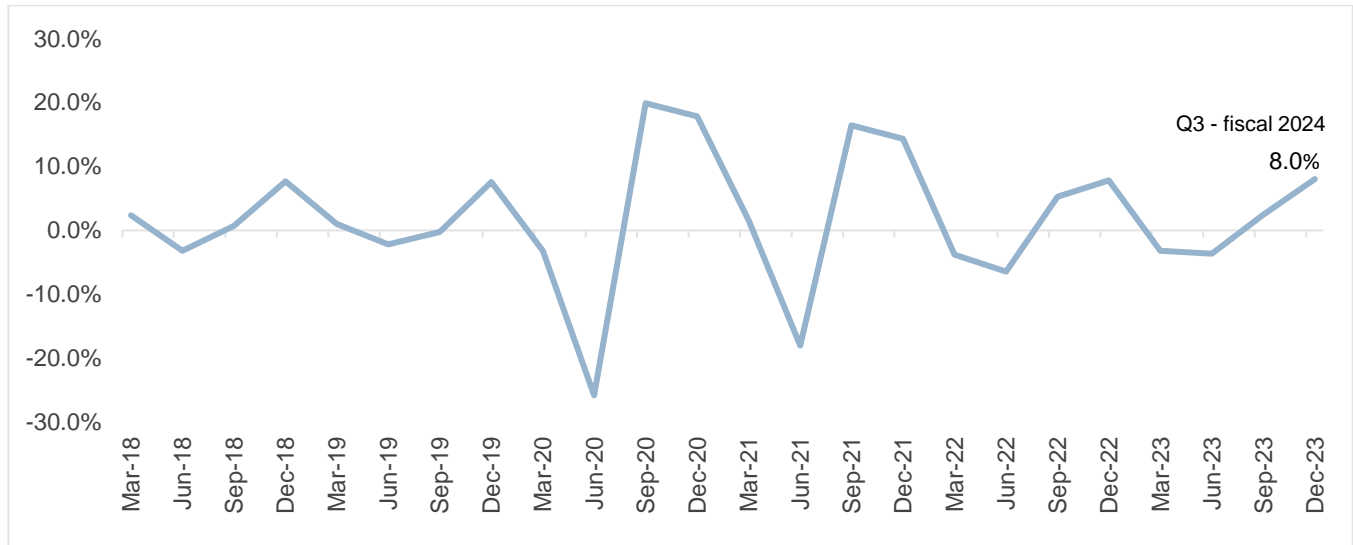
**Private final consumption expenditure**

Private final consumption expenditure (PFCE) rose marginally to 3.5% year-on-year in third quarter of fiscal 2024 compared with 2.4% the previous quarter, but remains sluggish. Rural demand indicators were a mixed bag, with demand for work under National Rural Employment Guarantee Act (NREGA) slowing this quarter, and growth in two-wheeler sales surging. However, growth in consumer non-durables production slowed considerably in the third quarter. Urban demand seemed to have sustained some momentum in the third quarter, with a pick-up in the

growth of passenger vehicle sales and consumer durables production, as well as continued double-digit growth in retail credit (18.1% versus 18.3% in the previous quarter). The latter indicates that the impact of past rate hikes and regulations on unsecured lending are still pending.

PFCE reflects the overall consumption patterns and spending capacity of households within an economy. When PFCE increases it often translates to increased demand for various goods and services.

**PFCE Quarterly Trend for India**



Note: Mar refers Q4, June refers to Q1, Sep refers for Q2, Dec refers to Q3  
Source: Industry, CRISIL MI&A

**Per Capita Income**

Per capita income (per capita NNI) is estimated to grow by 6.8% in fiscal 2024, compared with 5.7% in fiscal 2023. In fiscal 2021, per capita income declined 8.9% owing to GDP contraction amid the pandemic’s impact. Per capita income rose by 7.6% in fiscal 2022 on the lower base of fiscal 2021.

According to the International Monetary Fund’s estimates, India’s per capita income (at current prices) is expected to grow at 8.8% CAGR over 2023 to 2028.

As per CRISIL MI&A, Indian economy is expected to surpass USD 5 trillion mark over the next seven fiscals (2025-2031) and inching closer to USD 7 trillion. A projected average GDP growth of 6.7% in this period will make India the third-largest economy in the world and lift per capita income to the upper middle-income category. By fiscal 2031, India’s per capita income will rise to ~USD 4,500, thereby making it an upper middle-income nation.

At the macroeconomic level, the rise in per capita income implies that as incomes increase, the proportion of expenditure allocated to discretionary items such as consumer durables and automobiles will also increase. This will lead to an enhancement in consumption patterns, characterized by a growing demand for discretionary goods.

**India’s Demographic Advantage**

India’s population surpass China’s by a slight margin in CY2023, making it the most populous country with 1.4 billion (140 crores) people as per UNFPA’s State of World Population Report 2023. According to the report, 25% of India’s total population is between 0-14 years, 68% is between the ages of 15 and 64 years, which is considered the working population of a country, and 7% above 65 years. Apart from this, about 18% of the population is



between 10-19 years of age, and 26% are between 10-24 years (Generation Z). People under the age of 25 years currently account for more than 40% of the population.

While 17% of China's total population is between 0-14 years, 69% is between the ages of 15 and 64 years, which is considered the working population of a country, and 14% above 65 years. Apart from this, about 12% of the population is between 10-19 years of age, and 18% are between 10-24 years. The median age for China is nearly 39 years.

Similarly, 11% of Japan's total population is between 0-14 years, 58% is between the ages of 15 and 64 years, which is considered the working population of a country, and 30% above 65 years. Apart from this, about 9% of the population is between 10-19 years of age, and 14% are between 10-24 years. The median age for Japan is nearly 49 years.

The median age for United Kingdom is 40 years and the median age for United State is 38 years.

India's median age is about 28 years, and it has largest working population among major global economies. It is expected to add ~70 million to the workforce (15-64 age group) by 2030. This benefit allows greater engagement in productive labour, thus bolstering national income. India's youthful demographic not only strengthens the country's competitive edge in the services and manufacturing sectors but also unlocks the spending potential of a young population towards discretionary expenses.

The working/young population has significantly impacted India's growth in past few years majorly in the IT, manufacturing, and service sectors. This is in line with past progress of economies like Japan and China where the young population has fuelled economic development. India's young population is embracing new technologies and ideas which is expected to further boost the industries like technology, manufacturing, healthcare, and infrastructure.

The demographic dividend fosters workforce expansion, driving accelerated urbanization and industrialization. This, in turn, will spur investment in both physical and human infrastructure, ultimately enhancing the country's economic productivity.

## Policies Impacting the Indian Automobile Industry

Government policies impacting the automobile industry, including those related to infrastructure and supply chain, self-reliant manufacturing, foreign direct investment and tax related policies have an impact on vehicle manufacturing and supply. The Government of India has announced and implemented several initiatives such as National Infrastructure Pipeline, Gati Shakti Scheme and National Logistics Policy to improve the transportation infrastructure in the country.

### Improving infrastructure for increasing efficiencies in logistics

The government's capex push has been focused largely on transport-related sectors, such as roads, railways, and urban infrastructure. This is being complemented with policies geared towards improving and integrating different segments of the logistics ecosystem. All these are expected to reduce bottlenecks and improve competitiveness of domestic production and trade via reduced logistics costs and improved connectivity.

- **National Infrastructure Pipeline:** CRISIL MI&A expects aggregate (government plus private) spending on infrastructure to double by 2030, i.e. from ~INR 67 trillion between fiscals 2017 and 2023 to ~INR 143 trillion during fiscal 2024 to 2030, primarily driven by spends on 'core' infrastructure, i.e. roads, railways, airports, ports, urban infrastructure, irrigation, warehouses, and telecom.

- **PM Gati Shakti** - National Master Plan for Multi-modal Connectivity: Gati Shakti Scheme or National Master Plan for multi-modal connectivity plan, was unveiled in October 2021, with an objective of curtailing the logistics cost for the country, by coordinating the infrastructure creation activity across different government entities. Major characteristics of the scheme are:
  - Digital platform for coordination across 16 ministries, including roadways and railways
  - 'Gati Shakti' platform will subsume the infrastructure projects announced under the National Infrastructure Pipeline (valued at INR 111 trillion)
  - Existing infrastructure schemes across ministries, such as Bharatmala (Roads), Sagarmala (Ports), UDAN (Air), Inland Waterways, Dry ports etc. will be incorporated in the platform
  - The platform will also provide spatial data and implementation status for different projects
  - Eleven industrial corridors and two defence corridors are also planned in the scheme, covering clusters for textile, pharmaceutical, fishing, electronics, agriculture etc.
- Key targets set for different heads under the scheme are:
  - Ports: Capacity of the major ports to be increased from 1,282 million tonnes in fiscal 2020 to 1,759 million tonnes in fiscal 2025
  - National Waterways: Cargo movement to be ramped from 74 million tonnes to 95 million tonnes during fiscal 2020-25 period
  - Railways: Target of 1,600 million tonnes by fiscal 2025, vis-à-vis 1,210 million tonnes in fiscal 2020
  - MMLPs: Indian railways will setup 500 multimodal cargo terminals by fiscal 2025
  - Others: Gas pipeline length to be doubled from 17,000 Km to 34,500 Km within the country, incremental renewable capacity of ~150 GW, power line capacity target of ~452,000 circuit Km by fiscal 2025

An integrated platform to monitor the progress of projects and logistics initiatives spanning across different ministries will certainly aid in increasing coordination and planning infrastructure creation and connectivity.

- **National Logistics Policy (NLP):** National Logistics Policy (NLP) was launched in September 2022 to complement PM Gati Shakti National Master Plan (NMP). NLP addresses the soft infrastructure and logistics sector development aspect, including process reforms, improvement in logistics services, digitization, human resource development and skilling. The targets of the NLP are to: (i) Reduce cost of logistics in India; (ii) improve the Logistics Performance Index ranking – aim to be among top 25 countries by 2030 (India was ranked 38 out of 139 countries in 2023), and (iii) create data driven decision support mechanism for an efficient logistics ecosystem. A Unified Logistics Integrated Platform has been set up under this, which, as of September 2023, had integrated 34 logistics portals/digital systems across 33 ministries/ departments, and had over 600 industry players registered. Twenty-one states have also notified their own logistics policies, in line with the NLP.

The infrastructure policies would enhance the logistical efficiency there by strengthening the supply chain for automobiles and auto components. These initiatives will further lower the logistical cost and the lead time in components/automobile transit. In the case of raw materials, this allows various stakeholders in the ecosystem to have a clear understanding of raw material availability and necessary logistics for the same. Thus, these policies augment the efficiency in production, and supply.

## Decoupling of global supply chains

As traditional supply chains are threatened by large scale global events, rising trend in protectionism and wage inflation, there is a greater need for rethinking supply chain models to remain competitive. In the wake of global disruptions such as Covid, geopolitical crises, environmental disruptions, etc., significant decoupling of supply chains is happening to bring key supply links closer home, particularly the ones situated in China.

To establish collective supply chains that would improve their resilience in the long term, 18 economies, including India, the US and the EU unveiled a roadmap in July 2022 which included steps to counter supply chain dependencies and vulnerabilities. This was done as a part of the ongoing supply chain de-risking strategy of global companies/multinationals, wherein global companies are diversifying their businesses away from their reliance on a single large supplier, to alternative destinations. Beijing's Zero-Covid policy and the resultant disruptions to global supply chains, container shortage and higher lead times have served as an impetus to this strategy.

This reorientation has benefitted other Asian economies in southeast Asia and India. India can take advantage of the same as the enormous quantum of Chinese exports coupled with India's cost advantage in manufacturing, would serve as a highly lucrative opportunity for Indian manufacturers. Realising this opportunity, the government has introduced many reforms and incentive schemes to increase domestic manufacturing and attract global manufacturing firms to India.

## Lowering supply chain dependency on China

India including other nations are actively pursuing strategies to reduce supply chain dependency on China in the wake of pandemic and growing geo-political tensions.

This includes diversifying the supply chain by sourcing inputs from various countries with a goal of reducing the risk of over relying on a single country for sourcing and manufacturing. Furthermore, India is also trying to strengthen the domestic manufacturing environment through various policy initiatives. Key strategies adopted by India to diversify the supply chain includes:

- **Foreign investments:** India is attracting multi-national companies those who are actively seeking to diversify their manufacturing bases away from China. Government is aiding these companies in terms of tax benefits and incentive schemes. India have also regulated the FDI to attract investments from various countries across sectors.
- **Domestic manufacturing:** Government is pushing domestic companies to develop products locally and bring certain level of localisation in the products, thereby reduce dependence on China. This involves introduction of initiatives and schemes like Make in India, Atmanirbhar Bharat, China plus one, PMP and PLI.
- **Trade diversification:** India is actively engaging in trade pacts and FTA to diversify their trade partners. Strengthening trade ties with developing and developed economies offers alternatives to sourcing of goods and technology.

To reduce the dependency on China and prepare for potential future supply chain challenges, 14 nations under the Indo-Pacific Economic Framework (IPEF), including the United States, Japan and India, have reached an agreement aimed at augmenting supply chain resilience and diversification. The agreement involves sharing information with each other and coordinating responses during the time of crises. Under the agreement, the participating countries would establish an IPEF supply chain council, supply chain crisis response network, and labour rights advisory network that will provide a framework to strengthen supply chains and prevent potential disruptions.

## China plus one trend

The China Plus One Strategy, also known as Plus One or C+1, is a supply chain strategy that encourages companies to minimize their supply chain dependency on China by diversifying the countries they source parts from. The goal here is to reduce the risk of over relying on a single country for sourcing and manufacturing.

Many Western countries, including the US, have heavily relied on China when it comes to outsourcing their manufacturing. Low labour and production costs are one of the major reasons for this, as well as factors like China's strong domestic market, supply chain, infrastructure, free trade and tax agreements, and high growth potential. Regardless of the reasoning behind this reliance, people noticed that the global dependency on China was becoming a risk in as early as 2008, with the official China Plus One strategy being first introduced in 2013. This new strategy would allow businesses to continue to invest in China, while spreading their operations across multiple countries, which are considered the "Plus One". By establishing additional sourcing and manufacturing locations outside of China, companies found a way to mitigate business risks, access new consumer markets, and explore other innovation and technology, all while keeping their operations cost-effective.

Today, geopolitical, and economic factors drive much of the urgency behind businesses implementing a China Plus One approach. The approach gained traction due to the US–China trade war, fuelled by U.S. President Donald Trump in 2018. As tensions escalated throughout Trump's presidency, businesses became uncertain about how their supply chain and operations would be affected, accelerating the adoption of China Plus One. Additionally, the COVID-19 pandemic exposed vulnerabilities in global supply chains, especially for those who relied on China alone. Companies with diversified supply chains were better equipped to navigate disruptions caused by China's "Zero-Covid" policy, which led to long lockdowns and factory closures. Other issues, such as rising labour costs in China and various Chinese political movements, have also contributed to the rise of China Plus One in recent years.

## Make in India

The 'Make in India' initiative was launched in September 2014 to give a push to manufacturing in India and encourage FDI in manufacturing and services. The objective of the initiative was to increase the share of manufacturing in GDP to 25% by 2020 by boosting investment, fostering innovation, and intellectual property. The other objective was building best-in-class infrastructure for manufacturing across sectors, including, but not limited to automobile, auto components, aviation, biotechnology, chemicals, construction, defence manufacturing, electrical machinery, electronic systems, food processing, mining, oil and gas, pharmaceuticals, renewable energy, thermal power, hospitality, and wellness.

To achieve this objective, a dedicated Investor Facilitation Cell was set up to assist investors in seeking regulatory approvals, hand-holding services through the pre-investment phase, execution, and after-care support. Key facts and figures, policies and initiatives and relevant contact details were made available through print and online media. Indian embassies and consulates proactively disseminated information on the potential for investment in the identified sectors in foreign countries while domestically, regulations and policies were modified to make it easier to invest in India.

FDI inflows have received an impetus, as India jumped to the eighth position in the list of the world's largest FDI recipients in 2020 compared with 12th in 2018, according to the World Investment Report 2022. According to Press Information Bureau's press release of December 2023, FDI inflow to India increased to USD 85 billion in fiscal 2022, but decreased to USD 71 billion (provisional figure) in fiscal 2023. The press release also states that during the current financial year, fiscal 2024 (up-to September 2023) FDI inflow worth USD 33 billion has been reported. According to Ministry of Commerce & Industry, FDI inflow in the last 9 fiscal years (2014-23: USD 596 billion) has increased by 100% over the previous 9 fiscal years (2005-14: USD 298 billion) and is nearly 65% of the total FDI reported in the last 23 years (USD 920 billion).

However, the share of manufacturing in GDP has not attained the intended levels of 25%. Hence, additional policies were announced, and targets rolled forward initially to 2022 and then to 2025. Domestically, multiple steps were taken to make sectors more attractive and ease investment processes. Some of the major steps taken included announcement of the NIP and reduction in corporate tax; various sectors such as defence manufacturing, railways, space, and single brand retail have been opened for FDI. Measures to boost domestic manufacturing were also taken through Public Procurement Orders (PPO), Phased Manufacturing Programme (PMP) and Production Linked Incentive (PLI) schemes, etc. Many states also launched their own initiatives on similar lines to boost manufacturing in their respective states.

### Foreign Direct Investment (FDI)

FDI plays a pivotal role in economic growth, aiding development and shaping of the economic landscape. Through FDI route, international corporations can invest in India, capitalizing on the country's investment incentives offered by Indian government, including tax incentives and relatively competitive labour costs. This fosters job creation and offers various additional advantages along with facilitating the acquisition of technological expertise from global peers. Government bodies, such as Department for Promotion of Industry and Internal Trade (DPIIT), Reserve Bank of India (RBI) and Securities and Exchange Board of India (SEBI) formulates the regulations, and guidelines for FDI. DPIIT frames and implements policies to promote and regulate foreign investment in India across sectors. RBI manages the monetary aspects of foreign investments and SEBI regulates FDI in the capital market.

There are two FDI routes in India, the Government route and the Automatic route. The Automatic route allows foreign investors to invest in sectors without requiring prior approval from Indian government. Under this route, investors are only required to notify the RBI within a specified time frame. Whereas the Government route mandates prior approval from the Indian government or relevant authorities for investments in India. In April 2020, the DPIIT amended the FDI Policy, that the countries which shares a land border with India which include China, Bangladesh, Pakistan, Bhutan, Nepal, Myanmar, and Afghanistan, can invest only under the Government route. Shortly, it will be mandatory to obtain government approval for investments from these countries. FDI proposals from these countries must go through tight scrutiny and government has set up an inter-ministerial panel to review these proposals. All ministries and departments have been recommended to have dedicated FDI cells to process these proposals quickly. This policy thus restricted entry and expansion of Chinese OEMs including MG and Great Wall Motors in India by restricting them to invest or raise funds from China.

### Summary of FDI in key Indian sectors

Sector	FDI Cap	Route
Automobile	100%	Automatic
Airports -Greenfield projects	100%	Automatic
Satellites- establishment and operation, subject to the guidelines of Department of Space/ISRO	74%	Government
Hospitals Sector	100%	Automatic
Defence	49% +	Government up to 100% of local defence ventures after obtaining approval

Source: [DPIIT](#), CRISIL MI&A

### Atmanirbhar Bharat Campaign

Atmanirbhar Bharat Abhiyan or the self-reliant India campaign was launched in May 2020 amid the Covid-19 pandemic, with a special and comprehensive economic package of INR 20 trillion, equivalent to 10% of the country's GDP.

The scheme was launched with the primary intent of fighting the pandemic and making the country self-reliant based on five pillars: economy, infrastructure, technology-driven system, demography, and demand. The stimulus package announced by the government under the scheme consisted of five tranches, intended to boost businesses, including Micro, Small and Medium Enterprises (MSMEs), help the poor (including farmers), boost agriculture, expand the horizons of industrial growth, and bring in governance reforms in the business, health, and education sectors.

The mission emphasises the importance of encouraging local products and aims to reduce import dependence through substitution. It also aims to enhance compliance and quality requirements to meet international standards and gain global market share.

The government has also rolled out other reforms — namely, supply chain reforms for agriculture, rational tax systems, simple and clear laws, capable human resources, and a strong financial system. These reforms will further promote business, attract investment, and strengthen Make in India initiative.

**PLI scheme to provide boost to industrial investments in the short-to-medium term**

The PLI scheme’s primary objective is to make manufacturing in India globally competitive by removing sectoral obstacles, creating economies of scale and ensuring efficiency. It is designed to create a complete component ecosystem in India and make the country an integral part of the global supply chain. Furthermore, the government hopes to reduce India’s dependence on raw material imported from China. The scheme is expected to boost economic growth over the medium term and create more employment opportunities, as many of the sectors covered under the scheme are labour-intensive. It will be implemented over fiscals 2022 to 2029.

The PLI scheme is a time-bound incentive scheme by the government which rewards companies in the 5-15% range of their annual revenue based on the companies meeting pre-decided targets for incremental production and/or exports and capex over a base year. The stronger-than-expected pick-up in demand and larger companies gaining share over smaller companies led to revival of capex in fiscal 2022. The rise in fiscal 2024 was on account of the expansion plans underway by India Inc.

Construction spends across industrial investments are seen rising 6-8% in fiscal 2024, driven by expansion in the oil and gas and metals segments. The growth is on a low base of fiscal 2023 where the sector faced a slight bump owing to geopolitical issues in the previous two fiscals. However, the PLI scheme is expected to provide the necessary boost to the sector.

Based on an analysis of eight key sectors, CRISIL MI&A estimates construction investment in the industrial segment at INR 4.0-4.1 lakh crore between fiscals 2023 and 2027, rising 1.3 times over spends seen between fiscals 2018 and 2022. The rise in investments is projected on account of inclusion of the PLI scheme in the capex investments of the industrial sector.

**Budgeted incentives for each sector under the PLI scheme**

Sector	Segment	Budgeted (INR bn) *	
Automobile	Advance chemistry cell (ACC) battery	181.0	751.4
	Automobiles and auto components	570.4	
Electronics	Mobile manufacturing and specified electronic components	409.5	545.2
	Electronic/technology products/IT hardware	73.25	
	White goods (ACE and LED)	62.4	
Pharma and medical equipment	Critical key starting materials/drug intermediaries and active pharmaceutical ingredients	69.4	253.6

Sector	Segment	Budgeted (INR bn) *	
	Manufacturing of medical devices	34.2	
	Pharmaceutical drugs	150.0	
Telecom	Telecom and networking products	122.0	122.0
Food	Food products	109.0	109.0
Textile	Textile products: man-made fibre (MMF) and technical textiles	106.8	106.8
Steel	Speciality steel	63.2	63.2
Energy	High-efficiency solar PV modules	240.0	240
Aviation	Drones and drone components	1.2	1.2
Total			<b>2,192</b>

\*Note: Approved financial outlay over a five-year period

ACE: Appliance and consumer electronics; LED: Light-emitting diode

Source: Government websites, CRISIL MI&A

An outlay of union budget of INR 751.4 billion for automobiles, auto components and ACC:

- INR 570.4 billion allotted for enhancing India's manufacturing capabilities of automobile and auto component industry - Advanced Automotive Products (AAT). The scheme has two components viz. Champion OEM Incentive Scheme and Component Champion Incentive Scheme. A total of 95 applicants have been approved under this PLI scheme.
- INR 181 billion under the 'National Programme on Advanced Chemistry Cell (ACC) Battery Storage' for achieving manufacturing capacity of 50 Giga Watt Hour (GWh) of ACC. Four companies have been selected till date for incentive under the PLI Scheme for ACC battery storage.

**PLI scheme for the automotive industry:** The PLI scheme for the automotive industry intends to promote high-tech green manufacturing, Advanced Automotive Technology (ATT) vehicles such as electric and hydrogen fuel cell vehicles. This scheme excludes conventional petrol, diesel, and CNG segments (internal combustion engines), as they have sufficient capacities in India. In the auto components category, more than 100 ATT components including hydrogen fuel cells, hydrogen injection systems, EV motors and lightweight cryogenic cylinders are eligible for PLI.

The PLI scheme targeting auto parts includes the following component schemes:

- Champion Original Equipment Manufacturers (OEM) Scheme: It is a sales value-linked plan, applicable to battery electric and hydrogen fuel cell vehicles of all segments.
- Component Champion Incentive Scheme: It is a sales value-linked plan for advanced technology components, complete- and semi-knocked down (CKD/SKD) kits, vehicle aggregates of two-wheelers, three-wheelers, passenger vehicles, commercial vehicles, and tractors, including automobiles meant for military use and any other advanced automotive technology components prescribed by the Ministry of Heavy Industries – depending upon technical developments.

**PLI scheme for the Automotive and Advanced Chemistry cells (ACC):** The policy on Advanced Chemistry Cell (ACC) Battery Storage was approved by the Government of India on May 2021 with budgetary outlay of INR 181.0 billion for setting up manufacturing facilities with a total manufacturing capacity of 50 Giga Watt Hour (GWh). This policy will strengthen the ecosystem for electric vehicles and Battery Storage in the country. The policy aims to enhance India's manufacturing capabilities of ACC by setting up of Giga scale ACC battery manufacturing facilities in India with emphasis on maximum domestic value addition.

Note: Please refer to module 3 for more details on the PLI scheme

**GST structure for the automobile industry**

Goods and Services Tax (GST) was introduced in 2017 as a single uniform taxation system, where all the taxes are subsumed into one. In the past, consumers had to pay two taxes- excise and VAT at rates ranging from 26.50% to 44%. However, with the introduction of GST, vehicles except EVs and hydrogen fuel cell vehicles are levied at a base rate of 28% and an additional cess at 1-22% range based on factors like dimensions, engine size and ground clearance. Importers/dealers are now able to claim the GST paid on goods imported/sold whereas previously, they were ineligible to claim the excise duty and VAT paid.

Excise paid on stock transfer would be covered by IGST under the GST law. Advance received for supply of goods is also taxed under GST. GST helps the manufacturers in procuring auto parts at a cheaper cost due to an improved supply chain mechanism under GST. GST on cars and bikes is kept under the 28% bracket and a list of cesses to be levied on different kinds of automobiles has also been declared by the Indian government which is ranging from 1 to 22%.

**GST and cess rate on automobiles based on fuel type**

Category of Car Model	GST Rate	Compensation Cess (%)
Electric Vehicles	5%	Nil
Hydrogen Fuel Cell Vehicles	12%	Nil
Passenger Vehicles (Petrol, CNG, LPG) up to 4m in length and up to 1200 cc engine	28%	1%
Passenger Vehicles (Diesel) up to 4m in length and up to 1500 cc engine	28%	3%
Passenger Vehicles (up to 1500 cc engine)	28%	17%
Passenger Vehicles (Above 1500 cc engine)	28%	20%
Passenger Vehicles popularly known as SUVs (above 4m in length, above >1500 cc engine & >170 mm ground clearance)	28%	22%
Hybrid Passenger Vehicles (up to 4m and up to 1200 cc engine Petrol) or (up to 4m and up to 1500 cc engine Diesel)	28%	Nil
Hybrid Passenger Vehicles (Above 4m or above 1200 cc engine Petrol or above 1500 cc engine Diesel)	28%	15%

Source: SIAM, CRISIL MI&A

**Import duty on passenger vehicles**

Import duty also known as import tax, import tariff or customs duty is an indirect tax levied by Indian authorities on goods purchased from a foreign country. Through import taxes, the price of imported goods increases and demand decreases. This propels domestic market growth, demand for indigenous products and protects Indian OEMs from foreign competitors.

**Customs duty on automobiles based on fuel type**

Criteria	Engine capacity	Fuel type	Import duty in %
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Used car import	Any	Any	125
Cars CBUs whose CIF value is more than USD 40,000	>3000 cc	Petrol	100
	>2500 cc	Diesel	
Cars CBUs whose CIF value is less than USD 40,000	<3000 cc	Petrol	70
	<2500 cc	Diesel	
ICE vehicle SKD:- CKD containing engine or gearbox or transmission mechanism in pre-assembled form but not mounted on a chassis or a body assembly	Any	Any	35
ICE vehicle CKD:- CKD containing engine, gearbox, and transmission mechanism not in a pre-assembled condition	Any	Any	15
Electric Vehicles SKD - Pre-assembled battery pack, motor, motor controller, charger, power control unit, energy monitor contractor, brake system, electric compressor not mounted on chassis	NA	Electric	30%
Electric Vehicle CKD - Disassembled battery pack, motor, motor controller, charger, power control unit, energy monitor contractor, brake system, electric compressor not mounted on chassis	NA	Electric	15%

Note: CIF: Cost, Insurance and Freight, CBU: Completely Built Up, SKD: Semi Knocked Down, CKD: Completely Knocked Down  
Source: SIAM, CRISIL MI&A

The government recently launched a scheme to promote electric passenger cars in India under which import duty concession is offered for OEMs who set up domestic manufacturing facility in India with a minimum investment of USD500 million. Under this scheme, the imported vehicles would attract a reduced customs duty of 15% with maximum CIF (Cost, Insurance & Freight) value of USD35,000.

**Corporate Average Fuel Efficiency/Economy norms (CAFE)**

CAFE, or Corporate Average Fuel Economy norms aim to reduce fuel consumption by vehicles (or improve fuel efficiency) by lowering carbon dioxide (CO<sub>2</sub>) emissions, hence reducing reliance on oil, and regulating pollution. Implemented in India on April 1, 2017, CAFE norms apply to petrol, diesel, LPG and CNG fuelled vehicles. In phase 1 (2017-2022), CAFE norms required average corporate CO<sub>2</sub> emissions to be less than 130 g/km by fiscal 2022 and below 113 g/km thereafter (CAFE II), i.e. vehicles needed to be 10% more fuel-efficient by fiscal 2022. CAFE II norms came into effect on April 1, 2023. This is expected to incentivize the shift towards greener technologies such as hybrids and electric vehicles (EVs). The Energy Conservation Bill requires carmakers to pay INR 25,000 per unit if their fleet’s CO<sub>2</sub> emissions exceed the intended CAFE score of 0-4.7 g/km, and INR 50,000 per unit if they exceed by more than 4.7g/km.

**National Green Hydrogen Mission**

The National Green Hydrogen Mission is a comprehensive action plan for establishing a Green Hydrogen ecosystem in India. The policy is aimed at making India a leading producer and supplier of Green Hydrogen in the world thereby creating export opportunities for Green Hydrogen and its derivatives. The policy, which promotes hydrogen as a clean energy source, was approved by the government of India with an outlay of INR 197 billion in January 2023. Of this INR 174.9 billion is allotted for the Strategic Interventions for Green Hydrogen Transition (SIGHT) programme, INR 14.7 billion for pilot projects, INR 4.0 billion for R&D, and INR 3.9 billion towards other Mission components.

Under the SIGHT program, the government would offer incentives for manufacturing of electrolyzers and production of green hydrogen. By 2030, the government wants to increase its annual hydrogen production capacity to five million metric tonnes. Reducing India's dependence on fossil fuels imports, lowering greenhouse gas emissions, transitioning the economy to low carbon intensity and making the country assume technology and market leadership in this new industry is the aim of the National Hydrogen Mission. The government plans to achieve this by setting up green hydrogen plants and encouraging research and development in the sector. The government has also pledged INR 350 billion in the energy transition to attain the goal of net zero carbon emissions by 2070.

As a part of this mission, development of hydrogen highways suited for heavy-duty, long-haul vehicles could be expected in the future. To strengthen the transport sector, necessary hydrogen production projects, distribution infrastructure and refuelling stations will be built along the highways. This will enable the development of hydrogen fuelled inter-state buses and commercial vehicles on such routes. Furthermore, in February 2024, the government issued Scheme Guidelines for Pilot Projects on use of Green Hydrogen in the Transport Sector that will support pilot projects in buses, trucks and four-wheelers with green hydrogen as a fuel. The scheme will be implemented with a total budgetary outlay of INR 5.0 billion (496 crores) till the fiscal 2026 and will support development of technologies based on fuel cell (FCEV) / internal combustion engine (ICE) based propulsion technology. The scheme would also explore the possibility of blending Green Hydrogen based Methanol/Ethanol and other synthetic fuels derived from Green Hydrogen in automobile fuels.

### **PLI for Green Hydrogen under SIGHT program**

SIGHT is a financial incentive mechanism to support domestic manufacturing of electrolyzers and green hydrogen. Incentive scheme for electrolyser manufacturing was introduced with an outlay of INR 44.4 billion aimed at maximizing indigenous electrolyzers manufacturing capacity, achieving levelized cost of hydrogen production and enhancing domestic value addition. The scheme would incentivise manufacturing of electrolyzers in India and the scheme would progressively indigenize the value chain. Incentive scheme for Green Hydrogen production was introduced in June 2023 with an initial outlay of INR 130.5 billion aimed at maximizing the production and enhance cost competitiveness of green hydrogen. The scheme offers support in terms of INR/kg of green H<sub>2</sub> production for a period of 3 years from the date of commencement of production. The incentives will be capped at INR 50/kg for first year, INR 40/kg for second year and INR 30/kg for third year. The cost incentivisation along with the indigenous development of electrolyser technology would support the demand growth and technology development in the transport sector as well.

### **Ethanol blending in India**

The government is promoting the use of ethanol a renewable and environment-friendly fuel in petrol. The Ethanol Blending program is aimed at reducing the import dependence of fuels, savings in foreign exchange, providing boost to domestic agriculture sector and for associated environmental benefits. The Roadmap for Ethanol Blending in India 2020-25 lays out an annual plan to increase domestic ethanol production in line with target of National Policy on Biofuels (2018) to reach a blending of 20% of ethanol in petrol (E20) by 2025/26. The roadmap aims at phased rollout of ethanol blended fuels in India with E10 fuel by April 2022, and phased rollout of E20 from April 2023 to April 2025. Further the policy mandates the roll out of vehicles that are E20 material-compliant and E10 engine-tuned vehicles from April 2023. Further, it mandates the production of E20-tuned engine vehicles from April 2025. OMCs have already rolled out E20 fuel in a phased manner in April 2023, however, they are yet to achieve widespread availability. The government is ambitious of attaining 20% ethanol-blended petrol by 2024-25 and 30% by 2029-30.

### BS-IV to BS-VI transition

BS emission standards are issued by the government to regulate the output of air pollutants from motor vehicles. In January 2016, the government decided to skip BS-V and instead implement BS-VI norms directly from BS-IV. It fixed the deadline of April 1, 2020, for the introduction of BS-VI emission norms.

### BS-VI regulations demand major reduction in PM and NOx levels.

Type of vehicle	Unit	BS IV	BS VI	Change
<b>Diesel</b>				
HC	gm/km	0.30	0.17	-43%
NO <sub>x</sub>	gm/km	0.25	0.08	-68%
PM	gm/km	0.025	0.0045	-82%
<b>Petrol</b>				
NO <sub>x</sub>	gm/km	0.08	0.06	-25%
PM	gm/km	-	0.0045	Newly added

Note: NO<sub>x</sub> – Nitrous Oxide, HC – Hydrocarbons, PM – Particulate matter

Source: CRISIL MI&A

Prices of BS-VI-compliant PVs increased 2-4% as devices and systems were added to reduce emission levels. The price hike was higher for diesel vehicles as these require additional exhaust parts.

### Addition of devices and sub-systems in BS-VI-compliant vehicles

Pollutant	Devices/subsystems to be included to reduce the pollutants
NO <sub>x</sub>	<ul style="list-style-type: none"> <li>Exhaust gas reduction</li> <li>Selective catalytic reduction</li> <li>3- way catalyst</li> <li>Lean NO<sub>x</sub> trap</li> </ul>
HC	<ul style="list-style-type: none"> <li>Secondary air injection</li> <li>3 way catalyst</li> <li>Diesel oxidation catalyst</li> <li>Purge control valve</li> <li>Canister</li> </ul>
PM	<ul style="list-style-type: none"> <li>Diesel particulate filter</li> <li>Gasoline particulate filter</li> </ul>

Source: CRISIL MI&A

In November 2022, the European Commission presented a draft proposal on Euro 7 Emission Norm to the European Parliament. According to the same, Euro 7 pollution standards for new cars and vans will be implemented from July 2025 and for buses and lorries from 2027. India follows the matured European market for framing and implementation of policies and adapts it to suit Indian conditions. Provided Euro 7 comes into force from 2025, India is highly likely to propose BS-VII regulation by end of this decade.

## **Review of the Indian Passenger Vehicle Industry**

### **Review of the Indian Domestic PV Industry (fiscals 2019 to fiscal 2024 till Feb 2024)**

Until liberalisation in 1991, there were only three major car manufacturers in India – Hindustan Motors, Premier and Maruti Suzuki (formerly Maruti Udyog). Maruti and Suzuki's partnership was the country's first Indian-foreign joint venture. Post liberalisation, the home brand Tata Motors entered the passenger vehicle (PV) segment with a series of launches throughout the decade. Another home brand Mahindra & Mahindra, that traditionally manufactured off-roading utility vehicles, also entered the PV space in the late 2000s. Also, major international corporations such as Hyundai and Honda entered the country in late 1990s following gradual implementation of economic reforms, with Hyundai Motor India quickly gaining prominent market share. From 2000 to 2010, almost every major car company had also established manufacturing facilities in the country.

Amidst improvement in macro-economic scenario, rising disposable incomes and expanding vehicle portfolios, the Indian PV industry witnessed stellar growth and reached a high of 3.4 million vehicle sales in fiscal 2019. This high growth until fiscal 2019 was led by continuous improvement in GDP, increase in disposable incomes and new model launches, stable cost of vehicle ownership, as well as rising traction for Sports Utility Vehicles (SUVs).

Between fiscals 2019 and 2024, India's domestic PV sales volume rose at 5% CAGR. This growth was despite the sales contraction (at 10% CAGR) witnessed during fiscals 2019 to 2021. From the low base of fiscal 2021, PV sales bounced back and grew at a healthy pace to reach a historic high of 3.9 million vehicles in fiscal 2023.

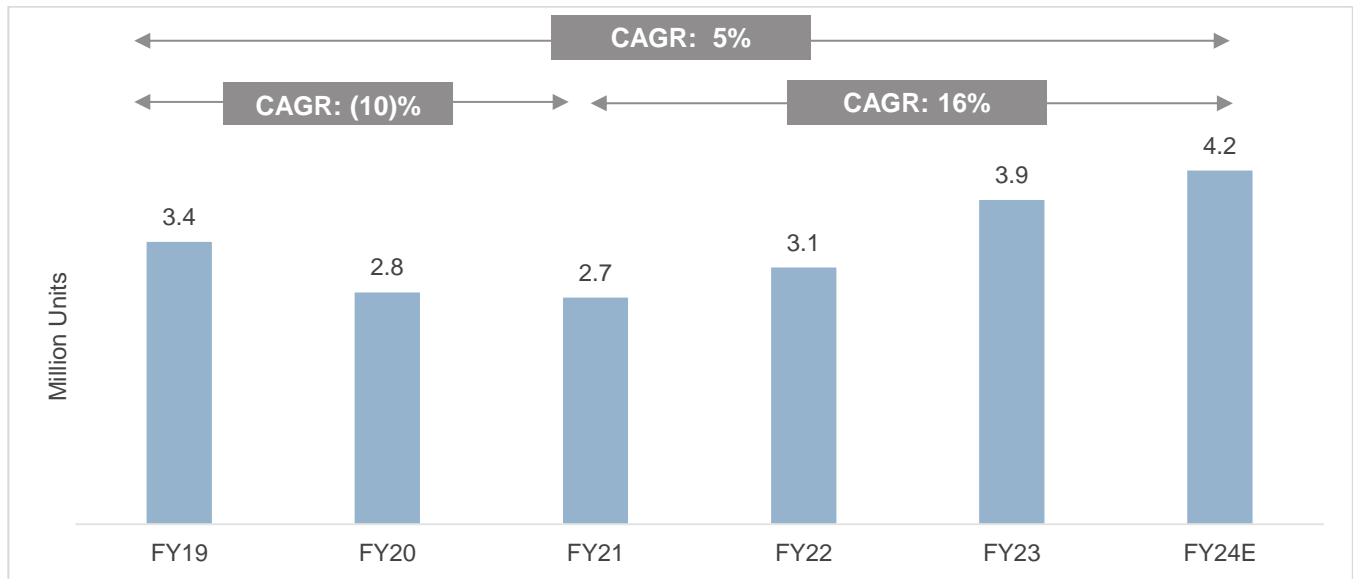
In fiscal 2020, contraction of the economy put pressure on vehicle sales. Moreover, the Non-Banking Financial Company (NBFC) liquidity crisis and halting of BS-IV vehicle production amid mandatory implementation of BS-VI norms from fiscal 2021 exerted added pressure during the year. The industry also lost nearly half a month's sales at fiscal year-end owing to outbreak of the Covid-19 pandemic and subsequent nationwide lockdown.

In fiscal 2021, domestic sales volume continued to be impacted by the first wave of the pandemic. A nation-wide lockdown, reduced mobility, and supply chain constraints leading to production cuts weighed on annual sales. Despite some improvement in sales with the reopening of the economy and increased demand for personal mobility during the second half of the year, sales contracted ~2.2% year-on-year owing to the additional price hikes due to implementation of the BS-VI norms.

Fiscal 2022 began with a much severe second wave of Covid-19. State-imposed lockdowns, economic uncertainty, and a global shortage of semiconductor supply caused extended waiting periods that impacted sales, especially in the first half of the year. There was some improvement in the economic scenario with the reopening of markets in the second half of the fiscal. Pent-up vehicle demand, further increased need for personal mobility and improved supply scenario provided thrust to PV sales during the second half. After a two-year consecutive drop, PV sales rose 13% from a very low base of fiscal 2021.

In fiscal 2023, the PV industry grew at a rate of 27% y-o-y, which was more than double the rate of 13% y-o-y witnessed during fiscal 2022, owing to the healthy pent-up demand created by two years of slump in sales volume. The orderbooks of auto OEMs were further supported by several new launches in the growing SUV category, which saw higher traction, along with multiple facelifts of existing models and easing supply of semiconductors. In fact, overall wholesale volume reached a historic high of 3.9 million units in the fiscal.

**Review of the domestic PV sales volumes**



Note:

1. Figures in bracket to be read as negative (Eg. (10) to be read as minus 10)
2. Passenger vehicles (PVs) are four wheeled motor vehicles used for carriage of passengers comprising not more than eight seats in addition to the driver's seat. PVs include hatchbacks, sedans, SUV, MPV and vans under it.

Source: SIAM, CRISIL MI&A

During fiscal 2024, growth momentum of the industry continued, albeit at a slower pace, backed by the continued traction for the SUV segment, intermittent launches and improvement in disposable income. Off the high base of fiscal 2023, the industry is estimated to have grown by 8.4% in fiscal 2024 to reach the historic high of 4.2 million units.

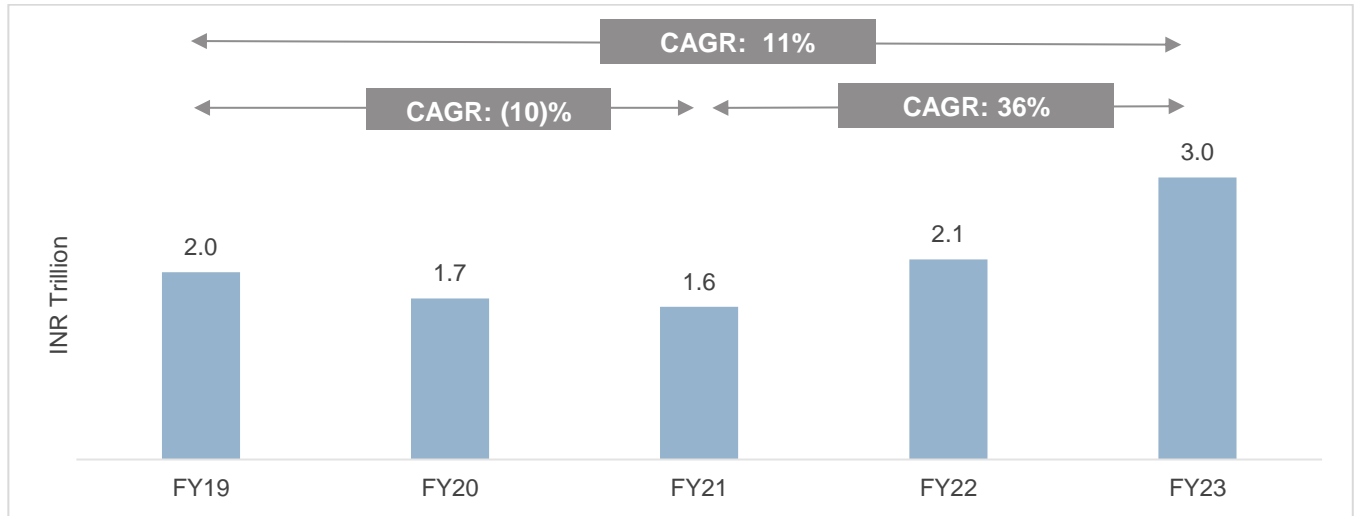
**Seasonality of sales in the domestic PV industry**

For the domestic passenger vehicle industry, the year end and festive (Dushhera/ Diwali) quarter is normally the best quarter from retail perspective. Retails are typically highest during the festive period of Dusshera and Diwali. Industry also offers additional discounts during the festive period and also sometimes align new vehicle launches around the same. Hence a substantial amount of inventory built up is done by the industry starting from 1 to 2 months before the festive period (generally August to October), therefore pushing the second quarter sales (July – September).

After the festive period, industry witnesses some dip in sales. Restricting dispatches for the year end is a major reason for the sales dip during the post festive month of December. OEMs usually offer higher discounts on the year end vehicles to encourage purchase and liquidate previous year dealer stocks in the months of December and January (next calendar year).

Vehicle dispatches are also higher during the fourth quarter of each fiscal (January -March), after the year change. The fiscal year end month of March also sees higher offtake to comply with the annual targets. Post the higher offtake, the beginning of the new fiscal (April-June) sees relatively lower dispatches after the increased inventory built up done during the previous financial year end coupled with lower retails during the rainy season. Many customers postpone their purchases for the auspicious days during the festive season, as well as to avail better incentives offered by the industry during the festive period.

**Review of the PV industry by value**



Note: Industry value calculated based on the reported vehicle sales revenue by OEMs and the total sales (domestic + exports) volumes of the industry reported by SIAM. FY24 financials are not available.

Source: SIAM, Annual Reports, MCA financials, CRISIL MI&A

The PV industry value witnessed a healthy growth from fiscal 2019-2023 period, growing at 11% CAGR. The average vehicle factory prices (ex-factory prices) rose at 8% CAGR during fiscal 2019-23 period led by rising share of premium vehicles. Additionally, price hikes undertaken by OEMs for compliance with emission norms and due to increase in raw material costs provided an added push to average prices.

Total sales (domestic + exports) volumes of the industry, on the other hand, grew at a subdued pace of 3% CAGR during the period. In fact, total vehicle sales (domestic + exports) dropped at 12.0% CAGR till fiscal 2021 dragging the industry value down in fiscal 2021.

From this low base, total sales (domestic + exports) grew at 21% CAGR till fiscal 2023 thrusting the industry revenues forward. A sharp rise at a CAGR of 12%+ in average prices amidst premiumization trend lent further support to industry size by value during fiscal 2021-23 period. Overall, the industry value grew at 36% CAGR from fiscal 2021 to 2023 to reach INR 3 trillion levels.

**Segmental Shifts Amidst Premiumization**

The passenger vehicle industry can be broadly classified basis body types into hatchbacks, sedans, sports utility vehicles (SUVs), multipurpose vehicles (MPVs) and vans. Traditionally, Indian passenger vehicle buyers have been cost conscious, with mileage and initial vehicle buying cost being the two main pillars of decision-making. Thereby, the hatchbacks segment had been leading PV sales over the years primarily because of the lower ticket size and lower running costs, making them affordable to the average Indian customer.

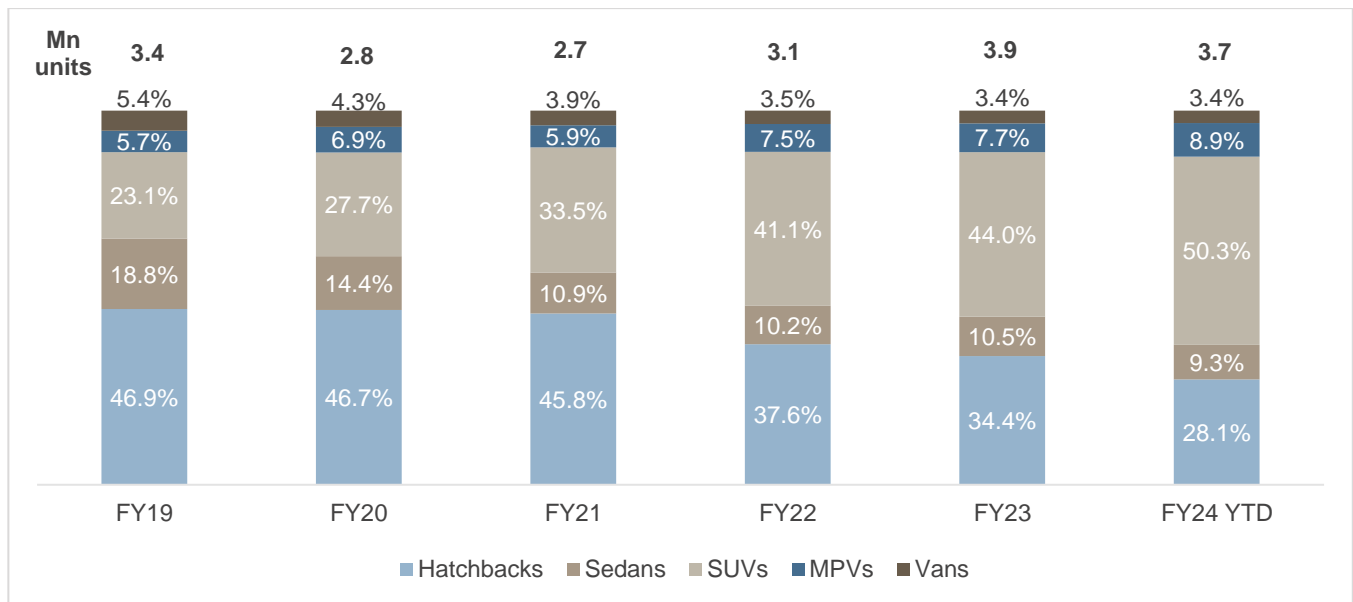
However, with a growing share of younger buyers in India, there is an increasing awareness and preference towards parameters other than price such as exterior & interior design, driving experience, safety, advanced features, and aesthetics, resulting in inter-segmental shift towards SUVs.

OEMs like Tata Motors & Hyundai Motor India have addressed this change by showcasing enhanced vehicle safety in their recent launches. Several OEMs have also gradually introduced advanced features and trickled them down from their top variants to the mid variants. Furthermore, rising disposable incomes has also given an impetus to growth in the SUV segment

Customer buying behaviour is also changing, wherein they are increasingly prioritising vehicle experience and technology over cost and are willing to pay a premium and are also ready to accept longer waiting time for the desired vehicle. More and more customers are now opting to buy mid to top level variants driving the intra-segmental shifts. This shift towards feature loaded vehicles is also driving the premiumisation trend.

Typically, hatchbacks are priced (ex-showroom) between INR 4 lakhs to 10 lakhs, sedans between INR 10 lakhs to 25 lakhs while SUVs are normally priced within INR 6 lakhs to 45 lakhs range and MPVs are between INR 10 lakhs to 30 lakhs. Within SUVs, compact SUVs are in INR 6 lakhs to 15 lakhs range, Mid-size SUVs are priced between INR 10 lakhs to 25 lakhs, Large SUVs are typically priced between INR 15 lakhs and 45 lakhs.

**Segment-wise trends in the overall PV sales volumes in India**



Note: YTD: Apr 2023- Feb 2024 period; Volumes for Tata Motors are not reported for the months of Jan 2024 and Feb 2024 in SIAM data, hence not included here. Figures above bars are the total sales volumes for the respective year.

Source: SIAM, CRISIL MI&A

**Slowdown in hatchbacks**

The hatchbacks segment, which was once the leading segment, has seen a loss in market share in recent years owing to lack of new model launches, frequent hikes in vehicle prices, increase in operating costs amid fuel price hikes, and an unfavourable macroeconomic environment that impacted the price sensitive entry-level customer base.

During the fiscal 2019 to fiscal 2024 period, while the industry is estimated to have grown at a 5% CAGR, the hatchbacks segment is estimated to have contracted at 6% CAGR. This caused the share of hatchbacks to contract from 47% in fiscal 2019 to 28% by fiscal 2024 (Apr-Feb).

Changing consumer preference towards SUVs, premiumization, limited focus by auto OEMs, and lower number of launches impacted the sales of hatchbacks segment.

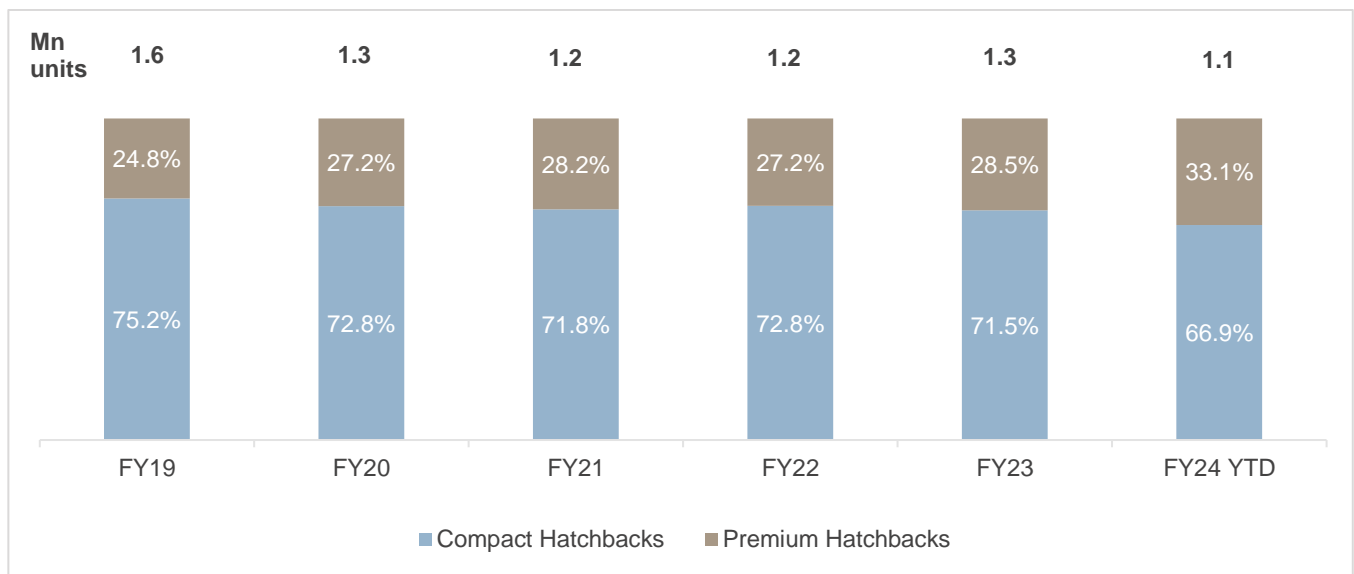
Additionally, the acquisition costs rose sharply due to the price hike caused by BS-VI emission norms implementation and the increase in raw material costs. This price rise was over and above the general annual price hike undertaken by OEMs, thus pushing the prices higher. The operating costs also shot up amidst the rise in fuel prices. On the other hand, the income levels of this entry-level customer segment were also severely impacted during the pandemic.

Thus, amidst the increased pressure on incomes and the cost surges; the demand for hatchbacks, especially for the price sensitive Compact Hatchbacks subsegment (length <3.9 m) was impacted severely.

Moreover, the rising pre owned car market also emerged as an alternate option for these price sensitive customers. Increased transparency, improved vehicle quality, rising share of organised segment aided the pre owned vehicle industry and in turn, restricted the growth of hatchbacks, especially compact hatchbacks segment.

During fiscal 2019 to fiscal 2024E period, sales of Compact Hatchbacks slid at an 8% CAGR while the Premium Hatchbacks (length>3.9m) such as the Tata Motors Altroz, Maruti Suzuki Baleno and Hyundai i20 performed relatively better. The share of Compact hatchbacks within the hatchbacks segment dropped from 75% in fiscal 2019 to 67% by fiscal 2024 (Apr-Feb).

**Sub segmental shift within hatchbacks segment**



Note: Compact Hatchbacks: Hatchbacks with length <3.9m, Premium Hatchbacks: Hatchbacks with length >3.9m; YTD: Apr 2023 – Feb 2024 period; Figures above bars are the sales volumes.

Source: SIAM, CRISIL MI&A

**Lower demand for sedans**

Sedans are relatively premium vehicles preferred by the upper middle class and affluent class customers as well as the customers who prefer the compact sub-4-meter sedans like Maruti Suzuki Dzire, Hyundai Aura, Hyundai Xcent & Honda Amaze especially for commercial purposes.

During the last 5 years, demand for sedans has dropped at 9% CAGR. Shift towards the SUV segment, drop in demand from ride hailing commercial base and limited launches have restricted the sales of sedans during fiscal 2019 to fiscal 2024 period and their contribution to overall PV sales dropped from 19% in fiscal 2019 to 9% by fiscal 2024 (Apr-Feb).

The slide in demand for compact sedans (length < 4m), which dominate the sedans segment with 73% share as of fiscal 2024, was relatively limited (fiscal 2019-24: 9% CAGR drop) amidst gradual increase in demand from ride hailing applications like OLA/ Uber after the pandemic. Demand for compact sedans reached a high in fiscal 2019 (75% of the sedans segment) backed by rising demand from ride hailing applications. However, the pandemic led to reduced demand for compact sedans due to the reduced overall mobility requirement coupled with shift in customer preference from shared to personal mobility. The share of compact sedans within the overall sedans



segment dropped to 72% during fiscal 2022. There has since been a gradual recovery in the commercial demand in fiscal 2023 & fiscal 2024 amidst normalised mobility.

On the other hand, demand for premium sedans (length 4 – 4.7 m) like Honda City, Maruti Suzuki Ciaz, Hyundai Verna, which contributed 26% to sedans segment in fiscal 2024, witnessed a sharper drop (fiscal 2019-24: 11% CAGR drop) due to limited number of vehicle launches coupled with customer preference shifting towards SUVs. However, introduction of new vehicles like Volkswagen Virtus and Skoda Slavia as well as launch of upgrades of Maruti Suzuki Ciaz, Honda City and Hyundai Verna witnessed some traction and restricted further drop in demand for premium sedans.

The luxury sedans (length >4.7m) subsegment which includes vehicles like Toyota Camry, Skoda Superb and Volkswagen Passat continued to contribute <1% to the sedans segment.

**Rise of SUVs**

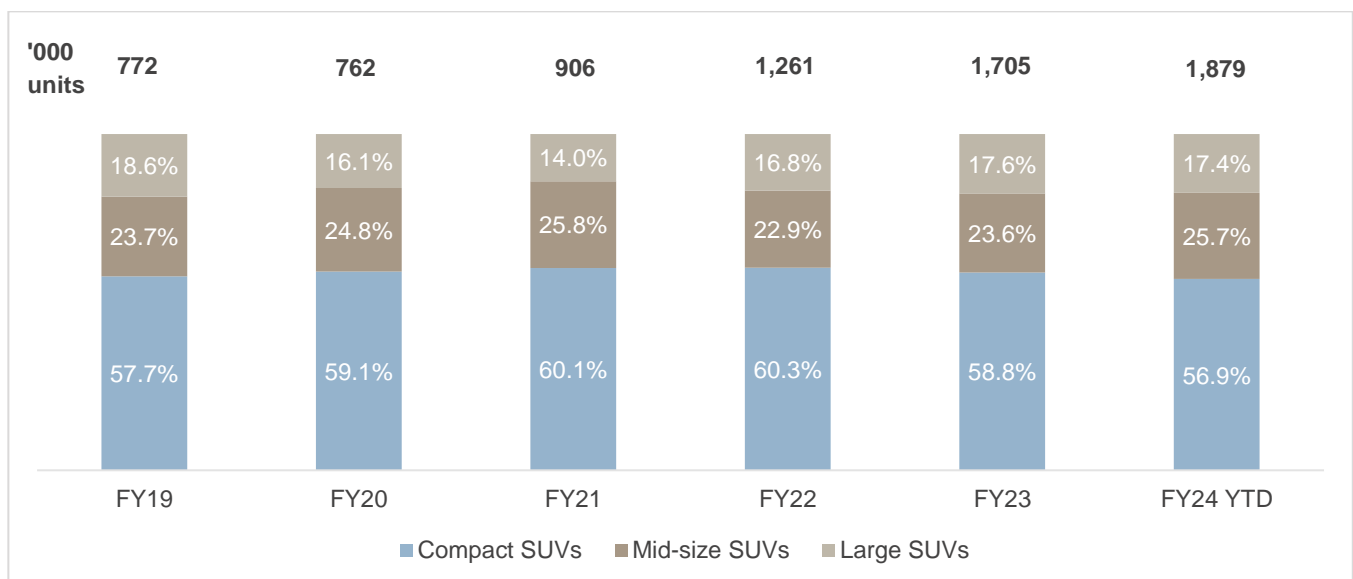
The SUV segment, which traditionally appealed to customers valuing larger seating capacity and its ability to drive on rough terrain, has increasingly gained customer preference over the years. The compact SUV segment, especially, provided the much-desired SUV body styling at competitive rates bringing SUV segment within the reach of the common consumers.

Recognising the changing consumer preferences, OEMs also launched higher number of vehicles in the SUV segment compared to other segments providing a further fillip to the SUV share expansion. In the last 5 years, 30+ SUVs were launched by the OEMs versus 4 hatchbacks and 3 sedans.

Thus, the changing customer preference coupled with new vehicle launches provided the real thrust to the growth of the SUV segment. Prominent launches from players like Hyundai Motor India, Tata Motors, Mahindra & Mahindra, Maruti Suzuki aided the growth of this segment. Moreover, entry of global players like Kia and MG, with their SUV portfolios lent further support to the segment’s growth.

All of this has led to the share of SUVs in overall domestic PV sales to more than double from 23% in fiscal 2019 to 50% in fiscal 2024 (Apr-Feb). During the last 5 years, while industry witnessed a growth at 5% CAGR, the SUV segment grew at more than 4x growth rate of 23% CAGR.

**Sub segmental shift within SUV segment**



Note: YTD: Apr 2023 – Feb 2024 period, Figures above bars are the sales volumes.

Source: SIAM, CRISIL MI&A

Within the SUV segment, compact SUVs (length <4m) grew in line (at 23% CAGR) with the overall SUV segment keeping its share steady within the SUV segment.

Launch of Ford EcoSport provided a real thrust to the compact SUV subsegment in India around fiscal 2014. Over the years, introduction of vehicles like Maruti Suzuki Brezza (fiscal 2016) and Tata Nexon (fiscal 2018) aided the growth of entire SUV segment as well as helped compact SUVs gain sizeable share within the SUV segment, reaching 58% by fiscal 2019 from 48% in fiscal 2014. Moreover, launch of Hyundai Venue (fiscal 2020), Kia Sonet (fiscal 2021), Tata Punch (fiscal 2022), Maruti Suzuki Fronx (fiscal 2024) over and above the launch of facelifts of other popular models backed the healthy growth of the compact SUV subsegment.

Introduction of Hyundai Creta in fiscal 2016, has propelled the mid-size SUVs (length 4 - 4.4 m) segment. The mid-size SUV segment outpaced (24% CAGR) the entire SUV segment and has grown its share within the mid-size SUV segment in the last 5 years. Continued traction for the high selling models like Hyundai Creta & Kia Seltos as well as successful recent additions including Maruti Suzuki Grand Vitara, Toyota Urban cruiser Hyryder and Honda Elevate provided the thrust to the growth of mid-size SUVs. The intermittent upgrades of the vehicles provided an added fillip to the sub segment's growth.

Demand for entire large SUVs (length > 4.4 m) subsegment got impacted during the pandemic amidst the financial pressures and reduced production levels due to semiconductor unavailability. The segment rebounded during the next 2 years with normalised production, improvement in customers' disposable incomes coupled with introduction of new vehicles like Mahindra Scorpio N, Mahindra XUV700 & Hyundai Alcazar. The subsegment witnessed healthy (21% CAGR) growth during fiscal 2019-fiscal 2024 period, albeit at a relatively slower rate than the other SUV subsegments impacting its share within the SUV segment.

Full size SUVs (length > 4.7m), form a smaller 12-15% share of the entire large SUV subsegment. These full-size SUVs grew at a much slower pace of 6% CAGR restricting the growth of entire large SUV subsegment.

**Segmental growth within the industry in the last 5 years**

Segment	FY19-FY24* CAGR
<b>Hatchbacks</b>	<b>(6) %</b>
Compact Hatchbacks	(8) %
Premium Hatchbacks	0%
<b>Sedans</b>	<b>(9) %</b>
<b>SUVs</b>	<b>23%</b>
Compact SUVs	23%
Mid-Size SUVs	24%
Large SUVs	21%
<b>MPVs</b>	<b>14%</b>
<b>Vans</b>	<b>(5) %</b>
<b>Total</b>	<b>5%</b>

Note: \*: based on FY24 estimates

Source: SIAM, CRISIL MI&A

Sales of MPVs consisting of vehicles like Toyota Innova, Maruti Suzuki Ertiga, primarily catering to the tourist and office transport segment, got impacted during the pandemic with reduced mobility. Amidst the gradual reopening of the offices as well as rise in tourism, segment sales rebounded in the next 3 years. During the entire five-year period, the sales of MPVs increased at a healthy pace of 14% CAGR. Addition of new vehicles like Toyota Innova Hycross, Maruti Suzuki Invicto as well as intermittent upgrades of popular models provided additional fillip to the segment's growth.

Vans typically contributed 3-5% to the overall PV sales. The discontinuation of Maruti Suzuki Omni from fiscal 2020 for the implementation of BS-VI impacted the share of the segment. Van volumes witnessed contraction at 5% CAGR during the last 5 years. However, the sole model within the vans segment, Maruti Suzuki Eeco, after the discontinuation of Omni, continues to garner traction for its commercial purposes.

**Competitive Landscape**

Domestic PV industry is an oligopolistic market with few players dominating the entire industry. Maruti Suzuki leads the PV industry in terms of domestic sales volumes. Hyundai Motor India is the second largest contributor to the domestic sales, followed by Tata Motors and Mahindra & Mahindra. These 4 players together contribute ~80% of the market.

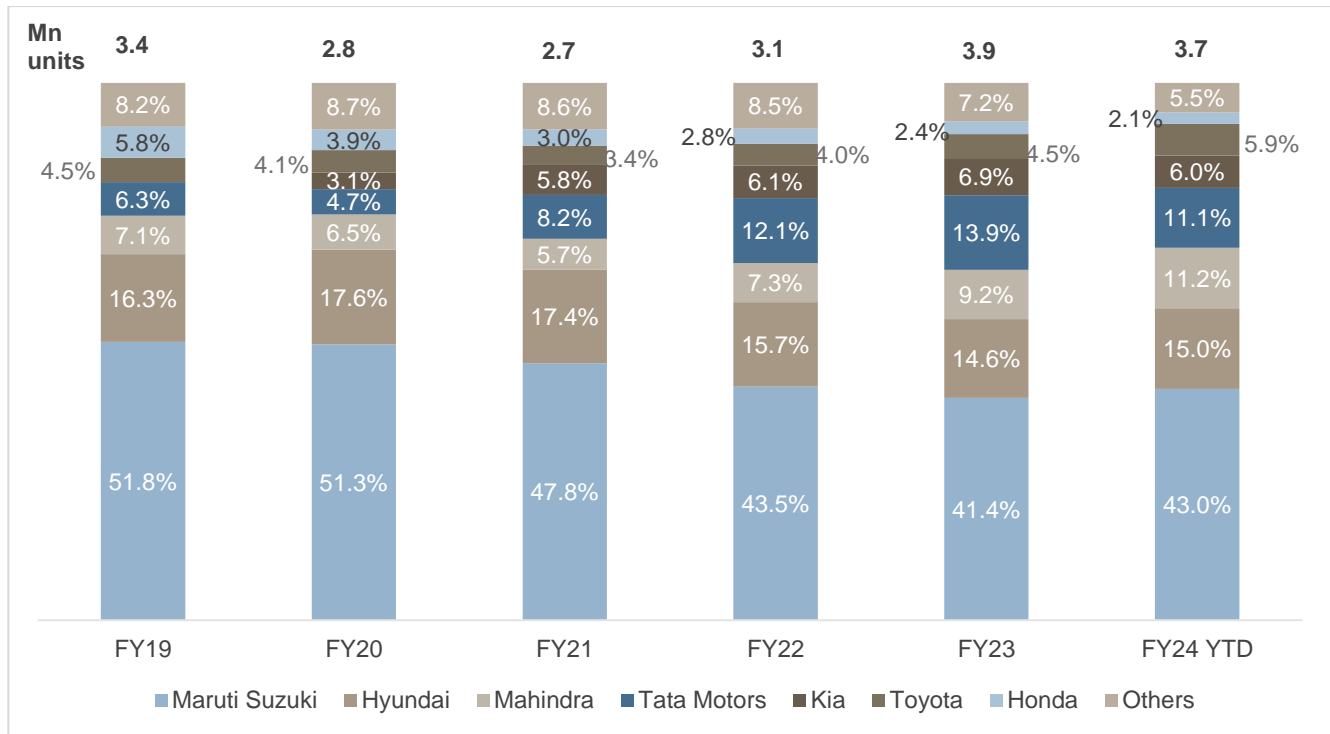
However, in the last 5 years, the competition has intensified amidst competitively priced feature-rich vehicle launches by all players as well as recent entrants such as Kia and MG grabbing sizeable shares.

Share of Maruti Suzuki contracted from a high base of 52% in fiscal 2019 to 41.4% in fiscal 2023 due to the shift in customer preference from hatchbacks towards SUVs and Maruti Suzuki's focus on the cars segment. However, success of their recent launches like the Grand Vitara, Fronx, Invicto and continued traction for the Ertiga and Brezza helped Maruti Suzuki regain some lost ground during fiscal 2024 YTD bringing their market share up to 43%.

Hyundai Motor India is the second largest contributor to Indian domestic PV sales since fiscal 2009 and has maintained its position in the market since then. This is due to continued traction for popular SUV models like Creta and Venue coupled with new vehicle launches and launch of upgrades of its popular models. Introduction of Venue,

Aura & Kona helped company expand its presence in the market during fiscal 2020. In the next 4 years, Hyundai Motor India maintained 15-18% share within the domestic market amidst continued demand for its popular models aided by frequent upgrades of its popular models like i10, i20, Creta, Verna & Venue.

**PV domestic market share across OEMs**



Note: Data is for Apr 2023- Feb 2024 period; Volumes for Tata Motors are not reported for the months of Jan 2024 and Feb 2024 in SIAM data, hence not included here. Others include MG, Renault/Nissan, Skoda, PCA etc. Figures above bars are the sales volumes.  
Source: SIAM- Society of Indian Automobile Manufacturers, CRISIL MI&A

Tata Motors gained ground in the last 5 years riding on the success of its SUV models of Nexon & Punch. The increase in traction for EVs (where Tata Motors dominates) has also provided an additional support to Tata Motors sales. In turn, Tata Motors' share of total market expanded from 6% to 11%, during fiscal 2019-2024YTD period.

The portfolio expansion in the form of XUV300, XUV700, Scorpio N has aided Mahindra & Mahindra's share in recent years. In the last 5 years, Mahindra & Mahindra expanded its share from 7% in fiscal 2019 to 11% by 2024 YTD.

Recent entrant Kia tasted early success in the Indian market in the form of Seltos & Sonet which helped the company grab a 6% share of the market by fiscal 2024 YTD.

Toyota has maintained its 4-6% market share with continued demand for its flagship Innova. While Glanza, Urban Cruiser and Hyryder provided added support to Toyota's sales.

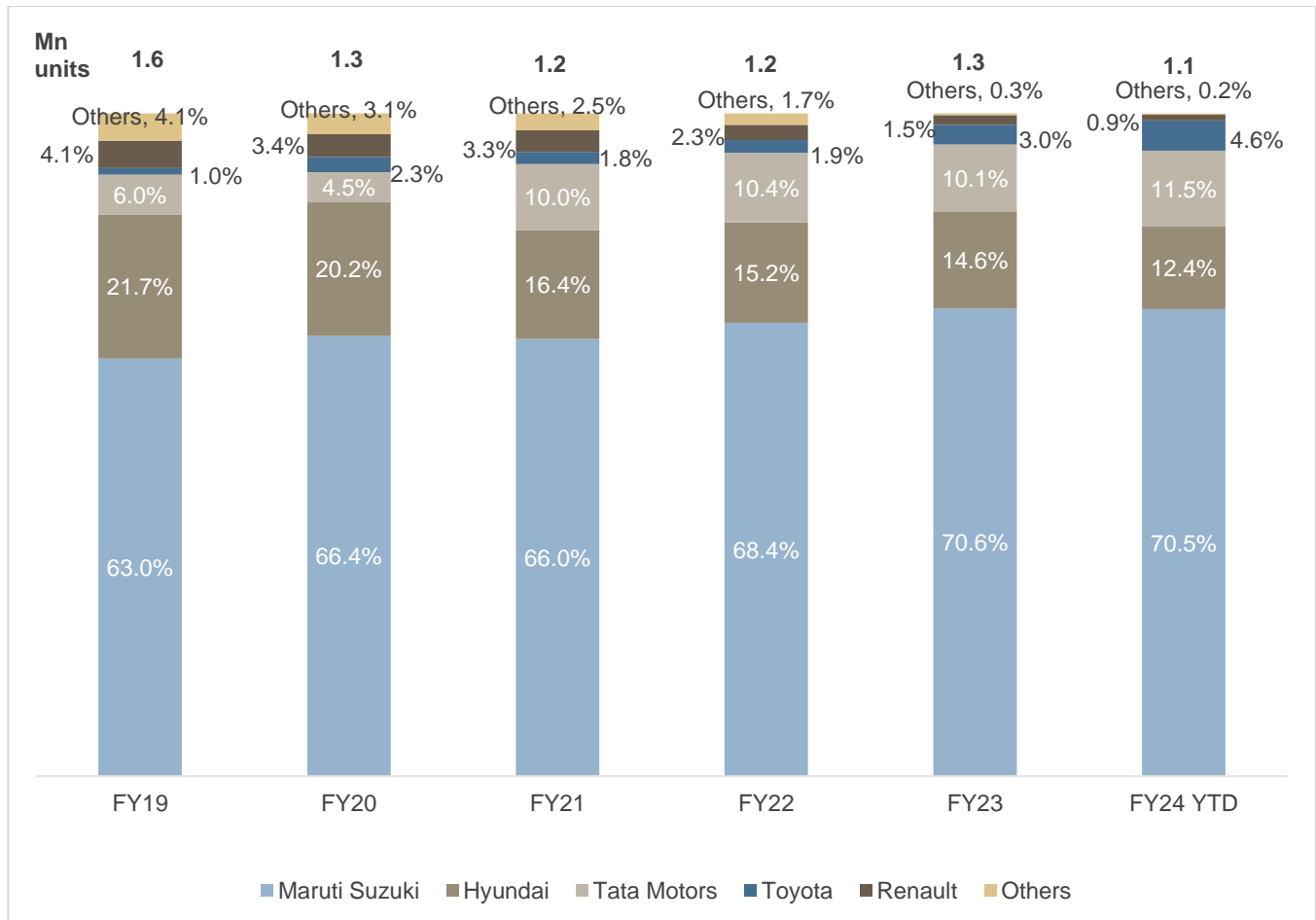
Honda has been facing intense competition in the domestic market and its share has contracted from 6% in fiscal 2019 to 2% in fiscal 2024 YTD.

**Competitive Landscape in the Hatchbacks segment**

Hatchbacks segment is dominated by Maruti Suzuki followed by Hyundai Motor India at second place. Maruti Suzuki leads both the compact hatchbacks as well as the premium hatchbacks subsegments. In the last 5 years, Maruti Suzuki has consolidated its position further, with increased presence in the compact hatchbacks

subsegment. Some of the highest selling models of Swift & WagonR backed Maruti Suzuki’s numero uno position. Despite some slowdown in sales of Alto, the addition of Spresso helped Maruti Suzuki maintain its lead in the compact hatchbacks subsegment.

**OEM wise market share in Hatchbacks segment**

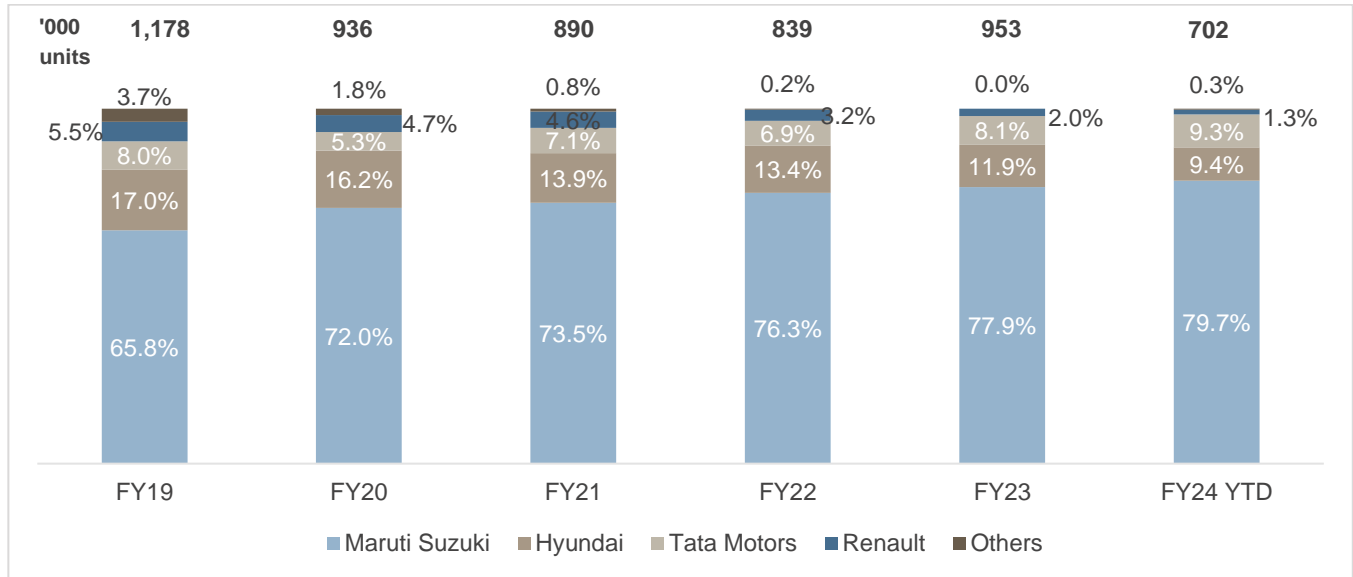


Note: YTD: Apr 2023 – Feb 2024, Figures above bars are the sales volumes.  
Source: SIAM, CRISIL MI&A

On the other hand, Maruti Suzuki lost some ground in the premium hatchbacks subsegment to Tata Motors & Toyota. While Baleno continues to lead the premium hatchbacks subsegment, introduction of Tata Altroz & Toyota Glanza contracted its share.

Hyundai Motor India has lost some share in the hatchbacks segment in the last 5 years. Discontinuation of its compact hatchbacks Santro & Eon impacted the company’s share within the hatchbacks segment. However, continued traction for popular models Grand i10 NIOS & i20 restricted the company’s drop in share. Intensified competition with entry of new models Tata Altroz & Toyota Glanza in the premium hatchbacks segment exerted pressure on its share in the premium hatchbacks subsegment in the last 5 years.

**OEM wise market share in Compact Hatchbacks segment**



Note: YTD: Apr 2023 – Feb 2024, Figures above bars are the sales volumes.

Source: SIAM, CRISIL MI&A

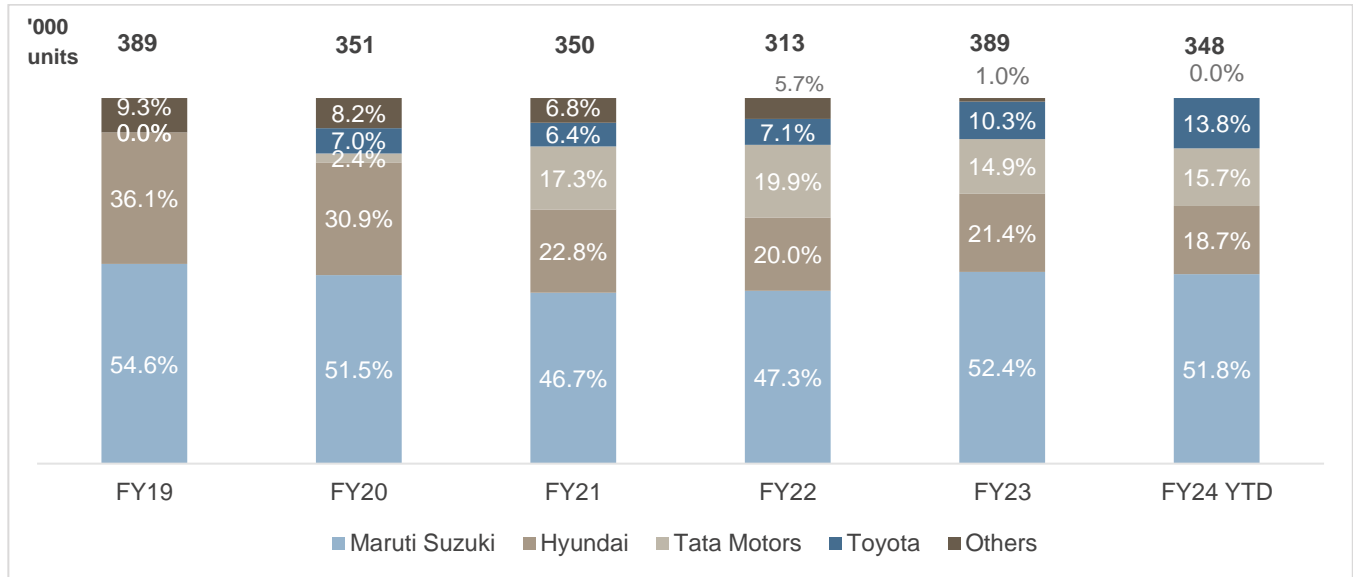
Tata Motors entered the premium hatchbacks segment with Altroz in fiscal 2020 and gained sizeable ground backed by intermittent upgrades as well as new powertrain launches for the model. Increased share in premium hatchbacks coupled with continued traction for its compact hatchbacks Tiago helped Tata Motors expand its presence in the overall hatchbacks segment as well.

The SUV styled hatchbacks Kwid aided Renault’s share in the compact hatchbacks segment. The slowdown in the demand for compact hatchbacks coupled with continued competition from Maruti Suzuki & Hyundai Motor India cost Renault its share in the compact hatchbacks space.

Toyota entered the premium hatchbacks market with Glanza in fiscal 2020. Continued traction for the model helped Toyota gain further ground in the premium hatchbacks subsegment until fiscal 2024.

Over the years, the premium hatchbacks segment witnessed considerable consolidation post discontinuation of models like the Volkswagen Polo, Ford Figo and Honda Jazz. However, early launches in the premium hatchback segment like Hyundai i20 (2008) and Maruti Suzuki Baleno (2015) helped to continue the momentum in the segment. Recent entrants Tata Motors & Toyota also gained sizeable ground through their models like the Tata Altroz and Toyota Glanza.

**OEM wise market share in Premium Hatchbacks segment**



Note: YTD: Apr 2023 – Feb 2024, Figures above bars are the sales volumes.  
Source: SIAM, CRISIL MI&A

**Top 10 Hatchbacks sold in fiscal 2024 Apr-Feb**

Compact Hatchbacks			Premium Hatchbacks		
OEM	Model	Share in FY24 Apr 2023 – Feb 2024	OEM	Model	Share in FY24 Apr- Feb
Maruti Suzuki	WagonR	26%	Maruti Suzuki	Baleno	52%
Maruti Suzuki	Swift	26%	Hyundai Motor India	i20	19%
Maruti Suzuki	Alto	15%	Tata Motors	Altroz	16%
Hyundai Motor India	Grand i10 NIOS	9%	Toyota	Glanza	14%
Tata Motors	Tiago	9%			
Maruti Suzuki	Celerio	5%			
Maruti Suzuki	Ignis	4%			
Maruti Suzuki	Spresso	4%			
Renault	Kwid	1%			

Source: SIAM, CRISIL MI&A

**Competitive Landscape in the Sedan Segment**

Maruti Suzuki leads the sedans segment with its model Dzire leading the segment with a 40% share (in fiscal 2024). Restricted mobility during the pandemic contracted the demand of Dzire during the pandemic, exerting pressure on its share during fiscal 2021 & fiscal 2022. The launch of Virtus and Slavia as well as sharp rise in Hyundai Aura sales put further pressure on Maruti Suzuki’s share during fiscal 2023.

Hyundai Motor India extended its presence in the sedans segment especially in fiscal 2024 led by the launch of its Verna facelift coupled with continued demand for its compact sedan model Aura. In fact, in fiscal 2024, despite

discontinuation of Xcent, Hyundai Motor India emerged as the second largest contributor to the sedans segment. Hyundai Verna was the top selling model in the premium sedans market in fiscal 2024 till Feb.

Honda has been facing intense competition in the sedans segment for its flagship model City, from the recently launched Volkswagen Virtus & Skoda Slavia as well as the Hyundai Verna facelift. Due to this its share contracted from 22% in fiscal 2019 to 14% in fiscal 2024.

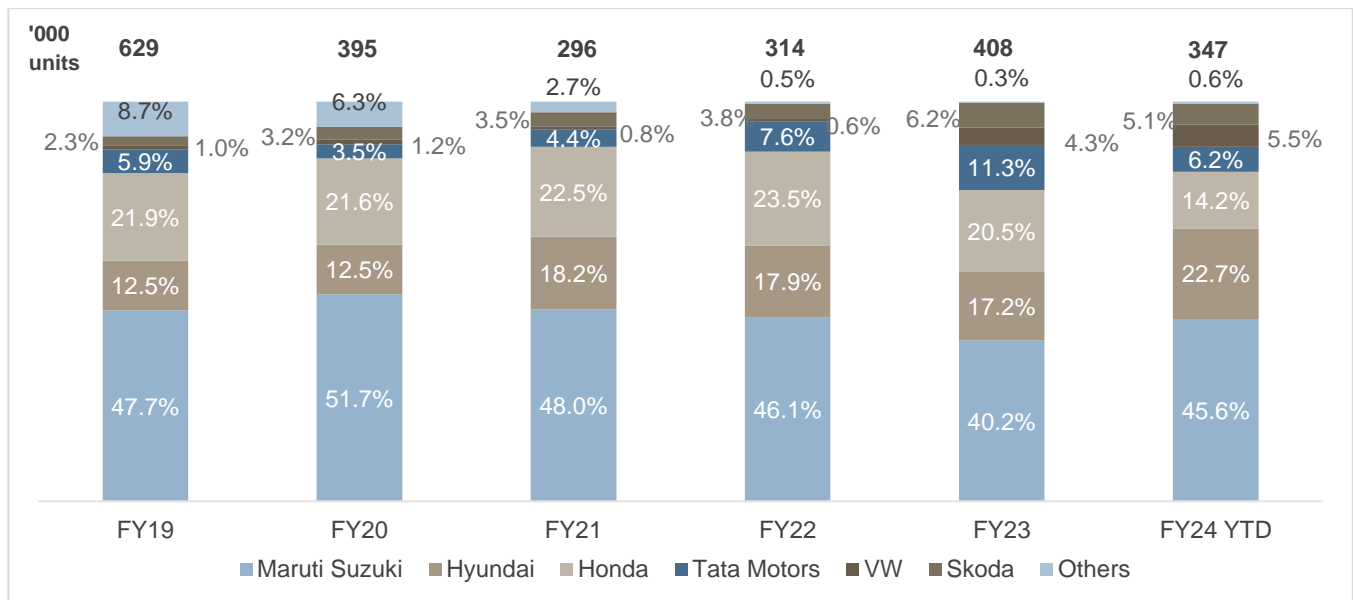
Within the sedans segment, the demand for compact sedans subsegment (length <4m) is primarily driven by the commercial usage. This subsegment is dominated by Maruti Suzuki with continued traction for its Dzire model. Hyundai's Aura since its launch in fiscal 2020, has also gained sizeable share within Compact Sedans for its commercial offering.

Tata Motors caters to only Compact sedans subsegment within the sedans segment. Its share dropped during the pandemic with slowdown in Tigor sales as well as discontinuation of Zest. Launch of Tigor EV in fiscal 2022 helped Tata Motors regain share within the sedans segment.

The premium sedans (length between 4- 4.7 m) subsegment was dominated by Honda City. Competition intensified recently within premium sedans amidst the launch of Volkswagen Virtus and Skoda Slavia. Moreover, Hyundai's Verna upgrade also received favorable response helping Hyundai Motor India lead the premium sedans subsegment in fiscal 2024. On the other hand, Honda (City) and Maruti Suzuki (Ciaz) lost sizeable ground in the premium sedans subsegment.

The Luxury sedans (length >4.7 m) is dominated by Toyota Camry.

**OEM wise market share in Sedans segment**



Note: YTD: Apr 2023 – Feb 2024, Figures above bars are the sales volumes.

Source: SIAM, CRISIL MI&A

**Top 10 Sedans sold in fiscal 2024 Apr-Feb**

OEM	Model	Share in FY24 Apr 2023 – Feb 2024
Maruti Suzuki	Dzire	43%
Hyundai Motor India	Aura	15%
Honda	Amaze	10%

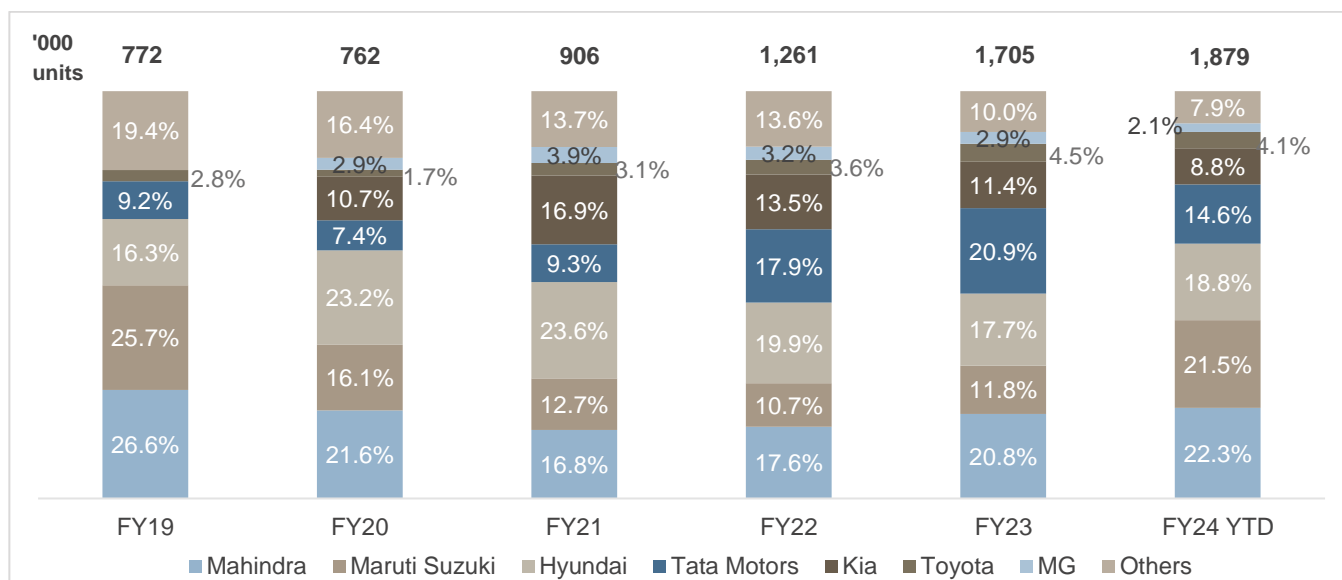


Hyundai Motor India	Verna	8%
Tata Motors	Tigor	6%
VW	Virtus	6%
Skoda	Slavia	5%
Honda	City	5%
Maruti Suzuki	CIAZ	3%
Toyota	Camry	1%

Source: SIAM, CRISIL MI&A

## Competitive Landscape in the SUV Segment

### OEM wise market share in SUV segment



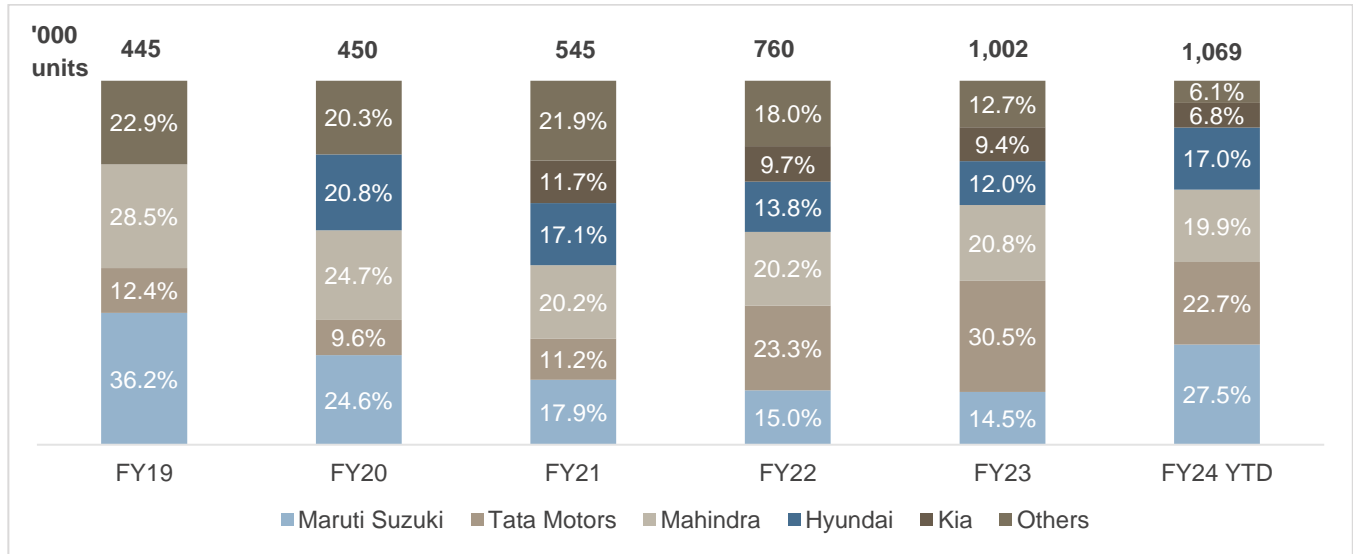
Note: YTD: Apr 2023 – Feb 2024, Figures above bars are the sales volumes.

Source: SIAM, CRISIL MI&A

Compared to other segments, the SUV segment is much more fragmented with no clear leader and very close competition between the OEMs. Moreover, amidst the sharp rise in demand for SUVs, competition has further intensified in this segment with increased focus from all the OEMs as well as entry of new players into this segment.

In the last 5 years, dominant players like Mahindra & Mahindra and Maruti Suzuki have lost some share from their elevated base, while Hyundai Motor India & Tata Motors have expanded their presence. New entrants Kia & MG entered India in fiscal 2020 and successfully grabbed a sizeable share in the next 4 years. Both the new entrants primarily focused on the fastest growing SUV segment. Entry of these global players aided the growth of overall SUV segment as well.

**OEM wise market share in Compact SUV segment**



Note: YTD: Apr 2023 – Feb 2024, Figures above bars are the sales volumes.  
Source: SIAM, CRISIL MI&A

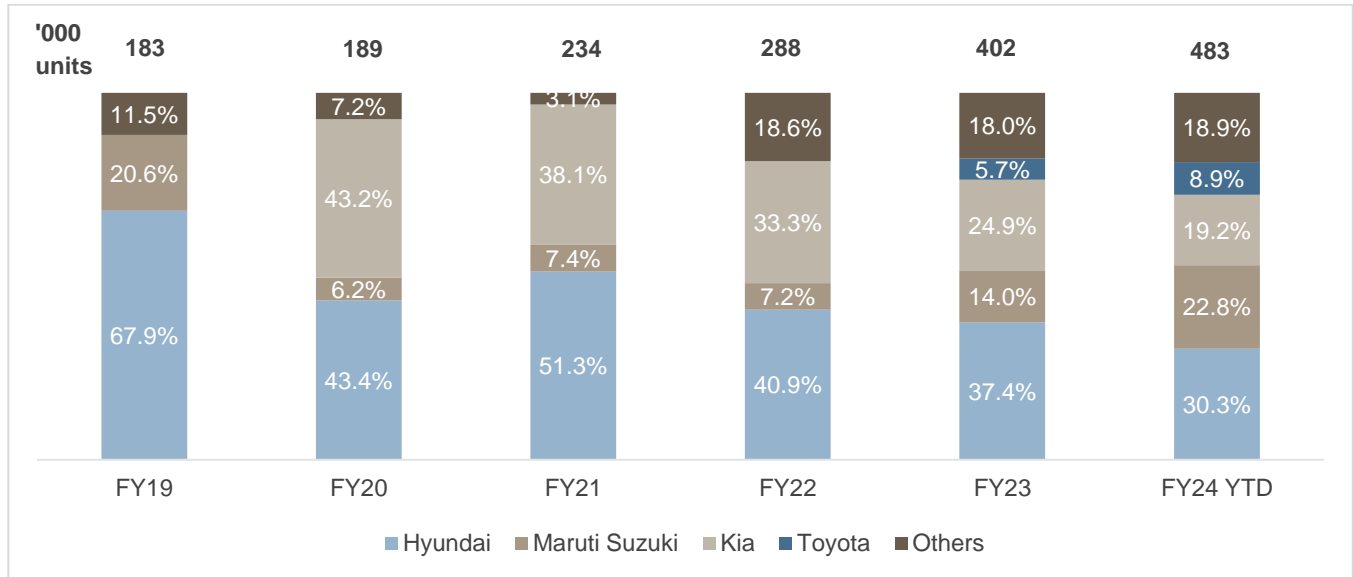
The largest subsegment within SUVs, compact SUV, has witnessed very intense competition in the last 5 years with a sizeable number of launches and upgrades from all major players. New launches have a notable impact on the sales of this segment with customers preferring the latest feature-rich competitively priced models. Thus, the launch of new models has a sizeable impact on the competitive landscape of this subsegment.

Until fiscal 2019, the compact SUV subsegment was relatively consolidated with only a few players offering compact SUVs. With its new entrant Brezza, Maruti Suzuki dominated the subsegment in fiscal 2019, followed by Mahindra & Mahindra due to continued traction for its popular Bolero model. Hyundai Motor India entered the compact SUV subsegment with Venue in fiscal 2020 and grabbed a sizeable 21% share within a year. Kia introduced Sonet in fiscal 2021 and contributed 12% to the subsegment during the year. Similarly, launch of Punch helped Tata Motors garner an additional 12% share in fiscal 2022. Additionally, increased traction for its model Nexon with the introduction of EV powertrain aided Tata Motors growth in fiscal 2022. Continued demand for these models helped Tata Motors expand its presence within the compact SUV space during fiscal 2023.

Bolero, Thar and XUV300 supported Mahindra & Mahindra’s 20-22% share within the compact SUV subsegment in the last 4 years.

The launch of Hyundai’s Exter and Maruti Suzuki’s Fronx and Jimny helped these two OEMs recover some lost ground during fiscal 2024.

OEM wise market share in Mid-size SUV segment



Note: YTD: Apr 2023 – Feb 2024, Figures above bars are the sales volumes.  
Source: SIAM, CRISIL MI&A

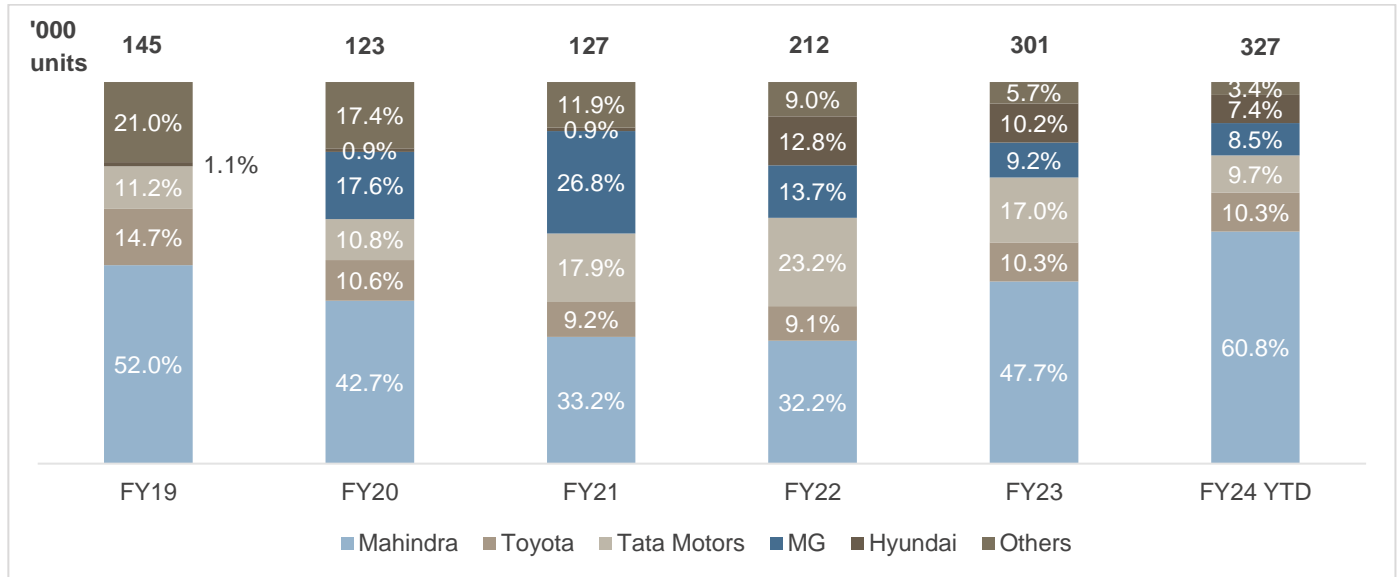
Hyundai Motor India dominates the mid-size SUV sub segment. With its flagship model Creta, Hyundai Motor India commanded a leading 68% share of the subsegment during fiscal 2019. Intermittent upgrades to Creta helped Hyundai Motor India maintain a notable share in the next 4 years as well. However, it faced stiff competition from new entrants in the subsegment restricting its share. Although, the share contracted over the years, with expansion in the overall segment sales, Hyundai Motor India’s sales have also grown over the years.

Entry of Kia in the Indian market with Seltos helped it garner a sizeable 43% share during fiscal 2020. On the other hand, Urban Cruiser Hyryder and Rumion backed Toyota’s expansion in the mid-size SUV subsegment in the last 2 years. The launch of Grand Vitara helped Maruti Suzuki expand its share during fiscal 2024.

In the last 2 years, the launch of models like the Honda Elevate, Skoda Kushaq, Volkswagen Taigun, Mahindra XUV400, Citroen C3 Aircross has intensified the competition further within the subsegment.

Many OEMs like Honda, Citroen, VW, Toyota entered this subsegment in the last 2 years while few OEMs like Renault and Nissan discontinued their offerings as well.

**OEM wise market share in Large SUV sub-segment**



Note: YTD: Apr 2023 – Feb 2024, Figures above bars are the sales volumes.  
Source: SIAM, CRISIL MI&A

Mahindra & Mahindra leads the large SUV subsegment with Scorpio and XUV product line. The company faced production constraints during fiscal 2021 and 2022 restricting its contribution in those years. Additionally, recent launches from MG (Hector) and Hyundai Motor India (Alcazar) exerted added pressure on Mahindra & Mahindra’s market share during those years. However, the launch of XUV700 and Scorpio N helped the company regain its lost share and expand its presence further in the last 2 years. Improvement in its production levels after the pandemic hiatus provided the much-needed thrust for Mahindra & Mahindra.

MG’s entry into the large SUV segment with the Hector helped it obtain 18% of the subsegment’s share in fiscal 2022. Hyundai Motor India introduced Alcazar in fiscal 2022 and expanded its presence in the large SUV segment significantly during the year.

Within the large SUVs, full size SUVs (length >4.7m) contributed ~12% to the subsegment in fiscal 2024. Full size SUV subsegment is dominated by Toyota’s Fortuner model followed by MG’s Gloster. Toyota has maintained its lead during the last 5 years.

**Top 10 SUV models sold in fiscal 2024 Apr-Feb**

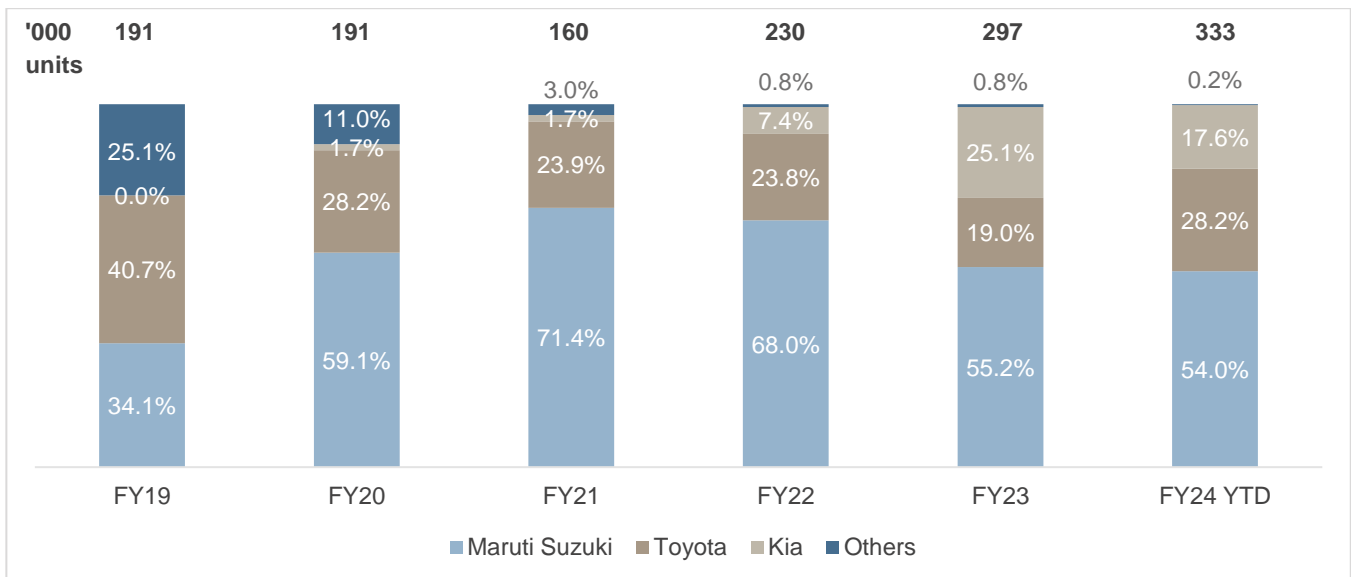
Compact SUVs			Mid-size SUVs			Large SUVs		
OEM	Model	Share in FY24 Apr 2023 – Feb 2024	OEM	Model	Share in FY24 Apr 2023 – Feb 2024	OEM	Model	Share in FY24 Apr 2023 – Feb 2024
Maruti Suzuki	Brezza	15%	Hyundai Motor India	Creta	30%	Mahindra & Mahindra	Scorpio	39%
Tata Motors	Nexon	12%	Maruti Suzuki	Grand Vitara	23%	Mahindra & Mahindra	XUV700	22%
Maruti Suzuki	Fronx	11%	Kia	Seltos	19%	Toyota	Fortuner	10%
Hyundai Motor India	Venue	11%	Toyota	HyRyder	9%	MG	Hector	8%

Compact SUVs			Mid-size SUVs			Large SUVs		
OEM	Model	Share in FY24 Apr 2023 – Feb 2024	OEM	Model	Share in FY24 Apr 2023 – Feb 2024	OEM	Model	Share in FY24 Apr 2023 – Feb 2024
Tata Motors	Punch	11%	Honda	Elevate	6%	Hyundai Motor India	Alcazar	6%
Mahindra & Mahindra	Bolero	9%	Skoda	Kushaq	5%	Tata Motors	Harrier	5%
Kia	Sonet	7%	VW	Taigun	4%	Tata Motors	Safari	4%
Hyundai Motor India	Exter	6%	MG	Astor	2%	Jeep	Compass	1%
Mahindra & Mahindra	Thar	6%	Mahindra & Mahindra	XUV400	1%	Hyundai Motor India	Tucson	1%
Mahindra & Mahindra	XUV300	5%	MG	ZS EV	1%	MG	Gloster	1%

Source: SIAM, CRISIL MI&A

## Competitive Landscape in the MPV and Vans Segments

### OEM wise market share within MPV segment



Note: YTD: Apr 2023 – Feb 2024, Figures above bars are the sales volumes.

Source: SIAM, CRISIL MI&A

The MPV segment is relatively consolidated with Maruti Suzuki and Toyota contributing more than 70%+ of volumes to the segment. With continued traction by commercial as well as personal segment, Maruti Suzuki's Ertiga (~40% contribution in fiscal 2024) aided Maruti Suzuki's share in the MPV segment in the last 5 years. Toyota's Innova has also contributed significantly to the MPV segment over the years, thus, aiding Toyota's share. Recent launch of Hycross further expanded Toyota's share during fiscal 2024. Carnival & Carens backed Kia's contribution to the MPV segment.

Maruti Suzuki is the only OEM catering to the vans segment through its Eeco model.

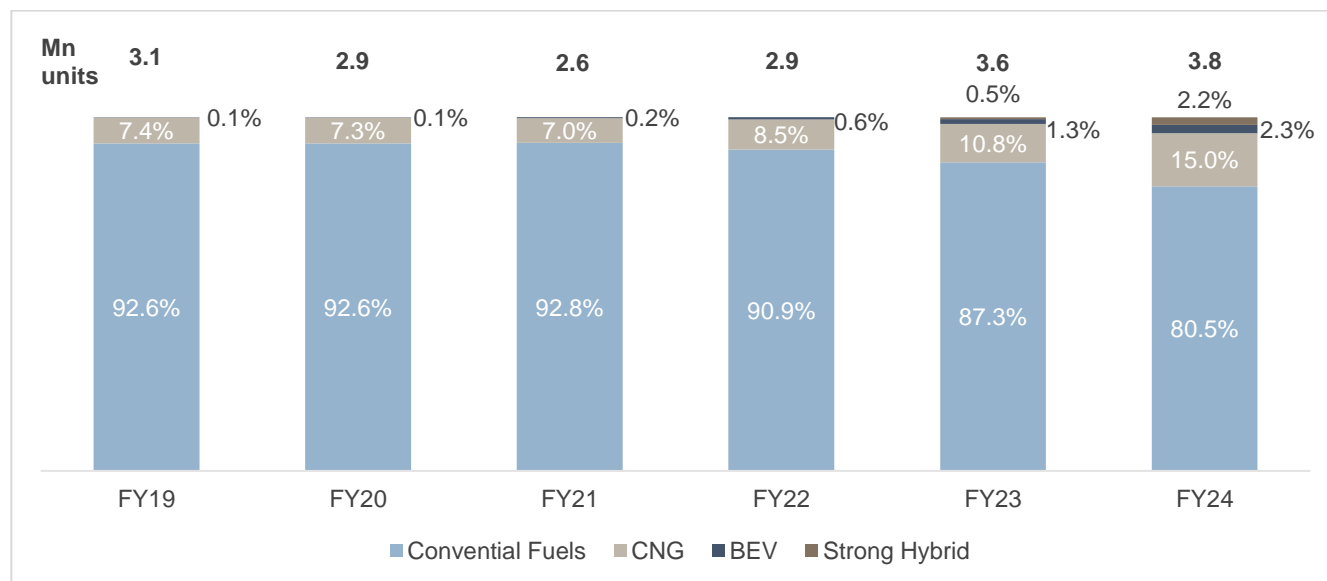
## Changing Powertrain Mix in the Indian Passenger Vehicles Industry

Conventional fuel powertrains (Petrol and Diesel) have dominated the Indian passenger vehicle industry for decades. Petrol vehicles were the preferred choice primarily due to low acquisition cost as compared to diesel vehicles. This was despite diesel being cheaper than petrol, however, during fiscal 2012 to fiscal 2014 period, there was an increasing preference for diesel vehicles due to rising petrol prices and further increase in the price gap with diesel. This was also supported by the fact that diesel vehicles gave better mileage, and there was only a slight difference in acquisition cost for a diesel vehicle.

However, considering the higher air pollution and environmental harm caused by diesel vehicles, the Supreme Court ordered a ban on diesel vehicles in the NCR region in order to reduce air pollution and improve the air quality. Moreover, higher price rise in diesel vehicles for the emission norms (BSIV & BSVI) implementation shifted consumer preference towards the petrol vehicles after fiscal 2015. Subsequently, the share of diesel PV retails in the industry dropped from 48% in fiscal 2015 to 37% in fiscal 2019.

Moreover, the shift in OEM focus from diesel to petrol including discontinuation of diesel models by few OEMs like Maruti Suzuki with the onset of stricter BSVI norms, exacerbated the situation for diesel vehicles. In fiscal 2024, the share of diesel powertrain in the industry retail slid to only 18%. On the other hand, the share of petrol variants expanded from 56% in fiscal 2019 to 63% by fiscal 2024.

### Powertrain mix trend of PV industry retails



*Note: Strong hybrid: Vehicles having a combustion engine as well as an electric motor. The vehicle can be powered by the engine, by the battery, or by both simultaneously. Battery of the vehicle is charged by the combustion engine and not by an external power source. Telangana & Lakshadweep retail data is not available on VAHAN.*

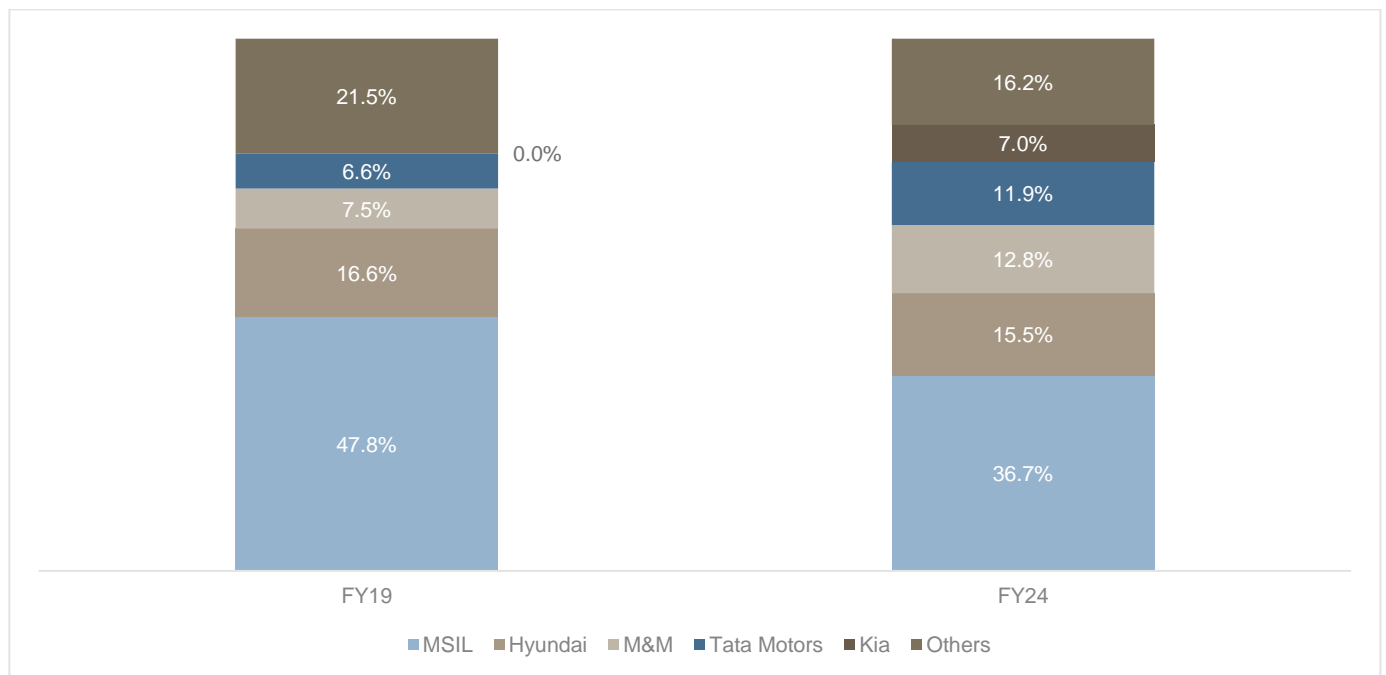
Source: VAHAN, CRISIL MI&A

Maruti Suzuki which contributed ~35% of retail sales during fiscal 2019, discontinued its diesel portfolio entirely during the BSVI transition. Other players like Hyundai Motor India, Tata Motors and Mahindra & Mahindra developed BSVI compliant diesel engines as well and continued to offer diesel powertrain.

Thus, in the next few years, players like Mahindra & Mahindra and Tata Motors expanded their presence in diesel retails in the next 5 years. Additionally, the recent entrant Kia pushed the diesel retails further with its SUV models and contributed 11% to diesel retails in fiscal 2024. Hyundai Motor India with its SUV offerings in the diesel powertrains maintained its 14% share in diesel retails.

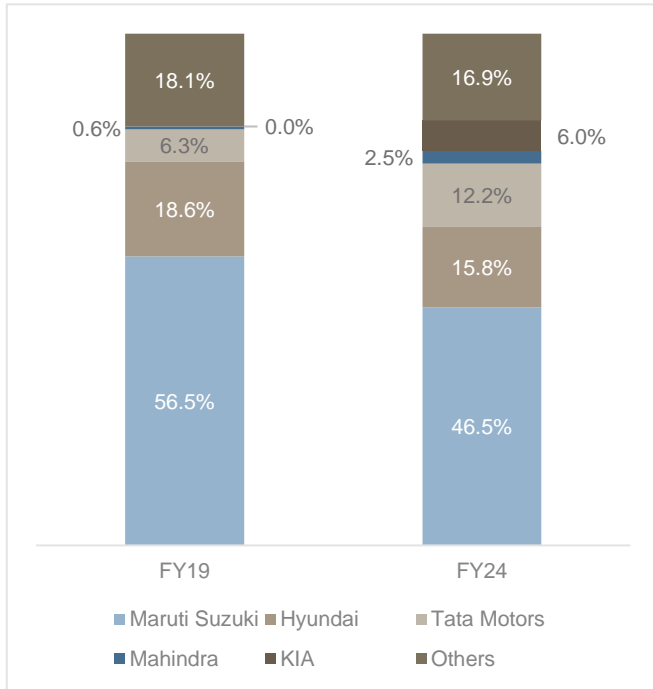
Preference shift towards the petrol variants as well as increased portfolio aided the expansion of petrol vehicle sales in the industry retails. Amidst the increased shift towards the petrol variants, the traditional diesel vehicle players like Mahindra & Mahindra, Tata Motors gained some ground in the petrol vehicle retails during the last 5 years, Mahindra & Mahindra increased its share from 1% in fiscal 2019 to 3% by fiscal 2024 while Tata Motors grabbed 12% of the petrol vehicle retails share by fiscal 2024. The recent entrant Kia, contributed about 6% to the petrol vehicle retails during fiscal 2024. The traditional petrol vehicle manufacturers Maruti Suzuki & Hyundai Motor India lost some ground to the above non- traditional players off the high base of fiscal 2019.

**OEM wise split for Conventional Fuel vehicle retails**

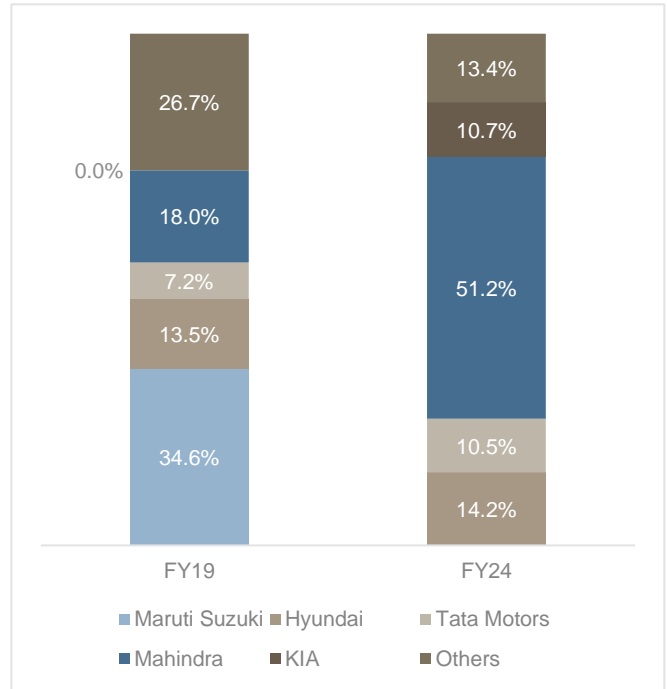


Source: VAHAN, CRISIL MI&A

**OEM wise split for Petrol vehicle retails**

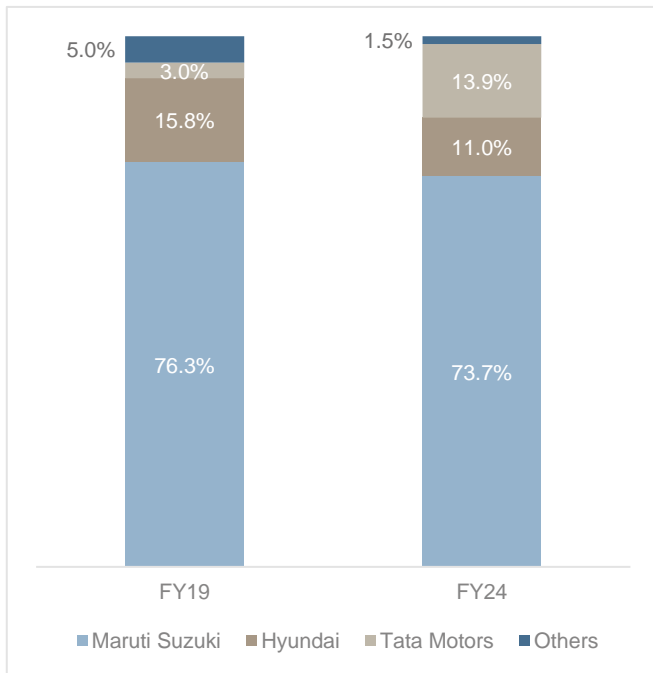


**OEM wise split for Diesel vehicle retails**

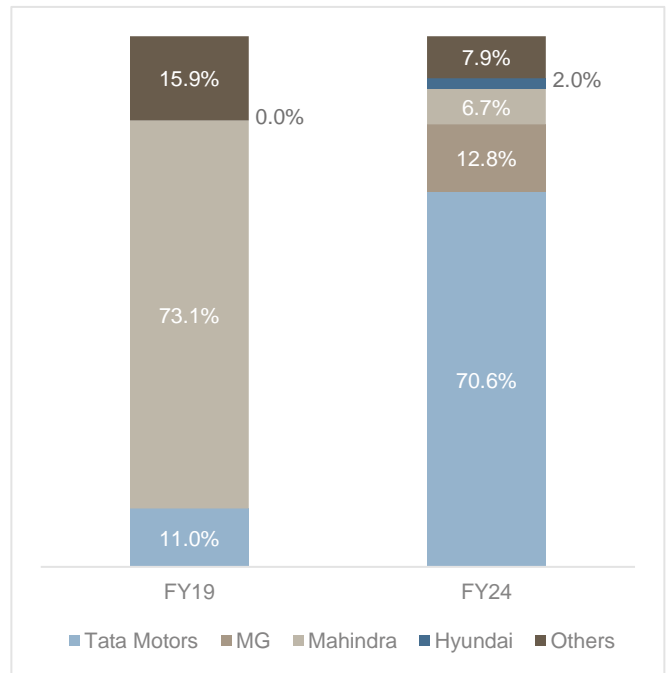


Source: VAHAN, CRISIL MI&A

**OEM wise split for CNG vehicle retails**



**OEM wise split for EV retails**



Source: VAHAN, CRISIL MI&A

The share of CNG vehicles in the entire industry retails has more than doubled in the last 5 years to 15% in fiscal 2024. CNG vehicles were primarily preferred for the commercial (taxi) segment, limiting their contribution to a 6-8% range. However, there has been an increase in the CNG portfolio especially in the last 2/3 years. CNG powertrain



options were introduced in premium hatchbacks and SUVs (Exter, Punch, Brezza, Fronx, Altroz, Baleno, etc.) due to the rising acceptance of CNG from the personal vehicle buyers. This has thrust the share of CNG powertrain in the last 2 years. Its contribution rose from 8% in fiscal 2022 to 15% in fiscal 2024. Additionally, the reduction in CNG fuel price post the Kirit Parikh panel recommendation provided an added boost to the CNG sales during fiscal 2024.

The recently emerged EV segment also expanded its presence especially in the last 3 years backed by launch of EV models, expanding charging infrastructure as well as rising climate consciousness. The share of electric vehicles in the overall retails increased from 0.1% in fiscal 2019 to 2.3% in fiscal 2024. (The EV segment is covered in detail below).

The recent launch of strong hybrid variants for a few models like the Maruti Suzuki Grand Vitara, Toyota Innova Hycross and Honda City has introduced an additional powertrain option for the Indian consumers. Strong hybrid powertrain witnessed healthy traction from consumers looking for increased mileage at relatively limited higher acquisition costs. Lower operating costs, environmental benefits, and relief from uncertainties faced by EV customers like range anxiety or charging station accessibility, have provided a boost to the strong hybrid vehicle retails in the last 2 years.

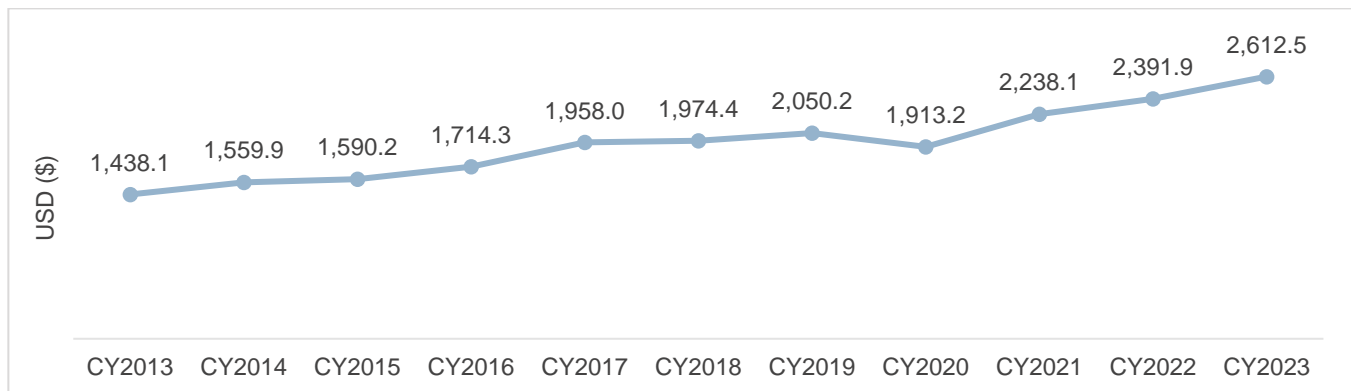
## Key Industry Growth Drivers & Trends

### GDP per capita

GDP per capita is GDP of a country distributed per person in the population. It is calculated by dividing total GDP by the population. Per capita income shows the increase in income thereby indicating economic well-being and average living standard of population in a country.

India had a GDP per capita of USD 2,612.5 in 2023 compared to USD 1,438.1 in 2013. It has increased at a CAGR of 6.2% in the last 10 years. In 2020, the GDP per capita decreased by 6.7% owing to the pandemic and nationwide lockdown which impacted the manufacturing and service sector. However, in 2021 these sectors returned to normalcy and GDP per capita increased by 17.0% to reach USD 2,238.1. Global dependency on India for production of goods and growing service sector in the country for the past decade has aided this growth.

### GDP per capita in USD from CY2013-2023

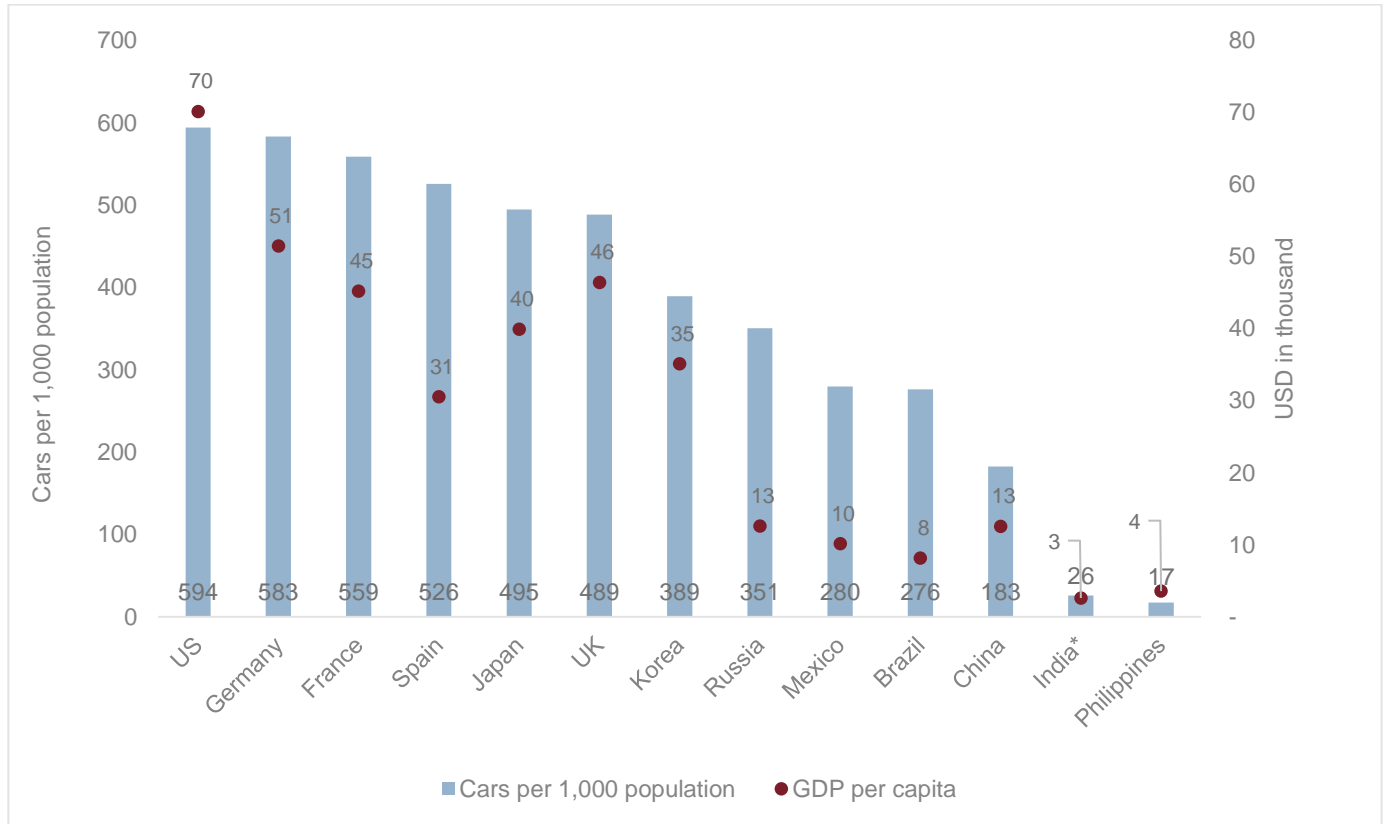


Source: IMF, CRISIL MI&A

### Vehicle Penetration in India

India's car market is extremely underpenetrated compared with most developed economies and some developing nations. The Indian PV market is one of the fastest growing in the world (CAGR 2021-2023), growing at 15.4% vs. 6.8% for Global passenger vehicle market. It was ranked second in terms of annual sales (after China) in 2023. However, the market is still highly underpenetrated compared with most developed economies, or even developing countries such as China, Brazil and Mexico. According to CRISIL MI&A, India had 26 cars per 1,000 people as of fiscal 2024. Although the penetration grew from 22 cars per 1000 people in fiscal 2019 to 26 cars as of fiscal 2024, it is significantly lower than the developed nations and even emerging nations like Brazil, Russia, and Mexico. This provides significant headroom for growth, especially given the expected increase in disposable incomes, faster economic growth, younger population, and increased focus from international OEMs. With penetration below the global average, India offers tremendous growth potential for automobile manufacturers.

**Country-wise car penetration, CY 2021**



Note: Data for CY 2021, India Data for FY24;  
Source: International Road Federation- World Road Statistics 2023, CRISIL MI&A

**Regulations/ safety norms**

Based on European emission standards, the Indian government has introduced the Bharat Stage (BS) norms, which are being implemented in a phased manner in the country. These mandatory norms increase the capital expenditure of the auto OEMs and in turn significantly impact the industry’s profitability. Currently BS-VI norms are being followed in India.

The PV industry has been conforming to safety regulations (such as mandatory installation of ABS/CBS, airbags, manual lock in anti-locking systems, seat belt warning system, speed warning system etc.) in new models. This has increased the manufacturing cost per vehicle. However, most car models, other than low-end ones, were already equipped with these safety instruments and for them, the impact will be subdued.

For the BS-VI stage 2 norms, applicable from fiscal 2024, companies have invested in the relevant technology, research, and development, and signed joint ventures (JVs) with global players. The norms resulted in price hike for vehicles across segments owing to the addition of new technologies to meet new emission regulations.

**Safety norms**

Bharat New Car Assessment Program (BNCAP) was launched by Ministry of Road Transport and Highways (MoRTH) on August 22th, 2023 with an aim to enhance the road safety of passenger cars by increasing the vehicle safety standards of these vehicles. BNCAP would promote a healthy competition between home grown OEMs and international OEMs to manufacture safer cars along with pushing the safety and quality of the vehicles in India. BNCAP rating system is a voluntary assessment program and came into effect on October 1, 2023.

BNCAP crash testing follows similar methodology followed in the Global New Car Assessment Programme (GNCAP). The testing method aims to offer star ratings to cars based on their performance in crash testing. The BNCAP regime has formulated a new standard, AIS 197 and will offer star ratings on a scale of five, for both adult occupant protection (AOP) as well as child occupant protection (COP) offered by a car in a crash test assessment. Apart from these, there are safety assist technologies like Electronic Stability Control (ESC), seat belt reminder, pedestrian protection and pole side impact that are considered as qualifier for each rating.

The crash testing protocols are:

- Frontal impact test
- Side impact test
- Pole side impact test

Other safety systems include mandatory ABS from April 2019, air bags for the driver from April 2020 and dual front airbags from January 2022. From June 2022, Electronic Stability Control (ESC) became mandatory for all new cars. From June 2023, Anti-Lock Braking Systems (ABS), and seat belt reminders for both driver and front passenger became mandatory for all new cars. Further, the government proposed six airbags mandatory for all cars from October 2023, however, dropped their plans as the new BNCAP regime will push OEMs to equip their cars with safety features to obtain a high star rating.

Some other safety measures are:

- Seat-belt reminders
- Alert systems for speeds beyond 80 kmph
- Reverse parking alerts
- Manual override over central locking system for emergencies

## **GST tax structure**

The government can change the course of the PV industry by changing the tax structure. Through GST, the government reduced tax rates slightly and increased the cess in order to reduce the price parity with pre-GST regime. The government has been levying high tax on diesel vehicles in order to discourage use. Consumers have a preference for diesel vehicles due to the better mileage as against petrol variants. In order to encourage electric vehicles (EVs), the government has reduced taxes on EVs from 12% tax to 5%, much lesser than internal combustion engine vehicles (28%). Also, the excise duty on petrol is a variable which the government adjusts to control fuel prices, which again has a high correlation with the PV industry sales. Further, the government may aim to lower the GST for hybrids to further minimize the usage of traditional ICE vehicles.

## **Government boost for Compressed Natural Gas (CNG)**

In fiscal 2023, the government had increased the price of domestic natural gas to USD 6.1 per metric million British thermal unit (mmBtu) in first half of fiscal 2023 and increased further 40% to USD 8.57 per mmBtu in second half of fiscal 2023 following elevated gas prices at international level on account of the Russia-Ukraine war.

On April 6, 2023, the Cabinet Committee on Economic Affairs chaired by Prime Minister Narendra Modi approved a revised pricing mechanism for natural gas produced in India, based on the recommendations made by the Kirit Parikh Committee in December 2022. The committee evaluated ways to boost natural gas production and ensure availability and affordability for end-users. The recommendations by the committee focused on price capping, deregulating the gas market, and bringing natural gas under the goods and services tax (GST) umbrella.

With the new pricing mechanism, the domestic gas price was capped at USD 6.5 per mmBtu for the fiscal 2024. Thus, CNG prices declined by 4% to INR 74/kg fiscal 2024. This decline in prices resulted the difference in total cost of ownership between diesel and CNG, favouring CNG transition and hence the long-term prospects for CNG adoption remain promising.

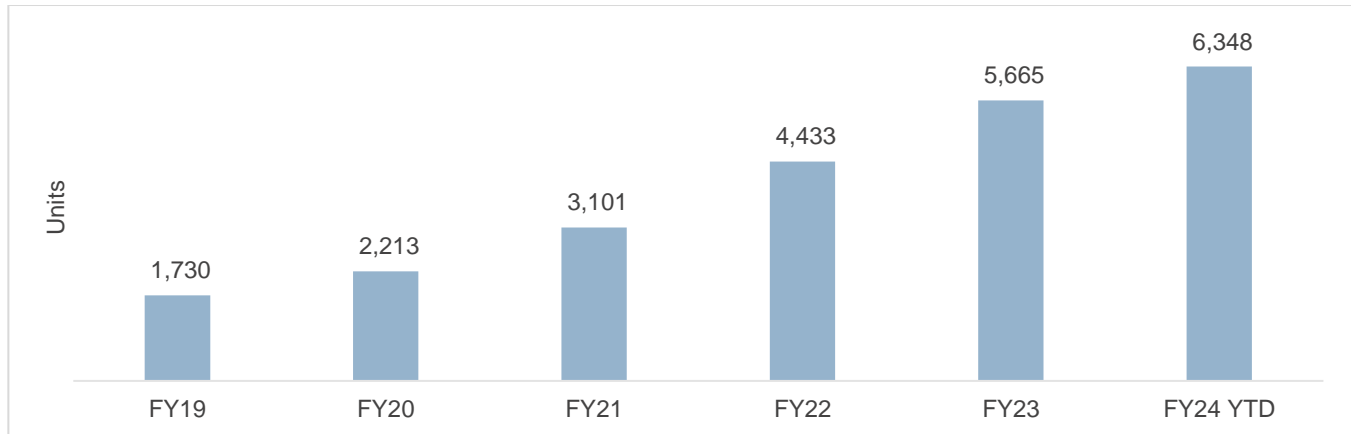
Fluctuating fuel prices and potential government incentives for eco-friendly alternatives could potentially ignite demand for CNG-powered vehicles. Moreover, advancements in CNG technology and the expansion of refuelling infrastructure may enhance the appeal of CNG models, offering a greener and more sustainable solution for the transportation sector.

As of fiscal 2023, a total of 21.9 thousand km length of gas pipeline was operational under multiple commissioned City Gas Distribution (CGD) projects, and a total of 33.1 thousand km stretch was under construction.

After completion of 11A CGD Bidding round in 2022, 295 Geographical Areas covering about 98% of the population and 88% of total geographical area of the country, which spread over around 630 districts in 28 states/Uts were authorized to be covered under the CGD network. Uttar Pradesh, Gujarat, Maharashtra, Madhya Pradesh, Karnataka and Haryana have been the largest beneficiaries in the allocation of Gas. In the 11<sup>th</sup> round, the government focused on uncovered regions/districts in Tamil Nadu, Maharashtra, Madhya Pradesh, West Bengal, and Chhattisgarh for setting up the CGD network. A target of setting 17,700 CNG stations in urban and rural areas by 2030 was also set.

In fiscal 2023, an additional 1,232 new stations were added, taking the total number of CNG stations to 5,665. Between fiscal 2019 and 2023, the number of CNG stations grew at a CAGR of 34.5%.

**Number of CNG Stations, FY19-FY24 YTD**



*Note: YTD refers to April 2023- February 2024 period*  
*Source: Petroleum Planning & Analysis Cell (PPAC), CRISIL MI&A*

According to PPAC, as of fiscal 2023 there were around 86,855 retail fuel outlets in India. As of fiscal 2024 YTD, this number increased to 89,396. The availability of refuelling infrastructure for traditional fuels are also on the rise, however, on a lower rate compared to CNG and EVs.

**Premiumization trend**

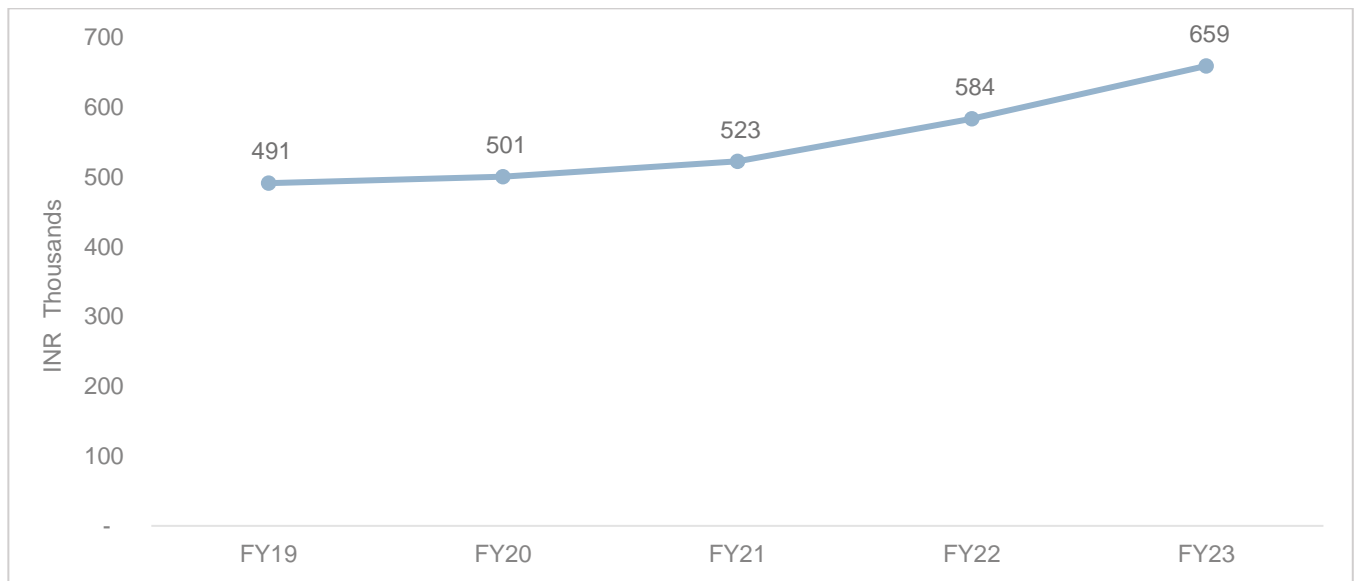
The average selling price (ASP) between fiscal 2019 and 2023 increased at a CAGR of 7-8% because of premiumization trend as well as sharp rise in vehicle prices. Modern consumers in India are preferring mid-end or top end version of the vehicles moving away from the traditional fuel-efficient budget friendly small cars towards higher priced feature loaded larger cars which offer much more space, taller ride height, seamless connectivity, and improved performance. Further, there has been a major shift in customer preference with the launch of compact

and mid-size SUVs. The share of small cars (hatchbacks) reduced from 46.9% in fiscal 2019 to 34.4% in fiscal 2023. During the same period, share of SUVs increased from 23.1% in fiscal 2019 to 44% in fiscal 2023.

This was majorly driven by shift in consumer sentiments towards newly launched feature rich vehicles in the SUV segment.

Increase in spending from the upper middle class after pandemic led to more purchases of SUVs supported by higher number of model launches in the SUV category (which have higher profit margins) and increase in affordability with launch of compact SUVs led to cannibalization of hatchbacks and compact sedans.

**Trend in Average Vehicle Price (ASP)**



Note: Based on OEM factory cost

Source: CRISIL MI&A

The rise in penetration of digital technologies and safety features in the vehicles also aid this ASP growth. There is a growing adoption of cars equipped with sunroof, digital infotainment systems and smart phone connectivity solutions. Modern car buyers who are aware of the safety standards are preferring cars equipped with necessary features like airbags, disc brakes and so on. These systems coupled with inclusion of modern LED lights, camera and radar systems are increasing the overall cost of a vehicle. For example, Hyundai Motor India introduced sunroof in their i10 and i20 hatchbacks back in 2008-09. From then till now, most of the models offered from the company provides sunroof as an option and the company has played a crucial role in popularising modern features in India.

Over and above these features, industry has also started offering connectivity as an add on feature in their latest offerings especially in the top variants. These connectivity features enable seamless interaction between the user and the vehicle through their application. Few of the features include remote start stop, remote HVAC (Heating Ventilation and Air Conditioning) control, real time location services etc. Such features are available in vehicles like MG Hector, Hyundai Venue, Creta, Tata Harrier/Safari, Mahindra XUV700, Maruti Grand Vitara to name a few.

Moreover, apart from the standard safety features, many of the OEMs are also offering advanced driver assistance and safety features through ADAS (Advanced Driver Assistance System) technology. The basic ADAS features include blind spot detection, emergency braking, cruise control, lane departure warning etc. These additional features are currently being offered in premium vehicles like Honda City, Kia Seltos, MG Hector, Hyundai Creta,

Mahindra XUV700 and Tata Safari. Currently most OEMs in the mass market<sup>1</sup> offer level 2 (L2) ADAS capability through their in house ADAS technology like Hyundai SmartSense and Honda SENSING.

All these additional features have also aided the premiumization within the passenger vehicle industry.

## **New model launches**

Apart from increasing sales of existing models, sales of new models have supported the overall industry's growth in the past decade, thereby driving demand. Most recent launches were mostly SUVs, which accelerated growth of the industry. As of fiscal 2023, a total of 10 new models were launched in various segments. These new models contributed to 3.1% of overall PV sales in that fiscal. Few of the notable model launches includes Maruti Suzuki Grand Vitara, Toyota Urban Cruiser Hyryder, Volkswagen Virtus, Innova Hycross and Hyundai Ioniq 5. In fiscal 2024, a total of 9 models were launched that contributed to over 6.6% of PV sales. Key model launches include Maruti Suzuki Fronx, Hyundai Exter, Honda Elevate and MG Comet EV. Going forward, the new vehicle pipeline is expected to provide additional thrust to domestic sales.

## **Outlook on the Domestic Passenger Vehicle Industry**

The domestic passenger vehicle industry grew at a 5% CAGR during fiscal 2019-24 period. Despite the pandemic hiatus, the industry achieved this growth from a record high base of fiscal 2019; led by the sharp rise in traction for the SUV segment, increased vehicle launches coupled with the entry of newer players. Relatively lower impact on disposable income of the upper middle class led to a significant growth in the SUV segment driving overall PV sales. In turn, the industry reached a historic high of about 4.2 million vehicle sales in fiscal 2024.

Despite this healthy growth, India's car penetration (26 cars per 1000 people- fiscal 2024) is still much lower than the car penetration in CY2021 of global peers like China (183), Mexico (280), Brazil (276) as well as of developed countries like United States (594), UK (489), Japan (495) and Korea (389). Thus, there is a lot of headroom for growth for the Indian domestic passenger vehicles market.

Going ahead, CRISIL MI&A expects the macroeconomic scenario to lend support to the industry growth with GDP projected to grow at a healthy pace between fiscal 2024 to fiscal 2029. India's GDP growth is expected to outperform other major geographies in the next 5 years with an expected growth rate of 6-8%. India's inflation levels are also expected to remain subdued in the 3-5% range, which is within the RBI's target band. CRISIL MI&A has assumed 3 years of normal monsoons within the 5-year outlook period and has considered positive momentum in rural demand. Fuel prices are also expected to remain near steady in the next 5 years. These favourable macro-economic factors are expected to aid the consumer disposable income levels.

Besides the macro-economic factors, continued support from government in terms of policies as well as continued expenditure & investments are expected to provide an added support. The favourable demographics is an added advantage for India which is also expected to help propel the passenger vehicle industry forward.

Additionally, OEMs are expected to continue with launches of feature rich competitively priced vehicles aiding the overall demand growth.

The financing scenario is projected to remain favourable for the industry and will lend further support amidst expanding financing reach and high Loan to Value (LTV) levels. Moreover, after multiple rate hikes in the last 2 years, a rate cut of 25-50 bps is expected in the near term keeping the interest rates competitive in the short-term horizon. Given the subdued inflation levels projected for the long term horizon, a further rate hike seems unlikely.

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<sup>1</sup> Mass market refers to OEMs whose domestic sales, exports and production data is captured monthly and annually by SIAM

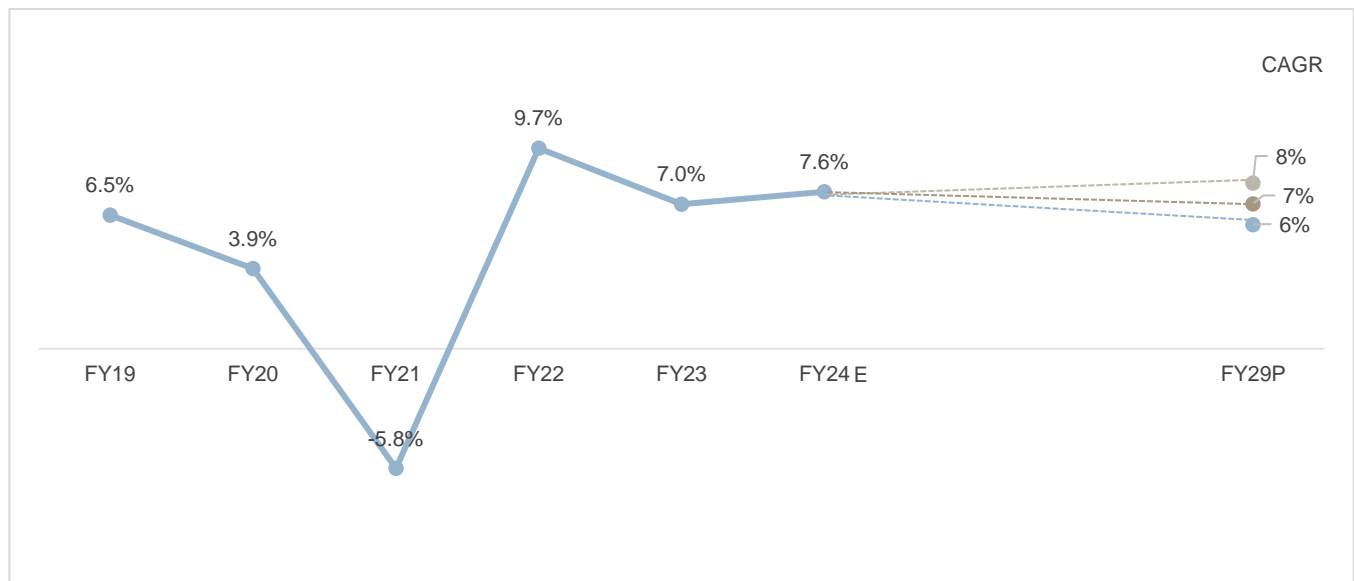
The changing consumer dynamics including younger consumer base, premiumization, electrification, shorter replacement cycles (4-5 years currently versus 7-8 years a decade ago) will provide further impetus to the demand. Additionally, the government’s push for scrapping of old vehicles is expected to help in shortening replacement cycles and hence aid demand.

Over and above these demand drivers, the capacity expansion by players like Maruti Suzuki, Hyundai Motor India, Tata Motors is expected to support the growing vehicle demand. Moreover, the expansion in the supporting infrastructure like EV charging stations and CNG pumps will also aid choices for customers across powertrains.

CRISIL MI&A expects the industry to clock 4.5-6.5% CAGR between FY24 to FY29 period to reach 5.2-5.7 million domestic vehicle sales.

CRISIL MI&A has considered 3 different GDP growth scenarios for the next 5 years. At a 6% CAGR GDP growth scenario, the PV industry is projected to reach ~5.2 million units by fiscal 2029 growing at 4.5% CAGR in the next 5 years. Assuming a 7% CAGR GDP growth, 5.5% CAGR growth can be achieved for the PV industry. If India achieves 8% CAGR GDP growth in the next 5 years, the domestic passenger vehicle industry will clock ~6.5% CAGR growth and reach ~5.7 million vehicle levels by fiscal 2029 according to CRISIL MI&A estimates.

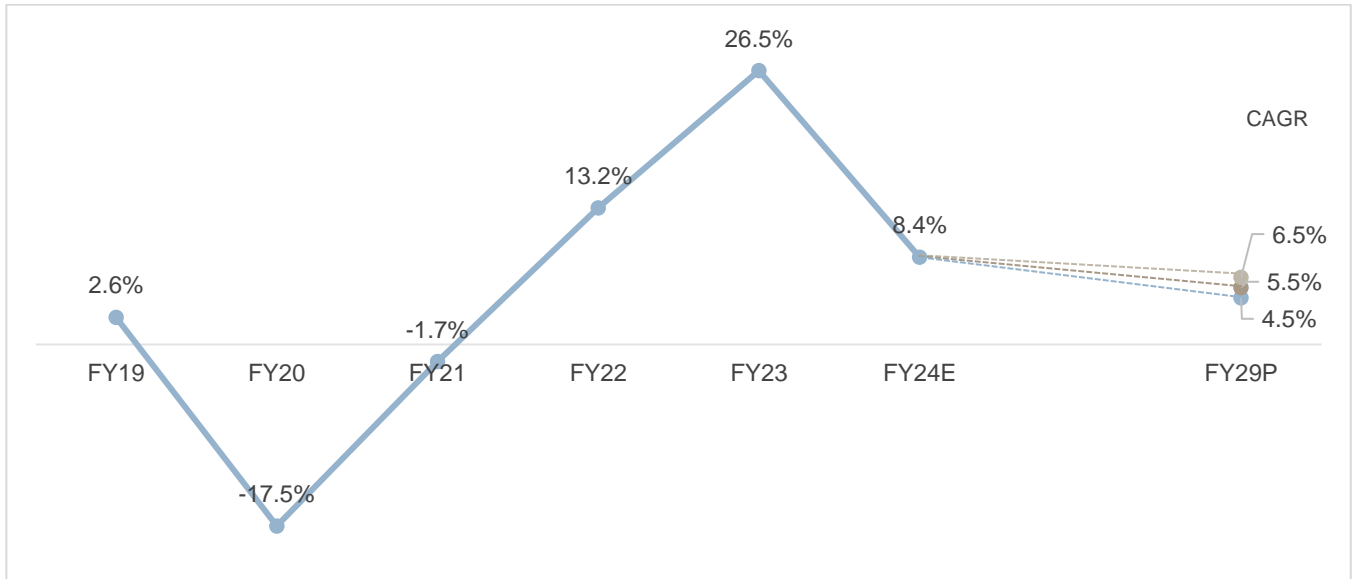
**GDP Growth outlook**



Source: Ministry of Statistics and Program Implementation (MoSPI), CRISIL MI&A



**Domestic PV Industry outlook (growth rate by sales volumes)**



Source: SIAM, CRISIL MI&A

**Domestic PV Industry outlook (volumes)**



Source: SIAM, CRISIL MI&A

**Segmental Outlook**

Growth in the domestic industry is expected to be led by the SUV and MPV segments while the hatchbacks, sedans and vans segments are expected to clock muted growth going ahead.

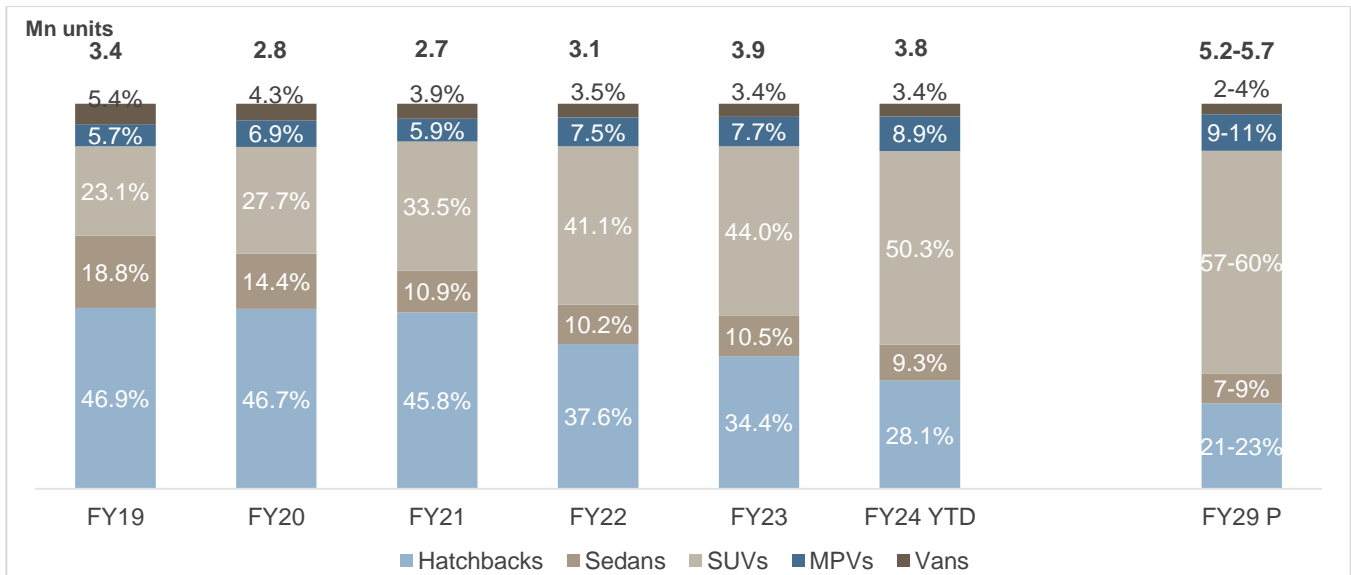
**Segmental growth outlook**

Segment	FY19-FY24 CAGR	FY24-FY29P CAGR
<b>Hatchbacks</b>	<b>(6) %</b>	<b>0.0 - 2.0%</b>
Compact Hatchbacks	(8) %	(1.0) -0.5%
Premium Hatchbacks	0%	1.5 - 4.0%

Segment	FY19-FY24 CAGR	FY24-FY29P CAGR
Sedans	(9) %	0.5 - 2.0%
SUVs	23%	7.0 – 9.0%
Compact SUVs	23%	6.8 - 8.8%
Mid-Size SUVs	24%	7.8 – 10.0%
Large SUVs	21%	7.2 – 9.2%
MPVs	14%	6.4 - 9.4%
Vans	(5) %	1.1- 2.0%
<b>Total</b>	<b>5%</b>	<b>4.5 – 6.5%</b>

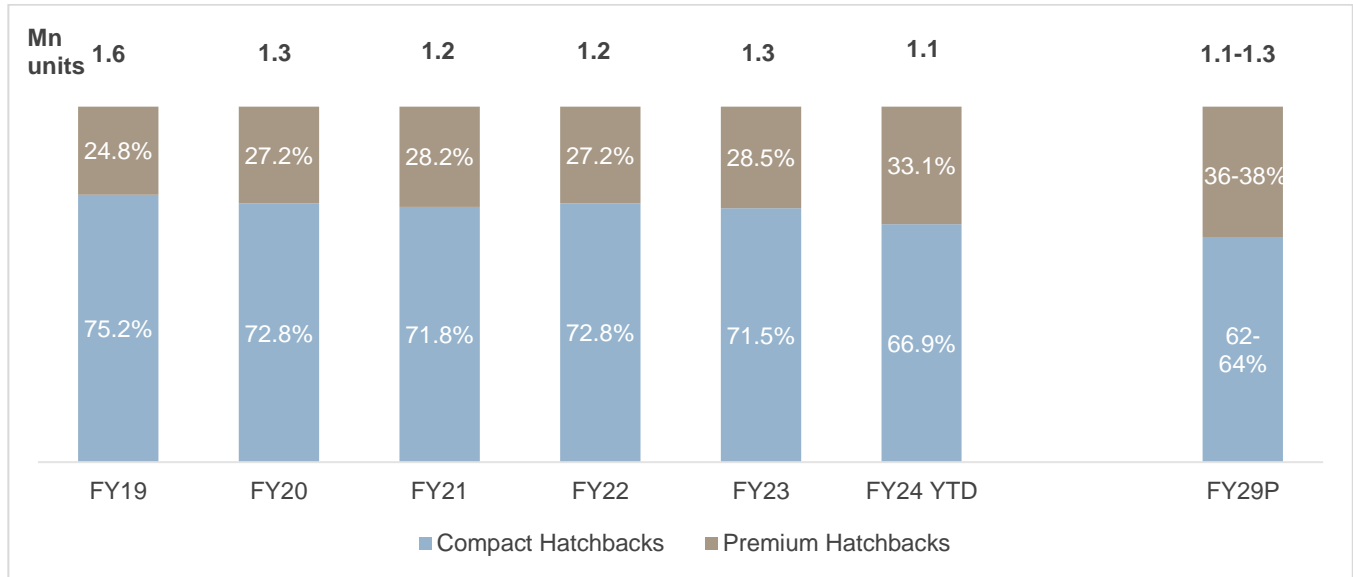
Source: SIAM, CRISIL MI&A

**Industry segmental split outlook**



Source: SIAM, CRISIL MI&A

**Sub segmental outlook for Hatchbacks segment**



Source: SIAM, CRISIL MI&A

The hatchbacks segment witnessed a contraction (at 6% CAGR) during fiscal 2019 to fiscal 2024 period where the compact hatchbacks segment witnessed a steep decline at 19% CAGR and the premium hatchbacks segment remained range bound. Changing consumer preference towards SUVs, premiumization, limited auto OEM focus, and fewer number of launches impacted the sales of hatchbacks segment. Amidst the increased pressure on incomes, and heightened costs; the demand for hatchbacks, especially for the price sensitive compact hatchbacks got severely impacted.

However, going ahead, CRISIL MI&A expects some improvement in the segment sales led by the continued traction for the premium hatchbacks subsegment. The premium hatchbacks subsegment is expected to grow led by continued demand for popular models like Tata Altroz, Maruti Suzuki Baleno, Hyundai i20 coupled with shifting consumer preference from compact hatchbacks towards the premium subsegment. Recent and future launches like Tata Altroz EV will also aid the demand growth. CRISIL MI&A expects a 1.5-4% CAGR growth for the premium hatchbacks subsegment in the next 5 years.

Income growth for the customer base of compact hatchbacks has been subdued in the last 2/3 years. CRISIL MI&A is seeing slow and gradual improvement in the same with incomes levels expected to improve from fiscal 2027 onwards supporting the growth of these subsegments.

Additionally, operating costs are estimated to rise only gradually, and the vehicle prices are also expected to hike at a moderate pace in the coming 5 years. Thus, improvement in income levels, traction for CNG variants, moderate hike in acquisition and operating costs coupled with continued support from financiers is expected to provide some support to the growth of Compact hatchbacks subsegment.

Moreover, the new generation Hyundai Grand i10 NIOS, Maruti Suzuki Swift, Maruti Suzuki WagonR EV are expected to provide the much needed thrust to the subsegment. The improvement in the demand from the ride hailing commercial segment is also expected to provide an added push.

However, limited new launches, discontinuation of few models like Santro will exert pressure on the subsegment.

Expansion of organized play in the used car market, improvement in the quality of preowned vehicles and rising acceptance of pre-owned vehicles leading to the projected expansion of pre-owned car market will limit the sales of compact hatchbacks in the long-term. Customers can opt for premium preowned hatchbacks in the price range of

new compact hatchbacks which is expected to support the shift from new compact hatchbacks to pre owned vehicles segment.

Overall, CRISIL MI&A expects some pressure on the compact hatchbacks subsegment in the short term, and gradual improvement over the long-term horizon. Overall, a flattish growth is projected for the subsegment. Subsequently, the share of compact hatchbacks within the hatchbacks segment is projected to slide further to 62-64% by fiscal 2029.

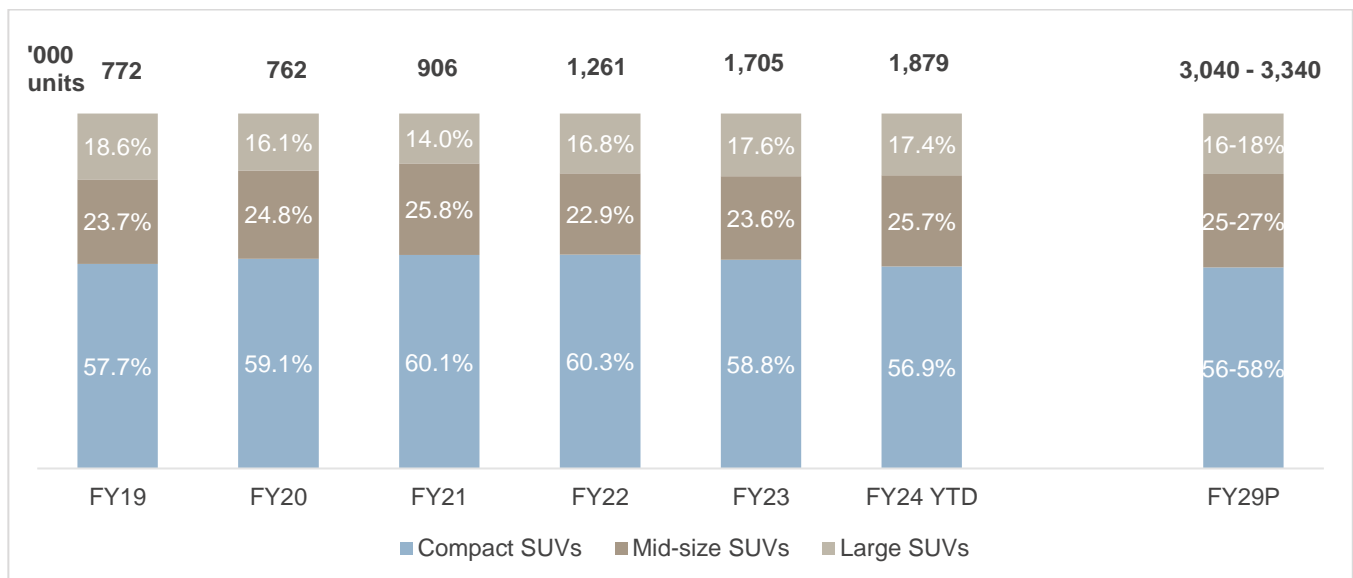
**Outlook for Sedan segment**

Sedans segment contributed ~19% to the industry sales in fiscal 2019. The segment sales contracted at 9% CAGR during fiscal 2019- fiscal 2024 period. Shift towards the SUV segment, drop in demand from ride hailing commercial base and limited launches restricted the sales of this segment during fiscal 2019-24 period and its contribution dropped to 9% by fiscal 2024.

However, the recent launches as well as upgrades like Hyundai Aura, Skoda Slavia, Volkswagen Virtus and Hyundai Verna and have witnessed increased demand in recent years. CRISIL MI&A expects continued demand for recent launches like Skoda Slavia, Volkswagen Virtus as well as upcoming new vehicles and upgrades of popular vehicles will aid the segment demand over the long-term. Moreover, the continued traction for commercial demand will support the compact sedans’ growth. The recent ride hailing applications like BluSmart, Lithium urban, Glyd will provide an added thrust to the commercial demand for compact sedans. However, the shift towards SUVs and higher OEM focus will limit the growth of sedans segment going ahead.

Thus, a 0.5-2% CAGR growth is expected for the sedans segment between fiscal 2024 and fiscal 2029.

**Sub segmental Outlook for SUV segment**



Source: SIAM, CRISIL MI&A

SUV segment has witnessed significant growth in the last 5 years, backed by changing consumer preferences, premiumization trend, multitude of launches at attractive price points, sharp expansion in portfolio across OEMs as well as entry of new global players with their SUV portfolio. The clear focus of OEMs towards the SUV segment with introduction of 13 compact SUV models, 9 mid-size SUV models, 10 large SUV models models during the fiscal 2019-24 period, provided the thrust to the overall SUV segment growth.

Moreover, compared to other segments like hatchbacks where the vehicle prices have seen an increase of 8-10% CAGR, the price hike for the SUV segment was at a much slower pace of 4-6% CAGR during the same period.

These factors helped the SUV segment outpace the industry growth in the last 5 years. In fact, its contribution more than doubled from 23% in fiscal 2019 to 50% in fiscal 2024. Within the SUV segment, compact, mid-size as well as large UV subsegments have clocked a sizeable growth at 23%, 24% & 21% CAGR respectively in the last 5 years.

Going ahead, the continued traction of popular models Maruti Suzuki Brezza, Tata Nexon, Hyundai Venue, Kia Sonet as well as increased demand for the recent launches like Tata Punch, Hyundai Exter and Maruti Suzuki Fronx is expected to support the demand growth for compact SUV segment. Additionally, upcoming models like Tata Nexon CNG, Hyundai Venue CNG, Tata Pelican, Hyundai AX1, Maruti Suzuki Baleno Coupe, Maruti Suzuki eVx, Futuro-E as well as upgrades of current popular models to provide the thrust to the sales. CRISIL MI&A projects the subsegment to clock a further growth at 6.8-8.8% CAGR in the next 5 years from this already elevated base of fiscal 2024.

Mid-size SUV segment has been clocking healthy numbers, backed by continued demand for models like Hyundai Creta and Kia Seltos as well as additional support from recent additions like Honda Elevate, Maruti Suzuki Grand Vitara and Toyota HyRyder. In fact, the subsegment is estimated to have witnessed a remarkable y-o-y growth of 34% in fiscal 2024, much faster than the other SUV subsegments which are estimated to have grown at 24% year-on-year.

The continued consumer preference for SUVs, attractive vehicle pricing, intermittent upgrades, addition of latest safety, connectivity and luxury features are projected to continue to provide the thrust to this subsegment going forward. Off the high base of fiscal 2024, CRISIL MI&A expects the mid-size SUV subsegment to clock a healthy growth of 7.8-10% CAGR in the next 5 years.

The large SUV subsegment witnessed a healthy growth at 21% CAGR in the last 5 years. It clocked a much faster year-on-year growth of 67% (fiscal 2022), 42% (fiscal 2023) & 24% (fiscal 2024) in the last 3 years. The new launches and upgrades like the Hyundai Alcazar, Tata Harrier, MG Hector, Tata Safari, Mahindra Scorpio N and Mahindra XUV700 have provided the thrust to the subsegment in the last 3 years. The future launches & upgrades are expected to keep the demand healthy in the next 5 years. Moreover, the continued premiumization trend and preference for SUVs is expected to help the subsegment clock a healthy 7.2-9.2% CAGR growth on an already elevated base of fiscal 2024.

Additionally, the new EV policy has also paved the way for entry of global OEMs in the next 2-3 years and few global players like Tesla & VinFast have shown the intent of entering the Indian market in the shorter term. The entry of global models from their portfolio will provide an added thrust to the segment's demand in the coming years.

The MPV subsegment, dominated by the tourist vehicle demand, witnessed renewed traction post the pandemic hiatus and clocked a healthy 31% CAGR growth in the last 3 years.

Going ahead, the continued demand from the tourist segment as well as an added traction for the recent launches like the Toyota HyCross and Maruti Suzuki Invicto will provide further thrust to the subsegment's growth in the coming years. Additionally, continued demand for popular models like Maruti Suzuki Ertiga, Toyota Innova, Maruti Suzuki XL6 coupled with future launches will lend added support. The subsegment is projected to witness a further 6.4-9.4% CAGR growth during the fiscal 2024-2029 period.

The smaller vans segment's demand contracted at 5% CAGR impacted by the discontinuation of Omni. However, the fiscal 2023 upgrade of Eeco helped the segment clock 21% year-on-year growth during the year and a further 5% growth during fiscal 2024. CRISIL MI&A expects the segment growth to turn positive in the long-term horizon

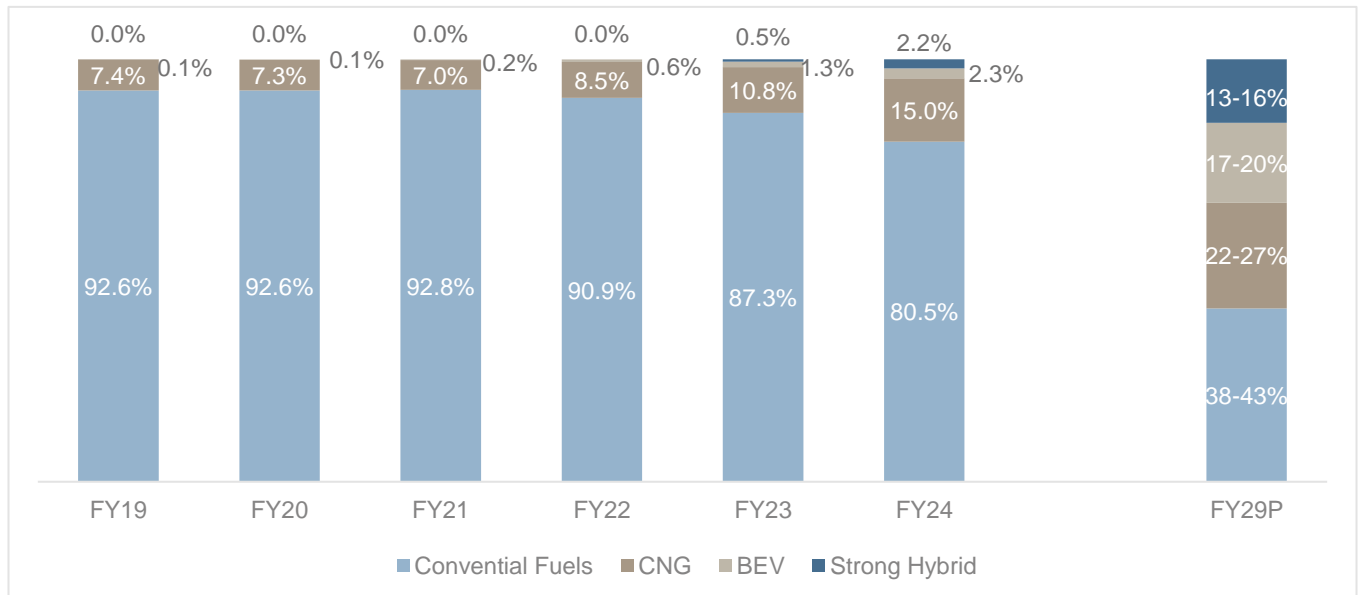
backed by the continued demand for Eeco for its commercial uses. However, no new launches in the segment are expected which will restrict the segment’s growth going ahead. The vans segment is projected to clock 1.1-2% CAGR in the next 5 years.

**Outlook on the Powertrain mix of the industry**

Indian domestic passenger vehicle industry, which was completely dominated by the conventional fuels, has witnessed fast acceptance of alternate fuels especially in the last 2/3 years. In fact, the share of CNG powertrain doubled to 15% while EV (2.3% share) and the latest addition, strong hybrids (2.2% share) expanded their presence in the vehicle retails.

Going forward, CRISIL MI&A expects the share of alternate fuel vehicles to witness a multi-fold growth while the conventional fuel vehicle’s share will slide.

**Powertrain wise Outlook of the industry**



*Note: Strong hybrid: Vehicles having a combustion engine as well as an electric motor. The vehicle can be powered by the engine, by the battery, or by both simultaneously. Battery of the vehicle is charged by the combustion engine and not by an external power source. Telangana & Lakshadweep retail data is not available on VAHAN.*

Source: VAHAN, CRISIL MI&A

By fiscal 2029, CRISIL MI&A projects the share of CNG variants to rise to 22-27% from the 15% share clocked in fiscal 2024. Healthy growth in CNG station infrastructure will primarily thrust the growth of CNG vehicle share. Amidst the government’s push coupled with the support of City Gas Distribution- CGD players, completion of commitments under the CGD rounds is expected to pick up pace. Thus, CNG station infrastructure is projected to rise at a healthy pace till 2030.

Over and above the expansion in station infrastructure, the prices of CNG fuel are expected to remain subdued as per the Kirit Parikh panel recommendations, thus providing an added boost to the CNG vehicle demand.

This has also led to expansion of the vehicle portfolio by players, especially in the premium segments like premium hatchbacks, compact SUVs and mid-size SUVs wherein they have announced future launches. This will lend further incentive to the CNG buyers.

Electrification is another trend witnessed in the Indian domestic passenger vehicle market in the last 2/3 years. Plethora of vehicle launches, expanding charging infrastructure and continued government support will aid further growth of electrification in India going ahead. CRISIL MI&A expects the EV penetration to reach 17-20% (approx. 1 million units) by fiscal 2029 from the 2.3% penetration (~90 k units) seen in fiscal 2024.

Off the low base, EV charging infrastructure is projected to grow at 58-63% CAGR in the next 5 years (covered in detail in the EV subsection). Moreover, most OEMs have planned 5-8 EV launches each in the medium term to cater to the expanding EV demand. These vehicle launches are expected to be across subsegments as well as across body types catering to multiple price points and in turn multiple customer bases. Additionally, the expected reduction in battery prices and increased production efficiency will lend further support in optimizing the EV prices. Furthermore, entry of global players like Tesla & VinFast will also aid electrification in the longer term.

However, for EVs, range anxiety, limited charging infrastructure, import dependency on certain components, higher import duties and underdeveloped local supply chain are few bottlenecks.

The recent entry of strong hybrid vehicles such as Maruti Suzuki Grand Vitara, Maruti Suzuki Invicto, Toyota HyRyder, Toyota Hycross and Honda City have witnessed fast acceptance due improved mileage, environmental benefits coupled with absence of EV concerns like range anxiety, limited charging infrastructure, etc. In the last 2 years, strong hybrid powertrains have grabbed ~2% share of the annual retails of the PV industry.

In the long-term horizon, CRISIL MI&A projects higher traction for strong hybrids, further buoyed by attractive hybrid offerings, OEM focus, infrastructure availability and government support. Proposed launches<sup>2</sup> of strong hybrid variants of popular models by Maruti Suzuki like Fronx, Baleno, Brezza, Swift and Dzire, Renault Duster, Toyota Fortuner, Nissan X-trail will aid the demand from customers. By fiscal 2029, strong hybrids are projected to contribute about 13-16% to the industry retails.

## Review of Exports Trend

Passenger vehicle exports are estimated to grow at ~3% in fiscal 2024 compared to 15% in fiscal 2023. The export volume is estimated to reach 682 thousand units in fiscal 2024 from 663 thousand units in fiscal 2023. The moderation in trade across global economies, which is directly linked to the slowdown in economic growth, has weighed down on passenger vehicle exports from the country. This economic slowdown is anticipated to lead to reduced consumer spending and investment in various regions, subsequently impacting merchandise trade volumes and posing significant challenges for India's export prospects. The Red Sea crisis has further added to the woes. Red Sea strait is a crucial shipping route for India's trade with Europe, Middle East, and Africa. The crisis is leading to an increased logistical challenge as changes in the trade route is impacting the distance and thus increasing the freight cost. Further, the longer transit times and higher lead time for dispatches owing to some uncertainties in the incoming cargo ships are also impacting exports. The Red Sea crisis might have a ripple effect on crude oil prices, thus impacting the inflation and GDP growth. As a result, the overall demand for Indian export cars in the international markets is likely to have flat growth in fiscal 2024.

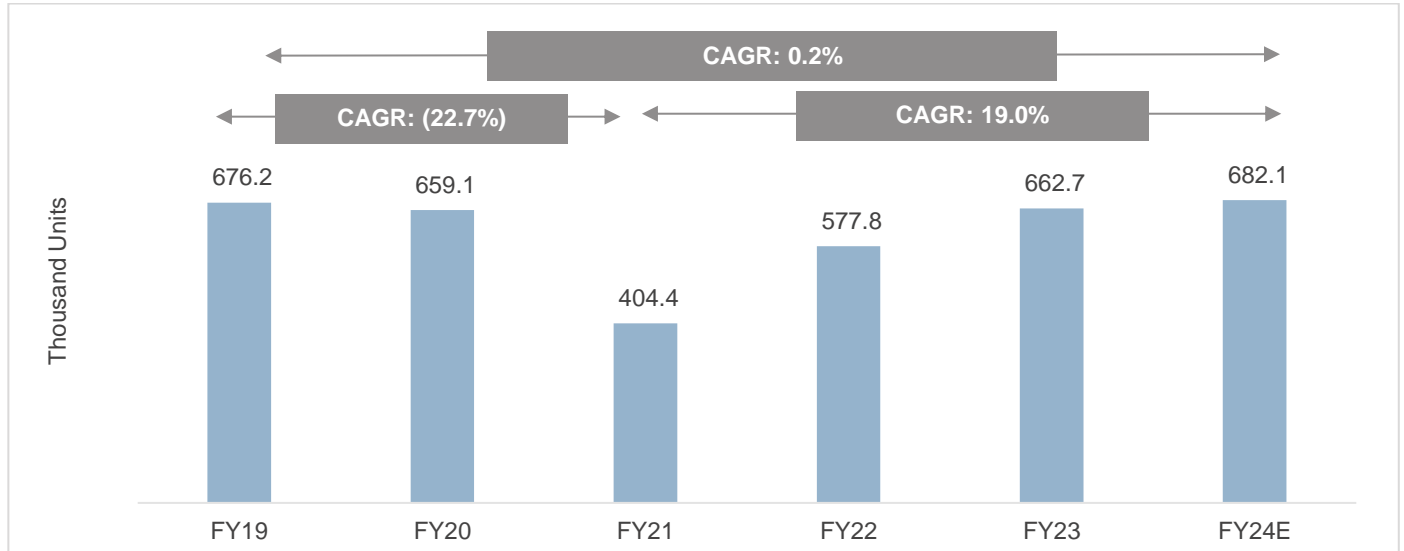
Fiscal 2023 recorded an export growth of ~15% owing to demand from emerging countries supported by push from major OEMs. Top export destinations including Morocco, Mexico, Philippines, Chile, Côte d'Ivoire and Indonesia witnessed good economic growth along with lowering inflation which resulted in a healthy demand recovery. Further, OEMs including Maruti Suzuki and Hyundai Motor India continued to export their entry level as well as best selling vehicles to overseas market leveraging the trade agreement pacts in place to gain competitive edge in these markets.

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<sup>2</sup> Not confirmed by OEMs, information available from other secondary sources

Demand for Indian vehicle in export destinations is affected by, among others, economic conditions in those export destinations such as inflation, geopolitical issues, incentives provided by the Government of India and trade agreements.

**Export growth trend (FY19-FY24E)**



Source: Society of Indian Automobile Manufacturers (SIAM), CRISIL MI&A  
 Note: FY24E (estimated) numbers are calculated basis actual exports volumes as of 11MFY2024

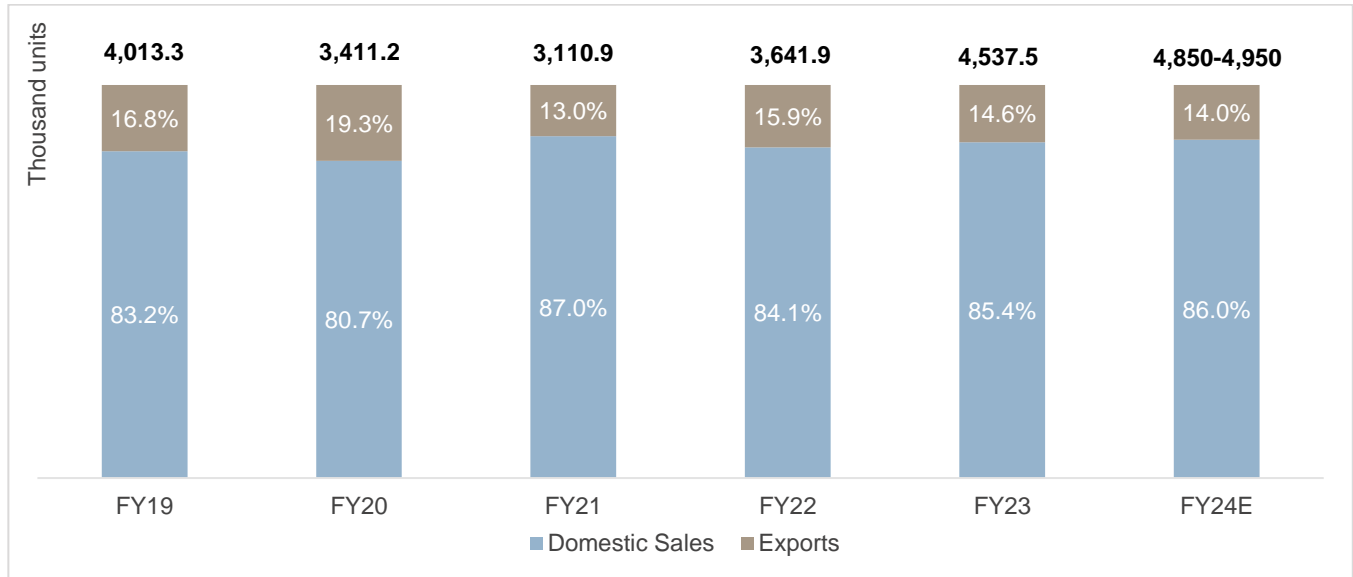
**Exports as a share of overall PV Sales**

The Indian PV market is largely domestic-focused, with domestic sales being 85.4% of the total sales in fiscal 2023. The share of exports vis-à-vis total sales contracted from 16.8% in fiscal 2019 to 14.6% in 2023. This could be attributed to the moderate growth in the global automobile industry as well as major OEMs focusing on catering to the fast-growing domestic market. Following a ~38.6% year-on-year drop in fiscal 2021, exports improved drastically by 42.9% in fiscal 2022 and 14.7% in fiscal 2023 owing to demand from emerging countries further supported by push from major OEMs.

In fiscal 2020, though, the export share had risen to 19% as OEMs refocused on export markets. Stagnating domestic sales over the past three years resulted in foreign automobile manufacturers such as Ford, General Motors, and Volkswagen increasing their focus on exports, thereby improving their capacity utilisation and boosting revenues. These players were utilising India as an export hub, as witnessed by the consistent increase in the proportion of exports to their total production share. However, with the exit of GM and Ford, and impact of COVID-19 and major OEMs prioritising the fast-growing domestic market over foreign markets, the export volumes declined through fiscal 2021. However, the government, through various schemes including PLI, is boosting domestic manufacturing capacity and is offering free access for Indian OEMs to various markets through Free Trade Agreements. These combined with OEMs developing products in-line with global trends is expected to drive the demand for exports going forward.



**PV industry share of domestic sales and exports (FY19-FY24E)**

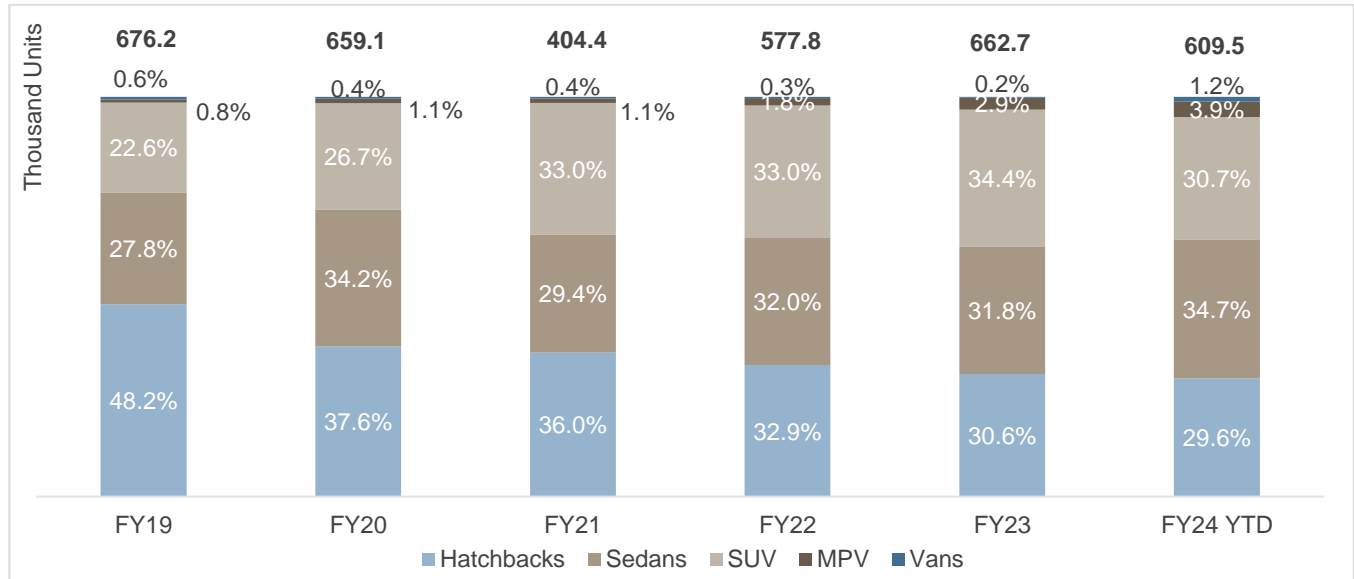


Source: SIAM, CRISIL MI&A

**Segmental review of PV exports**

The increasing demand for SUVs globally coupled with rising SUV manufacturing in India has led to the share of exports of SUVs rising from 23% to 34% between fiscal 2019 and fiscal 2023. The hatchbacks segment has witnessed a decline in market share over past few years owing to the shift in customer preference towards larger vehicles. Thus, the share of hatchbacks declined from 48% in fiscal 2019 to 31% in fiscal 2023. However, in the fiscal 2024, the share of SUVs in exports is expected to decline due to the increased focus by OEMs on supplying SUVs to the domestic market. This shift in focus was in response to the heightened demand for SUVs in the domestic market, which has experienced a shift in consumer preferences. Export of less chip-intensive small car models has continued to emerging markets like Africa and South America, leading to an increase in export share in fiscal 2024. The supply push for fuel-efficient and lesser chip intensive small cars (hatchbacks and compact sedans), to export markets by OEMs owing to the need of economical cars in emerging markets coupled with weakening demand for this segment in domestic market, has led to the growth of small car exports. International OEMs such as Volkswagen, Hyundai Motor India, and Nissan have continued to export their premium sedans, such as Virtus, Verna, and Sunny, which has led to a rise in the share of sedans from 28% in fiscal 2019 to 32% by fiscal 2023. The share of MPVs have also risen over the last five years reaching ~3% in fiscal 2023.

Vehicle segment wise export share (FY19-FY24 YTD)



Notes:

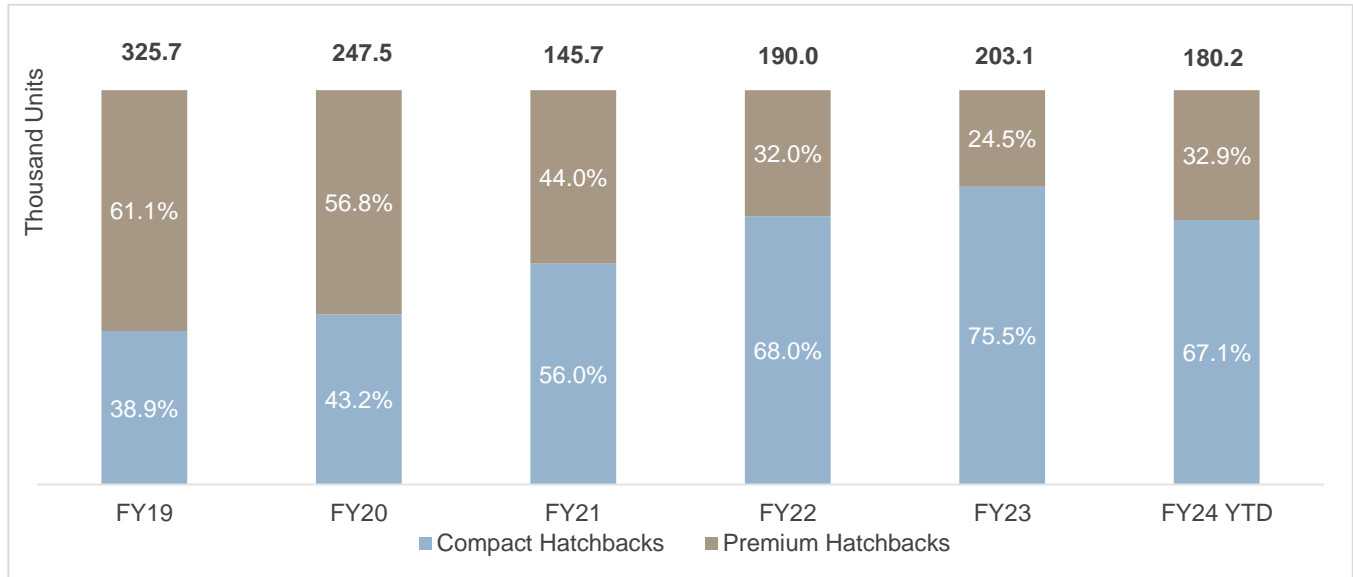
Hatchbacks include compact and premium hatchbacks  
 Sedans include compact, premium and luxury sedans  
 UV include compact SUVs, mid-size SUVs, and large SUVs  
 FY24 YTD refers to April 2023-February 2024 period  
 Source: SIAM, CRISIL MI&A

Sub segmental shift within hatchbacks segment

Within the hatchbacks segment, the share of exports for compact hatchbacks has risen from 39% in fiscal 2019 to 76% in fiscal 2023. This was primarily due to the rising demand for fuel efficient and lower ticket size vehicles from the emerging economies like Africa and South America. Models like the Grand i10 NIOS, Swift, Spresso and Celerio are the top export models in this segment which together constitute more than 90% of the segmental exports. In the compact hatchbacks segment, Hyundai Motor India offers two models – Grand i10 NIOS and Santro. However, Santro was recently discontinued in the Indian market and exports have also stopped now. As of fiscal 2024 (Apr-Feb), Grand i10 NIOS is the top exported compact hatchbacks model (by volume). Maruti Suzuki continues to push their compact hatchbacks to export markets owing to the weakening demand in the domestic market for compact hatchbacks. Renault Kwid, Tata Tiago and Maruti Suzuki Ignis are the other key models in this segment.

Premium hatchbacks have lost share to compact hatchbacks over the past few years reaching 24% share in hatchbacks exports in fiscal 2023 from more than 60% in fiscal 2019. Maruti Suzuki Baleno dominates the premium hatchbacks segment with more than 80% market share as of fiscal 2023. With the i20 model, Hyundai Motor India has also ventured into the export market for premium hatchbacks. They started exports of i20 in fiscal 2023 and secured a share of ~15% within the segment.

**Hatchbacks segment wise export share (FY19-FY24 YTD)**



Note: FY24 YTD refers to April 2023-February 2024 period

Source: SIAM, CRISIL MI&A

**Sub segmental shift within sedans segment**

The sedans segment witnessed a dip in exports between fiscal 2019 and fiscal 2021 owing to the pandemic. However, between fiscal 2021 and fiscal 2023, the segment witnessed a double-digit growth of 33.0% CAGR. Sedan segment leads the overall exports with 35% share in fiscal 2024 YTD.

Premium sedans lead exports with over 90% share within the overall sedans segment. Hyundai Verna, Nissan Sunny, Volkswagen Virtus, and Honda City are the top export models in the segment. Hyundai Verna has demonstrated a strong export demand over the last five years and grew at a CAGR of 13% between fiscal 2021 and fiscal 2023. In the premium sedans segment, Verna was the top exported model with 35.7% market share as of fiscal 2024 YTD. Also, Hyundai Motor India launched a facelift version of Verna towards the end of fiscal 2023 which further boosted the export demand. Volkswagen Virtus has also gained a significant share in fiscal 2023.

Compact sedans segment is dominated by models like Maruti Suzuki Dzire, Hyundai Aura and Hyundai Xcent. There were no new model launches in this segment over that last two years as compared to premium segment. Dzire has maintained a strong position in this segment, however, Hyundai Motor India with launch of Aura has gained significant share in this segment. These three models together constitute more than 90% of the exports share of compact sedans.

**Sub segmental shift in SUV exports**

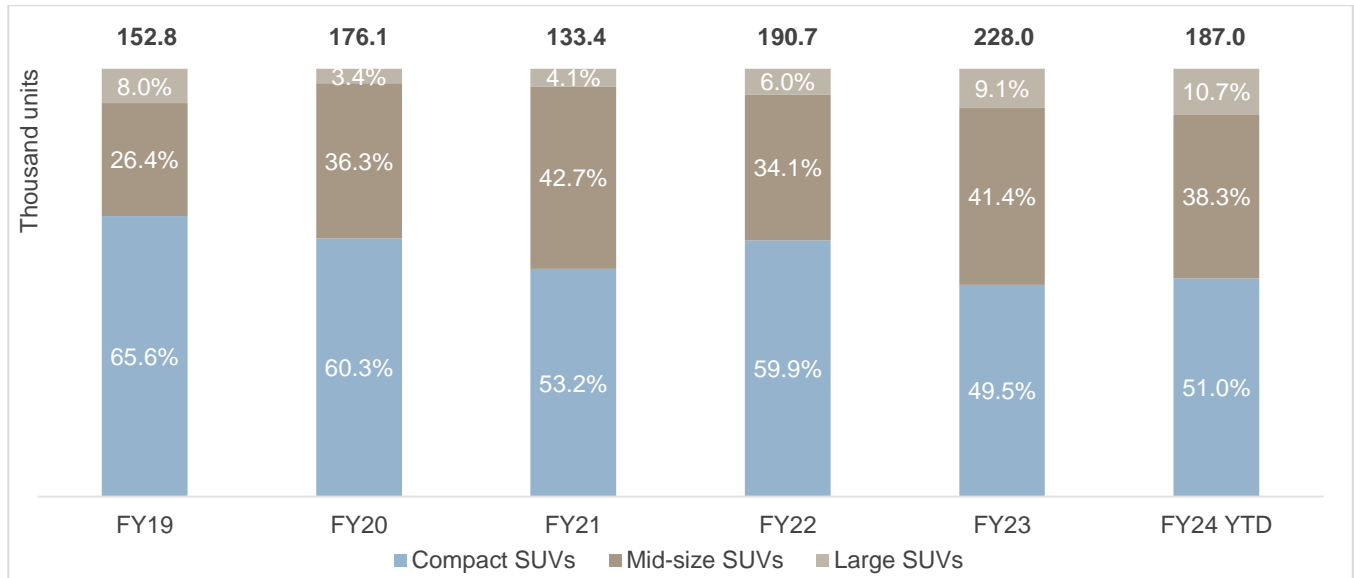
Compact SUVs lead the export market for SUVs followed by mid-size SUVs and large SUVs. The market share for large SUVs has been increasing steadily over last five years due to the growing demand for large SUVs globally. Hyundai Alcazar, Mahindra XUV700 and Mahindra Scorpio are the top selling large SUV models. Since launch in fiscal 2022, Alcazar has gained good traction in the export markets. Further, with launch of XUV700 and refreshed Scorpio models, Mahindra & Mahindra has gained share in this segment.

Share of mid-size SUVs in the exports has grown over the past five years and reached 41% in fiscal 2023 from 26% in fiscal 2019. Kia Seltos and Hyundai Creta were the top two export models in this segment during fiscal 2023. However, with launch of Maruti Suzuki Grand Vitara and Toyota Urban Cruiser HyRyder in fiscal 2023,

Maruti Suzuki and Toyota have gained significant share in this segment in fiscal 2024. Further, in fiscal 2024 refreshed version of Seltos and Creta were launched in the domestic market.

Compact SUV segment is a crowded segment with many OEMs having multiple product offerings in the segment. Top export models in this segment are Kia Sonet, Maruti Suzuki Jimny, Maruti Suzuki Fronx, Hyundai Venue, Nissan Magnite and Renault Kiger which together account ~90% of the share as of fiscal 2024. Maruti Suzuki exports both 3-door and 5-door version of Jimny to overseas markets. Exports of Hyundai Venue launched in fiscal 2020 grew at a CAGR of 7% between fiscal 2020 and fiscal 2023. Kia Sonet leads the compact SUV segment exports since launch in fiscal 2021.

**SUV segment wise export share (FY19-FY24 YTD)**



Note: FY24 YTD refers to April 2023-February 2024 period  
Source: SIAM, CRISIL MI&A

**Segmental shift in MPV and Vans export**

MPV exports segment grew at a CAGR of 37% between fiscal 2019 and fiscal 2023. Ertiga, Carens and XL6 are the top selling models in the segment which contribute to ~99% of sales in the segment. Second generation Ertiga and XL6 were launched in fiscal 2023, which has given a further momentum to the segment.

Vans are a niche in the overall exports market owing to very few models available in this segment. Maruti Suzuki Eeco is the only model in this segment. Eeco has achieved a record export growth in the fiscal 2024 YTD. This was mainly due to the launch of updated Eeco in fiscal 2023 with updated engine and new features.

**Competitive Scenario**

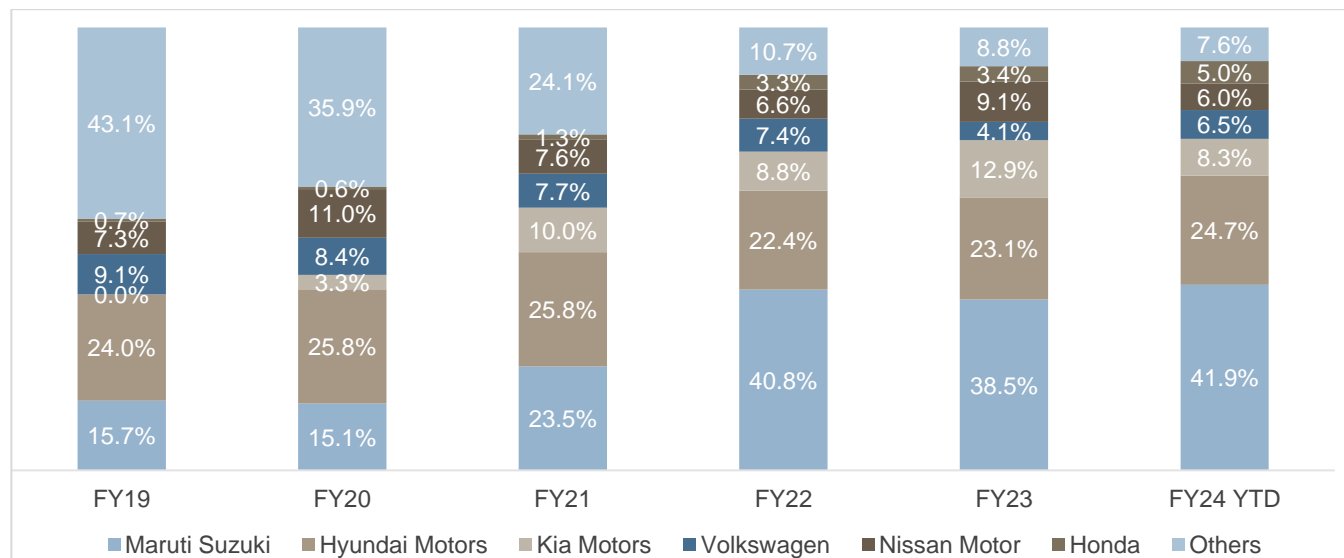
Fiscal 2023 recorded an export growth of ~15% owing to demand from emerging countries supported by push from major OEMs. Latin America and Africa dominated the demand for Maruti Suzuki’s Baleno, S-Presso and Dzire models. Overall exports of Maruti Suzuki stood at 2.6 lakh helping it garner ~39% of overall exports share and making it the biggest PV exporter. Hyundai Motor India (23%), Kia (~13%) and Nissan (9%) secured second, third and fourth spot in exports share respectively.

Hyundai Motor India remains as the county’s largest car exporter cumulatively from fiscal 2005 till fiscal 2024 YTD. As of fiscal 2024 YTD, their exports stood at 150.6 thousand units. In fiscal 2023, the exports reached 153 thousand from 129.3 thousand in fiscal 2022, a growth of 18.4% contributed mainly by African and Latin American

markets. Verna, Grand i10 and Aura are the top export model for Hyundai Motor India. Since its launch, Verna has always maintained a strong position in the export market. With the launch of 6<sup>th</sup> generation Verna in fiscal 2023, Hyundai Motor India has started exports of the same to Latin America and South Africa. Further, SUV models Creta, Alcazar and Venue are among the top exported vehicles from India. Compact sedans including Aura and Xcent, strengthen the company’s position in the compact sedans market. Improved performance and subsequent recognition in emerging market for small cars such as Hyundai Aura, Maruti Suzuki Dzire, Maruti Suzuki Baleno, Hyundai Grand i10, as well as SUV models like Hyundai Creta, Kia Seltos and Kia Sonet have led to increase in exports. Kia has scaled up export operations very quickly in India after entry in mid-2019 and posted ~69% growth over the previous fiscal. Export performance of Tata Motors and Mahindra & Mahindra is subdued owing to their higher focus on the domestic market. Nissan and Renault also posted good growth driven by their new crossovers. Volkswagen also started exporting the Virtus and Taigun to overseas markets leveraging the demand for large cars.

Maruti Suzuki has significantly grown its shipments and emerged as the top car exporter in the country with ~42% market share in fiscal 2024 YTD. Hyundai Motor India market share has remained stable over the past few years, and it is the second largest passenger car exporter with ~25% market share in fiscal 2024 YTD. The company’s export volumes have increased year-on-year by ~6% owing to the introduction of the new Verna, and continuing momentum for Grand i10 and Venue models. Top export destinations for Hyundai Motor India are South Africa, Saudi Arabia, Chile and Mexico.

**OEM wise exports share by volume (FY19-FY24 YTD)**



Note: FY24 YTD refers to April 2023-February 2024 period

Source: SIAM, CRISIL MI&A

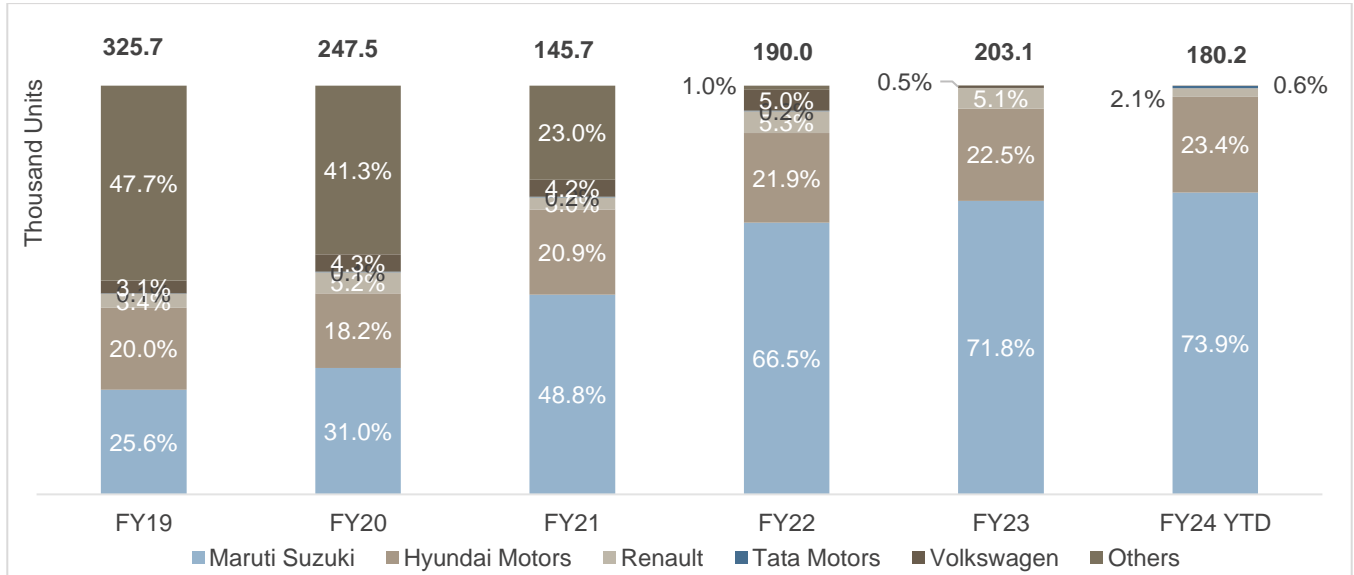
**OEM Segment wise market share**

**Hatchbacks**

Maruti Suzuki dominates the hatchbacks exports with more than 70% market share in fiscal 2023 as well as fiscal 2024 YTD. Baleno, Swift, Spresso and Celerio are the top export models from Maruti Suzuki. Hyundai Motor India, the second largest player in this segment, holds more than 23% market share as of fiscal 2024 YTD. They have maintained a consistent share in the market over the past few years with their market share remaining range bound. Grand i10 and i20 are the top models from Hyundai Motor India in this segment. Till fiscal 2021, there were many OEMs including General Motors, Nissan Motors and Volkswagen who were exporting hatchbacks like Beat,

Micra, Datsun and Polo from India. However, these companies discontinued the production of these models. Tata Motors currently exports their Tiago model and holds 0.6% market share as of fiscal 2024 YTD. This is largely because of their higher focus on the domestic market over exports.

**OEM wise hatchbacks export share (FY19-FY24 YTD)**



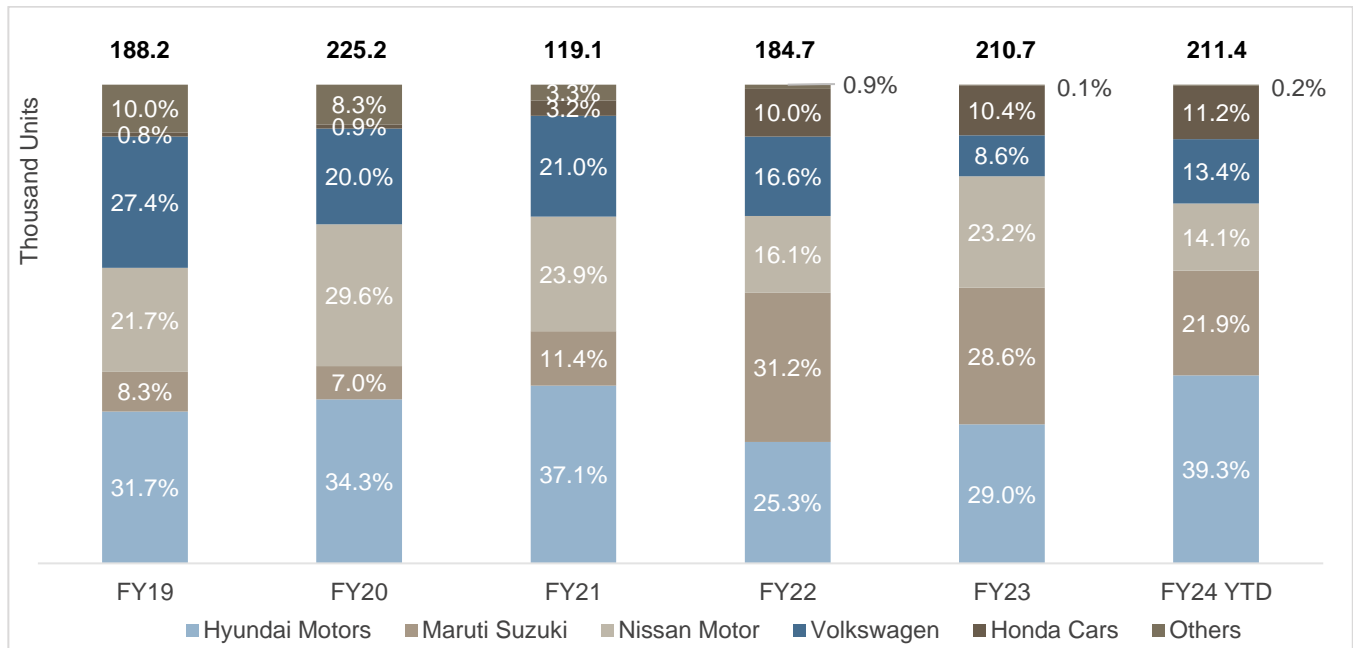
Note: FY24 YTD refers to April 2023-February 2024 period

Source: SIAM, CRISIL MI&A

**Sedans**

In the sedans segment, Hyundai Motor India leads the export market with more than 39% market share in fiscal 2024 YTD followed by Maruti Suzuki at ~22%. Hyundai Motor India has maintained a strong position in the sedans market over the past few years, but it is facing tight competition from Maruti Suzuki and other international OEMs in both compact and premium sedans segments. Although the market demand for compact sedans is decreasing globally, Hyundai Motor India is witnessing a good demand for their models Aura and Xcent. Verna, that belong to the premium sedans segment. Maruti Suzuki has two models offering in this segment, Dzire and Ciaz. Nissan Motor holds 14% market share in this segment with their one model- Sunny. Although the model was discontinued in the domestic market, the company continues to export the same. Volkswagen had 27.4% market share in this segment as of fiscal 2019, which shrunk in the following years. Vento was the primary model contributing to Volkswagen's export growth. However, with the launch of Virtus in fiscal 2023, a replacement model for Vento, the company has started gaining the lost market share. Honda has witnessed a steady growth in this segment over the past few years due to the demand for their City model in the overseas market. Their market share has grown from less than 1% to 10% between fiscal 2019 and fiscal 2023.

**OEM wise sedans export share (FY19-FY24 YTD)**



Note: FY24 YTD refers to April 2023-February 2024 period  
Source: SIAM, CRISIL MI&A

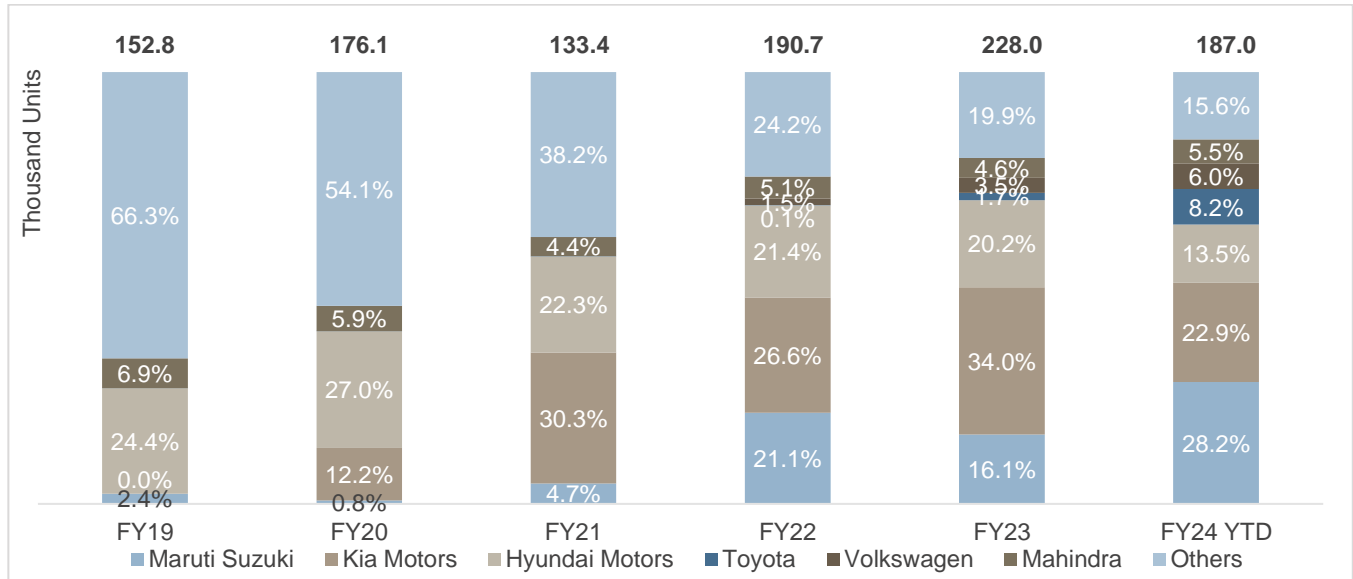
**SUVs**

As of fiscal 2023, Kia Motors was leading the SUV export segment with 34% market share followed by Hyundai Motor India at 20% market share. In the SUV segment, both Hyundai Motor India and Kia witnessed a double-digit growth in fiscal 2023 at 13% and 53% respectively compared to previous year and have maintained a strong position in the SUV market over the past few years. These Korean auto OEMs dominated the SUV export market with more than 50% market share as of fiscal 2023. However, in fiscal 2024 YTD Maruti Suzuki dominates the SUV segment with more than 28% market share, followed by Kia at ~23% and Hyundai Motor India at ~14%. The shift in trend is primarily due to two reasons: 1) new models from Maruti Suzuki- Grand Vitara, and Fronx were launched in fiscal 2023 and are witnessing a strong demand in export markets 2) Greater focus of other OEMs like Kia and Hyundai Motor India on the domestic market with launch of refreshed models of their top selling SUV Seltos and Creta.

Hyundai Motor India has maintained a consistent position in the SUV segment over the past few years. Key models for the company in this segment are Venue, Creta and Alcazar. The volumes for Hyundai Motor India in this segment grew at a CAGR of 5.4% between fiscal 2019 and fiscal 2023. Although there was a dip in exports owing to pandemic, they reached 97% of the pre-covid export volumes in fiscal 2023. Kia’s Seltos and Sonet are the top exported SUVs as of fiscal 2023. Further, launch of renewed models of Creta and Seltos are expected to give a thrust to Hyundai Motor India and Kia exports in the coming months.

Toyota’s export share was very small in the past few years with less than 1% market share in fiscal 2022. However, with the launch of Urban Cruiser HyRyder in mid fiscal 2023, the company’s market share has increased to 8.2% in fiscal 2024 YTD marking a significant growth. Volkswagen is also gaining traction in the export market through export of their SUV model Taigun, which was launched in fiscal 2022. Mahindra & Mahindra is also maintaining a stable position in the SUV export market through their multiple SUV models including Scorpio, XUV700, and XUV300.

**OEM wise SUV export share (FY19-FY24 YTD)**



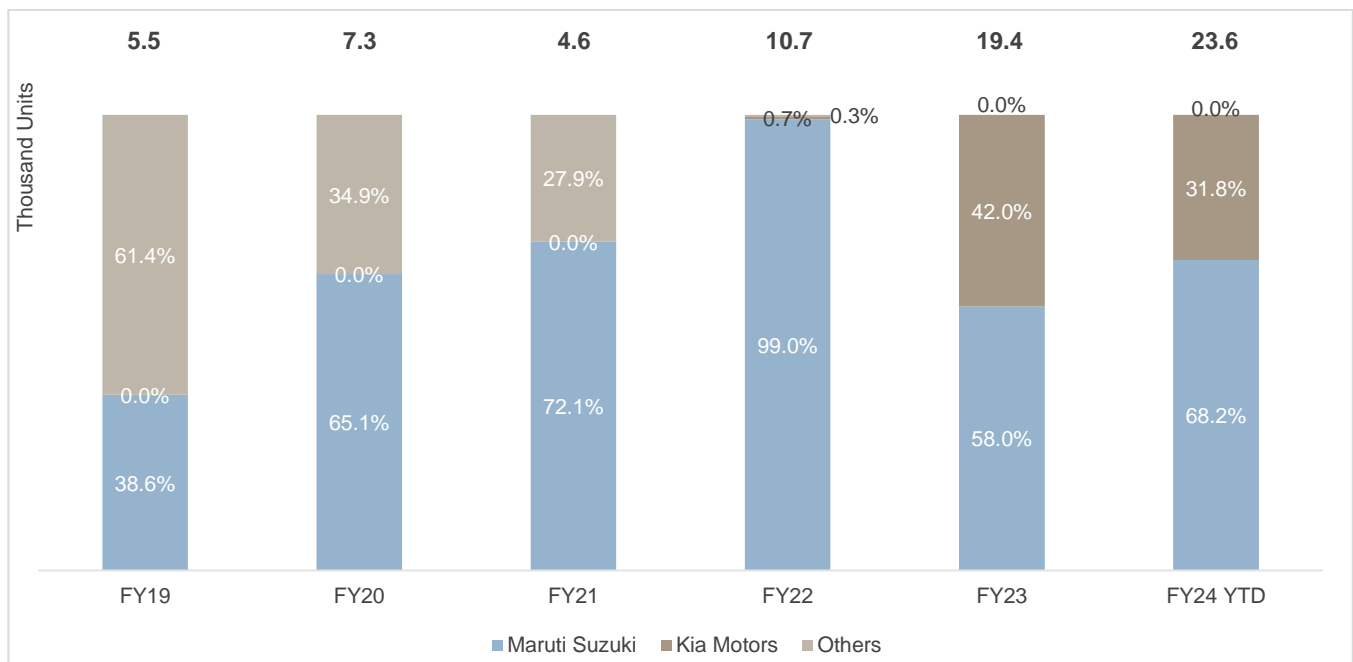
Note: FY24 YTD refers to April 2023-February 2024 period

Source: SIAM, CRISIL MI&A

**MPVs**

MPV segment is dominated by Maruti Suzuki with 58% market share in fiscal 2023. Although the market share was fluctuating over the past years, it has witnessed volume growth at a CAGR of 84% between fiscal 2021 and fiscal 2023. Ertiga was the top contributing model for Maruti Suzuki. Kia Motors launched Carens in the end of fiscal 2022 and has witnessed a strong export growth in fiscal 2023.

**OEM wise MPV export share (FY19-FY24 YTD)**



Note: FY24 YTD refers to April 2023-February 2024 period

Source: SIAM, CRISIL MI&A



**Vans**

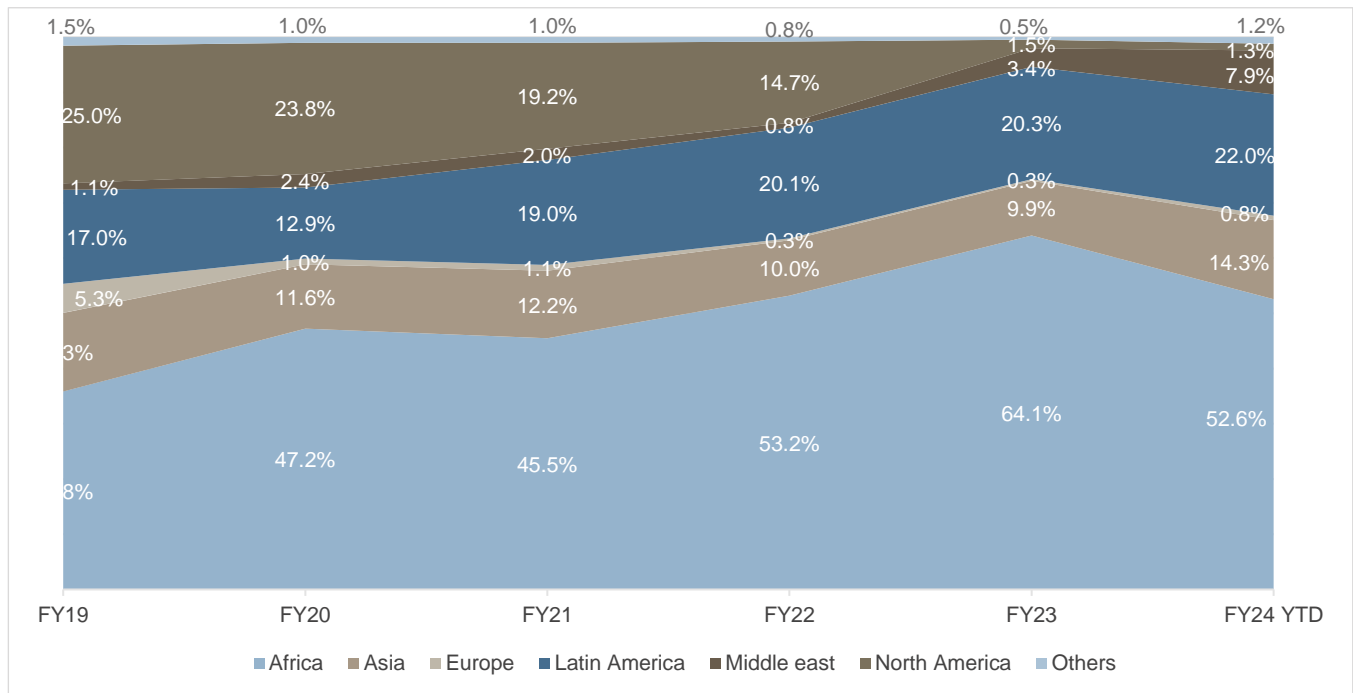
Eeco is the only model available in the van segment and hence Maruti Suzuki leads the vans segment. The updated model of Eeco launched in fiscal 2023 is gaining a strong demand in overseas markets.

**Review of key export destinations**

PV manufacturers from India have grown a stable base in African and Latin American countries over the years owing to good brand recognition of Indian brands for entry level cars. Share of exports to Africa increased to 64% in fiscal 2023 from ~36% in fiscal 2019. South Africa, Tunisia and Angola are the key export destinations within Africa. The share of exports to Latin America also increased in the same period from 17% to 20% due to the increased focus on economies like Mexico, Chile and Peru. Other top export destinations include Saudi Arabia in the Middle East and Philippines & Indonesia in Asia. Exports to North America have decreased gradually in the past five years. This is primarily due to the quitting of American automakers like GM and Ford from India.

Trade tensions between China and other developed economies including US and Europe coupled with initiatives taken by these countries to diversify their supply chain through various strategies could bring additional attention to export hubs like India. This would offer opportunity for domestic car makers to expand their export reach leveraging government support through various initiatives like FTA, PLI and PMP schemes.

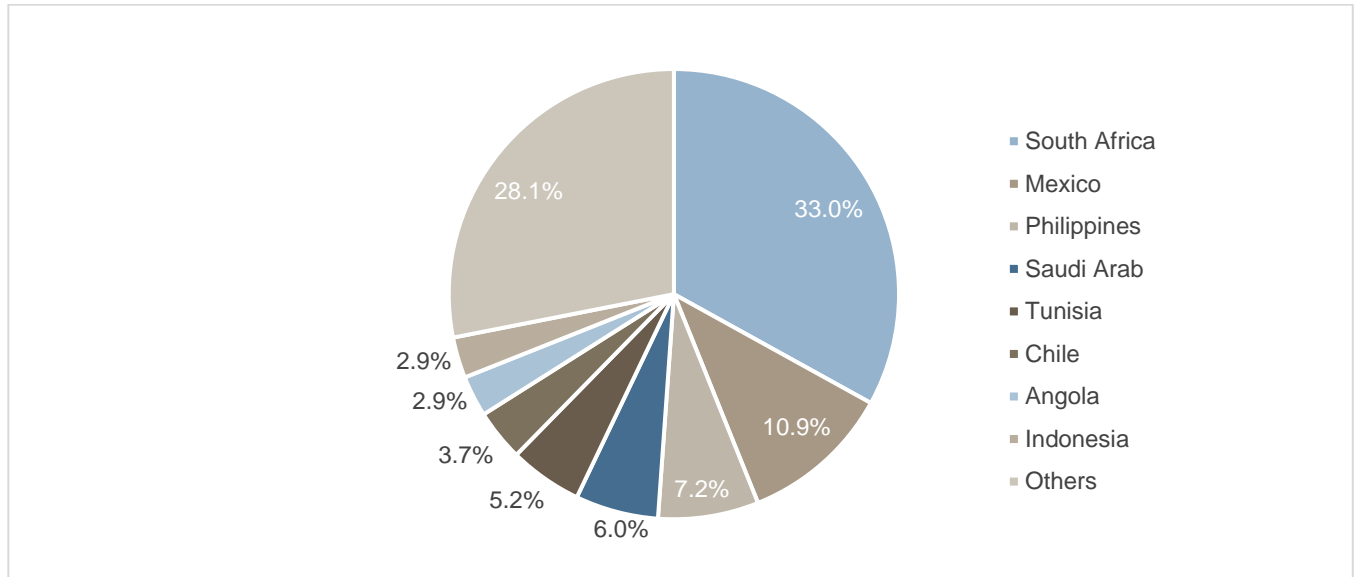
**Key export destinations, by region (FY19-FY24 YTD)**



Note: YTD refers to April-December 2023

Source: DGFT, CRISIL MI&A

**Key export destinations, by country (FY24 YTD)**



Note: YTD refers to April-December 2023

Source: DGFT, CRISIL MI&A

At country level, share of exports to South Africa increased to 43.4% in fiscal 2023 from 20.1% in fiscal 2019. South Africa has become the major export market followed by Mexico, whose share increased from 2.1% in fiscal 2022 to ~11% in fiscal 2024 YTD. Newer markets such as Saudi Arabia and Indonesia have also seen increase in exports from India.

The economic slowdown in major passenger vehicle export destinations is playing a crucial role in hindering India's export potential. High interest rates, coupled with monetary and energy crises in certain regions, are dampening consumer spending and leading to a decrease in goods imports, including Indian-made vehicles. Consequently, India's passenger vehicle exports are likely to encounter limited opportunities for substantial growth in these markets. However, developing economies are increasingly becoming high focus destinations for passenger vehicle exports due to rising incomes, infrastructure availability and changing consumer preferences. For Latin America, the exports from India have grown over the last two years despite the global headwinds.

**Trend in Global Passenger Vehicle (Car) Sales**

According to International Organization of Motor Vehicle Manufacturers (OICA), in calendar year (CY) 2023 global passenger vehicle sales rebounded significantly and grew by 11.3% after remaining stable in 2022 as supply chain challenges eased. The passenger vehicle volumes reached 65.3 million in 2023, from 64.8 million in 2019 surpassing the pre-covid volumes. During the same period, the industry grew at a CAGR of 0.2%. In 2022, global passenger vehicle sales grew at 2.4% with India and China recording strong growth. China remained the largest car market in the world with 40.2% share in the sales globally and selling almost as many vehicles as in the European and US markets combined.

The European car market grew strongly at 18.7% in 2023 compared to 2022, reaching a volume of ~15.0 million units. Similar trends in both EU and Eastern European markets drove the regional market forward. Most European markets witnessed a strong growth, including the four largest markets Italy, Spain, France and Germany at 18.9%, 16.7%, 16.1% and 7.3% respectively. Despite the overall growth, when compared with pre-pandemic volumes, the registrations have dropped currently reaching 84% of the pre-pandemic volume of 17.9 million units registered in 2019. Russia and Ukraine experienced substantial declines in 2022 and are now on a path to recovery, with their markets showing impressive growth rates (66.7% and 60.6%, respectively). New passenger

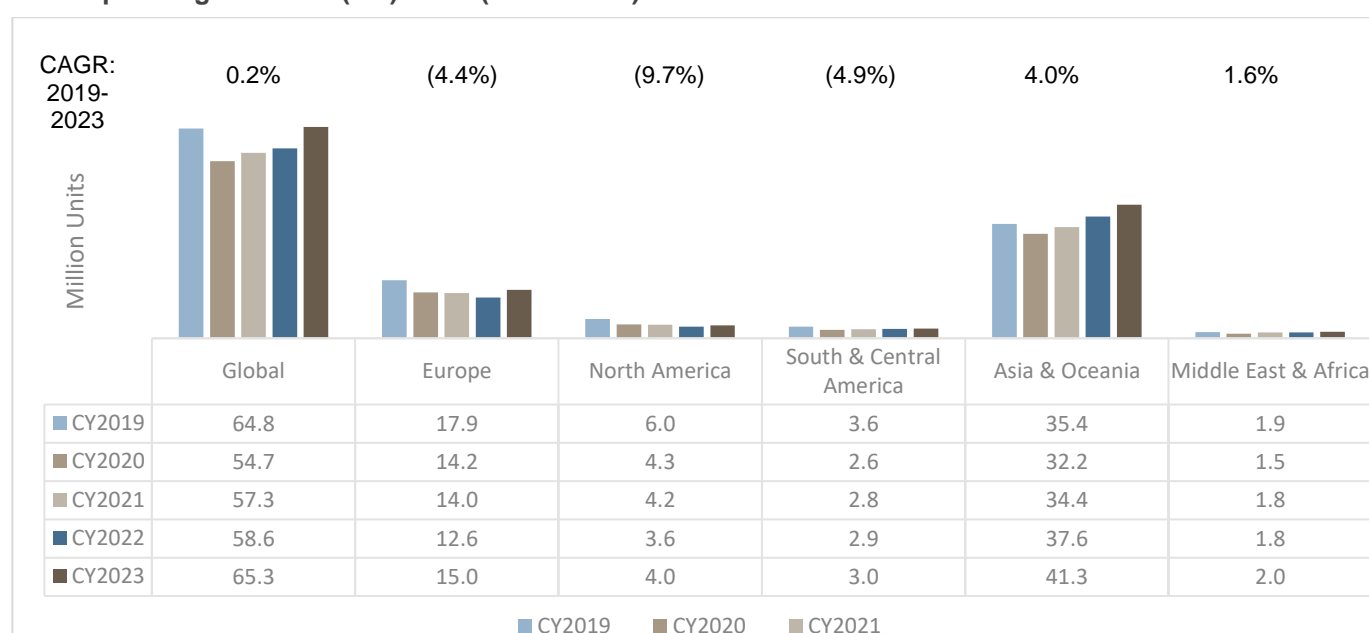
vehicle registrations in the Europe contracted by 9.8% to 12.6 million cars in 2022. It was the third consecutive year of weaker sales with the total European new car market, with 5 million vehicles lesser than in 2019. New passenger vehicle registrations in Germany increased only by 1.1% in 2022, while other large European markets declined at France (-7.8%), Italy (-9.7%), and Spain (-5.4%). Production problems which arose due to semiconductor shortage and supply chain issues due to Russia-Ukraine conflict was the major issues impacting the Europe passenger vehicle market than a lack in consumer demand.

Despite rising interest rates and high inflation, North America experienced a 10.3% growth in volume of car sales in 2023 from a low base in 2022. The US recorded a 9% growth in new car sales compared to the previous year. Mexico recorded a double-digit growth in 2023 at 22.8%, however is yet to catch up with pre-covid sales levels. Passenger car sales in the South and Central America region totalled ~3.0 million units in 2023, remaining stable over the past few years. The region witnessed a marginal growth of 1.0% in 2023 compared to 2022. This growth was primarily driven by Brazil, the leading market in the region, which grew by about 9.2%. Full-year sale volumes in North America were down by 14.0% in 2022 compared to 2021. In the USA, passenger car sales contracted by 14.7% in 2022, affected by supply chain and logistics issues. Japan's passenger car sales were down by 6.2% compared with 2021, due to higher energy prices and depreciation of the yen that led to a decline in real disposable income. On a similar note, South Korean new car registrations declined by 3.3% in 2022 compared to 2021.

Indian passenger car sales surged to a record level of about 4.1 million units in 2023, growing by 8.2% and once again surpassing Japan's volume. This growth was driven by a rising preference for individual mobility, and the introduction of new models. Japan's car sales grew in double digits by a notable 15.8% in 2023, driven by a lower baseline in 2022 resulting from semiconductor and component shortages. China's car sales recorded a 10.6% increase in 2023, surpassing 26 million units. Chinese car sales in 2022 increased by 9.5% to over 23.5 million vehicles and was among the two countries in the top three markets to record an increase in car sales in 2022. India was the fastest growing major market in 2022 and surpassed Japanese to become the second largest passenger vehicle market in the world

*Note: The current analysis global passenger vehicles are basis the passenger car numbers reported by OICA and do not include small commercial vehicles/pick ups. All numbers mentioned are for CY2023*

## Global passenger vehicle (car) sales (CY19-CY23)



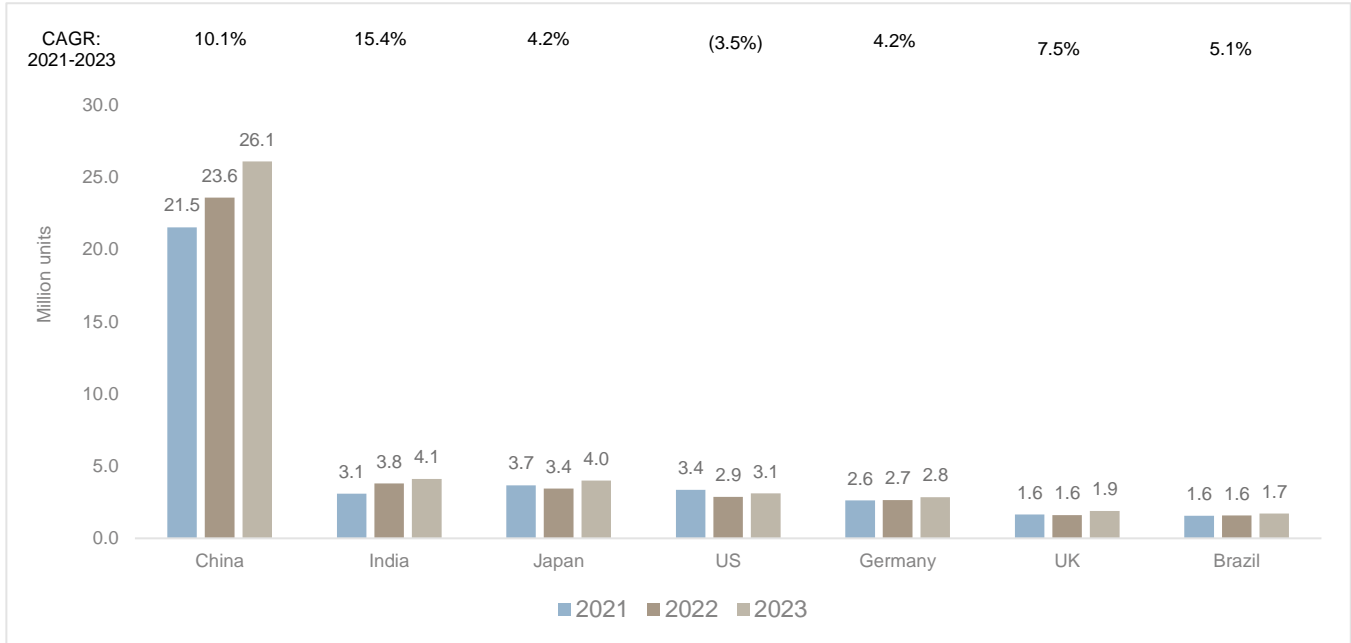
Note:

- All the analysis in global passenger vehicle section is based on calendar year (Jan-Dec period)

- OICA considers only passenger car numbers for all geographies. Vehicles categorized under light truck category or light vehicle category is not part of the analysis

Source: OICA, ACEA, CRISIL MI&A

**Passenger vehicle (car) sales by country- Top 6 countries (CY21-CY23)**



Note:

- All the analysis in global passenger vehicle section is based on calendar year (Jan-Dec period)
- OICA considers only passenger car numbers for all geographies. Vehicles categorized under light truck category or light vehicle category is not part of the analysis

Source: OICA, CRISIL MI&A

Global PV sales in CY2023 was dominated by Toyota Group (Toyota Motor Corporation) at 11.1 million, followed by Volkswagen Group with 9.2 million units and Hyundai Motor Group (Hyundai + Kia) with 7.3 million units. These three OEMs were the top three PV makers in the world. Renault-Nissan-Mitsubishi and Stellantis secured the fourth and fifth spot with 6.4 million units each.

**Free Trade Agreement (FTA) scenario/current tariff with respect to automobile exports**

In order to expand the exports markets while ensuring access to raw materials and capital goods necessary to accelerate domestic manufacturing, India engages in regional and bilateral trade negotiations. Currently, India has favourable market access and economic cooperation with more than 50 countries through multiple trade agreements. FTA is aimed at eliminating or lowering the trade barriers for Indian exporters, so that they could gain a competitive advantage in the foreign markets, paving the way for increased sales and market share. FTA allows exporters access to overseas market at low customs duties or any other taxes. Further such agreements offer a conducive environment for automakers and suppliers in terms of technical collaboration, investments and knowledge sharing that could augment the industry’s overall performance and growth.

The following table lists few trade agreements that India has signed and implemented.

Agreement	Enforced Date	Member country	Agreement type	Benefit for automotive industry	Description
Comprehensive Economic Partnership Agreement	1 May 2022	UAE	FTA	Zero-duty market access	Passenger vehicles, including two wheelers, three wheelers, personal type vehicle and few automotive components are going to get duty free market access in the UAE.
Economic Cooperation and Trade Agreement	29 December 2022	Australia	FTA	Zero customs duty	Passenger vehicles and associated components shall be exempt from the customs duties offering preferential market access
Trade and Economic Partnership Agreement	10 March 2024	Iceland, Liechtenstein, Norway, and Switzerland	FTA	Zero customs duty	Vehicles other than railway or tramway rollingstock, and parts and accessories are exempt from the customs duty
Comprehensive Economic Partnership Agreement	1 January 2010	South Korea	FTA	NA	Motor cars and automotive components are exempt from the obligation of tariff reduction or elimination
Malaysia-India Comprehensive Economic Cooperation Agreement	1 July 2011	Malaysia	FTA	Tariff reduction	Motorcycles get market access and tariffs are reduced to certain pre-determined levels
ASEAN-India Free Trade Agreement	1 January 2010	Brunei, Burma, Cambodia, Indonesia, Laos, Malaysia, Philippines, Singapore, Thailand, Vietnam	FTA	Reduction in tariff	<ul style="list-style-type: none"> <li>Indonesia, Cambodia planned to reduce import duties on passenger vehicles.</li> <li>Brunei reduced custom duties and passenger vehicles are going to get duty free market access</li> <li>Malaysia, Vietnam, Myanmar, Laos, Philippines, and Thailand have passenger vehicles in EL (Exclusion List) where no concession is granted, however EL is subjected to annual tariff review with a view to improving market access.</li> </ul>

India's FTAs can drastically reshape the duty scenario while offering exporters an improved access in the overseas markets through various mechanisms including duty elimination/concession. Apart from that most favoured nation (MFN) status of India with developed/developing nations could bring trade advantages to India in the form of low tariffs or high import quotas.

The following table shows import duties faced by India in top export destinations:

Importer	Year	Duties/Tariff (%)	Type
South Africa	2022	10	MFN
Mexico	2023	28.33	MFN
Philippines	2023	30	MFN
Saudi Arabia	2022	5	MFN
Tunisia	2016	0	MFN
Chile	2023	6	MFN

Note: referred HS code is 870321

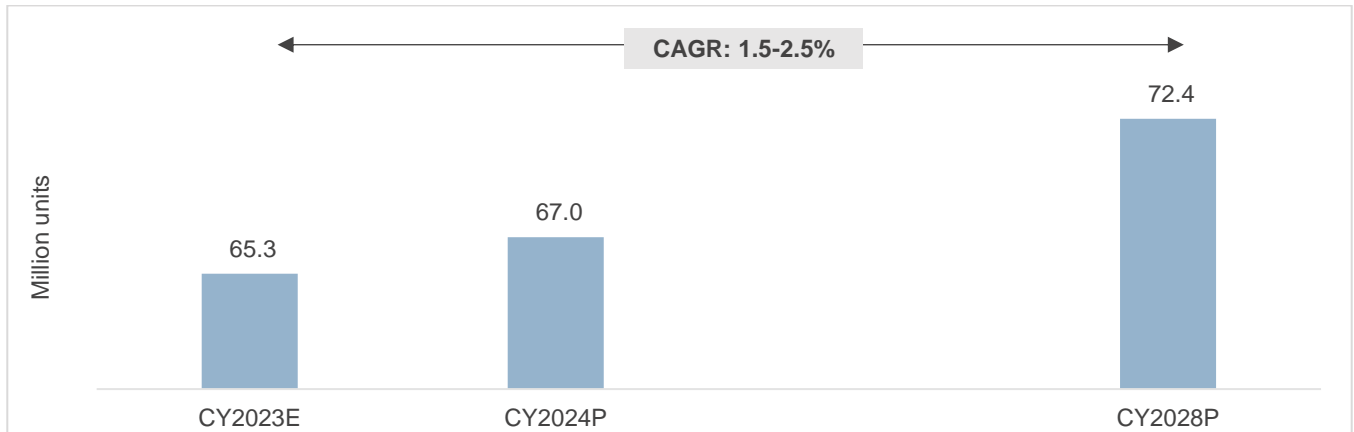
Source: World Trade Organization , CRISIL MI&A

**Global passenger vehicle sales outlook**

In 2023, global passenger vehicle sales grew by 11.3% driven by the momentum in Europe, India, Japan, and North America, despite high inflation, and rising interest rates. Going ahead gradual recovery in volumes are expected with growth in par with global economic growth. Global demand for passenger vehicles is expected to grow at a CAGR of 1.5-2.5% between 2023 and 2028. In Europe and North America, sales are expected to rise moderately after the surge in 2023, however, failing to recover to pre-pandemic levels even in the medium term. Despite the concerns surrounding the volatility of the supply chain and recessionary fears, the North American outlook remains positive over the short-term. China has surpassed the pre-pandemic level demand, despite weakness of domestic consumption. Further, China is expected to remain as net exporter of passenger vehicles due to increasing production. Strong growth momentum is expected from the developing economies due to economic growth, rising disposable incomes and changing consumer preferences in these markets, driving the demand for cars in APAC, Middle East and Africa. Further, improving supply scenario in Japan is expected to contribute to a more positive near-term outlook.

The market for passenger vehicle is expected to grow and is shifting towards fuel efficient and low emission vehicles. Additionally, consumers are preferring cars with advanced safety features and innovative technologies, such as connectivity and autonomous driving capabilities; thereby driving the market for cars with premium features. Government regulations, tax structure and incentives are impacting the demand for ICE and EV vehicles.

**Outlook for global passenger vehicle (car) sales (CY23E-CY28P)**



Source: OICA, CRISIL MI&A

**PV Exports Outlook for India**

Passenger vehicle exports from India is expected grow at 3.1% in fiscal 2024 and at a CAGR of 7-9% between fiscals 2024 and 2029. Anticipated economic growth in key export regions along with push from OEMs will make India the base of exports for certain models, which in turn will boost exports. While the outlook for Middle East and Asia remains positive, the ongoing Iran-Israel conflict would remain a key monitorable. Any escalation of the conflict could push the oil and gas price alongside impacting the shipping through the Strait of Hormuz. Rise in crude oil prices could impact the fuel prices in export destinations thereby increasing the inflation pressure and impacting exports demand from India.

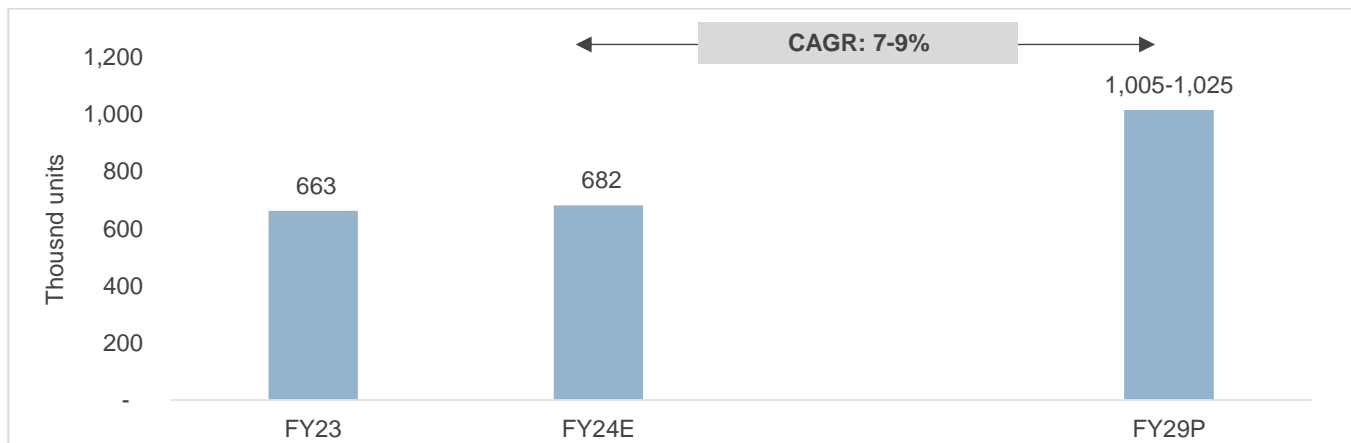
Few years back, India was major export hub for cars like hatchbacks and compact sedans. However, India has successfully transitioned to be a large car (Premium sedans and SUVs) exporter over the last 5-6 years. OEMs are actively broadening their portfolios to cater the changing consumer preferences in both domestic as well as global

markets. SUV sales are accelerating exports and models like the Hyundai Creta, Maruti Suzuki Grand Vitara, Hyundai Venue, Toyota Urban Cruiser HyRyder, Maruti Suzuki Jimny, Maruti Suzuki Fronx, and Volkswagen Taigun have gained strong traction in the export markets. Further premium sedans like the Hyundai Verna and Volkswagen Virtus are key models driving the market for large cars.

Major OEMs in India are expanding their production capacities with an aim to make India as an export hub for Africa, Middle East, and Asia. Further, policies including PLI are offering a momentum to domestic OEMs for manufacturing and exporting EVs from India. Government offers incentives through PLI for entire EV ecosystem including automobiles, auto components and ACC batteries. Major OEMs in India have already announced plans to export EVs from India starting 2025-2026.

Anticipated economic stability / growth and increased push from OEMs and India's trade agreements are expected to boost India's overall exports.

**Outlook for exports (FY23-FY28P)**



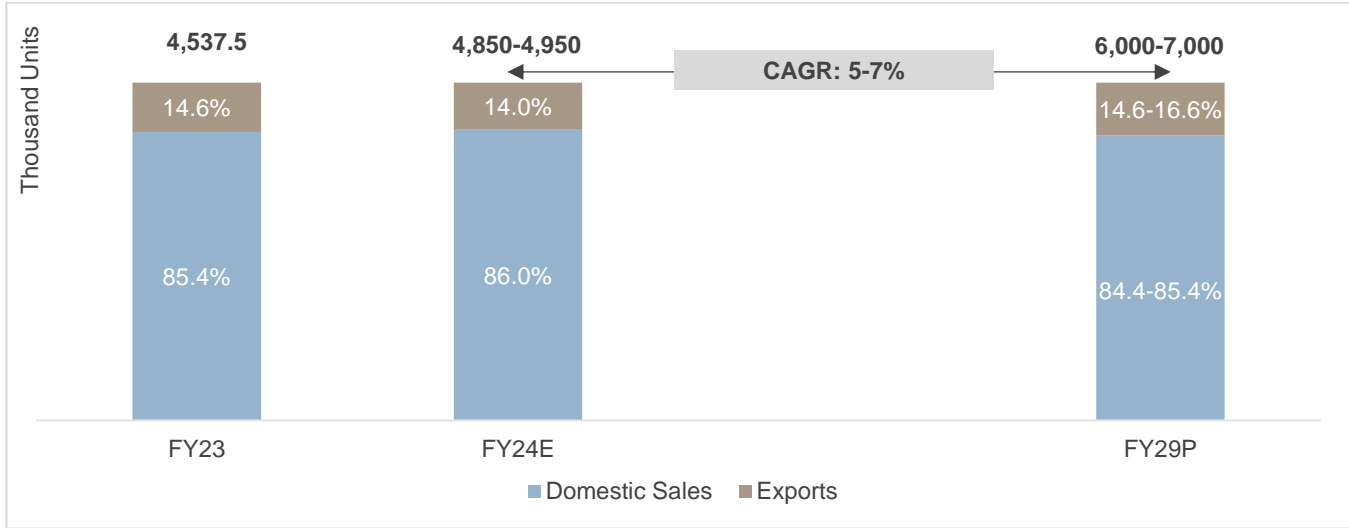
Source: CRISIL MI&A

India's economic relations with global economies through different trade agreements would enable Indian automotive companies to enhance the exports of automobiles and related components from the country. Recently India has established FTA with several nations including the UAE and Australia. India is also negotiating with the UK and the EU on establishing FTA. FTA agreements will offer immense potential to Indian OEMs, enabling them to tap into a broader customer base and establish as a key player in the global automotive industry. SUVs are gaining strong traction in the global markets and their exports are on the rise. This momentum is expected to continue this decade with SUVs crossing 40% share in exports and remain the fastest growing segment. Rising disposable income supported by lowering inflation growth rate in key export destinations like South Africa, Mexico and few others are expected to further aid the growth of SUVs, and overall exports.

**Overall PV industry – Domestic Sales + Exports**

Domestic sales, which formed 85.4% of overall industry in fiscal 2023, is expected to grow at 4.5-6.5% CAGR between fiscals 2024 and 2029P. Over the period, exports are forecast to grow at 7-9% CAGR reaching a share of 15.6% by fiscal 2029.

Overall PV industry by domestic sales and exports (FY23-FY29E)



Source: CRISIL MI&A



## **Electrification in the Indian PV Industry**

Amid rising environmental concerns, electric vehicles (EVs) are gaining traction globally, including in India. The country is one of the signatories to the Paris Agreement under the United Nations Framework Convention on Climate Change. It is also part of the EV30@30 campaign, targeting a 30% sales share for EVs by 2030.

To accelerate EV adoption, the government has been incentivising consumers by extending support via FAME (Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles in India) subsidy as well as tax cuts. The government announced INR 100 billion for Phase II of FAME, which commenced on April 1, 2019. The policy aims to provide a subsidy of INR 10,000 per kWh to four-wheelers (battery EVs, plug-in hybrid EVs, strong hybrids) for commercial purposes and public transport. It also envisions creation of infrastructure for charging of EVs.

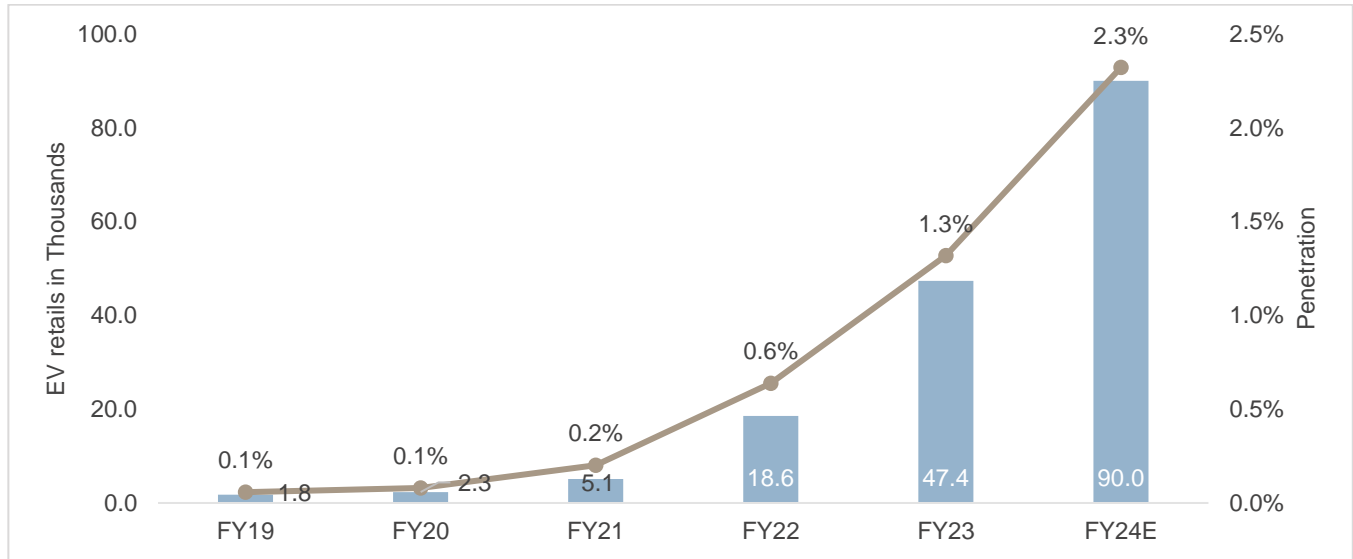
These schemes alongside the Production Linked Incentive (PLI) schemes, scrappage policy as well as the Make in India initiative is setting up the roadmap for widespread EV manufacturing and adoption. (Policies have been covered in detail in earlier sections)

Furthermore, the government is taking measures to address one of the major concerns regarding EVs: range anxiety (fear of running out of charge in the middle of the journey) due to low availability of public charging infrastructure. To address this concern, and support an ecosystem to accelerate EV sales, the Ministry of Road Transport and Highways is setting up new EV charging stations as well as supporting the expansion of charging stations in homes and commercial centers.

Government support, coupled with rising awareness about EVs, environmental concerns, expansion in EV infrastructure as well as increasing EV model portfolio is driving electrification in India. The EV segment received a real thrust in the last two years backed by model launches at competitive rates, price hikes in ICE vehicles and elevated & petrol diesel costs. While EVs bring several cost benefits and have evolved into a desirable powertrain choice today, the public perception towards electric vehicles and awareness against pollution from ICE vehicles also played a major role behind the rise in EV adoption across the country.

EV adoption in India is led by two wheelers and three wheelers, however, passenger vehicles are fast catching up. EV penetration in the passenger vehicle (PV) segment was insignificant till fiscal 2021 amidst limited vehicle portfolio coupled with lower customer awareness. Fast expansion in portfolio (3 models in fiscal 2019 to about 14 models in fiscal 2024), rising awareness, government push and expanding supporting infrastructure caused a sharp rise in EV adoption. EV retails increased from about 2 thousand vehicles in fiscal 2019 to 90 thousand vehicles in fiscal 2024: a 45x increase in 5 years. In turn, the penetration of EVs within the industry retails rose from 0.1% in fiscal 2019 to 2.3% by fiscal 2024.

**Domestic passenger vehicles EV retails and penetration trend**



Note: VAHAN figures exclude Telangana, Lakshadweep retails  
Source: VAHAN, CRISIL MI&A

With only a handful of vehicle options like Reva, E Verito, and Bolt, EV adoption in passenger vehicles was inconsequential in fiscal 2019. One of the most popular EVs in India, Nexon EV was launched in the second half of fiscal 2020 providing the thrust to the passenger vehicle EV adoption. The launch of Kona electric (H1 fiscal 2020) as well as ZS EV (H2 fiscal 2020) provided further boost to the vehicle adoption during fiscal 2020. Continued traction for these models helped EV retails clock a sizeable growth during fiscal 2021. However, pandemic decelerated the growth pace of EVs, given the higher acquisition costs, strained production levels as well as financial pressure on the consumers.

Real impetus to the EV adoption started from fiscal 2022. Gradual normalization of economy, improvement in macro-economic scenario, increase in mobility, expansion in EV portfolio and continued government support aided the EV adoption growth. Moreover, further rise in ICE vehicle prices, sharp hike in petrol diesel prices, increasing in customer awareness and younger buyers provided an added impetus to EV adoption.

Entry of new players like BYD as well as introduction of models like Tiago EV, Tigor EV, Punch EV, XUV400, Comet EV, eC3, Ioniq, Atto 3 in a short span provided the thrust to the EV adoption. In fact, with the introduction of Tiago, Comet in the hatchbacks segment and Tigor in the sub 4-meter sedans segment, expanded the customer reach for EVs. Traction for Tigor for commercial fleet usage further aided the EV growth.

During fiscal 2021 to fiscal 2024 period, EV retails increased at ~160% CAGR (17x). This sharp rise in EV retails translated into 2.3% EV penetration in fiscal 2024.

However, electrification in the passenger vehicle segment is still at a quite nascent stage and there is a sizeable scope of expansion going ahead.

## Intensifying Competition in the EV Passenger Vehicle Space

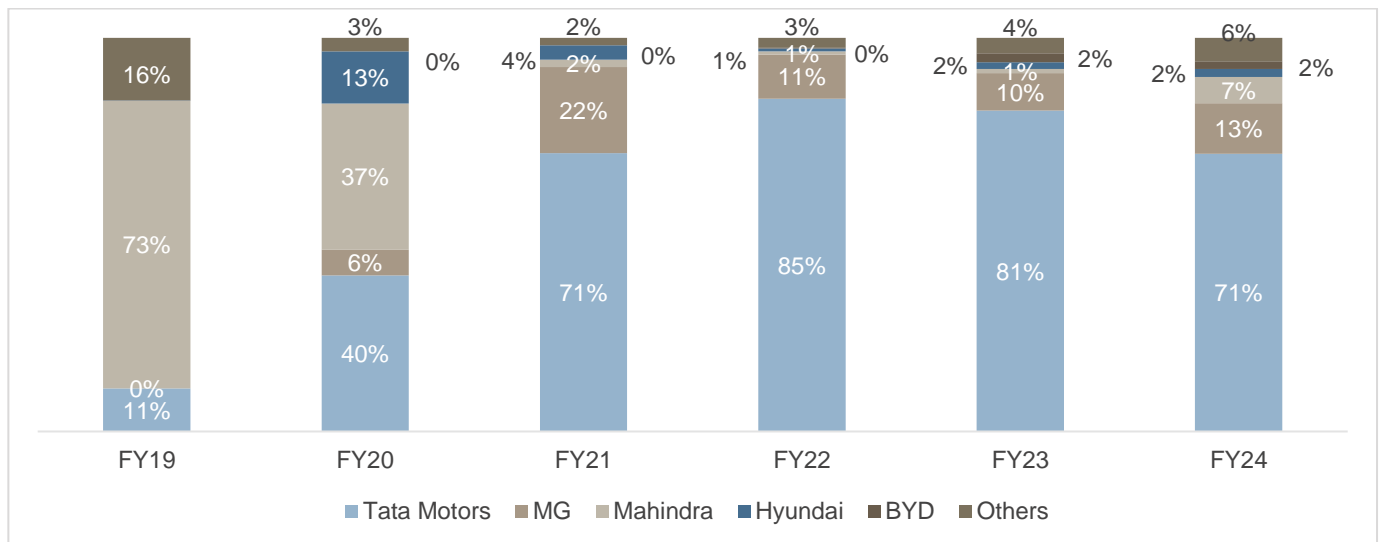
The competition within the EV space has been intensifying, illustrated by the fluctuating market shares and positions of automobile companies in India that offer EVs in the passenger vehicle space.

Mahindra & Mahindra dominated the EV market till fiscal 2019. Introduction of Nexon helped Tata Motors take the lead in the EV space. Continued traction for its popular EV Nexon coupled with new EV launches like Tiago, Tigor and Punch, aided Tata Motors' share expansion. However, with increased competition especially from MG and Mahindra & Mahindra, Tata Motors lost some ground during fiscal 2024.

ZS EV supported MG's expansion in the EV subsegment. The recent launch of Comet EV further extended its contribution during fiscal 2024. The introduction of *Kona* helped Hyundai Motor India grab a 13% market share during fiscal 2020. Intensified competition in the subsegment restricted its contribution in further years.

Mahindra & Mahindra lost its lead in the EV space with discontinuation of its models like e Verito. The launch of XUV400 aided its share expansion in recent years.

### Player wise share in EV retail sales



Source: VAHAN, CRISIL MI&A

The new entrant BYD contributed ~2% to the EV retails during fiscal 2024 for its vehicles *Atto 3*, *E6* and its latest launch *Seal*.

With the competition intensifying in the EV space all major OEMs have planned EV launches in the near future:

OEM	Announcement
Maruti Suzuki	First EV- a large SUV (eVX) by fiscal 2025 & 6 EVs across segments by fiscal 2031
Hyundai Motor India	4 EVs in the future - launches to be across segments and different price points
Tata Motors	EVs of different body styles at different price points; Harrier EV, Curvv EV in fiscal 2025; Sierra, Avinya to follow
Mahindra & Mahindra	8 new EVs by fiscal 2030
MG	New fast charging variants for its current range, one new EV in fiscal 25

JSW MG	New vehicle launch every 3-6 months with focus on New Energy vehicles
KIA	One electric MPV & SUV by 2025, launch of few global EV models including an RV by 2030
Renault	Hatchbacks EV by 2025

Source: Company Annual Reports, press releases, media announcements

## Policies Supporting EV Adoption and EV Supply Chain

The Government of India has introduced a set of fiscal and non-fiscal incentives to support the adoption of electric mobility. In 2012, National Electric Mobility Mission 2020 (NEMMP 2020) was launched with a target of having 6-7 million electric vehicles on the road by 2020. This was further supported with the announcement of the Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles (FAME) scheme in 2015. The FAME scheme provides subsidies for the purchase of electric vehicles and for the installation of charging infrastructure. Further as a continuation policy, FAME II was introduced in 2019 to further support the EV ecosystem. Also, the government introduced Production Linked Incentive (PLI) and Phased Manufacturing Program (PMP) to support the EV supply ecosystem by supporting OEMs, battery manufacturers and tier suppliers. The PLI scheme for Advanced Chemistry Cell (ACC) (INR 181.0 billion) along with the PLI Scheme for automotive sector (INR 259.4 billion) and FAME II (INR 100.0 billion) will enable India to adopt environmentally cleaner, and sustainable EV based system from the traditional fossil fuel-based automobile transportation system.

### FAME policy (I & II)

As part of the National Electric Mobility Mission Plan (NEMMP) 2020, the Department of Heavy Industry (DHI) formulated the FAME I policy in 2015 with a budget outlay of INR 9.0 billion (INR 895 crore). The FAME I policy was aimed at promoting EV ecosystem through technology development, demand creation, pilot project, and charging infrastructure thereby ensuring its sustainable growth. In the FAME 1, about 2.78 lakh EVs were supported via demand incentives. In addition, 465 buses were sanctioned to various cities/states under this scheme. Phase-II of the FAME policy was implemented with an outlay of INR 100.0 billion in 2019 for a period of 5 years, with the aim to support demand for EVs by supporting 7,000 e-Buses, 5 lakh e-3 Wheelers, 55,000 e-4 Wheeler (Commercial purposes) and 10 lakh e-2 Wheelers (including commercial & private). The Ministry of Heavy Industries (MHI) had sanctioned 520 Charging Stations/Infrastructure under the FAME I policy. Further, this Ministry has also sanctioned 2,877 Electric Vehicle Charging Stations in 68 cities across 25 States/UTs and 1576 charging stations across 9 Expressways and 16 Highways under FAME II.

Segment	Maximum vehicles supported	Approx size of battery (kWh)	Incentive offered (INR/kWh)	Maximum Ex-factory price to avail incentive (INR)
2W	1,000,000	2	10,000	1.5 lakhs
3W	500,000	5	10,000	5.0 lakhs
4W	35,000	15	10,000	15.0 lakhs
Bus	7,090	250	20,000	2.0 crores

In June 2021, demand incentive for 2Ws was increased to INR 15,000/ kWh capped at 40% of the vehicle cost. In June 2023, this was again revised and reduced to INR 10,000 per kWh of battery from INR15,000 per kWh earlier and the maximum subsidy cap from 40% to 15%.

## **PLI Policy**

### **PLI for Automobile and Auto components**

The government approved the PLI Auto policy in 2021 with a budget outlay of INR 259.4 billion for a period of 5 years from fiscal 2023 to fiscal 2027. Total Incentive per entire group company is capped at INR 64.9 billion. The policy offers incentives for manufacturing of Advanced Automotive Technology (AAT) Products. This policy would further promote localization for AAT products and enable creation of Indigenous value chain. The policy consists of two components, incentivizing incremental sales of automobile and auto components named Champion OEM Incentive Scheme and Component Champion Incentive Scheme, respectively.

- **Champion OEM Incentive Scheme:** The Champion OEM Incentive scheme is a sales value linked scheme, applicable to Battery Electric Vehicles (BEV) and Hydrogen Fuel Cell Vehicles (FCEV) of all segments – 2 wheelers, 3-wheelers, passenger vehicles, commercial vehicles, Tractors, Automobiles meant for Military use, and any other AAT vehicle as prescribed by MHI. The incentive scheme targeted to address the cost disabilities related to Advanced Automotive Technology vehicles faced by OEMs. depending upon technical developments
- **Component Champion Incentive Scheme:** The Component Champion Incentive scheme is also a sales value linked scheme, applicable on pre-approved AAT components of all vehicles, CKD/SKD kits, Vehicle aggregates of 2-Wheelers, 3-Wheelers, passenger vehicles, commercial vehicles, tractors and any other AAT components prescribed by MHI.

A total of 115 companies had filed their application under the PLI scheme for Automobile and Auto Component Industry. As of September 2023, 18 applicants have been approved under this Champion OEM Incentive scheme. Approved list of applicants includes Tata Motors, Hyundai Motor India, Asok Leyland, Eicher Motors Limited, Kia India Private Limited, Suzuki Motor Gujarat Private Limited and Mahindra & Mahindra Ltd. to name a few. Further, 67 companies have secured PLI approval under the Component Champion Incentive Scheme. Few of the beneficiaries include Sona BLW Precision Forgings Limited, Hero MotoCorp, Tata Autocomp, Toyota Kirloskar, Motherson Sumi, Lucas-TVS and Bosch.

The PLI Scheme for Automobile and Auto Component was able to attract proposed investment of INR 748.5 billion against the target estimate of investment INR 425.0 billion over a period of five years. In December 2023, the PLI scheme was revised and is now applicable for a continuous period of five financial years, commencing from the fiscal year 2023-24. The disbursement of the incentive is scheduled for the subsequent financial year, April 1, 2024, to March 31, 2025.

### **PLI for Automotive and Advanced Chemistry cells (ACC)**

The Government of India on May 2021 approved the PLI policy on Advanced Chemistry Cell (ACC) Battery storage with a budget outlay of INR 181.0 billion for setting up battery manufacturing facilities with a total capacity of 50 Giga Watt Hour (GWh). This policy will strengthen the ecosystem for electric vehicles and battery storage in the country. The policy aims to enhance India's manufacturing capabilities of ACC by setting up of Giga scale ACC battery manufacturing facilities in India with emphasis on maximum domestic value addition. Under the scheme, the beneficiary OEM must achieve a domestic value addition of at least 25% and raise it to 60% within 5 years while also making the mandatory investment of INR 2.3 billion /GWh for committed capacity within 2 years. The incentives under the PLI scheme will be disbursed over a fixed period of five years, from the time of commissioning of the manufacturing facility.

In the first round of PLI awards (March 2022), three companies secured incentives: Ola Electric for 20 GWh lithium-ion cell manufacturing, Reliance New Energy for 5 GWh sodium-ion cell manufacturing, and Rajesh Exports for 5

GWh lithium-ion cells. These companies committed a combined investment of INR 270.0 billion for the scheme. In the next round of bidding, the government is unlikely to relax the criteria for localisation of cell manufacturing and the minimum bidding capacity is expected to remain at 5 GWh.

**Phased Manufacturing Program**

Under FAME II policy, PMP has been introduced with the aim of boosting domestic manufacturing of EVs, its assemblies/ sub-assemblies and parts/sub-parts thereby increasing the domestic value addition. The PMP is a government initiative to promote the local manufacturing of EVs in India. The PMP offers a scaled duty structure for imported EV parts. To provide further impetus to electric mobility and promote indigenous development of electric vehicles, the central government has reduced and rationalized basic custom duty on electric vehicles.

The following Phased Manufacturing Programme (PMP) is notified:

S No	Item		Current BCD	PMP	
				Proposed BCD	Proposed date
1	CBU	Bus (HS 8702) & Trucks (HS 8704)	25%	50%	April 2020 onwards
2	SKD	PV(HS 8703) & 3W (HS 8703/8704)	15%	30%	
		2W(HS 8711)		25%	
		Bus(HS 8702)		25%	
		Truck(HS 8702)		25%	
3	CKD	Bus(HS 8704) PV (HS 8703) 2W (HS 8711) 3W(HS 8703/8704)& Truck (HS 8704)	10%	15%	
4	Lithium-ion cells (HS 85076000) for use in the manufacture of Lithium-ion accumulator for electric vehicles		5%	15%	April 2021 onwards
5	Battery packs (HS 8507) for use in the manufacture of electric vehicles		5%	15%	
6	Parts for use in the manufacture of electric vehicles like <ul style="list-style-type: none"> <li>• AC or DC Charger</li> <li>• AC or DC Motor</li> <li>• AC or DC Motor Controller</li> <li>• Power Control Unit (Inverter, AC/DC Converter, Condenser)</li> <li>• Energy Monitor</li> <li>• Contactor</li> <li>• Brake System for recovering</li> <li>• Electric Compressor</li> </ul>		0%	15%	

Note: BCD: Basic Customs Duty, CBU: Completely Built Up, SKD: Semi Knocked Down, CKD: Completely Knocked Down  
Source: MHI, CRISIL MI&A

**Charging and EV Infrastructure policy**

The government is actively promoting charging infrastructure and battery swapping to support the EV ecosystem in India. The plan is to establish five lakh public charging stations (PCS) by 2025, by offering financial assistance to states and private companies. This initiative addresses the lack of charging infrastructure which is a key barrier to

EV adoption. Further through the revised guidelines and standards for charging infrastructure issued by Ministry of Power, the government aims to augment the station density/distance between two charging stations as below:-

- At least one charging station to be made available in a grid of three-by-three km. Further one charging station to be set up at every 25 km on both side of highway/roads.
- For long range and heavy duty EVs, there should be one fast charging station at every 100 km, one on each side of the road/ highway

Further, the policy was amended to cap the maximum tariff applicable to EV public charging. In addition to Battery Charging Stations (BCS), the government is also promoting Battery Swapping and released its draft Battery Swapping Policy in 2022. The policy is aimed at standardizing battery specifications and creating a battery swapping network by rollout of BSS in phased manner. This policy is targeted at supporting the adoption of battery-swapping for light electric power train vehicles (LEV) of category L, and E-Rickshaw/E-Cart. Also, the policy highlights the importance of re-use of end-of-first-life swappable batteries and recycling of end-of-life batteries.

### **Scheme to promote manufacturing of electric passenger cars in India**

In March 2024, MHI introduced scheme to promote India as a manufacturing hub for EVs and attract investments from global EV manufacturers. Through the scheme, automakers can import 8,000 EVs per year with a provision for maximum 40,000 for a period of five years provided that the company commits to invest in India for local manufacturing. The scheme would also enable automakers to carryover unused annual imports during the same five-year period. EVs of minimum CIF (Cost, Insurance & Freight) value of USD 35,000 or above are eligible for reduced custom duty of 15% for the same period. Also, the total number of EVs allowed for import would be determined by the total duty foregone or investment made, whichever is lower, subject to a maximum of INR 64.8 billion.

The scheme mandates a minimum investment of INR 41.5 billion (USD 500 million) in India with a timeline of 3 years for setting up EV manufacturing facilities and commence the production of EVs. Further, automakers are expected to achieve a certain level of domestic value addition (DVA) in the next 5 years. DVA should gradually increase reaching 25% by the third year and 50% by fifth year. For availing benefits under this scheme, certain eligibility conditions in terms of global turnover and global investment needs to be met. Global group revenue from automotive manufacturing should be minimum INR 100.0 billion based on the latest audited annual financial statements during the time of application. Also, global investment of company or the group companies in fixed assets (gross block) of INR 30.0 billion at the time of application. Thus, the scheme would further augment the development of domestic EV ecosystem thereby strengthening the EV manufacturing and domestic value chain along with attracting investments from leading EV players around the world.

### **Policies towards battery recycling**

Battery Waste Management Rules 2022 was implemented by the Government to promote the reuse and recycling of Advanced Chemistry Cell (ACC) batteries. This policy has set out the government's vision for battery recycling in India, including the provision of financial incentives, the development of standards, and raising of awareness about the importance of battery recycling. The traditional EV battery value chain includes raw material extraction, battery manufacturing followed by first life application and finally disposal. However, battery reuse and recycle will introduce alternate value chain where batteries are re-purposed for a second life application in the energy-storage segment. Finally, in the end-of-life stage where the battery no longer meets its performance requirements, it is recycled for extraction of metals like Co, Ni, Al, Cu, etc. The introduction of reuse and recycle policy of ACC batteries would help to reduce the battery prices further and improve availability of raw materials in the future.

A policy on Extended Producer Responsibility (EPR) concept has been introduced, where the producers (including importers) of batteries are responsible for collection and recycling/refurbishment of end-of-life batteries and use of recovered materials into new batteries. EPR mandates that all end-of-life batteries must be collected and sent for recycling/refurbishment and prohibits disposal in landfills. To meet the EPR obligations, battery producers may engage themselves or authorise any other entity for collection, recycling, or refurbishment of batteries. Further, there are targets for recovery of the battery materials - 70% by fiscal 2025, then 80% by fiscal 2026, and 90% from fiscal 2027 onwards. Producers will also have to include 5% of recycled material in the total dry weight of a cell by fiscal 2028, 10% by fiscal 2029, 15% by fiscal 2030, and expanding to 20% by fiscal 2031.

The battery swapping policy also emphasizes on the re-use and recycling of swappable batteries. To promote the re-use of swapped batteries after their end-of-life in automotive applications, energy operators or battery swapping operators will be encouraged to develop a power bank using these batteries to store and use energy for EV charging or other stationary applications.

## **Scrappage Policy**

The scrappage policy envisages phasing out of old passenger and commercial vehicles. The policy aims to curb air pollution, improve road, passenger & vehicle safety, enhance fuel efficiency, improve auto sector sales and boost availability of low cost materials for automotive, steel and electronics industry.

The process kicked off in May 2016, with the Ministry of Road Transport and Highways (MoRTH) issuing a concept paper outlining the Voluntary Vehicle Fleet Modernisation Programme to encourage scrapping of vehicles manufactured before March 31, 2005. The policy was declared during the 2021-22 union budget.

The policy requires passenger vehicles older than 20 years and commercial vehicles older than 15 years to pass a fitness test to continue plying on the road. The end-of-life vehicles, which do not pass the fitness test will lose the vehicle registration and will be scrapped. As per the policy, automated testing stations ATS and vehicle scrappage centres will be established in order to support the initiative.

The policy further introduces incentives to scrap the vehicles and offers discounts against the scrappage certificate issued by the scrappage centres. The incentives proposed include a scrap value to be given by the scrappage centre (4-6% of ex showroom price of the new vehicle), road tax rebate by the state governments, rebate in registration fees and discounts from OEMs while purchasing the new vehicle against the scrappage certificate.

The policy also introduces few dis-incentives for using the old vehicles including increased fees for fitness test and issuance of fitness certificate for commercial vehicles as well as increased re registration fees for private vehicles above 15 years of age. After 20 years of age, private vehicles will be de registered.

As per the policy, mandatory fitness testing for private vehicles, is proposed to commence from June 2024 in a phased manner.

## **EV incentives offered at state level**

Many state governments have come forward and are providing incentives on purchase of an electric vehicles, wherein the benefit provided is in addition to FAME-2 policy benefits.

- Maharashtra is providing an incentive of INR. 5,000/kWh, subject to a maximum of INR 1.5 lakh/vehicle for the first 10,000 electric cars. The policy also provides 100% exemption on road tax until 2025. An additional early-bird discount of INR 5,000/kWh (a maximum of INR 1 lakh, if purchased before the end of fiscal 2022) as well.



- Gujarat has announced an EV policy that would provide purchase incentives of INR 10,000/kWh, with vehicles having minimum 15 kWh battery and maximum ex-factory cost of INR15 lakhs. The policy will remain valid until 2025.
- Bihar is providing an incentive of INR. 10,000/kWh subject to a maximum of INR 1.5 lakh. The policy also provides 100% exemption on road tax until 2024.
- Odisha has announced a subsidy of INR 10,000/- per kWh for four-wheelers with subsidy capped at INR 1.5 lakh/per vehicle. The policy which was initially launched in 2021 was revised in April 2023.
- Meghalaya is providing an incentive of INR 4,000/kWh for the first 2,500 electric cars. The policy also provides 100% exemption on road tax until 2026.
- The Telangana government is also providing a 100% exemption of road tax and registration fee on purchase of first 5,000 electric cars until 2025.
- The Tamil Nadu government is providing incentive of INR 10,000 /kWh for commercial electric cars with incentives capped at INR 1.5 lakh per vehicle and maximum 3,000 of vehicles incentivised per year.
- Haryana government is providing direct purchase incentive of 15% of the ex- showroom price of vehicle maximum up to INR 6.0 lakh on purchase of EV in state for the first 1,000 units. This is applicable for the vehicles with price ranging from INR 15.00 lakh to 40.00 lakh.

## Barriers to adoption of electric vehicles and challenges in the Indian EV ecosystem

The government is actively pushing for EVs, and in order to drive adoption, various measures are being taken like building public EV charging infrastructure, incentives for players investing in R&D to develop EV components, and alternate chemistry cells. However, by far the biggest challenge faced by the EV industry is the dependencies in the EV manufacturing supply chain. The industry continues to rely on imports of critical parts including motors and batteries. The current domestic supply chain still needs to advance before it becomes 100% indigenous. Some of the key challenges to the large scale adoption of EVs are:

- **High acquisition cost:** Despite the direct and in-direct incentives offered by the government, the acquisition cost for an EV is 10-20% higher than the ICE equivalent.
- **Limited charging infrastructure:** One of the major hurdles in adoption of EVs in India is the unavailability and slow development public charging infrastructure. Currently India has limited number of chargers in national highways, state highways and public places. This poses a threat to mass scale adoption of EVs in the country.
- **Range anxiety:** Addressing range anxiety plays pivotal role in expediting the widespread adoption of EVs. EVs are yet to receive the consumer trust in terms of range and hassle-free operation. EV drivers need the assurance that they can conveniently find charging points on their route and trust in the reliability of those chargers. Further, Indian climatic conditions, terrain and driving patterns of consumers impact the range of a vehicle. Hence the actual operable range is generally lower than the promised range as per ideal conditions leading to range anxiety.
- **Dependency on raw material imports for battery:** Metals like lithium, magnesium, cobalt, nickel, etc. are needed for manufacturing EV batteries. Countries deficient in these resources need to depend on imports for manufacturing EVs. Imports increase the cost of procurement of raw materials and hence manufacturing of EVs. Also, any unprecedented global event could further elevate the raw material prices along with disrupting the entire supply chain for the same. Currently, India is highly dependent on imports for Lithium or Lithium-ion cells and the dependency on imports along with the lack of robust supply chain

network threatens the current supply of the Lithium. While India recently discovered Lithium reserves in the country, commercialization of the same might take time, thereby making India dependent on imports for the medium term.

- **Import of EV components:** While many EV suppliers have reached domestic content requirement as mentioned by the government, there are still a lot of component parts that need to be imported. For example, permanent magnets in electric motors, semiconductor chips, electronic child parts, and printed circuit boards (PCBs). Capability of Indian OEMs to manufacture and design these complex systems is currently limited owing to limited technical expertise, less availability of raw materials and intense investment requirement.
- **Resale value remains a concern:** The resale market for EVs is still developing, and there is limited data and history to guide buyers and sellers. This lack of information can make it difficult to determine the value of a used EV, leading to uncertainty and potentially lower resale prices. Several factors impacts the resale price of EVs, including market demand, vehicle age, battery health and changing technology.

## Charging Infrastructure Landscape




EV charging station has single or multiple charge points that supplies electrical power necessary to charge a vehicle. Electric vehicle supply equipment (EVSE) is the basic unit of a charging station where it accesses power from electricity grid, utilizes a control system and connectors to charge EVs. EVSE manufacturers meet the need for EV chargers by supplying to OEMs with charging equipment for retail EV consumers and to charge point operators who put up charging stations in public places. EVSE manufacturers are also partnering with EV fleet operators to develop the most appropriate charging solutions for their fleet.

The charging levels for EVs in India are similar to global standards. Speed of charging for EV chargers are defined by the amount of energy delivered to the vehicle's battery per unit of time. There are three levels of chargers based on speed of charging:

- **Level 1 Charging:** L1 charging is a slow type of charging for EVs. L1 chargers plug directly into a standard 230-volt AC outlet. The average power output of an L1 charger is <3.3 kW. L1 charging primarily occurs in residential settings, and there are very few L1 chargers built for public use.
- **Level 2 Charging:** L2 charging is the most prevalent type of charger. L2 chargers operate at 208-240 volts and the output is anywhere from 7 kW to 22 kW of AC power. L2 charging provides a faster charging speed compared to L1, allowing for quicker replenishment of the EV's battery. L2 chargers can be found in residential townships as an amenity for occupants and visitors, and at public locations such as parking garages, OMC retail outlets, grocery stores, malls, hotels, and workplaces.
- **Level 3 Charging:** L3 charging, also known as DC fast charging or rapid charging, is the fastest charging option for EVs. L3 chargers operate at higher voltages and currents, allowing significantly faster charging times. It can provide a substantial amount of range in a short period, typically ranging from 30 minutes to an hour for an 80% charge. L3 chargers are commonly found at public charging stations along highways, rest areas, depots, and other high-traffic locations.

EV charging infrastructure for PVs can be classified into residential, public charging station (PCS), and fleet charging based on its ownership and operation.

**Electric vehicle chargers - business models based on end-use segment**

Charging Scenarios / users	Charging station Images	Products /Solutions
Residential & Retail segment		Wall mount charger offered by OEMs along with the purchase of vehicle. Typically, in the range of 7.2 to 11 KW AC charger which requires a 3-phase residential connection.
Charging stations installed in key areas for public as a supplement to residential charging (PCS)		Charging stations are operated by PSUs, Private players, OMCs and network operators. The power is supplied either by discoms or captive power arrangements.
Fleet operators who offer e-fleet for urban mobility solutions.		Fleet operators are urban mobility service providers who offer electric car riding platforms. Currently there are very few start-ups in this space, most of which have captive charging stations where bulk of fleet can be charged at once.

*Note: EV charging infrastructure considered for PVs under PCS include Bharat DC-001, CCS-II, CHAdeMo and Type-II chargers*

*Source: CRISIL MI&A*

**Current expanse of India’s Charging Infrastructure**

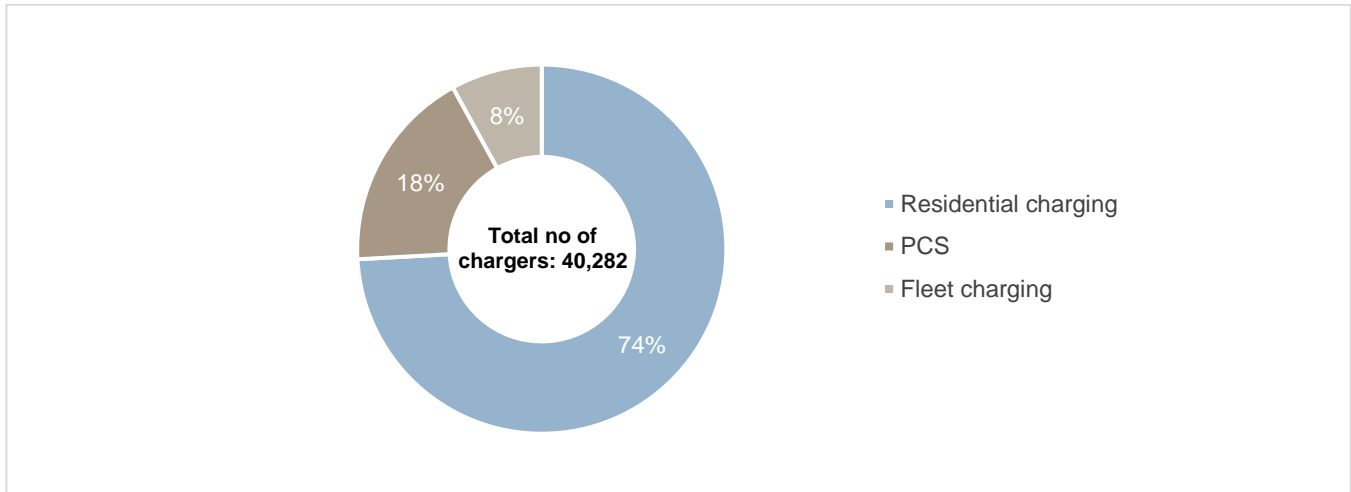
India's domestic passenger vehicle EV subsegment retails grew 45x during fiscal 2019 to fiscal 2024 period with penetration rising from 0.1% in fiscal 2019 to 2.3% in fiscal 2024.

To support the rising electric vehicle population, there is a growing focus on expanding the supporting charging infrastructure network across the country. Public charging stations are being installed in cities, highways, and commercial areas, making it more convenient for EV owners to charge their vehicles. There is an increasing adoption of fast charging technologies, such as DC fast charging, to reduce charging times and provide greater convenience to EV users.

Setting up charging stations demands a considerable quantum of investment, which includes capital expenditure, grid connection fees, and operations and maintenance expenditures. Another issue for charging infrastructure development is assuring charger compatibility. As a result, in the charging infra segment capital availability as well as technical skill is required.

To address this issue, the leading EV charger manufacturers in India are currently engaged in manufacturing a diverse product portfolio of AC and DC chargers.

**Business segment wise chargers' share: Fiscal 2023**



Note: Actual numbers for full year fiscal 2024 are currently not available

Source: Bureau of Energy Efficiency (BEE), CRISIL MI&A

The overall number of chargers for PVs is estimated at more than 40,000, with the residential category leading by far with a nearly 74% share in terms of volume. According to data from the Bureau of Energy Efficiency, a total of 12,146 Public Charging Stations (“PCS”) were active in the country as of January 2024. This is a 19x increase over the 650 charging outlets in 2019.

**Technical challenges for EV Infrastructure development**

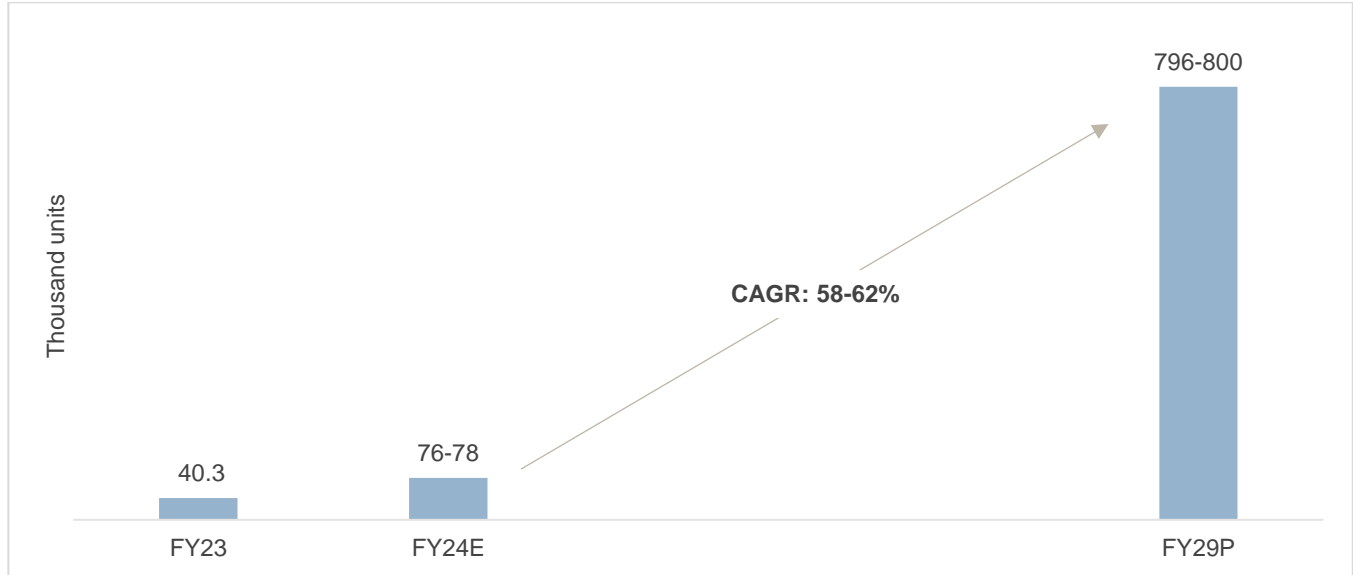
- **Performance requirements:** 95%+ uptime (expected by customers and also for efficient utilization), at least 95% power conversion efficiency, working temperature range of -10 to 55 degrees and wide output voltage in DC Chargers of 200V to 1000V is required to ensure compatibility across vehicle ranges. These criteria aid in the reduction of energy expenses and the achievement of high uptime.
- **Grid Infrastructure Compatibility:** EV chargers must be compatible with current and future grid utilities, such as smart grid systems and V2G technologies. Making room for such improvements in the future is critical for making the product future proof. For example, the upcoming ISO15118 standard defines a new type of communication between the charger system, vehicle, and smart grid.
- **Partnerships and Alliances:** For charging infrastructure to work efficiently, there has to be a seamless coordination of the hardware with the EV ecosystem of central management systems of various CPO’s, all existing and new EV models plying on road and with grid where there is functionality of grid load management. EV chargers that can integrated with maximum of such ecosystem players will have more advantage in the market.
- **Service setup:** Established OEMs have pan India sales and therefore, such OEM’s and Charge Point Operators would require EV Charger manufacturers to have national presence. Companies having national service presence would have an advantage over others.

**Outlook for charging infrastructure**

The EV charger demand in India witnessed a significant increase in fiscal 2022 and fiscal 2023, owing to increasing EV penetration. The demand has accelerated further in the fiscal 2024, with EV sales crossing 88,000 units, compared to 47,000 during fiscal year 2023. Of the 12,146 public charging stations, close to 60% stations have been provided by private players, a few of the major ones being Delta Electronics, ABB, Exicom Tele-Systems

Limited, and Mass-Tech. Tata Power, JioBP, ChargeZone, Statiq and Magenta are some of the leading charge point operators of EV charging stations in the country.

**Market size of overall charging infrastructure: Fiscal 2024- fiscal 2029**



Source: CRISIL MI&A

With respect to public sector units, Convergence Energy Services Limited which is a subsidiary of Energy Efficiency Services Limited, NTPC Vidyut Vyapar Nigam Ltd, OMCs such as Indian Oil Corporation Limited, Hindustan Petroleum Corporation Limited, Bharat Petroleum Corporation Limited, State boards such as Kerala State Electricity Board, Bangalore Electricity Supply Company Limited etc are some of the leading players that have floated tenders/set up stations or offering space for retail outlets.

This diverse market offers AC, DC, and fast charging stations to cater to different EV needs. Further, real estate companies such as Lodha Group, MyGate, and Rustomjee Group, collaborated with charge point Operators to deploy EV charging solutions in their new and existing properties.

Residential charging with a wall mount charger is a convenient and cost effective way to charge electric cars at home. EV owners can plug in their vehicles and leave them to charge overnight, ensuring that they are fully charged and ready to go in the morning. Wall mount chargers may come with additional features such as Wi-Fi connectivity, mobile app control, and scheduling options. These features can help optimize charging and provide greater convenience for EV owners

**EV models in India and charger options**

OEM	EV Models	Portable Charger	Wall mount charger	Wall mount Charger rating
Tata Motors	Nexon Max	✓	✓	7.4 Kw AC
	Nexon Prime	✓	✗	7.4 Kw AC
	Tiago XT	✓	✗	7.4 Kw AC
	Tiago XZ+	✓	✓	7.4 Kw AC
	Tigor (All variants)	✓	✗	-
	Punch	✓	✓	7.4 Kw AC
MG	ZS EV	✓	✓	7.4 Kw AC

OEM	EV Models	Portable Charger	Wall mount charger	Wall mount Charger rating
	Comet	✓	✗	7.4 Kw AC
Hyundai Motor India	Ioniq5	✓	✓	11 Kw AC
BYD	Atto 3	✓	✓	7.4 Kw AC
	e6	✓	✓	7.4 Kw AC
M&M	XUV400	✓	✓	7.4 Kw AC
	e-verito	✓	✗	-
	e2o	✓	✗	-
	eKUV100	✓	✗	-

Source: Company websites, CRISIL MI&A

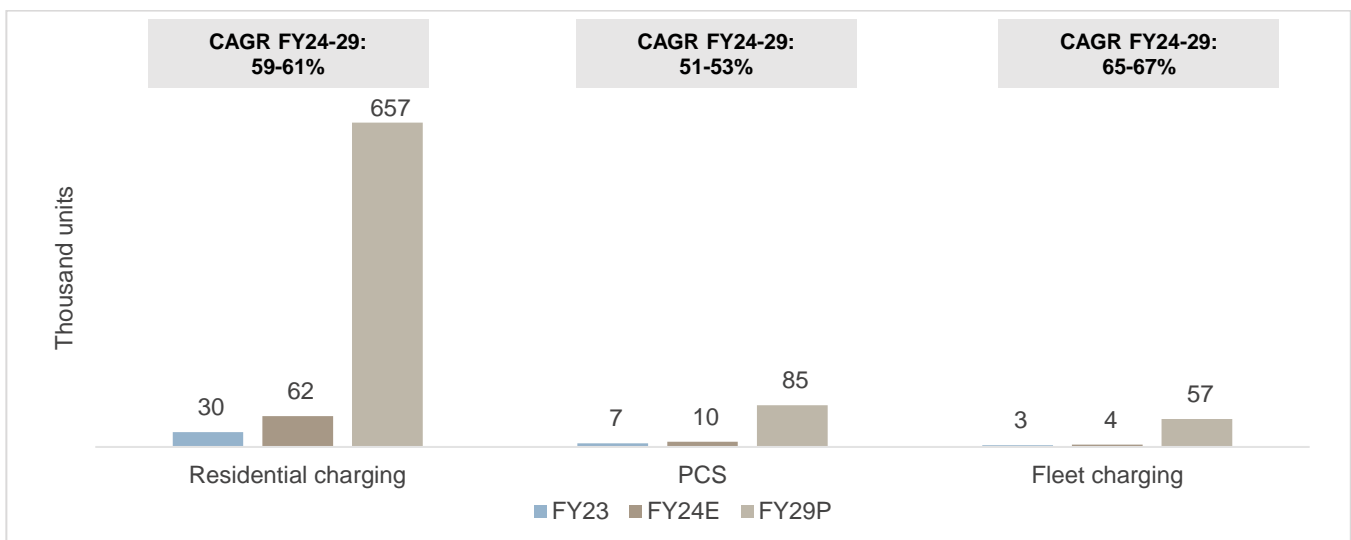
The Union Minister of Heavy Industries sanctioned INR 8.0 billion in March 2023 under FAME India Scheme Phase II to the PSU Oil Marketing Companies (OMCs) – Indian Oil (IOCL), Bharat Petroleum (BPCL), and Hindustan Petroleum (HPCL) – for setting up 7432 public fast charging stations across the country. The OMCs have sufficient land in the premises of their Retail Outlets which can be utilized for the setting up of the charging stations.

**OMC wise proposed Chargers to be installed:**

OMC	Chargers of 50/60 KW capacity	Chargers of 100/120 KW capacity	Total
IOCL	2,707	731	3,438
BPCL	1,739	595	2,334
HPCL	1,216	444	1,660
Total	5,662	1,770	7,432

Source: CRISIL MI&A

**Segment wise share in electric vehicle charging infrastructure in Fiscal 2024 – Fiscal 2029**



Source: CRISIL MI&A

With the commercial fleet operator’s population expected to go up by 50% (of total commercial fleets), coupled with an increase in the share of fast chargers, the market for fleet charging is expected to grow at a faster pace with

CAGR of 65-67% between the fiscal 2024 and 2029. Market for residential chargers is expected to grow at a CAGR of 59-61% between the fiscal 2024 and 2029 due to the growing demand of wall mount chargers that could support charging at home. PCS is expected to grow at 51-53% CAGR between fiscal 2024 and 2029 with rising investments from OMCs.

## Recent trends and developments

Leading Charge Point Operators and EVSE manufacturers in India are investing in the development of EV charging infrastructure to address the lack of charging infrastructure, which is one of the major challenges to the widespread adoption of EVs in India. Charging infrastructure is a critical component in the value chain of the EV eco system, and as such, they are strategizing their investments and partnerships at the present time.

- **Tata Power:** Tata Power is one of the leading players in India's charging infrastructure market. The company has partnered with HPCL (Hindustan Petroleum Corporation Limited) to construct EV charging stations at HPCL's retail shops. They also partnered with IOCL -Indian Oil Corporation Limited to install 500+ EV charging points across multiple IOCL outlets. Tata Power's EV charging network spans over 475 cities offering more than 73,000 home chargers, 5,300 public, semi-public & fleet charging points and 690+ bus charging stations.
- **Jio-BP:** Jio-BP, a Reliance Industries Limited and BP joint venture, is developing its EV charging infrastructure across India. They have added more than 1,000+ public charge points in their network during fiscal 2023, taking total strength to 1,400+ across 8 cities and major cities. In March 2024, the company announced partnership with House of Hiranandani, a leading real estate developed to set up EV charging infrastructure in their properties across Chennai, Mumbai, Hyderabad and Bengaluru. The company is also setting-up charging infrastructure for Citroen brand across their dealership and workshops. Also in December 2021, company signed MoU with Mahindra & Mahindra to set-up charging stations in the country.
- **Fortum:** Fortum, which forayed into India's EV charging infrastructure space in 2017, has rebranded its 'Fortum Charge & Drive' EV charging business. The company is switching to a new brand identity – Glida and has over 450 charging points in key cities across 15 states. In March 2024, company partnered with Statiq with an aim to enhance the nationwide network for EV charging infrastructure. With this entire Glida charging network would be now accessible though Statiq App, enabling interoperability between them.
- **Zeon Charging:** Zeon Charging, a Tamil Nadu-based electric charging infrastructure company, will invest INR 2.5 billion in the installation of 400 EV chargers across the state according to a MoU signed in 2021. This five-year investment started in 2021, is specifically for setting up chargers in Tamil Nadu, wherein they have identified spots and will add these chargers at 70-100 locations within the next two years. In addition, Zeon will have 300 locations around the state, both in cities and along roads, during the next five years. In December 2023, MG Motor India signed MoU with Zeon that will allow MG users to access more than 300 charging stations under Zeon.
- **ChargeZone:** ChargeZone, a tech-driven EV charging infrastructure company in India, has raised USD54 million in Series A1 funding round led by global impact investment management firm BlueOrchard Finance. The company plans to raise an additional USD75-100 million in equity as part of Series A2 during 2023-2024. The investment will be deployed to accelerate the next phase of expansion of its retail and public EV charging network across India, including State and National Highways.

Apart from CPOs and EVSE manufacturers, PV OEMs are actively pushing for development of EV charging infrastructure. OEMs are partnering with EV infrastructure players for setting-up EV charging stations across their dealerships, highways, residential and public places. While most of the OEMs are offering EV chargers along with

the purchase of an EV vehicle for residential charging purposes, few OEM have developed initiatives for expanding the public/captive charging infrastructure:

- Tata Passenger Electric Mobility Ltd. (TPEM), the EV arm of Tata Motors has made significant partnerships with EV infrastructure players. In April 2024, company partnered with Shell, aimed at offering superior charging experiences for EV owners across India. The two companies are planning to introduce convenient payment systems and loyalty programs for TPEM customers. In March 2024, the company signed an MoU with HPCL with an aim to setup 5,000 electric vehicle charging stations by December 2024. Further in December 2023, TPEM collaborated with BPCL with an aim to setup 7,000 electric vehicle charging stations in one year. These collaborations will leverage TPEM's insights from EV fleets on-road and widespread fuel stations network of these OMCs to set-up charging stations at key locations. In December 2023, TPEM signed a MoU with leading CPOs Chargezone, Glida, Statiq, and Zeon, to develop charging infrastructure in the country. These CPOs have a combined network of nearly 2,000 charging points across key cities and plans to roll out over 10,000 additional charging points within the next 12-15 months through this collaboration.
- In May 2024, MG Motor has signed an MoU with Adani TotalEnergies E-Mobility Ltd (ATEL) to set-up 60 kW DC fast chargers at upcoming MG Motor dealerships. ATEL will supply, manage, install and maintain the charging infrastructure under this partnership. Furthermore, both companies plan to integrate other public charging stations into the app to improve the visibility of the existing charging network. In February 2024, MG Motor announced collaboration with BatX Energies for off-grid solar-EV charging station powered by repurposed MG EV batteries. The second-life battery storage system was developed by BatX Energies in partnership with MG to provide a second life to the used batteries of MG EVs. Further MG introduced MG Charge initiative in 2022 with an aim of deploying 1,000 charging points in 1,000 days within residential communities and apartments across India. As of April 2024, company has set up 500 chargers in 500 days under the Charge initiative. In April 2024, MG Motor India has signed an agreement with Epsilon Group for electric vehicle (EV) charging solutions and battery recycling. Power EV, an Epsilon group arm will provide customized charging solutions for MG EVs. In December 2023, the company signed an MoU with Zeon Electric to scale up its current EV charging infrastructure. In November 2023, MG partnered with Charge Zone with an aim to jointly establish charging stations across key locations, including highways, cities, and MG dealerships. MG has also partnered with BPCL, Tata Power and Jio-BP for expanding EV charging infrastructure in India. MG and BPCL launched 12 DC fast charging stations for EVs on the Delhi-Jalandhar corridor in February 2023.
- In May 2023, Hyundai Motor India, signed MoA with Shell to install 60kW DC fast chargers at 36 EV dealerships in India. The company has also launched high speed public EV charging network across key highways and cities in the country. The public charging network of fast chargers is located across cities like Mumbai, Chennai, Pune, Ahmedabad, Hyderabad, Gurugram, and Bangalore, as well as on major highway routes like Hyderabad-Vijayawada, Mumbai-Surat, and Mumbai-Nashik. The power rating of these chargers ranges from 30kW to 150kW. With this, Hyundai Motor India is among the first few OEMs in the country to set up EV fast charging stations at public locations in key cities and highways. Further, through Hyundai Charger Management System on the myHyundai App, EV owners can easily locate, navigate, pre-book and monitor the charging status remotely. Hyundai Motor India is planning to also add about 10 more DC fast charging stations at new locations in CY2024. They have also signed an agreement with the Government of Tamil Nadu to install 100 charging stations by CY2027.
- In March 2024, Mahindra & Mahindra signed an MoU with ATEL for setting-up EV infrastructure across the country. Also, the partnership will offer access for Mahindra & Mahindra EV owners to the ATEL charging network. Further, Mahindra & Mahindra has partnered with Jio-bp, Statiq, and Charge Zone to

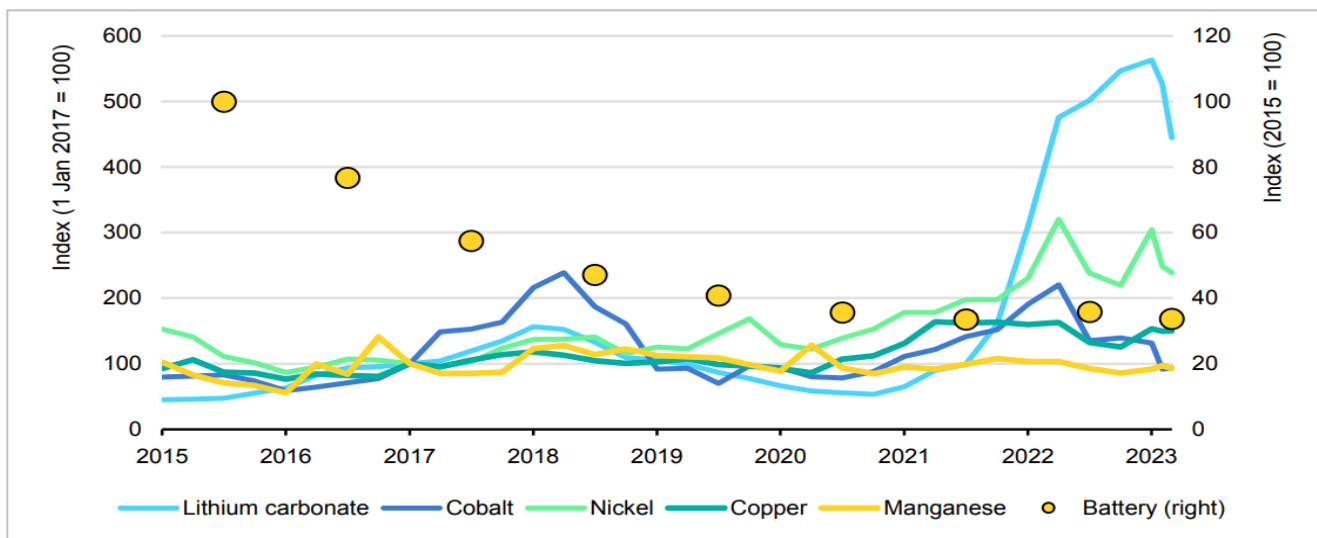


provide EV owners from Mahindra & Mahindra accessibility to these chargers and expand charging infrastructure in the country.

## Battery Pack Price Glide Path and Drivers

The prices of lithium-ion batteries have been declining steadily in recent years. This is due to several factors, including increased demand, technological advancements, and economies of scale. Compared to 2022, The US National Renewable Energy Laboratory (“NREL”) expects the costs of the batteries to fall by 47%, 32% and 16% by 2030 in its low, mid, and high-cost projections, respectively. By 2050, the costs could fall by 67%, 51% and 21% in the three projections, respectively.

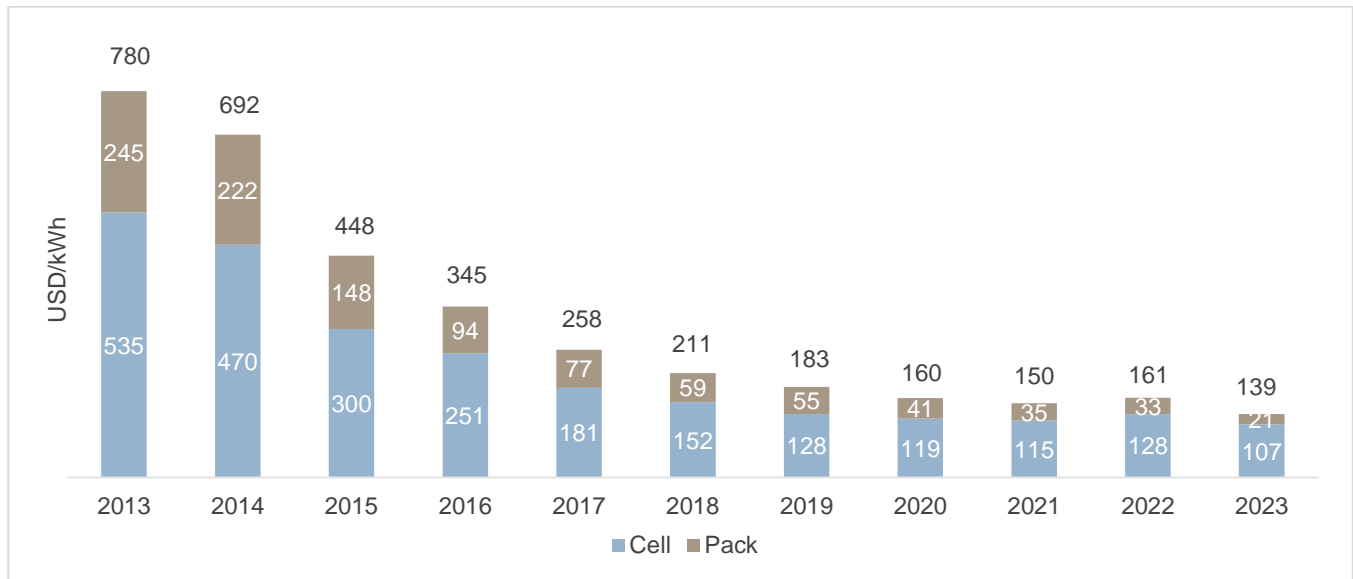
### Price of selected battery raw materials and lithium-ion batteries, 2015-2023



Notes: Data until March 2023. Lithium-ion battery prices (including the pack and cell) represent the global volume-weighted average across all sectors. Nickel prices are based on the London Metal Exchange, used here as a proxy for global pricing, although most nickel trade takes place through direct contracts between producers and consumers. The 2023 battery price value is based on cost estimates for NMC 622.  
Source: IEA analysis based on material price data by S&P, 2022 Lithium-Ion Battery Price Survey by BNEF and Battery Costs Drop as Lithium Prices in China Fall by BNEF. IEA. CC BY 4.0

According to BNEF, the price of lithium-ion battery packs has dropped 14% to a record low of USD139/kWh in 2023 after an unprecedented price increase in 2022. This was due to the fall in prices of raw material and components as production capacity improved across the battery value chain. Battery prices vary across different regions, with China having the lowest prices on average, and the rest of the Asia Pacific region having the highest. This price difference is because more than 60% of battery cells and almost 80% of cathodes are manufactured in China. Battery packs in the US and Europe were 11% and 20% higher, respectively. Higher prices are due to the higher production cost, undeveloped market, lower volumes, and the diverse range of applications. Over the last few years, the cell-to-pack cost ratio has risen from the traditional 70:30 split, and the cell cost now contributes to more than 75% of the pack cost. This is due to improved changes in pack design, along with introduction of cell-to-pack approaches, which have helped reduce costs.

**Volume weighted average lithium-ion battery pack and cell price (2013-2023)**



Notes: Historical prices have been updated to reflect real 2023 dollars. Weighted average value includes 303 data points from passenger cars, buses, commercial vehicles, and stationary storage.

Source: Bloomberg NEF

BNEF expects average battery pack prices to drop again in 2024, reaching USD133/kWh due to decreasing raw material costs for metals like lithium, nickel, and cobalt. In the medium to long term, advancing technological innovations along with manufacturing improvement should further drive decline in battery pack prices, to USD113/kWh in 2025 and USD80/kWh in 2030. Manufacturing process improvements, continued R&D investment, and capacity expansion across the battery value chain would help improve battery technology and reduce costs over the next decade. . With lowering cost of battery, vehicle prices are expected to decrease thereby reducing the acquisition cost and operational costs of an EV. This would create a positive sentiment among EV buyers and drive the EV adoption further.

**Cost of Ownership Comparison – EV vs ICE**

As of fiscal 2024, the total cost of ownership (TCO) of an EV for a personal vehicle was 11% higher than that of a petrol vehicle and 6% higher than that of a diesel vehicle for 10,000 km. This is expected to be 3% lower versus petrol and 8% lower versus diesel in fiscal 2029 for the same distance, highlighting the financial viability of electric PVs for personal use application. Additionally, the TCO per km of an e-PV become even more economical without the subsidies by fiscal 2029 owing the lowering battery cost and improving technology.

**TCO for private vehicles in fiscal 2024 for four-year ownership and annual running of 12,000 km**

Annual running	6,000 km	10,000 km	15,000 km	18,000 km	20,000 km
EV vs petrol	19% higher cost than petrol	11% higher cost than petrol	4% higher cost than petrol	0.3% higher cost than petrol	2% lower cost than petrol
EV vs diesel	10% higher cost than diesel	6% higher cost than diesel	2% higher cost than diesel	0.2% higher cost than diesel	1% lower cost than diesel

**TCO for private vehicles in fiscal 2029 for four-year ownership and annual running of 12,000 km**

Annual running	6,000 km	10,000 km	15,000 km	18,000 km	20,000 km
EV vs petrol	4% higher cost than petrol	3% lower cost than petrol	10% lower cost than petrol	13% lower cost than petrol	15% lower cost than petrol
EV vs diesel	4% lower cost than diesel	8% lower cost than diesel	12% lower cost than diesel	14% lower cost than diesel	15% lower cost than diesel

*Note: Nexon EV and Nexon Petrol/Diesel variants have been considered for comparison*

*Source: CRISIL MI&A*

The FAME-2 subsidy is only offered for commercial use and no benefits are provided for personal-car owners. The decreasing battery cost due to the localisation under PMP and PLI is expected to lower the cost of an EV and will help maintain the competitiveness of EVs against diesel and petrol variants in the long run.

**OEM Electrification Initiatives**

Below are some of the major initiatives undertaken by OEMs to enhance their electrification capabilities:

**Maruti Suzuki**

- The company plans to introduce 6 EVs by fiscal 2031. These EVs are to be manufactured in Suzuki Motor Gujarat, for which the production facility is being set-up.
- To expand its EV production, Suzuki Motor corporation plans to invest INR 32.0 billion in Suzuki Motor Gujarat to add a new fourth production line which can produce 2.5 lakh units per year; For EV battery manufacturing, SMC is setting-up a facility in Gujarat.
- The Parent company Suzuki Motor Corp has announced plans to invest JPY 4.5 trillion (INR 2.8 trillion) globally on its electrification drive by 2029-30.
- In August 2022, Suzuki Motor Gujarat announced an investment of INR 73.0 billion for a battery manufacturing plant in Hansalpur, Gujarat for both the local market and exports. Suzuki Motor Corporation had earlier entered in an MoU with the Gujarat government to spend around INR 104.4 billion for local production of battery electric vehicles/batteries.
- Battery manufacturing to be done by Toshiba Denso Suzuki Lithium-Ion Battery Gujarat Private Limited (TDSG) and supply Lithium-ion batteries to Maruti Suzuki and Suzuki Motor Gujarat. They plan to manufacture 30 million cells per year in 2025 with production capacity of more than 1GWh.
- The Company commenced ELV recycling through its joint venture Company–Maruti Suzuki Toyotsu India Private Limited (MSTI), Noida in fiscal 2022.
- Through collaboration with a domestic recycler, company recycled 12.8 tonnes of batteries. Additionally, the company is ensuring compliance with the latest Battery Waste Management Rules of 2022 and is exploring technologies for repurposing batteries once their primary useful life has been completed.

**Hyundai Motor India**

- Hyundai Motor India introduced the country’s first electric mass market SUV, the Kona Electric, in 2019, followed by Ioniq 5 in 2023. The company developed dedicated EV platform E-GMP and adapted platforms for battery electric vehicles in India. They plan to further launch 4 new EVs in India.
- Hyundai Motor India has signed an agreement with the government of Tamil Nadu to invest INR 200.0 billion over the next decade (2023 to 2032).

- The investment will be done to introduce new models of EVs, increase EV production capacity at their Chennai plant set up a battery packing assembly unit and install charging stations along major highways and in key cities. The Chennai manufacturing plant was one of the largest single location passenger vehicle manufacturing plants in terms of production capacity for CY2023.
- The company has also invested in a battery assembly plant in Chennai, Tamil Nadu, which will have a capacity of around 75,000 battery packs annually in the first phase by 2025.
- In 2024, an additional commitment of INR 61.8 billion was declared by the company including INR 1 billion towards the 'Hydrogen Valley Innovation Hub' in collaboration with IIT Madras.
- Additionally, the company completed the acquisition of General Motors' Talegaon plant and has signed an MoU with the State of Maharashtra for an investment of INR 60.0 billion for infrastructure upgradation and capacity expansion at the Talegaon plant.
- Hyundai Motor India has partnered with *Attero Recycling*, a company that handles the recycling of Li-ion batteries for up to 90% of automotive OEMs in India. Presently, *Attero* has the capability to recycle 3,500 tonnes of batteries annually, with plans to increase this capacity to 6,000 tonnes per year. A new facility in Telangana is also being set up, aiming to elevate the capacity to 12,000 to 13,000 tonnes.
- In 2024, Hyundai Motor Company and Kia Corporation signed a Memorandum of Understanding with Exide Energy Solutions for a strategic cooperation to aid battery localisation for their upcoming electric vehicles. The partnership will enable Hyundai Motor India and Kia to equip future EVs in India with locally produced batteries, especially LFP (Lithium-Iron-Phosphate) from Exide Energy. This strategic move marks the beginning of Hyundai Motor India and Kia's expansion in India's battery development and production market.
- Sterling Tools Limited, has signed a MoU with South Korea's, Yongin Electronics Co., Ltd, a major supplier of components to the Hyundai Kia Motor Group for an EV component production facility. Sterling Tools Limited will set up a new greenfield manufacturing facility in India to manufacture EV components. The MoU aligns with the Atma Nirbhar Bharat vision of the Indian government where Yongin Electronics Co., Ltd will offer its technological expertise in the EV sector enabling Sterling Tools to strengthen their EV component portfolio.

## Tata Motors

- Tata Motors introduced their first EV, the Tigor EV, in 2019, followed by Nexon EV in 2019, Tiago EV in 2022 and Punch EV in 2024. Punch EV was the first product based on their advanced Pure EV architecture [acti.ev](https://www.tatamotors.com/acti.ev).
- Tata Motors Ltd (TML) and TPG Rise Climate also entered an agreement wherein TPG Rise Climate along with its co-investor ADQ, shall invest in a subsidiary of Tata Motors (Tata Passenger Electric Mobility Limited which was formed in 2021 for the electric vehicle subsegment)
- The new company shall leverage all existing investments and capabilities of Tata Motors Ltd and will channelize the future investments into electric vehicles, dedicated BEV platforms, advanced automotive technologies and catalyze investments in charging infrastructure and battery technologies.
- The company plans to offer EVs in different body styles, at different price points in the medium term with launch of Harrier EV, Curvv EV in fiscal 2025 and launch of Sierra, Avinya subsequently. They plan to launch a total of 6-7 EVs by fiscal 2026.
- TPTEM plans to invest USD 2 billion over the next 5 years in products, platforms, drivetrains dedicated EV manufacturing, charging infrastructure and advanced technologies.

- Additionally, over the next five years, in association with Tata Power Ltd, the company plans to create a widespread charging infrastructure to facilitate rapid EV adoption in India.
- Together with Tata AutoComp, the company has localized crucial EV powertrain components. The company plans to further localize components like battery packs, motors, and combo boxes.
- The Company has also planned an investment of INR 130.0 billion to set up lithium-ion cell manufacturing giga-factory in Gujarat. In the first phase, the plant will have a production capacity of 20 GWh.
- Tata Motors has also partnered with battery recyclers in India, such as *Attero Recycling* and *RecycleKaro*, for the recycling of electric vehicle Li-ion batteries.
- Tata Group company, Tata Chemicals also has a battery recycling facility near Mumbai, which recovers valuable metals like Lithium, Cobalt, Nickel and Manganese.

## **Mahindra & Mahindra**

- Mahindra introduced e-Verito sedan in 2016 and XUV400, compact electric SUV in 2023. However, company discontinued the e-Verito sedan later on.
- The company incorporated *Mahindra Electric Automobile limited (MEAL)* in 2022 to undertake PV electric vehicle business of the company; MEAL entered into an agreement with British international Investment (BII) to invest up to INR 19.3 billion in MEAL.
- The total capital infusion by the company and BII for MEAL is envisaged to be approximately INR 110.0 billion (USD 1.4 billion) between fiscal 2024 and fiscal 2027 for the planned product portfolio. The funds are to be utilized to create and market Electric SUV portfolio.
- They plan to introduce 8 electric SUVs by 2030
- The company has partnered with Valeo, a player in electrification technologies, to provide the electric powertrain for a certain range of Born Electric vehicle platform and onboard charger combo for its electric utility vehicles.
- Valeo will invest in localising the production of the electric powertrain in Pune, Maharashtra, near Mahindra's plant. The localised production will encompass the electric motor, inverter, gearbox, and the integrated 3-in-1 bi-directional Combo power electronics, combining the on-board charger (OBC), DC-DC converter, and power distribution unit (PDU).

## **KIA**

- They plan to launch 2 EVs by 2025 in India. A locally manufactured EV in the RV body style is also expected to be launched by 2030
- Company will partner with CPOs (charge point operator) Statiq, Chargezone, Relux Electric, Lion charge & E-fill charger to expand EV infrastructure.
- Kia India plans to invest INR 20.0 billion to drive research and development (R&D), infrastructure development and manufacturing capabilities to locally produce EVs in India.
- In 2024, Hyundai Motor Company and Kia Corporation signed a Memorandum of Understanding with Exide Energy Solutions for a strategic cooperation to aid battery localisation efforts for their upcoming electric vehicles

## **MG**

- MG currently offers two EV models, ZS EV from 2020 and Comet EV from 2023.

- The company is planning to expand its EV portfolio by launching 2 new EVs in 2024
- In 2024, SAIC motors and JSW group formed a new strategic joint venture *JSW MG Motor India Pvt Ltd (JSW MG Motor India)*
- JSW MG Motor India will invest INR 50.0 billion to enhance production capacity and launch one new vehicle including electric vehicles every 3-6 months starting September 2024
- The company will have second plant in Gujarat near existing unit at Halol and production capacity is expected to range from over 1 lakh per year to over 3 lakh per year
- In February 2024, JSW Group signed an MoU with the Odisha government for establishment of an integrated electric vehicle and EV battery manufacturing project at an investment of INR 400.0 billion in the state.
- The JSW group will set up an electric vehicle, and component manufacturing plant at Naraj in Cuttack district, while it will set up a copper smelter and lithium refinery at Paradip in Jagatsinghpur district. The project consists of a 50 GWh EV battery plant, EV, lithium refinery, copper smelter and related component manufacturing units.
- MG Motor India has teamed up with *Attero Recycling* to reuse and recycle Li-ion batteries of ZS EV. The company has also collaborated with *CleanMax* to supply 4.85 MW of wind-solar hybrid power to MG's manufacturing facility in Halol, Gujarat.
- The company has also partnered with integrated battery recycling and repurposing solutions provider *Lohum* to develop second-life solutions for the car maker's EV batteries. Under the collaboration, *Lohum* will reuse end-of-first-life batteries of MG electric vehicles to build 2nd-life Battery Energy Storage Systems (BESS) for a wide variety of clean energy applications in domestic urban and rural markets.

## Toyota

- The company is planning to launch an EV in 2025
- The company is also planning to introduce a high-performance lithium-ion battery to its next gen EVs by 2026
- Toyota Kirloskar Auto Parts (TKAP) Pvt Ltd, which manufactures drivetrain parts and assemblies has set up a new facility at Toyota's manufacturing complex at Bidadi near Bengaluru to produce e-drive transmission systems as part of its INR 41.0 billion investment program. The new unit can produce 135,000 units a year

## Renault Nissan

- Renault will launch Kwid EV in 2025
- Nissan plans to launch 16 EVs in next three years globally

## Skoda VW

- Skoda EV plans to introduce 6 models by 2027 globally including one model for India, a low priced electric SUV
- Skoda Auto will begin assembling electric vehicles in India latest by 2027
- Volkswagen is planning to have a portfolio of 11 electric vehicle by 2027. An investment of EUR 180 billion (INR 15,818.4 billion) to be done globally in the next five years and part of the investment will be for India

- VW EV Volkswagen ID.4 expected in India by fourth quarter of 2024. Initially it will be available only in 10 cities across India that presently constitute 80% of premium and luxury EV sales in the country
- VW will also set up fast-charging infrastructure at dealerships that sell the ID.4
- The company plans to localise battery export from India and ramp up volumes in future
- The Volkswagen Group already has a relationship with Mahindra & Mahindra to supply EV components for the Indian carmaker's upcoming INGLO-based EVs

## Overview of Customer Touchpoints in the Passenger Vehicle Industry

Dealerships form an intrinsic part of the automobile sector, playing the role of an intermediary between the customers and the manufacturers. They provide a local vehicle distribution channel based on a contract with an automaker. They also play a key role in the aftermarket space by providing maintenance services and supplying spares/automotive parts and accessories. From manufacturers' perspective, dealers play the crucial role of retail distribution at regional, city and local levels, and provide manufacturers with customer insights that are useful in the production planning of manufacturers.

Dealers support customers from the initial phase of purchase journey with guidance on vehicle selection and assist in the necessary vehicle financing. They facilitate a smooth transfer of vehicle from manufacturer to customer, assisting in registration and required insurance formalities. The dealers provide the required support for accessorising and vehicle customisation. Furthermore, dealers are also responsible for offering vehicle service assistance to customers.

### Current Network Strength and OEM-wise Touchpoints

Dealers normally have three types of touchpoints: sales-service-spares (3S), only sales (1S), and only workshops (2S- service & spares). Most large dealers have multiple touchpoints with a few 3S touchpoints and many workshops/ service stations across the city. They also have a large sub-dealer network that works under the umbrella dealership and caters to smaller semi-urban/ rural areas nearby. A few dealers also have ARDs (authorised representatives of the dealer) that provide the minimal required services to customers in rural areas. However, ARDs are more prominent in the two-wheeler segment. For PV dealers, the main dealer has a few 3S dealership touchpoints in major cities, complemented by many workshops catering to service and maintenance demand. Small dealers normally have 1-3 sales touchpoints and 2-4 workshops in one city or town. Large dealers have 10-15 touchpoints in multiple cities across 1-2 states, with 20-40 service touchpoints and a network of sub-dealers.

As of fiscal 2023, there were more than 9,200 sales touchpoints across India catering to the overall demand for passenger vehicles. Maruti Suzuki, Tata Motors and Hyundai Motor India are the top OEMs with higher number of sales touchpoints compared to peers. Maruti Suzuki operates more than 3,250 sales touchpoints in India including their Arena and Nexa showrooms. They added 263 sales touchpoints in fiscal 2023, primarily in rural markets. Tata Motors added 227 sales touchpoints in fiscal 2023 to reach to more than 1,400 sales touchpoints, becoming the second largest sales network in India. Hyundai Motor India has more than 1,350 sales touchpoints across India. These three OEMs together operate ~65% of the total PV sales touchpoints in the country.

Maruti Suzuki operates more than 4,560 service touchpoints in the country as of fiscal 2023, which is 1.4x times the number of its sales touchpoints. During the same year, the company added 310 service touchpoints majorly in the rural markets. Hyundai Motor India has the second largest number of service touchpoints in the country. As of fiscal 2023, they operate more than 1,500 service touchpoints which is 1.1x times the number of their sales touchpoints. Tata Motors expanded their service network, adding 150 service touchpoints in fiscal 2023, making their total service touchpoints to 855. However, the ratio of service to sales touchpoints for Tata Motors is lower compared to the major OEMs, standing at 0.6.

Maruti Suzuki operates more than 7,800 total customer touchpoints (sales touchpoints + service touchpoints) in India as of fiscal 2023. Hyundai Motor India is the second largest with more than 2,850 total customer touchpoints in India as of fiscal 2023. Hyundai Motor India is followed by Tata Motors with more than 2,250 total customer touchpoints.



**Current Sales and Service Touchpoints**

OEM	Touchpoints		
	Sales Touchpoints	Service Touchpoints	Total Customer Touchpoints
Maruti Suzuki	3,250+	4,560+	7,800+
Hyundai Motor India	1,350+	1,500+	2,850+
Tata Motors	1,400+	850+	2,250+
Mahindra & Mahindra*	1,250+	600+	1,850+
Kia Motors India	520+		520+
Toyota Kirloskar Motor	600+		600+
Honda Cars India*	400+		400+
SkodaAuto India	250+		250+
MG Motor India	350+		350+
Renault India	450+	530+	980+
Volkswagen India	190+	130+	320+
Nissan Motor India	250+		250+

Note: \* not verified from official source

Source: Company Annual Reports of fiscal 2023 for listed players and Hyundai Motor India. For other non-listed OEMs, data sourced from company websites or press releases in April to December months duration of fiscal 2024.

Both Hyundai Motor India and Maruti Suzuki have a larger service network vis-à-vis their sales network as they both have a large existing customer base requiring vehicle services throughout ownership lifetime. Tata Motors has aggressively expanded its sales network in the recent past and currently has 1,400+ sales touchpoints across India. They also have 850+ service touchpoints. Mahindra & Mahindra has 1,250+ sales touchpoints and 600+ service touchpoints.

**Online Car Sales in India**

The rise of digital technology has led to new trends in the automotive industry alongside shifting the buying patterns in cars. Online car retail/sale is an evolving phenomenon in the Indian PV landscape and many OEMs have started this incorporating various technologies into their current ecosystem. Traditional car selling model involves customer visiting dealerships physically and completing the entire process of car buying with assistance of a sale executive. However, customers are currently using digital medium to research about cars and make a purchase decision. This is paving way to the rise of digital experiences in car exploring and buying process. Identifying this shifting preference, OEMs are now leveraging online platforms as a potential avenue that could further strengthen retail and complement the current distribution network.

Online car sale is the process of selling cars through digital channels such as the company website, online platforms, and mobile applications. Digital retail platform enables customers to research, browse, configure, book and purchase car from the comfort of their homes. OEMs are recognizing this shifting preference and are embracing digital technologies to offer personalized and seamless experience to end customers. To improve the customer engagement through these digital channels, OEMs have introduced technologies including virtual showroom, vehicle configurator, AR/VR experience alongside integrating finance, insurance, used car valuator etc. Almost all OEMs in India including Maruti Suzuki, Hyundai Motor India and Kia have launched various digital initiatives to enable the car sale online. Some of initiatives include:

- Online car booking

- Virtual showrooms
- Vehicle configurator
- Online financing and insurance
- Retail platform (end-to-end solution)

In 2020, Hyundai Motor India was amongst the first mass market players to introduced online automotive retail platform 'Click to Buy', an end-to-end online car buying platform that offered complete car retail experience to customers. The platform offers access to complete range of cars and offers complete spectrum of services with information including on-road prices, online finance options, dedicated sales consultants, special online promotions, estimated time of delivery, online test drive booking and home delivery of cars.

Tata Motors also launched their 'Click to Drive' digital sales platform in 2020. However, unlike Hyundai Motor India's platform this is not an end-to-end platform. Click to Drive enables customers to review the car online through configurator, and book the car online. After booking buyers will be navigated to the nearest dealer and a sales consultant would guide the customer through the entire purchase process, including providing the on-road price, financing, and valuation of used car. Customers can choose to complete the process over email, WhatsApp, or video call.

Maruti Suzuki launched the Smart Finance platform in 2020. Smart Finance is an AI driven, end-to-end car finance marketplace with multiple financiers. Customers can explore loan offers from multiple financiers, customized loan offers and track loan status in real time. As of fiscal 2023, more than 30% of customers financed their cars through this mode. Although this is not an end-to-end car buying platform, smart finance acts as a facilitator between customer and financier. Company has onboarded financiers including State Bank of India, HDFC Bank, Mahindra Finance, IndusInd Bank, ICICI Bank, Cholamandalam Finance, Axis Bank, Bank of Baroda, Kotak Mahindra Prime, Sundaram Finance, AU Small Finance Bank, YES Bank, HDB Financial Services, Toyota Financial Services (India), Federal Bank and Karur Vysya Bank into this platform. The platform is available for both Arena and NEXA customers and covers a wide range of customer profiles to meet the growing demands of customers across India.

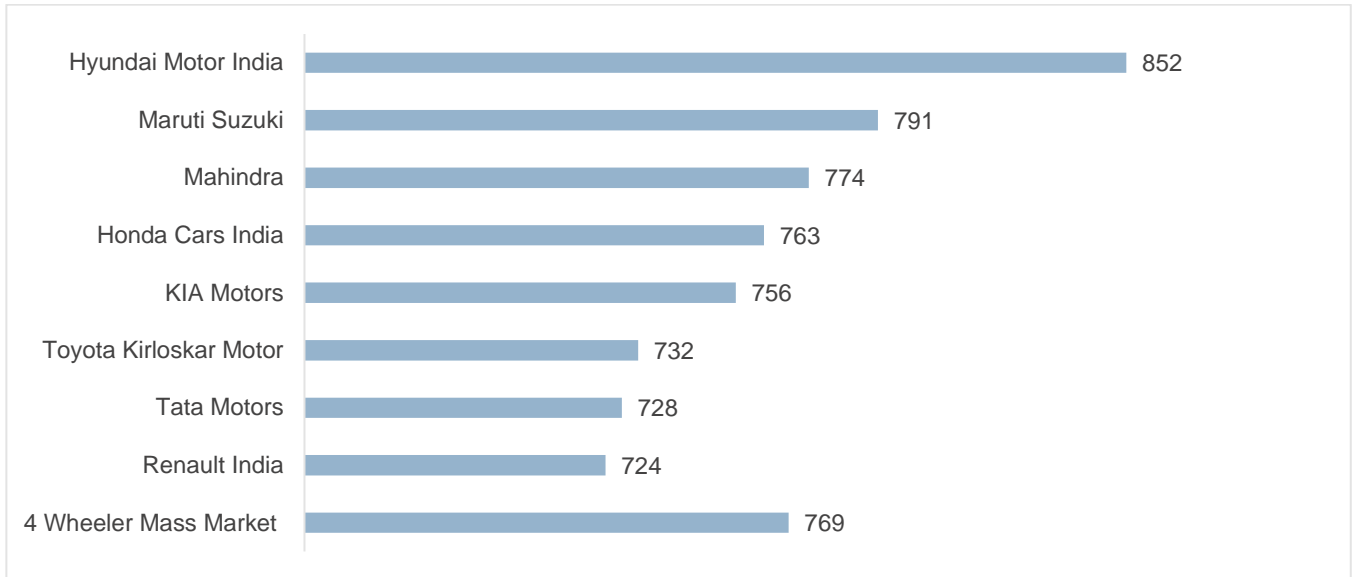
Other OEMs including MG, Volkswagen, Mahindra & Mahindra, and Skoda also offer online platforms which enable customers to visualise, configure and book their cars online. OEMs are trying to upgrade their online channels through investing in multiple cutting-edge technologies. Online sale channels are no alternate channel to dealerships, but it's a channel that complements sales. With customers increasingly preferring digital channels for their research and purchase decision, its very important for OEMs to have an updated online portal. While the share of online sales is very small currently, it is expected to pick up the pace in the future with more customers opting for online purchase.

## Dealer Satisfaction Scores

Dealers are the primary touchpoints for the car buying customer in India, as well as the face of the OEMs. Efficient dealer management and satisfaction are of great importance in ensuring successful network growth in the long run. Recently, the Federation of Automotive Dealers Association (FADA) conducted their 2023 India Dealer Satisfaction Study, which was a dealer satisfaction survey conducted amongst a total of 1,821 dealer principals who represent around 3,500 outlets across various OEMs, regions and vehicle categories. (Among 1821 dealers, dealers for PV – 523 Dealers).

In mass market passenger vehicle segment Hyundai Motor India dealers ranked highest in the satisfaction index amongst all PV OEM dealers. Maruti Suzuki and Mahindra & Mahindra are the other two players in top 3. FADA has considered factors like Business Viability & Policy, After-Sales, Sales & Order Planning, Training, Product, and Marketing to evaluate the scores.

**PV Dealers Rankings as per FADA's 2023 India Dealer Satisfaction Study:**



Source: Federation of Automobile Dealers Associations (FADA) September 2023 report, CRISIL MI&A

According to FADA's previous Dealers Satisfaction Study 2022, Kia Motors dealers were most satisfied followed by Hyundai Motor India, MG Motor India, Mahindra & Mahindra, Renault India, Toyota Kirloskar Motor, Tata Motors, Maruti Suzuki and Honda Cars India.

According to FADA Dealer Satisfaction Study 2021, Kia Motors dealers were most satisfied, followed by MG Motor, Toyota Kirloskar Motor, Renault, Tata Motors, Hyundai Motor India, Maruti Suzuki, Mahindra & Mahindra, Ford, and Honda Cars India.

## Player Comparison

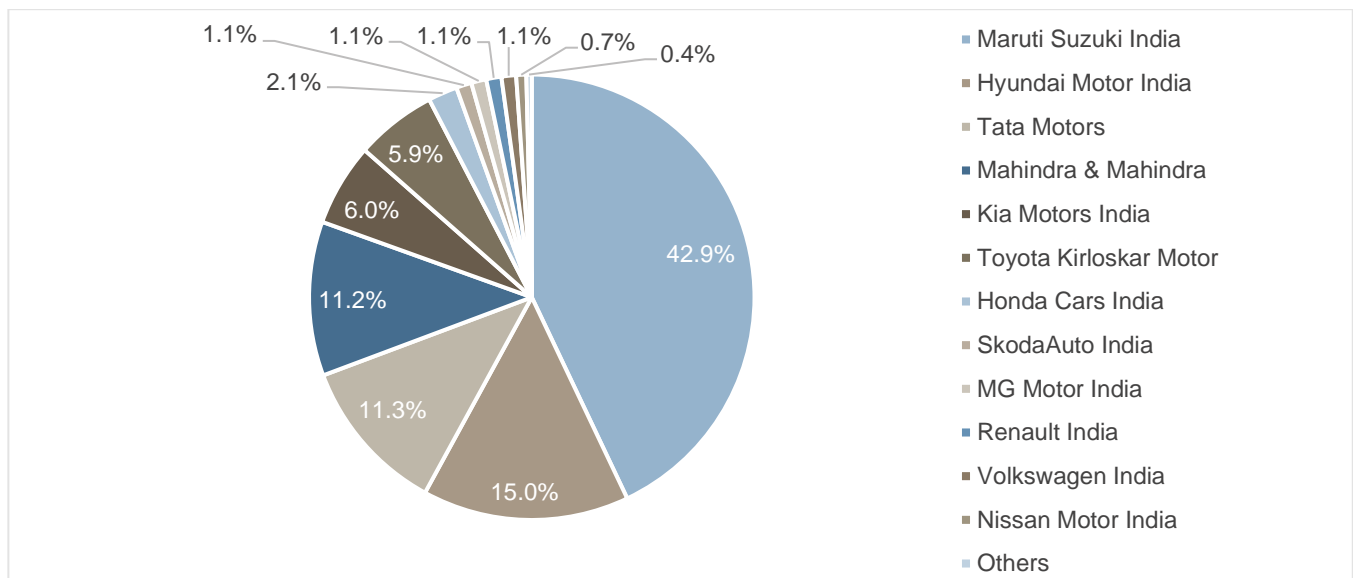
### Market Related Parameters

#### Market Share:

##### Industry level

Owing to the launches of several new models – especially new SUVs, new powertrains, and advanced features - the passenger vehicle industry has seen a shift in market share dynamics in the past few years. The share of Maruti Suzuki reduced from 51.2% in fiscal 2019 to 42.9% in fiscal 2024. However, their recent launches like Grand Vitara, XL6, Fronx, Invicto and continued traction for Ertiga & Brezza helped Maruti Suzuki regain some lost ground during fiscal 2024. Hyundai Motor India has maintained its share between 15%-18% over the fiscal 2019 to fiscal 2023, with market share for current fiscal 2024 being 15%. Introduction of Venue, Aura, Exter, Alcazar & Kona helped company expand its presence in the market during fiscal 2020. Facelift launch of Creta, Verna & Venue further backed the sales for Hyundai Motor India. The market share of Tata Motors rose from ~7% in fiscal 2019 to 11.3% in fiscal 2024, led by increased demand for the SUV models of Nexon and Punch.

#### Market Share by Volume for FY24YTD

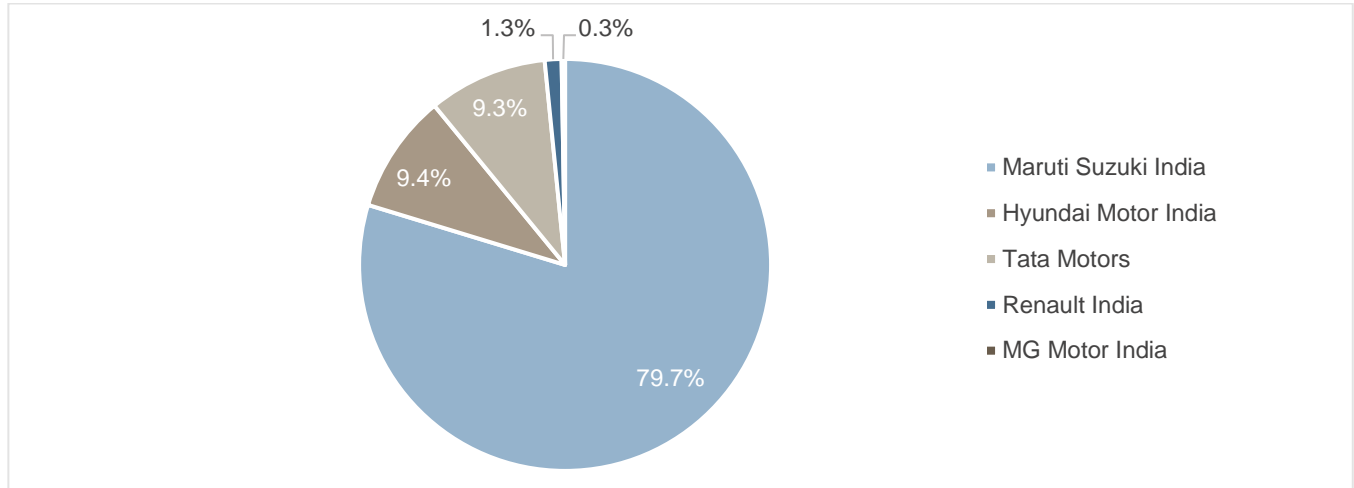


Note: Market Share by volume for FY24YTD- Apr'23-Feb'24

Source: SIAM, CRISIL MI&A

**Segment Level**

**Compact Hatchbacks (Length <3.9m)**

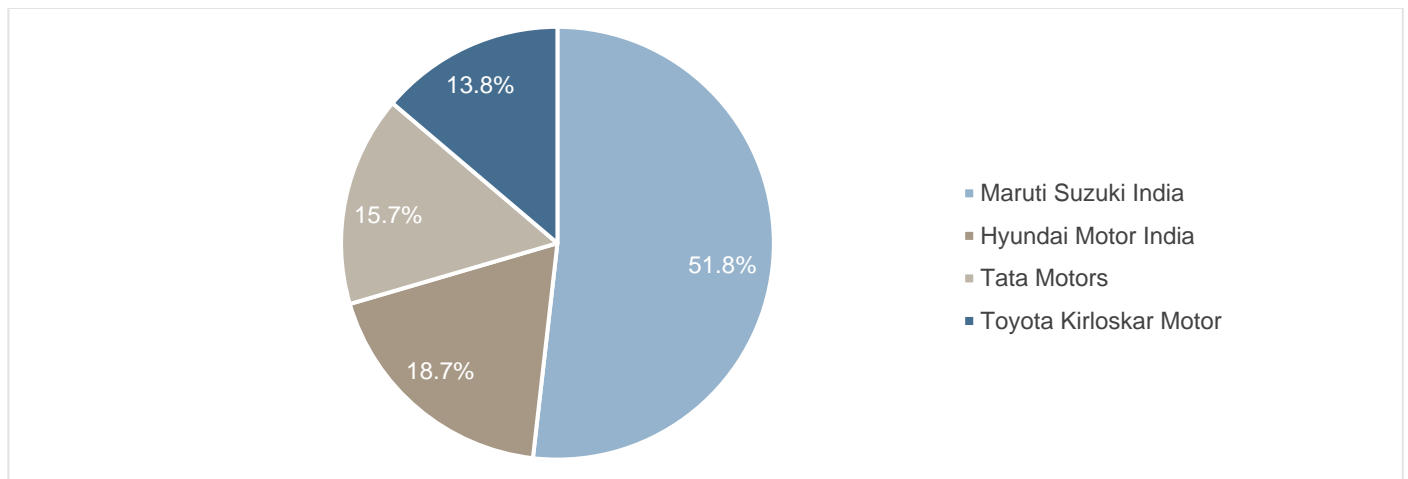


Note: Market Share by volume for FY24YTD- Apr'23-Feb'24

Source: SIAM, CRISIL MI&A

In the compact hatchbacks segment, Maruti Suzuki currently commands the largest market share of 79.7%. This dominance is primarily attributed to popular models such as the WagonR, Swift, Alto, Celerio, Ignis, and S-Presso. Hyundai Motor India and Tata Motors follow with 9.4% and 9.3% respectively, attributable to their models like Hyundai Grand i10 NIOS, and Tata Tiago. Following them, Renault and MG Motors have their presence in the segment with 1.3% and 0.3% of the market share. This is primarily derived from the sales of models such as Renault Kwid and MG Comet.

**Premium Hatchbacks (Length >3.9m)**

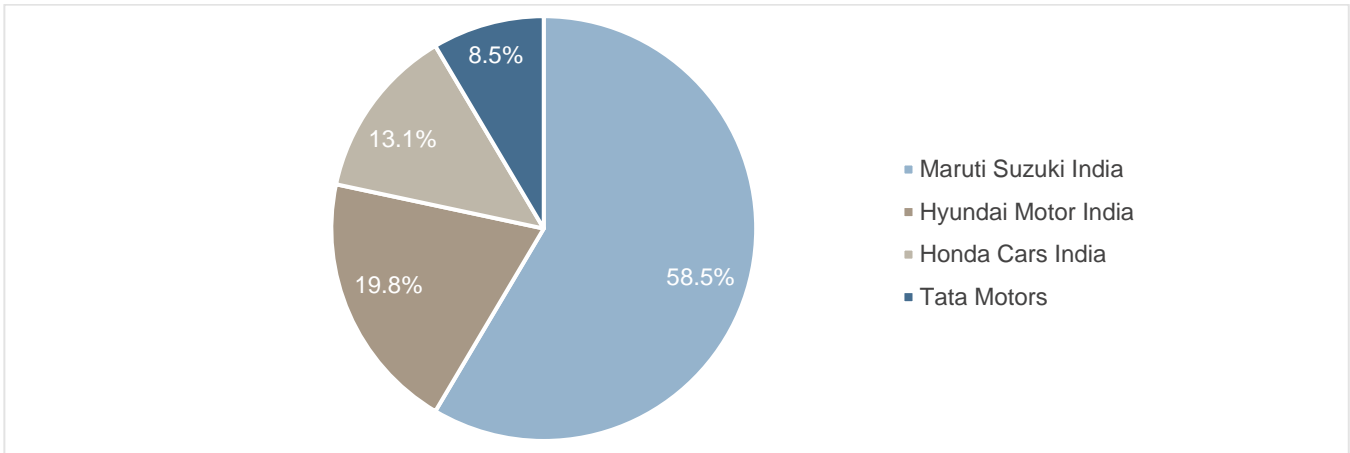


Note: Market Share by volume for FY24YTD- Apr'23-Feb'24

Source: SIAM, CRISIL MI&A

In the premium hatchbacks segment too, Maruti Suzuki holds a dominant market share of about 51.8% with its model Baleno. Hyundai Motor India is the second largest player with a market share of around 18.7% with its model i20. Following Hyundai Motor India, Tata Motors holds approximately 15.7% market share with its model Altroz. Toyota also commands a significant share of approximately 13.8% with its model Glanza.

**Compact Sedans (Length <4m)**

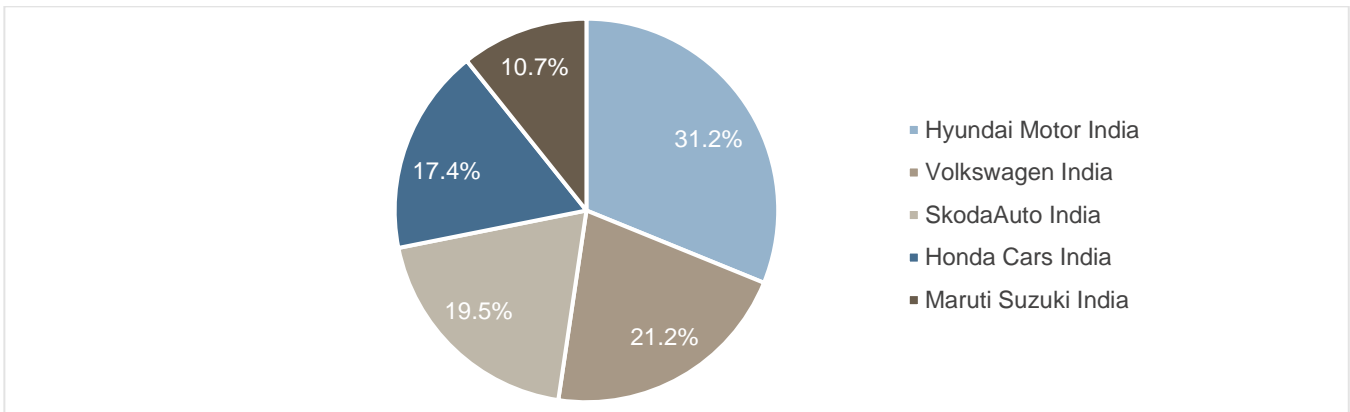


Note: Market Share by volume for FY24YTD- Apr'23-Feb'24

Source: SIAM, CRISIL MI&A

In the compact sedans segment, Maruti Suzuki leads with a market share of approximately 58.5%, from the Dzire model. Following Maruti Suzuki, Hyundai Motor India holds a share of around 19.8%, attributed to Aura model. Honda follows with a market share of 13.1%, derived from the sale of its model Amaze. Tata Motors holds a share of around 8.5% with its model Tigor. The models in this segment are used for both personal and commercial purposes.

**Premium Sedans (Length b/w 4m-4.7m)**

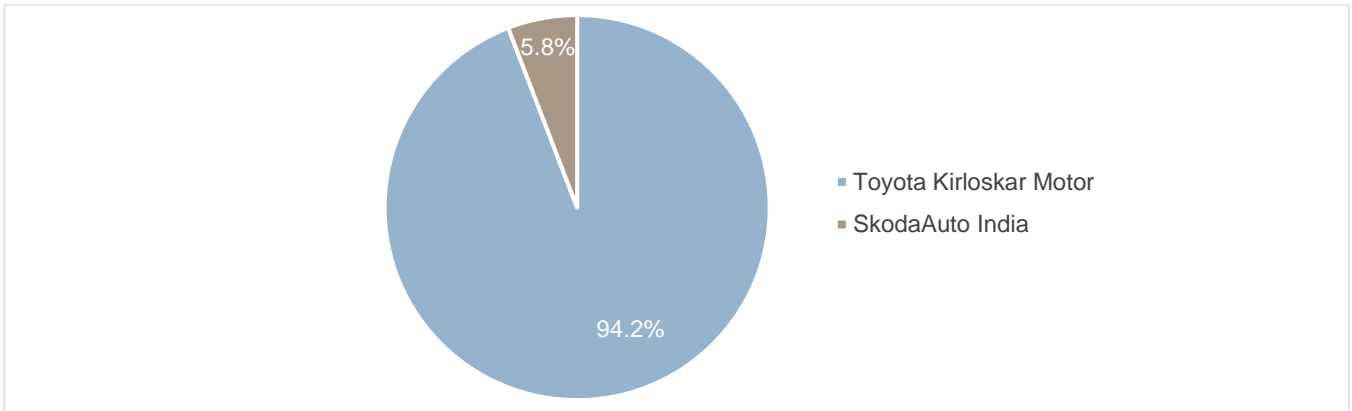


Note: Market Share by volume for FY24YTD- Apr'23-Feb'24

Source: SIAM, CRISIL MI&A

In the premium sedans segment, Hyundai Motor India dominates with a 31.2% market share, driven by sale of its only model Verna. Following them, Volkswagen holds a 21.2% market share primarily from sales of the Virtus model. Skoda follows Volkswagen with a 19.5% market share, attributable to the sales of its model Slavia. Honda occupies a 17.4% market share, driven by the popularity of City model. Maruti Suzuki holds a 10.7% market share, largely from sales of the Ciaz model.

**Luxury Sedans (Length >4.7m)**

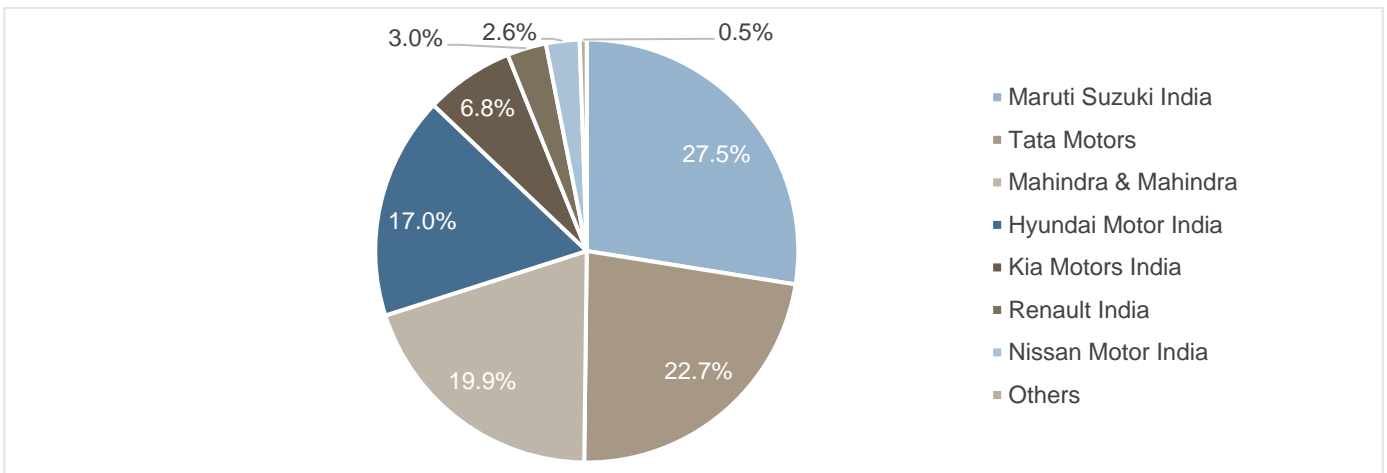


Note: Market Share by volume for FY24YTD- Apr'23-Feb'24

Source: SIAM, CRISIL MI&A

Within the luxury sedans market, Toyota commands a sizable 94.2% share through its Camry Model sales, while Skoda captures a 5.8% market share with its Superb Model.

**Compact SUVs (Length <4m)**

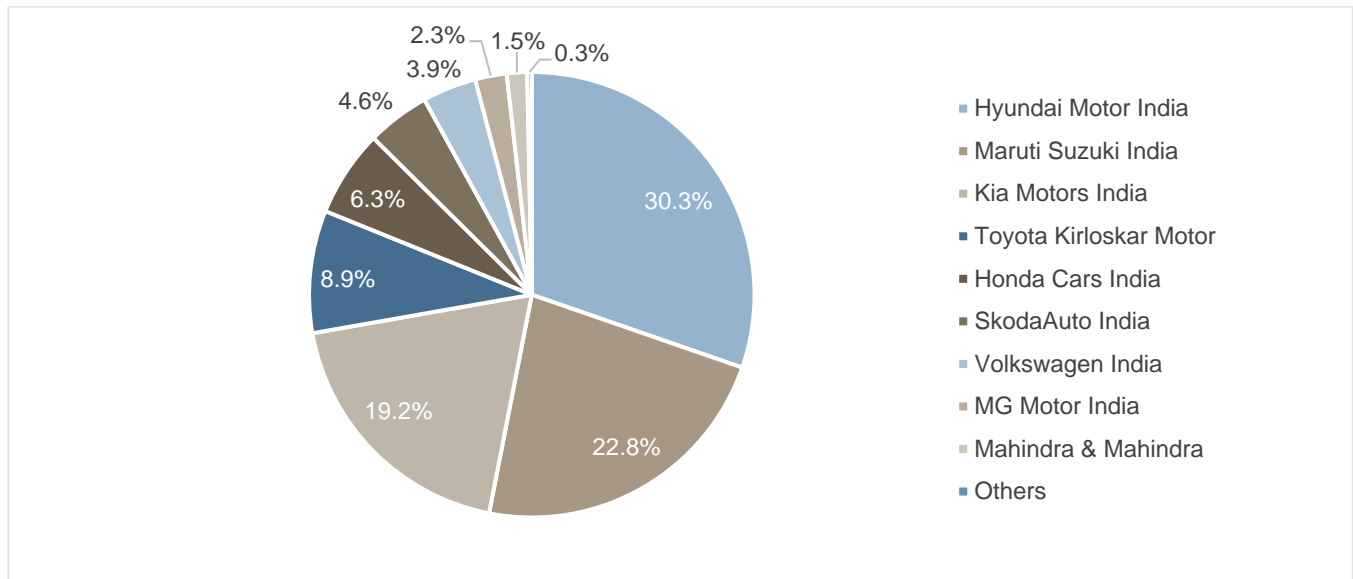


Note: Market Share by volume for FY24YTD- Apr'23-Feb'24

Source: SIAM, CRISIL MI&A

In the compact SUVs segment, market is balanced and intensely competed among Maruti Suzuki, Tata Motors, Mahindra & Mahindra, and Hyundai Motor India. Maruti Suzuki has a market share of 27.5%, driven by the sales of its Brezza, Fronx, and Jimny models. Following Maruti Suzuki, Tata Motors secures a share of 22.7% with its Nexon and Punch models. Mahindra & Mahindra holds a share of 19.9% with offerings such as the Bolero, Thar, and XUV300. Hyundai Motor India occupies a share of 17.0% with its Venue and Exter models, while Kia contributes 6.8% of the market with its Sonet model.

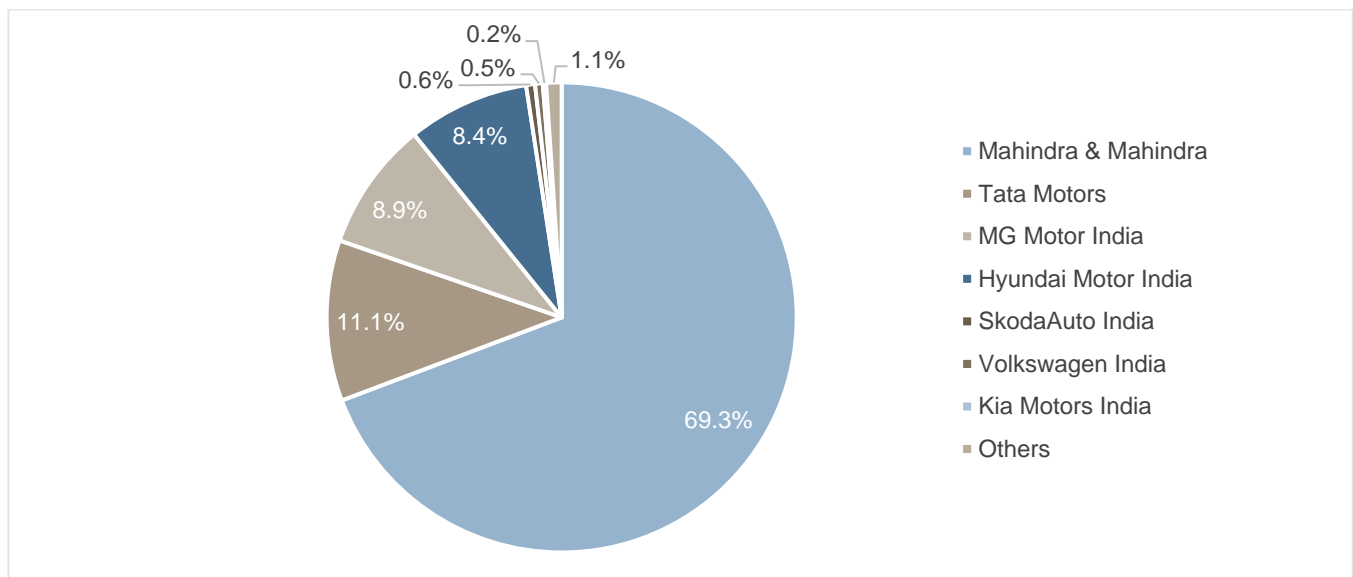
**Mid-Size SUVs (Length b/w 4m-4.4m)**



Note: Market Share by volume for FY24YTD- Apr'23-Feb'24  
Source: SIAM, CRISIL MI&A

In the mid-size SUVs segment, Hyundai Motor India commands a dominant market share of 30.3%, driven by its model Creta. Following Hyundai Motor India, Maruti Suzuki secures a market share of 22.8% from sales of the Grand Vitara. Kia follows with a 19.2% market share derived from sales of the Seltos model. Toyota holds 8.9% market share from sales of the Urban Cruiser HyRyder, while Honda captures a 6.3% share from sales of the Elevate model.

**Large SUVs (Length b/w 4.4m-4.7m)**



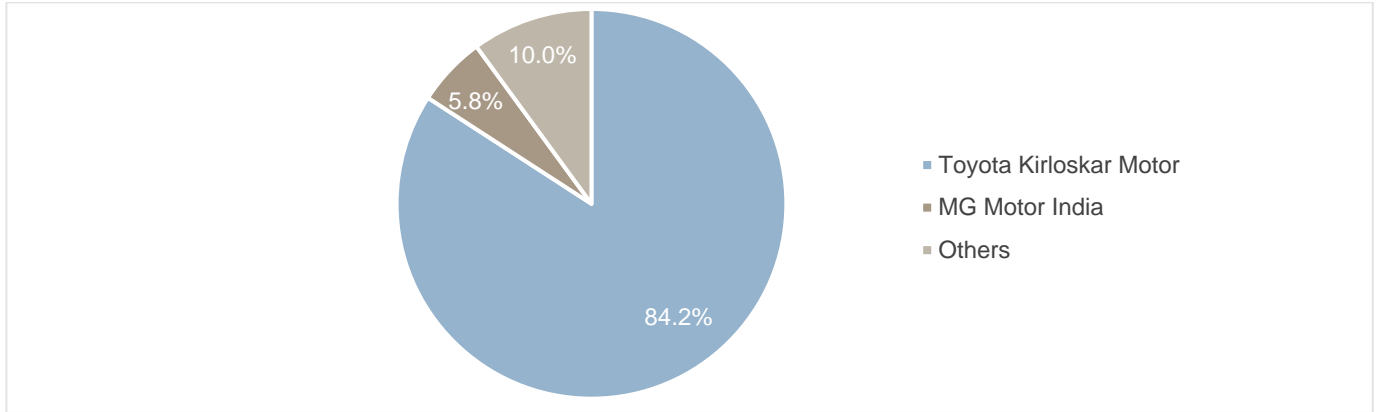
Note: Market Share by volume for FY24YTD- Apr'23-Feb'24  
Source: SIAM, CRISIL MI&A

In the large SUVs segment, Mahindra & Mahindra holds a commanding market share of 69.3%, driven by the sales of models such as the Scorpio and XUV700. Following Mahindra & Mahindra, Tata Motors holds a market share of 11.1% from the sales of models including the Harrier and Safari. MG follows with an 8.9% market share derived



from sales of Hector. Hyundai Motor India captures 8.4% share with models like the Alcazar, Tucson, Ioniq5 and Kona (currently discontinued).

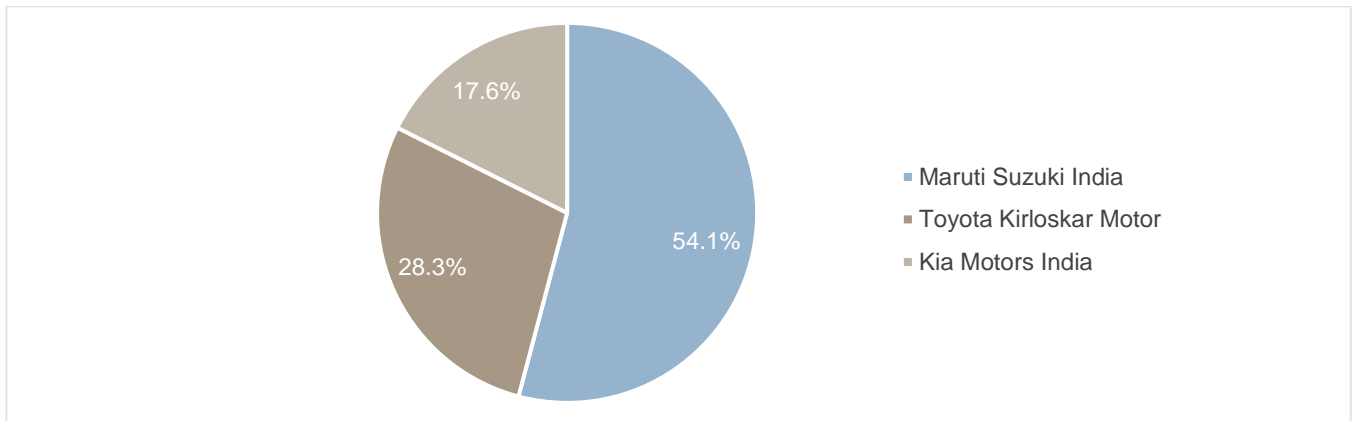
**Extra Large SUVs (Length > 4.7m)**



Note: Market Share by volume for FY24YTD- Apr'23-Feb'24  
Source: SIAM, CRISIL MI&A

In the extra-large UV segment, Toyota dominates with an 84.2% market share, driven by sales of models such as Fortuner and Hilux, while MG follows with a 5.8% market share primarily from sales of the Gloster. Others (Jeep and Force) hold market shares of ~5% each.

**MPV**



Note: Market Share by volume for FY24YTD- Apr'23-Feb'24  
Source: SIAM, CRISIL MI&A

In the MPV segment, Maruti Suzuki commands a 54.1% market share from the sale of models including Ertiga, XL6, and Invicto. Following them is Toyota, holding a 28.3% market share primarily from sales of models such as Innova HyCross, Innova Crysta, Rumion, and Vellfire. Kia commands a share of 17.6% from models like Carens & Carnival.

**Vans**

In the vans segment, Maruti Suzuki holds a 100% share primarily from the sales of the Eeco model.

### Current Capacity & Expected Capacity Addition

OEM	Current Capacity	Expected Capacity Addition	Comments on upcoming plant
Maruti Suzuki	2.25 million units	Total ~4 million units by FY31	<ul style="list-style-type: none"> <li>Kharkhoda in Haryana with a capacity of 0.25 million units and will be commissioned in 2025</li> <li>Another plant in Gujarat with a capacity of 1 million units by FY29</li> <li>A new production line to be added at the existing SMG facility, which will add a capacity of 0.25 million units.</li> </ul>
Hyundai Motor India	0.82 million units	Aims to achieve 1 million+ units through further expansion of Talegaon plant	<ul style="list-style-type: none"> <li>Aims to reach 1 million units production capacity with the acquisition of GM's Talegaon Plant.</li> <li>Talegaon plant has a capacity to produce 0.13 million units per year and will be commissioned in 2025. Further capacity expansion to 0.17-0.25 million units is planned.</li> </ul>
Tata Motors	0.90 million units	Total 1.02 million units via capacity enhancements	<ul style="list-style-type: none"> <li>Recently acquired the Ford India plant, recently commissioned in Jan 2024 at Sanand, which has a production capacity of 0.3 million vehicles. The plant capacity can be scaled to 0.4 million vehicles, which will take the production capacity to 1.02 million units.</li> </ul>
Mahindra & Mahindra	0.59 million units	Total 1.08 million units by FY28/29	<ul style="list-style-type: none"> <li>Aiming to double the SUV production.</li> </ul>
Kia Motors India	0.35 million units	Total 0.4 million units in FY25	<ul style="list-style-type: none"> <li>Aim to reach 0.4 million units in FY25 via capacity enhancements</li> </ul>
Toyota Kirloskar Motor	0.34 million units	Total 0.44 million units from CY2026	<ul style="list-style-type: none"> <li>Additional 0.1 million units via 3<sup>rd</sup> manufacturing plant from 2026 onwards</li> </ul>
Honda Cars India	0.18 million units	Expandable to total 0.22 million	<ul style="list-style-type: none"> <li>Current capacity of 0.18 million is expandable to 0.22 million</li> </ul>
SkodaAuto Volkswagen India	0.24 million units	Total 0.31 million units by Nov 2024	<ul style="list-style-type: none"> <li>The facility at Pune has a production capacity of 0.18 million cars per year, while that at Chhatrapati Sambhajinagar (formerly known as Aurangabad) has a capacity of 0.06 million cars per year</li> </ul>
MG Motor India	0.10 million units	Total 0.3 million units annually	<ul style="list-style-type: none"> <li>The company will expand its production capacity in Halol, Gujarat, with a focus on producing NEVs. This will significantly increase the production capacity from the current 0.1 million up to 0.3 million vehicles annually</li> </ul>
Renault – Nissan India	0.48 million units	-	<ul style="list-style-type: none"> <li>No plan for adding capacity. Will increase utilization of current facilities</li> </ul>

Source: Company reports, press releases, CRISIL MI&A

## Operational Parameters

### Maruti Suzuki

#### Price Bracket Wise and Powertrain-wise Product Portfolio:

Maruti Suzuki offers a large portfolio of products across price brackets. A significant part of their portfolio is in the INR 0-10 lakhs range followed by INR 10-15 lakhs range. They offer Petrol and CNG powertrain options for almost all the models in their portfolio, along with recent launch of Strong Hybrid technology in Grand Vitara. Maruti currently has no offerings with diesel and pure electric powertrains.

With the launch of Maruti Suzuki 800 in 1983, Maruti Suzuki accelerated the evolution of passenger vehicles in India. Over the years, the company has contributed significantly to the development of mass market passenger vehicle industry in India with introduction of new technology including the high efficiency K series engines in 2008, introduction of CNG powertrain in 2010, AGS technology in 2014 and mild hybrids in 2015.

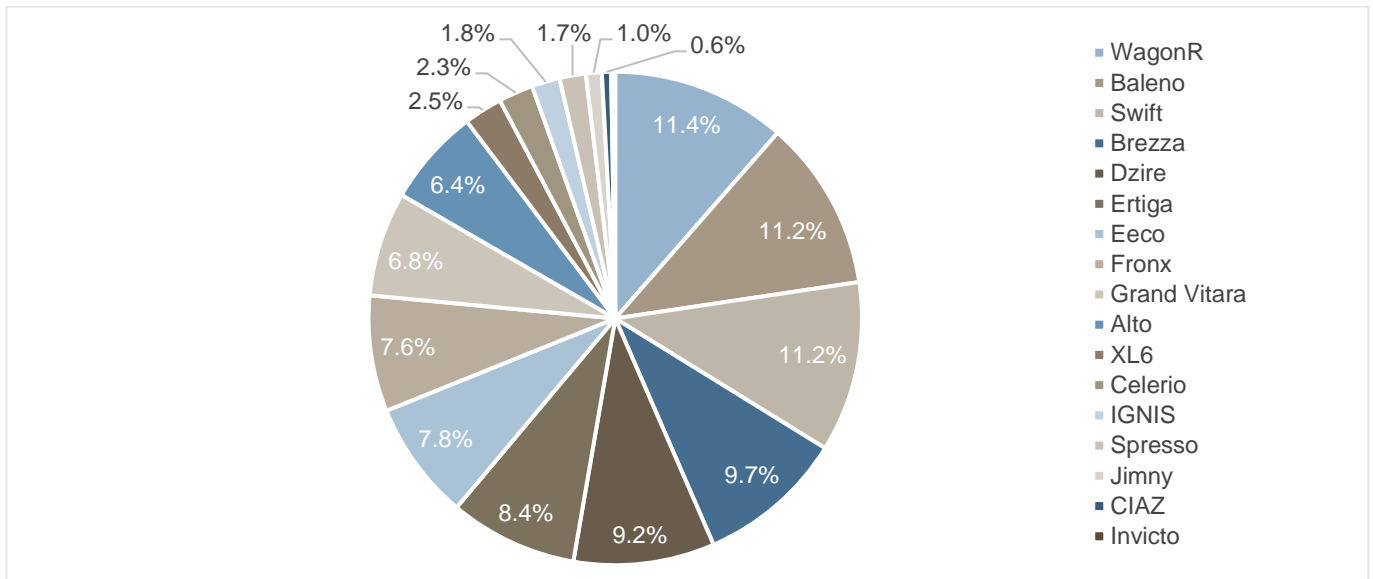
Price Bracket (in INR)	% Volume Contribution to OEM Sales	Petrol	Diesel	CNG	EV	Strong Hybrid
0-10 Lakh	6.4%	Alto		Alto		
	1.7%	S-Presso		S-Presso		
	11.4%	New Wagon R		New Wagon R		
	7.8%	Eeco		Eeco		
	2.3%	Celerio		Celerio		
	1.8%	IGNIS				
	11.2%	Swift		Swift		
	11.2%	Baleno		Baleno		
10-15 Lakh	9.2%	Dzire		Dzire		
	7.6%	Fronx		Fronx		
	0.6%	CIAZ				
	8.4%	Ertiga		Ertiga		
	9.7%	Brezza		Brezza		
	2.5%	XL6		XL6		
15-20 Lakh	1.0%	Jimny				
	6.8%	Grand Vitara		Grand Vitara		Grand Vitara
20 Lakh & above	0.3%	Invicto				Invicto

Note: Prices considered are ex-showroom Delhi prices for the middle variant of each model. For % volume contribution sales Volume taken of YTD FY2024 – Apr'23-Feb'24

Source: CRISIL MI&A

#### Model Wise Sales Contribution

Maruti Suzuki's top selling models are Wagon R, Baleno, Swift from Hatchbacks segments, Brezza from Compact SUVs, and Dzire from Compact Sedans which account for more than 50% of their sales volumes today.



Note: Sales Volume taken of YTDFY2024 – Apr'23-Feb'24

Source: SIAM, CRISIL MI&A

### Awards & Accolades

1. Grand Vitara:
  - a. 'Car of the Year' & 'Mid-Size SUV of the year' at Autocar Awards 2023
2. Baleno:
  - a. 'Hatchback of the Year' at both the Autocar Awards 2023 and Zee Auto Awards 2022
  - b. 'Best Pre-Owned Large Hatchback Award' OLX Autos Autocar Pre-Owned Car Awards 2023
  - c. 'Best Hatchback Award' Autoportal Best Car Awards 2023
  - d. 'Premium Hatchback of the Year' Motor Vikatan Awards 2023
3. Brezza:
  - a. 'Update of the Year 2023' Indian Vehicle Awards
  - b. 'Sub Compact SUV of the Year' at both the Acko Drive Awards 2023 and the ABP Auto Awards 2022
  - c. 'Best Pre-Owned Compact SUV' OLX Autos Autocar Pre-Owned Car Awards 2023
  - d. 'Facelift SUV of the Year' Jagran HiTech Awards 2022
  - e. ICOTY 2017 Winner
4. Ertiga
  - a. 'Best Pre-Owned MPV' and the 'Best Pre-Owned Car of the Year' OLX Autos Autocar Pre-Owned Car Awards 2023
5. Ciaz
  - a. 'Best Pre-owned Midsize Sedan' OLX Autos Autocar Pre-owned Car Awards 2023
6. Alto K10
  - a. 'Entry Level Hatchback of the Year' title at the Vikatan Awards 2023 and the 'Entry Level Car of the Year' at the ABP Auto Awards 2022

- b. 'People's Car of the Year' at the Jagran HiTech Awards 2023 and the 'Entry-level Car of the Year' at the Acko Drive Awards 2023
- 7. Celerio
  - a. 'Hatchback of the Year' at the Motoring World Awards 2022
- 8. Swift
  - a. ICOTY 2019 Winner
  - b. ICOTY 2012 Winner
  - c. ICOTY 2006 Winner
- 9. 'Manufacturer of the Year' title at Jagran HiTech Awards 2022 and at 1<sup>st</sup> edition of Acko Drive Awards 2023.
- 10. 'SUV of the Year' – Jimny – Zee Auto Awards 2023

*Note: The list of awards and accolades has been obtained basis our assessment of information available in public domain, and may not be exhaustive, ICOTY awards list is exhaustive as awards since inception have been considered*

## **Safety:**

Maruti Suzuki Brezza, Fronx, Baleno, Jimny, and Grand Vitara are equipped with 6 airbags for safety.

## **Hyundai Motor India**

### **Price Bracket Wise and Powertrain-wise Product Portfolio:**

Hyundai Motor India's parent company, Hyundai Motor Corporation offers several powertrain options in its global portfolio which is a mix of conventional fuels like petrol & diesel as well as more eco-friendly options like BEV, PHEV, HEV, FCEV and CNG.

In India, Hyundai Motor India offers a diverse portfolio of products across price brackets. While almost their entire portfolio has petrol powertrain options, they also offer diesel powertrain options primarily for SUVs, and CNG options for the 0-10 lakhs bracket which support better ownerships costs amidst rising fuel prices. Hyundai Motor India currently has 1 EV model that is in the 20lakh+ price bracket (Kona was recently discontinued), with very high battery range. Hyundai Motor India also offers latest N-line versions (sporty and high-performance cars) in models like i20, Venue and Creta.

Hyundai Motor India has been at the forefront of several innovations in the industry. During their early years they were the first player to introduce the Santro with a "tall boy" hatchback design that offered better headroom and seating height as compared to other available hatchbacks in the market then. They were also amongst the first to introduce the CRDi diesel engine technology in India. Hyundai Motor India was the first mass market OEM to introduce power steering in India by providing the option for their Santro model in 2006. They also introduced the Kona EV in 2019, which was India's first long range EV (452 km range) by a mass market player in the less than INR 30 lakhs price bracket. And they also introduced the Ioniq5 which was amongst the first premium EVs (greater than INR 30 lakhs price bracket) launched in India by a mass market player. They were also amongst the early players to launch connected car technology via Bluelink and have been responsible for introducing a slew of new age features in their portfolio like Daytime Running Lights (DRLs), Air Purifier and Dash Cam with recording capability. Further, they were also first to introduce panoramic sunroof in the mid-size SUV segment.

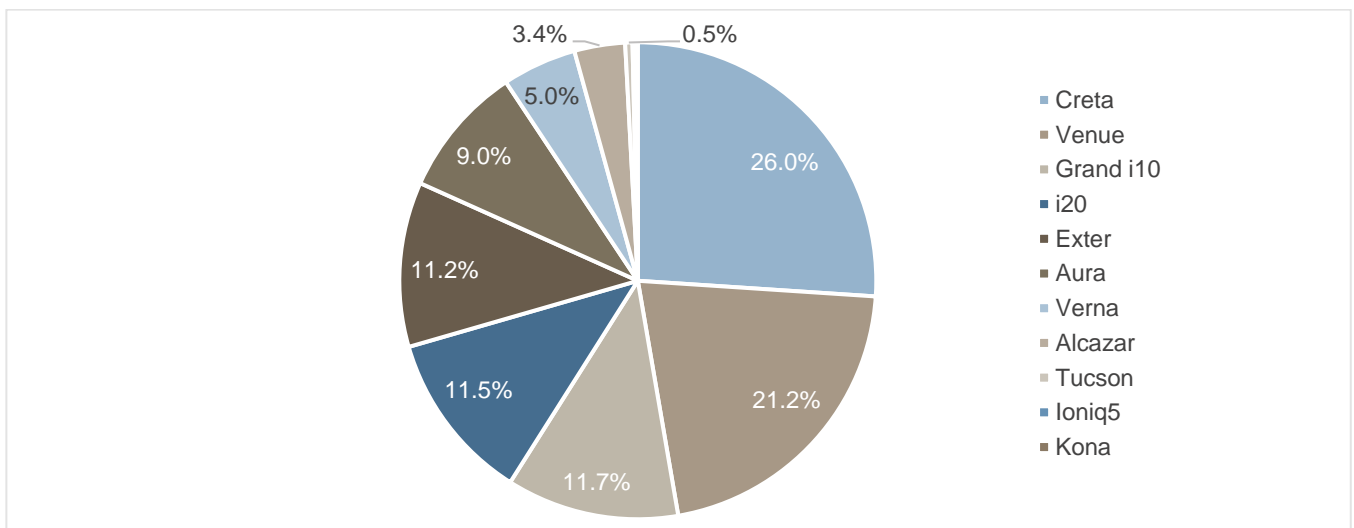
Price Bracket	% Volume Contribution to OEM Sales	Petrol	Diesel	CNG	EV	Strong Hybrid
0-10 Lakh	11.7%	i10 Grand NIOS		i10 Grand NIOS		
	9.0%	Aura		Aura		
	11.2%	Exter		Exter		
	11.5%	i20				
10-15 Lakh	-	i20 N-Line				
	21.2%	Venue	Venue			
		Venue N-Line				
5.0%	Verna					
15-20 Lakh	26.0%	Creta	Creta			
		Creta N-Line				
20 Lakh & above	3.4%	Alcazar	Alcazar			
	0.5%	Tucson	Tucson			
	0.2%				IONIQ5	
	0.1%				Kona (recently discontinued)	

Note: Prices considered are ex-showroom Delhi prices for the middle variant of each model. For % volume contribution sales Volume taken of FYYTD- Apr'23-Feb'24

Source: CRISIL MI&A

**Model Wise Sales Share**

Almost 47% of Hyundai Motor India’s sales volume is from Creta and Venue while Creta, Venue and Exter account for almost 58% of the sales volume. This shows a strong SUV focused affinity for Hyundai Motor India in the Indian market.



Note: Sales Volume taken of YTD FY2024 – Apr'23-Feb'24

Source: SIAM, CRISIL MI&A

## Awards & Accolades

1. Exter
  - a. ICOTY 2024 Winner
  - b. Acko Insurance – The One that Matters Awards – 2024 Micro SUV
  - c. Jagran Hi-tech Awards – Urban Car of the Year 2023
  - d. Car of the Year – Zee Auto Awards 2023
2. Ioniq 5
  - a. Green Car Award 2024 by ICOTY
  - b. Coveted EV of the Year 2024 by ABP Auto Awards
  - c. Acko Insurance – The One that Matters Awards – Car Design of the Year 2024
  - d. Jagran Hi-tech Awards – Electric Car of the Year 2023
  - e. Green car of the Year and Hi-Tech Car of the Year – Zee Auto Awards 2023
  - f. Premium Electric SUV of the Year – Top Gear Awards 2023
  - g. World Car of the Year – World Car Awards 2022
3. Verna
  - a. Acko Insurance – The One That Matters Awards – 2024
  - b. Compact Car, Car&Bike Awards 2024
  - c. Car of the Year 2024 by ABP Auto Awards
  - d. Sedan of the Year 2024 by ABP Auto Awards
  - e. Design of the Year 2024 (Budget Car) – Zee Auto Awards 2023
  - f. ICOTY Winner 2018
4. TUCSON
  - a. Car of the Year: Acer FASTER Awards 2023
  - b. Premium SUV of the Year – CAR India Awards 2023
  - c. Car of the Year -Top Gear Awards 2023
  - d. AutoX AWARDS 2022 – Best of 2022
5. ICOTY Winner 2021- i20
6. Venue
  - a. Facelift of the Year- ZEE AUTO AWARDS 2022
  - b. ICOTY Winner 2020
7. ICOTY Winner 2016- Creta
8. ICOTY Winner 2015 –Elite i20
9. ICOTY Winner 2014 –Grand i10

10. ICOTY Winner 2008- i10
11. Most Trusted Brand Award – Zee Auto Awards 2023
12. Best Corporate Social Responsibility Initiatives: Hyundai Motor India
13. Motor India Foundation – Acer FASTER Awards 2023
14. Manufacturer of the Year: Hyundai Motor India Ltd – CAR India Awards 2023

*Note: The list of awards and accolades has been obtained basis our assessment of information available in public domain, and may not be exhaustive, ICOTY awards list is exhaustive as awards since inception have been considered*

**Safety:**

Hyundai Verna has obtained a 5-star rating according to the most recent criteria set by Global NCAP in 2023. The Verna was assessed in its most basic passive safety specification with 6 airbags and Electronic Stability Control (ESC) as standard. The model achieved a five-star rating for adult and child occupants.

In 2022 publication by Global NCAP Hyundai 120 – 2 airbags and Hyundai Creta – 2 airbags obtain a 3-star rating. Hyundai Motor India is the first mass market OEM in India to standardize six airbags across all its models and variants under its “safety-for-all” mission in Oct 2023. Apart from that, Hyundai Motor India has also standardized 3-point seatbelt and seatbelt reminder as a standard safety feature across all variants.

Hyundai also announced that it will voluntarily participate in the recently introduced Bharat NCAP with three models to begin with, with more vehicles to follow for the safety tests.

**Tata Motors**

**Price Bracket Wise and Powertrain-wise Product Portfolio:**

Tata Motors primarily offers products under 15 lakhs, with couple of models above 20 lakhs. They have powertrain options across all models under 10 lakhs – petrol, EV, and the recently launched CNG variants. Diesel options are also available for the higher range models. Tata Motors also has a subsidiary especially for the electric vehicles known as Tata Passenger Electric Mobility Ltd (TPEM).

The company has propelled the EV powertrain in India with launch of its popular EV models like Nexon, Tiago, Tigor and Punch. Moreover, they also introduced AMT transmission in the CNG powertrain for the mass market as well as twin cylinder CNG technology aiding the growth of CNG powertrain in India.

Price Bracket	% Volume Contribution to OEM Sales	Petrol	Diesel	CNG	EV	Strong Hybrid
0-10 Lakh	15.8%	Tiago		Tiago	Tiago	
	5.2%	Tigor		Tigor	Tigor	
	27.9%	Punch		Punch	Punch	
	13.1%	Altroz	Altroz	Altroz		
10-15 Lakh	30.3%	Nexon	Nexon		Nexon	
15-20 Lakh						
20 Lakh & above	4.2%		Harrier			



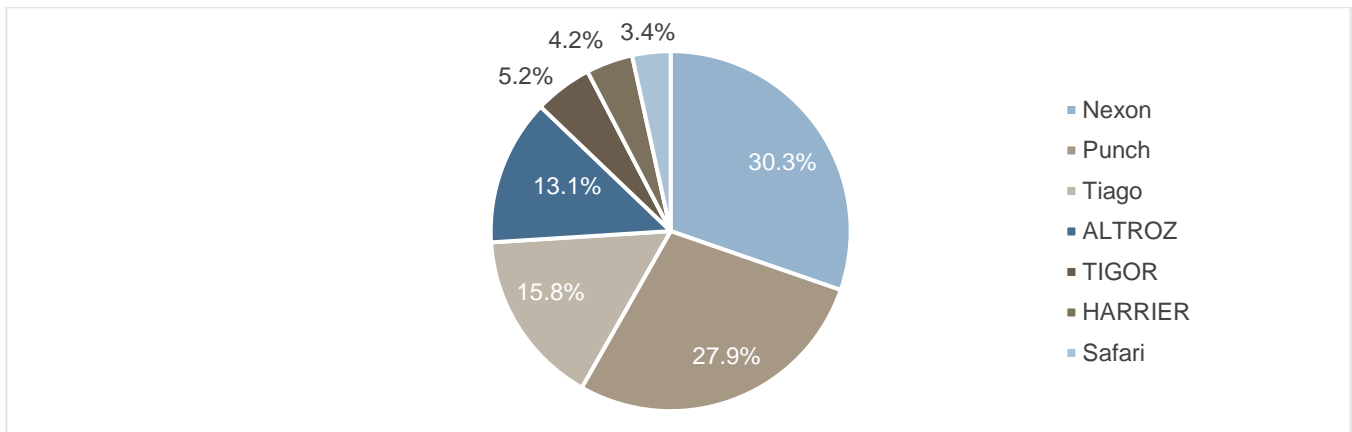
	3.4%		Safari			
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Note: Prices considered are ex-showroom Delhi prices for the middle variant of each model. For % volume contribution sales Volume taken of YTD FY2024 – Apr'23-Feb'24

Source: CRISIL MI&A

**Model Wise Sales Contribution**

Almost 60% of Tata Motor’s sales volumes come from Nexon and Punch that belong to the compact SUV segment. Tiago and Altroz from the Hatchbacks segment account for another ~30% of the volumes showcasing their strength in the under 15 lakhs segment.



Note: Sales Volume taken of YTD FY2024 – Apr'23-Feb'24

Source: SIAM, CRISIL MI&A

**Awards & Accolades:**

- Received Manufacturer of the year award at Auto Car 2023 awards
- Nexon
  - 'Facelift of the year' – Zee Auto Awards 2023 and ABP Auto Awards 2024
- ICOTY Green Card Award Winner 2021- Nexon EV
- ICOTY Premium Car Award Winner 2021- Land Rover Defender
- ICOTY Winner 2010- Nano
- Ranked #1 SUV manufacturer in India
- #1 Tiago, Tigor, Punch ranked by the JD Power IQS Survey 2022
- The Range Rover has been awarded Car Design Review 9's top accolade of 'Production Car of the Year', for its thoroughly modern yet recognisable form.
- The new Range Rover won in the 'Best New Large SUV' and 'Best PHEV' categories at the Car Expert Awards and Business Motoring awards.
- The Defender won 'Best Large Premium SUV' and 'Best Off-roader' at the Auto Express and Parkers awards.

Note: The list of awards and accolades has been obtained basis our assessment of information available in public domain, and may not be exhaustive, ICOTY awards list is exhaustive as awards since inception have been considered

**Safety –**

The Nexon was the inaugural model to receive a five-star NCAP rating in 2018. In 2023, the updated Nexon with enhanced safety features such as six airbags and Electronic Stability Control (ESC) has secured the second-highest score in Global NCAP testing for both adult and child occupant safety. Additionally, Tata Motors led the rankings with the top rating for their Safari & Harrier models for both adult & child occupant safety. The Punch and Altroz models have received top NCAP ratings in 2023.

Tata Motors continued its legacy of safety with the new Safari and Harrier SUVs achieving a 5-star rating in adult and child occupant protection in the new Bharat-NCAP, setting new standards in Indian automotive safety. Tata Nexon, Harrier, Punch EV, Safari and Nexon EV has 6 airbags

**Mahindra & Mahindra**

**Price Bracket Wise and Powertrain-wise Product Portfolio:**

Mahindra & Mahindra primarily offers products between 10-20 lakhs. They also have a portfolio offering multiple powertrain options – Petrol, Diesel and EV.

During the early 2000s, Mahindra & Mahindra, popularised the SUV segment in India, through their successful models of Bolero and Scorpio.

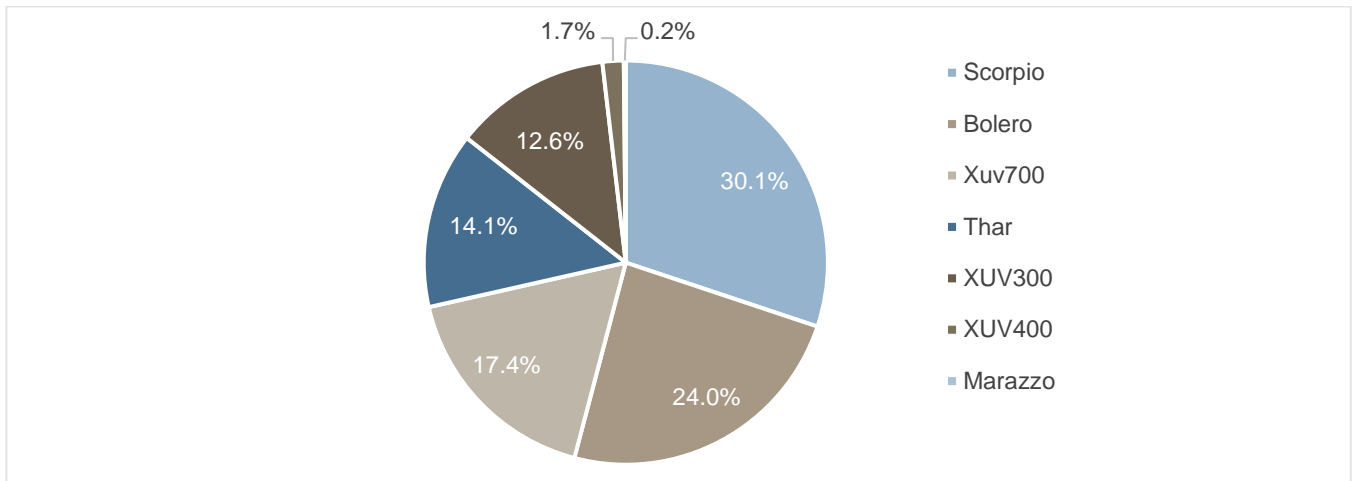
Price Bracket	% Volume Contribution to OEM Sales	Petrol	Diesel	CNG	EV	Strong Hybrid
0-10 Lakh						
10-15 Lakh	24.0%		Bolero			
	12.6%	XUV300	XUV300			
15-20 Lakh	0.2%		Marazzo			
	14.1%	Thar	Thar			
	1.7%				XUV400EV	
	30.1%		Scorpio			
	17.4%	XUV700	XUV700			

*Note: Prices considered are ex-showroom Delhi prices for the middle variant of each model. For % volume contribution sales Volume taken of YTFY2024 – Apr'23-Feb'24*

Source: CRISIL MI&A

**Model Wise Sales Contribution**

Around 54% of M&M's sales volumes comes from Scorpio and Bolero that belong to Large and Compact SUV segments respectively. Thar and XUV300 from the Compact SUV segment account for another ~27% of the volumes.



Note: Sales Volume taken of YTD FY2024 – Apr'23-Feb'24

Source: SIAM, CRISIL MI&A

**Awards & Accolades:**

1. Won the Automotive Company of the Year award by Top Gear India.
2. Scorpio-N
  - b. Coveted Autocar Viewer’s Choice, Car of the Year award.
  - c. Readers’ Choice Car of the Year: Mahindra Scorpio-N – Car India Awards 2023
3. XUV700
  - d. ICOTY Winner 2022
4. XUV400
  - e. Electric Vehicle of The Year at the Car&Bike Awards 2024
5. XUV300 TurboSport
  - f. Variant of the Year – Car India Awards 2023
6. Thar 4x2
  - g. Variant of the Year – ABP Auto Awards 2024

Note: The list of awards and accolades has been obtained basis our assessment of information available in public domain, and may not be exhaustive, ICOTY awards list is exhaustive as awards since inception have been considered

**Safety –**

Scorpio-N was rated as the world’s first body-on-frame vehicle to receive a 5-star rating for adult and 3-star rating for child safety from GNCAP in 2022. Mahindra XUV700– 2 Airbags received 5-star rating for adult and 4-star rating for child from GNCAP in 2021 publication. Mahindra XUV300, XUV700 and Scorpio-N come with 6-airbags for safety.

**Kia Motors India:**

**Price Bracket Wise and Powertrain-wise Product Portfolio:**

Kia primarily offers products between 10-20 lakhs and has multiple powertrain options – Petrol, Diesel, and EV.

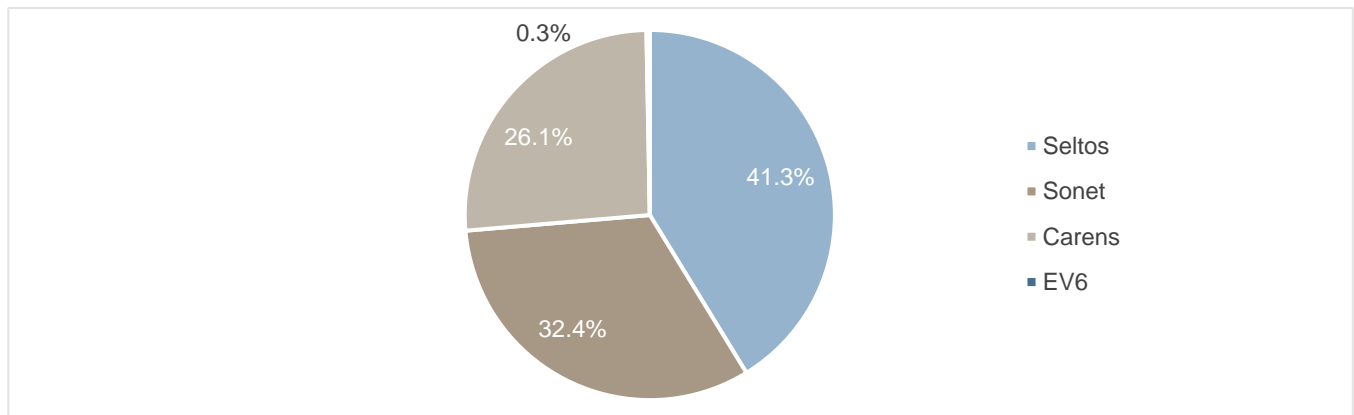
Price Bracket	% Volume Contribution to OEM Sales	Petrol	Diesel	CNG	EV	Strong Hybrid
0-10 Lakh						
10-15 Lakh	32.4%	Sonet	Sonet			
15-20 Lakh	41.3%	Seltos	Seltos			
	26.1%	Carens	Carens			
20 Lakh & above	0.3%				EV6	

Note: Prices considered are ex-showroom Delhi prices for the middle variant of each model. For % volume contribution sales Volume taken of YTFY2024 – Apr'23-Feb'24

Source: CRISIL MI&A

**Model Wise Sales Contribution**

Majority of Kia’s sales volumes come from the SUV segment with Seltos having 41% of sales, followed by Sonet and Carens. EV6 currently holds a minimal share of around 0.3% by volume.



Note: Sales Volume taken of YTFY2024 – Apr'23-Feb'24

Source: SIAM, CRISIL MI&A

**Awards & Accolades:**

1. Carens:
  - a. ICOTY Winner 2023
  - b. Family Car of the Year – Car&Bike Awards 2023
  - c. MPV of the Year – Car India Awards 2023
2. EV6: Green Car Award Winner 2023 ICOTY
3. EV9: Family Car of the Year: Top Gear Award 2023

Note: The list of awards and accolades has been obtained basis our assessment of information available in public domain, and may not be exhaustive, ICOTY awards list is exhaustive as awards since inception have been considered

**Safety –**

Kia Carens – 6 Airbags received a 3-star rating for both adult and child safety from GNCAP in 2022 publication. Kia Seltos – 2 Airbags received 3-star rating for adult and 2-star rating for child safety from GNCAP in 2020 publication. The entire Kia lineup in India now comes with 6-airbags.

**Toyota Kirloskar Motor**

**Price Bracket Wise and Powertrain-wise Product Portfolio:**

Toyota primarily offers products above 20 lakhs and has powertrain options – Petrol, Diesel and CNG.

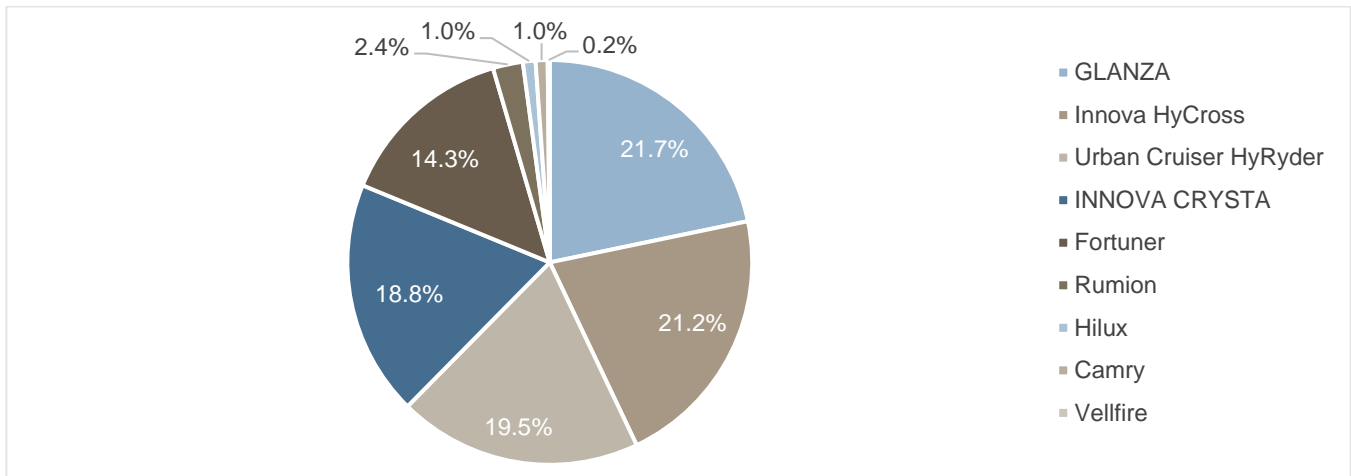
Price Bracket	% Volume Contribution to OEM Sales	Petrol	Diesel	CNG	EV	Strong Hybrid
0-10 Lakh	21.7%	Glanza		Glanza		
10-15 Lakh	2.4%	Rumion		Rumion		
15-20 Lakh	19.5%	Urban Cruiser HyRyder		Urban Cruiser HyRyder		Urban Cruiser HyRyder
20 Lakh & above	18.8%	Innova Crysta	Innova Crysta			
	21.2%	Innova HyCross				
20 Lakh & above	1.0%		Hilux			
	14.3%	Fortuner	Fortuner			
	1.0%	Camry				
	0.2%	Vellfire				Vellfire

Note: Prices considered are ex-showroom Delhi prices for the middle variant of each model. For % volume contribution sales Volume taken of YTDFY2024 – Apr'23-Feb'24

Source: CRISIL MI&A

**Model Wise Sales Contribution**

Almost 22% of Toyota’s sales volumes come from Glanza which belongs to the premium hatchbacks segment. Urban Cruiser HyRyder from the mid-size SUV segment holds ~20% share of the volumes. Innova HyCross and Innova Crysta from the MPV segment account for 40% of the volumes showcasing their strength in the MPV segment.



Note: Sales Volume taken of YTD FY2024 – Apr'23-Feb'24

Source: SIAM, CRISIL MI&A

**Awards & Accolades:**

1. Land Cruiser
  - a. Design of the Year – Top Gear Award 2023
2. Innova HyCross
  - a. 'Car Of the Year' and 'Hybrid of The Year' – Car&Bike Award 2023
  - b. 'MPV of the Year' – Autocar Awards 2023
3. Urban Cruiser HyRyder
  - a. SUV of the Year – Car India Awards 2023
4. Kirloskar Motor Clinches Two Prestigious EEPIC India National Export Awards

Note: The list of awards and accolades has been obtained basis our assessment of information available in public domain, and may not be exhaustive, ICOTY awards list is exhaustive as awards since inception have been considered

**Safety –**

Toyota Urban Cruiser – 2 Airbags received a 4-star rating for adult and 3-star rating for child safety in GNCAP 2022 publication. Toyota Innova Crysta and Toyota Fortuner have 7 airbags for safety while Toyota Glanza, Urban Cruiser, and Innova Hycross have 6 airbags for safety.

**Honda Cars India**

**Price Bracket Wise and Powertrain-wise Product Portfolio:**

Honda Cars primarily offers products between 10-15 lakhs primarily with petrol option. Honda City also has a strong hybrid option.

Price Bracket	% Volume Contribution to OEM Sales	Petrol	Diesel	CNG	EV	Strong Hybrid
0-10 Lakh	41.9%	Amaze				

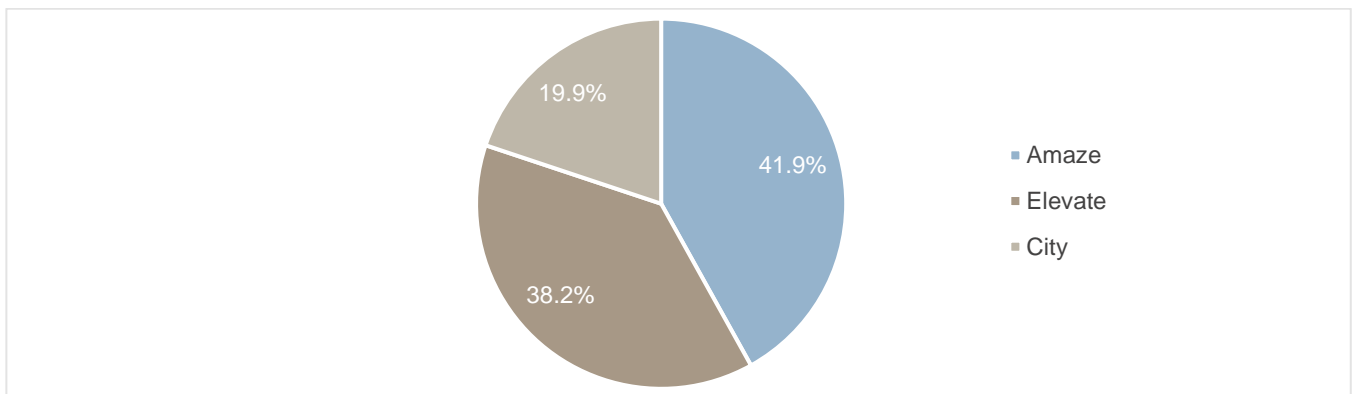
10-15 Lakh	38.2%	Elevate				
	159.9%	Honda City				Honda City

Note: Prices considered are ex-showroom Delhi prices for the middle variant of each model. For % volume contribution sales Volume taken of YTDFY2024 – Apr'23-Feb'24

Source: CRISIL MI&A

## Model Wise Sales Contribution

Almost 62% of sales volumes come from Amaze and City that are sedans. Elevate from the mid-size SUV segment accounts for another ~38% of the volumes.



Note: Sales Volume taken of YTDFY2024 – Apr'23-Feb'24

Source: SIAM, CRISIL MI&A

## Awards & Accolades:

1. Elevate
  - a. Compact SUV of the Year – Car&Bike awards 2024
  - b. Viewer's Choice of the Year – Car&Bike awards 2024
  - c. SUV of the Year – ABP Auto Awards 2024
2. Honda City
  - a. Hybrid Sedan of the Year – Car India Awards 2023
  - b. ICOTY Winner 2009
3. ICOTY Winner 2007 – CIVIC
4. Amaze
  - a. Update of the Year – Indian Vehicle Awards 2022

Note: The list of awards and accolades has been obtained basis our assessment of information available in public domain, and may not be exhaustive, ICOTY awards list is exhaustive as awards since inception have been considered

## Safety –

Honda City (4<sup>th</sup> Gen) – 2 Airbags received a 4-star rating for adult and child safety from GNCAP in 2022 publication. Honda Jazz – 2 Airbags has received a 4-star rating for adult and 3-star rating for child safety in GNCAP 2022 publication. Honda City and Elevate came up with safety features of 6 Airbags as standard application across all grades.

**Skoda Auto India**

**Price Bracket Wise and Powertrain-wise Product Portfolio:**

SkodaAuto primarily offers products above 15 lakhs and only has petrol as the powertrain option.

Price Bracket	% Volume Contribution to OEM Sales	Petrol	Diesel	CNG	EV	Strong Hybrid
15-20 Lakh	42.5%	Slavia				
	53.0%	Kushaq				
20 Lakh & above	0.3%	Superb*				
	4.2%	Kodiaq				

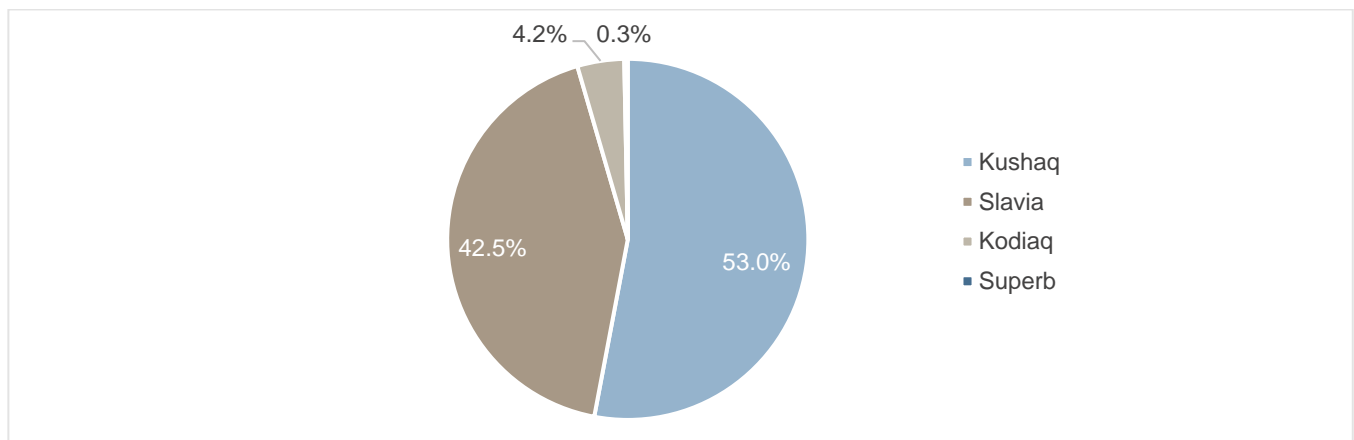
Note: Prices considered are ex-showroom Delhi prices for the middle variant of each model. For % volume contribution sales Volume taken of YTD FY2024 – Apr'23-Feb'24

Superb production has been discontinued from April 2023; however, sales are there in FY24.

Source: CRISIL MI&A

**Model Wise Sales Contribution**

Almost 53% of sales volumes come from Kushaq which is a mid-size SUV. Slavia from the Premium Sedan segment accounts for ~43% of the volumes.



Note: Sales Volume taken of YTD FY2024 – Apr'23-Feb'24

Source: SIAM, CRISIL MI&A

**Awards & Accolades:**

1. Slavia

- a. Sedan of the year – Car India Awards 2023

Note: The list of awards and accolades has been obtained basis our assessment of information available in public domain, and may not be exhaustive, ICOTY awards list is exhaustive as awards since inception have been considered

**Safety –**

Skoda Slavia received a 5 star rating for adult and child safety from GNCAP in 2023 publication. Skoda Kushaq has received a 5 star rating for both adult and child safety by GNCAP in 2022 publication. Skoda Kushaq has 6 airbags.



**MG Motors India**

In a short span, MG Motors has established its presence in the Indian passenger vehicle mass market segment. It was one of the first companies to introduce connected cars for mass market segment in India. The company offers latest software-based features like Car As A Platform subscription model and AI based personal assistant in its products.

**Price Bracket Wise and Powertrain-wise Product Portfolio:**

MG Motors primarily offers products over 10 lakhs and has petrol, diesel, and EV as powertrain options.

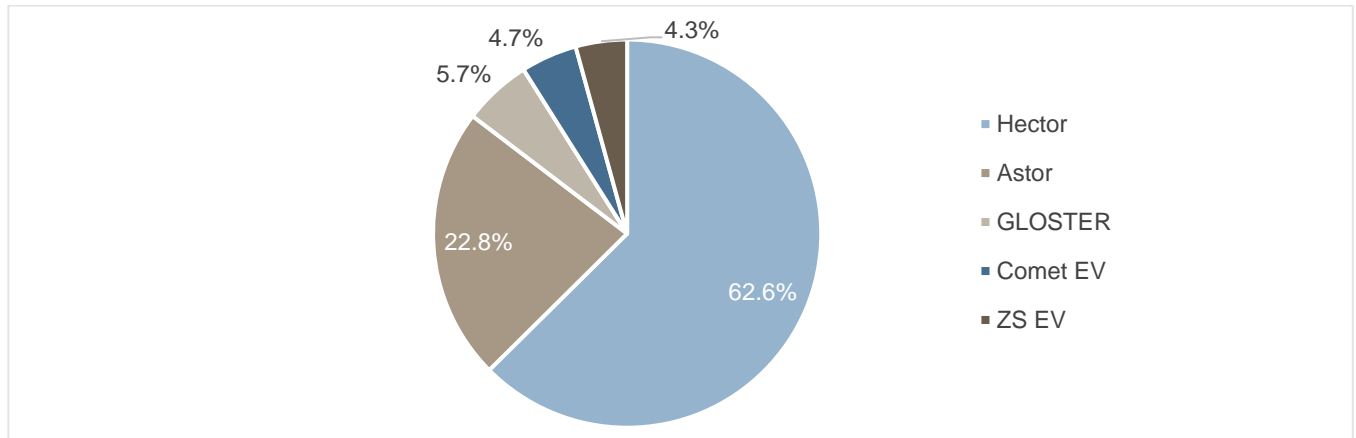
Price Bracket	% Volume Contribution to OEM Sales	Petrol	Diesel	CNG	EV	Strong Hybrid
0-10 Lakh	4.7%				Comet EV	
10-15 Lakh	22.8%	Astor				
15-20 Lakh	62.6%	Hector	Hector			
20 Lakh & above	4.3%				ZS EV	
	5.7%		Gloster			

*Note: Prices considered are ex-showroom Delhi prices for the middle variant of each model. For % volume contribution sales Volume taken of YTD FY2024 – Apr'23-Feb'24*

Source: CRISIL MI&A

**Model Wise Sales Contribution**

Almost 63% of MG's sales volumes comes from the Hector, which is a large SUV. The EVs – Comet & ZS – account for almost 10% of its volumes.



*Note: Sales Volume taken of YTD FY2024 – Apr'23-Feb'24*

Source: SIAM, CRISIL MI&A

**Awards & Accolades:**

1. Comet:
  - a. Value for money of the Car – ABP Auto Awards 2024
  - b. Most Promising Car of the Year – ZEE Auto Awards 2023

2. MG Motor India Receives National Energy Conservation Award 2023

Note: The list of awards and accolades has been obtained basis our assessment of information available in public domain, and may not be exhaustive, ICOTY awards list is exhaustive as awards since inception have been considered

**Safety –**

MG Hector comes with 6 Airbags that include dual front airbags, front seat side impact and side curtain airbags that work together with the seatbelts.

**Renault India**

**Price Bracket Wise and Powertrain-wise Product Portfolio:**

Renault primarily offers products of 10 lakhs and has petrol as the powertrain option.

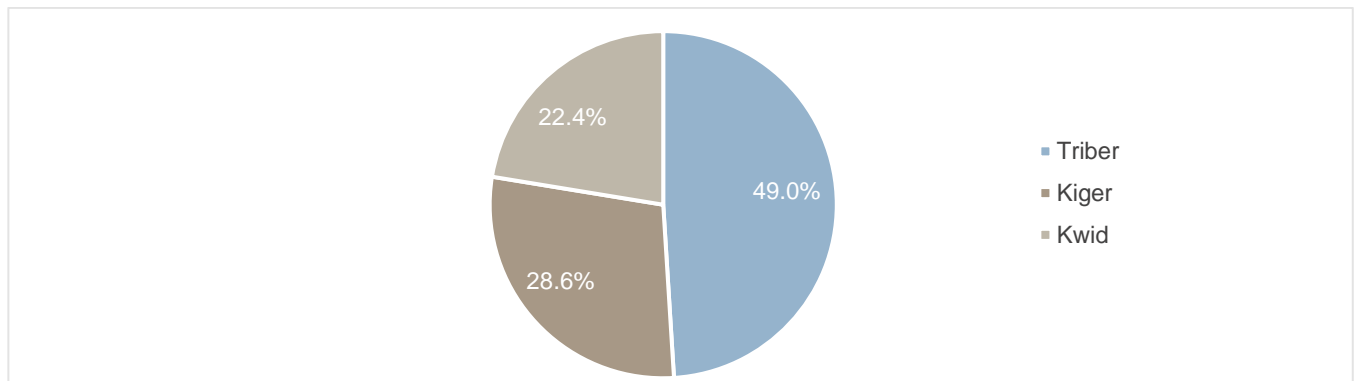
Price Bracket	% Volume Contribution to OEM Sales	Petrol	Diesel	CNG	EV	Strong Hybrid
0-10 Lakh	22.4%	Kwid				
	49.0%	Triber				
	28.6%	Kiger				

Note: Prices considered are ex-showroom Delhi prices for the middle variant of each model. For % volume contribution sales Volume taken of YTDFY2024 – Apr’23-Feb’24

Source: CRISIL MI&A

**Model Wise Sales Contribution**

Almost 78% of the sales volumes come from Kiger and Triber that belong to the compact SUV segment. While Kwid from the compact hatchbacks segment accounts for ~22% of the volumes.



Note: Sales Volume taken of YTDFY2024 – Apr’23-Feb’24

Source: SIAM, CRISIL MI&A

**Awards & Accolades:**

1. Triber
  - a. Family Car of the Year – Autocar India Awards
  - b. Best Brand Awards 2023 – The economic Times Awards 2023
  - c. MPV of the Year – Car India Awards

2. Kiger
  - a. Best Upgrade Award 2023 – Autoportal India Awards
  - b. Compact SUV of the year – Autocar India Awards 2022
  - c. Viewer’s Choice of the Year – Jagran Hi Tech Awards 2022
  - d. Sub-Compact SUV of the Year – Car India Awards 2022
3. Kwid
  - a. Best pre-owned small hatchbacks – OlxAutos & AutoCar Pre-owned Car Awards 2023
4. Duster won the ICOTY Award in 2013.

*Note: The list of awards and accolades has been obtained basis our assessment of information available in public domain, and may not be exhaustive, ICOTY awards list is exhaustive as awards since inception have been considered*

**Safety –**

Renault Kiger – 2 Airbags received a 4-star rating for adults and 2-star rating for child safety by GNCAP in 2022.  
Renault Triber – 2 Airbags received a 4-star rating for adults and 3-star rating for child safety in GNCAP 2021 publication.

**Volkswagen India**

**Price Bracket Wise and Powertrain-wise Product Portfolio:**

Volkswagen primarily offers products above 15 lakhs and provides petrol and diesel powertrain options.

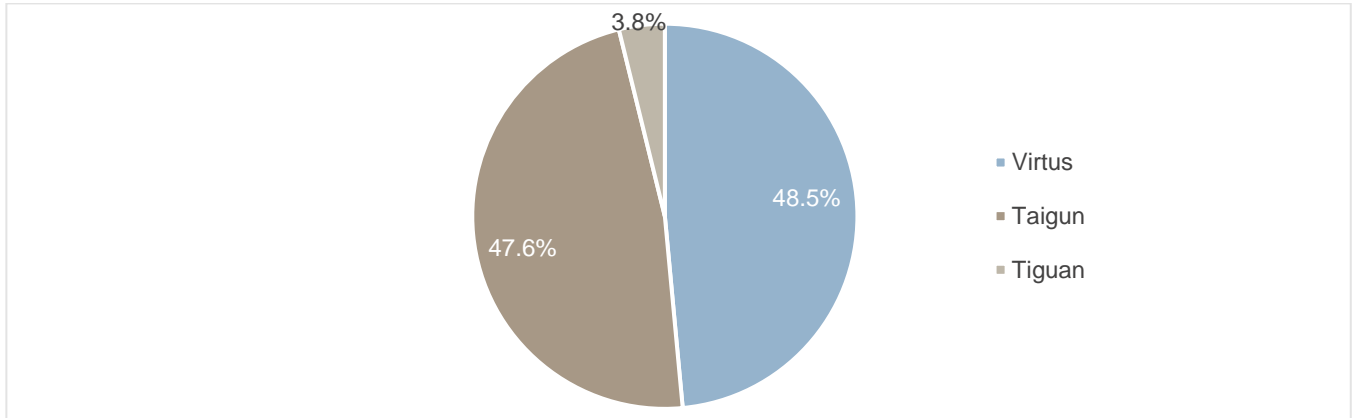
Price Bracket	% Volume Contribution to OEM Sales	Petrol	Diesel	CNG	EV	Strong Hybrid
15-20 Lakh	48.5%	Virtus				
	47.6%	Taigun				
20 Lakh & above	3.8%	Tiguan				

*Note: Prices considered are ex-showroom Delhi prices for the middle variant of each model. For % volume contribution sales Volume taken of YTD FY2024 – Apr’23-Feb’24*

Source: CRISIL MI&A

**Model Wise Sales Contribution**

Around 51% of Volkswagen’s sales volumes comes from Taigun and Tiguan that are SUVs. Virtus from the premium sedans segment account for ~49% of the volumes.



Note: Sales Volume taken of YTDFY2024 – Apr’23-Feb’24

Source: SIAM, CRISIL MI&A

**Awards & Accolades:**

1. Virtus – Sedan of the Year – Car India Awards 2023

Note: The list of awards and accolades has been obtained basis our assessment of information available in public domain, and may not be exhaustive, ICOTY awards list is exhaustive as awards since inception have been considered

**Safety –**

Volkswagen Virtus received a 5-star rating for both adult and child safety by GNCAP in 2023 publication. Volkswagen Taigun has received a 5-star rating for both adult and child safety in GNCAP 2022 publication.

**Nissan Motor India**

**Price Bracket Wise and Powertrain-wise Product Portfolio:**

Nissan Motors primarily offers products below 15 lakhs and has Petrol as the powertrain option.

Price Bracket	% Volume Contribution to OEM Sales	Petrol	Diesel	CNG	EV	Strong Hybrid	Sales Contribution (%)
0-10 Lakh	100%	Magnite					100%

Note: Prices considered are ex-showroom Delhi prices for the middle variant of each model. For % volume contribution sales Volume taken of YTDFY2024 – Apr’23-Feb’24

Source: CRISIL MI&A

**Model Wise Sales Contribution**

Nissan’s 100% sales volumes come from the model Magnite which belongs to the compact SUV segment.

**Awards & Accolades:**

1. Magnite
  - a. ‘2023 ICONIC Brand of the Year’ at the Dainik Jagran Next ICONIC Awards
  - b. ‘Compact SUV of the Year 2021’ by Top Gear
  - c. ‘Game Changer’ award by Motor Octane

**d. 'Value for Money' by Autocar India**

*Note: The list of awards and accolades has been obtained basis our assessment of information available in public domain, and may not be exhaustive, ICOTY awards list is exhaustive as awards since inception have been considered*

**Safety –**

Nissan Magnite – 2 Airbags received a 4-star rating for adult and 2-star rating for child safety in GNCAP 2022 publication.

**Financial Parameters**

**Player-wise Overall Financial Comparison (fiscal 2023)**

Particulars	Maruti Suzuki	Hyundai Motor India	Tata Motors	Mahindra & Mahindra	Kia Motors India	Toyota Kirloskar Motor	Honda Cars India	Skoda Auto Volkswagen India	MG Motor India	Nissan Renault India
Passenger Vehicle Volume Wise Market Share (%)	41.3%	14.6%	14.0%	11.2%	6.9%	4.5%	2.4%	2.4%	1.3%	2.9%
Operating revenue (INR billion)	1,175.7	603.1	478.7	849.6	387.8	337.3	141.9	170.4	75.8	123.6
Operating margin (%)	8.5%	9.1%	1.0%	12.3%	7.7%	5.3%	4.1%	3.1%	-12.9%	-1.3%
PAT margin (%)	7.3%	7.8%	NA	7.7%	5.5%	4.2%	10.4%	1.9%	-14.3%	0.3%

*Note: For Maruti Suzuki and Hyundai Motor India Consolidated financials are used and for all other OEMs standalone financials are considered.*

*For Mahindra & Mahindra the Operating Revenue is for Standalone business that includes Automotive segment (comprises of sale of automobiles, spares, mobility solutions, Construction Equipment and related services), Farm Equipment (comprises of sale of tractors, implements, spares and related services) and Others (comprises of Powerol, Two Wheelers and Spares Business Unit). For Automotive Segment the Operating Revenue is INR 585.1 billion, however other financial parameters are not available specifically for Automotive Segment.*

*For Tata Motors the financials are for passenger vehicles segment*

*NA = Not Available in the data reported in Annual or Quarterly Reports by respective players*

*Source: Company Financial Reports, CRISIL MI&A*

**Financial Ratios comparison (fiscal 2023, standalone financials only)**

Particulars	Maruti Suzuki	Hyundai Motor India	Tata Motors#	Mahindra & Mahindra	Kia Motors India	Toyota Kirloskar Motor	Honda Cars India	Skoda Auto Volkswagen India	MG Motor India	Nissan Renault India
Return on Capital Employed (%)	17.9%	27.0%	9.0%	18.1%	43.0%	27.0%	0.2%	2.2%	(0.4)	6.6%
Return on Net worth (%)	14.1%	26.0%	13.0%	16.1%	31.0%	39.0%	1.2%	6.2%	(19.1)	0.7%
Debt Equity Ratio	0.02x	0.06x	0.84x	0.11x	0.50x	0.84x	1.50x	0.52x	(7.80)	0.12x
Current Ratio	0.6x	2.1x	0.5x	1.3x	1.5x	1.6x	1.3x	0.8x	0.6x	1.3x

Particulars	Maruti Suzuki	Hyundai Motor India	Tata Motors#	Mahindra & Mahindra	Kia Motors India	Toyota Kirloskar Motor	Honda Cars India	Skoda Auto Volkswagen India	MG Motor India	Nissan Renault India
Debt Service Coverage Ratio	40.3x	29.3x	10.0x	24.0x	1.4x	12.5x	7.2x	258.6x	(0.1)	1.6x
Debt Ratio (%)	1.5%	3.6%	1.5%	6.6%	42.6%	26.3%	37.3%	16.5%	43.7%	6.3%

Note: For all players Standalone financials are used.

#: Tata Motors Standalone financials represents commercial vehicles business

Source: Company Financial Reports, CRISIL MI&A

### Key Financial KPIs for last three fiscals (fiscal 2021 to 9M fiscal 2024 for Listed Players only)

#### Maruti Suzuki India Limited (Consolidated):

Metric	Unit	As at and for the nine months ended		As at and for the Fiscal		
		December 2023	2023	2022	2021	
<b>Financial metrics (Consolidated)</b>						
Revenue from Operations	(in INRm)	1,033,870.00	1,175,713.00	883,298.00	703,720.00	
Domestic <sup>(1)</sup>	(in %)		NA	87.40	93.12	
Overseas <sup>(1)</sup>	(in %)		NA	12.60	6.88	
EBITDA	(in INRm)		NA	NA	NA	
EBITDA Margin	(in %)		NA	NA	NA	
EBIT	(in INRm)		NA	NA	NA	
EBIT Margin	(in %)		NA	NA	NA	
Profit for the period / year	(in INRm)	95,359.00	82,110.00	38,795.00	43,891.00	
Profit for the period / year Margin <sup>(2)</sup>	(in %)	9.22	6.98	4.39	6.24	
Net worth	(in INRm)		NA	617,913.00	525,006.00	
Return on capital employed	(in %)		NA	NA	NA	
<b>Total Sales volume<sup>(3)</sup></b>	-		NA	1,966,164	1,457,861	
Domestic <sup>(3)</sup>	-		NA	1,706,831	1,361,722	
Exports <sup>(3)</sup>	-		NA	259,333	96,139	
<b>Total customer touchpoints<sup>(4)</sup></b>	-		NA	8,204	7,164	
Sales outlets <sup>(4)</sup>	-		NA	3,640	3,120	
Service touchpoints <sup>(4)</sup>	-		NA	4,564	4,044	

Note: Consolidated financials have been considered

For 9MFY24 data, quarterly filings by the respective organizations have been referred to. These are unaudited filings and CRISIL is not liable if the numbers are modified in the final FY24 audited reports later.

NA = Not Available in the data reported in Annual or Quarterly Reports by respective players

(1) Domestic information includes sales and services to customers located in India and Overseas information includes sales and services rendered to customers located outside India

(2) Profit for the period / year Margin is calculated as Profit for the period / year percentage of revenue from operation

(3) Includes PV and LCV volumes

(4) Includes PV and LCV touchpoints

Source: Company Financial Reports

**Maruti Suzuki India Limited (Standalone):**

Metric	Unit	As at and for the nine months ended		As at and for the Fiscal	
		December 2023	2023	2022	2021
<b>Financial metrics (Standalone)</b>					
Revenue from Operations	(in INRm)	1,026,977.00	1,175,229.00	882,956.00	703,325.00
Domestic <sup>(3)</sup>	(in %)	NA	87.39	85.85	93.11
Overseas <sup>(3)</sup>	(in %)	NA	12.61	14.15	6.89
EBITDA	(in INRm)	NA	NA	NA	53,453.00
EBITDA Margin	(in %)	NA	NA	NA	7.60
EBIT	(in INRm)	NA	81,844.00	29,147.00	23,138.00
EBIT Margin	(in %)	NA	7.30	3.50	3.50
Profit for the period / year	(in INRm)	93,316.00	80,492.00	37,663.00	42,297.00
Profit for the period / year Margin <sup>(1)</sup>	(in %)	9.09	6.85	4.27	6.01
Net worth	(in INRm)	NA	603,820.00	540,860.00	513,668.00
Return on capital employed <sup>(2)</sup>	(in %)	NA	17.90	8.90	10.40

Note: Standalone financials have been considered

For 9MFY24 data, quarterly filings by the respective organizations have been referred to. These are unaudited filings and CRISIL is not liable if the numbers are modified in the final FY24 audited reports later.

NA = Not Available in the data reported in Annual or Quarterly Reports by respective players

(1) Profit for the period / year Margin is calculated as Profit for the period / year percentage of revenue from operation

(2) Reported ROCE is defined as EBIT / capital employed, and capital employed = total equity + borrowings - cash and cash equivalents + deferred tax liabilities

(3) Domestic information includes sales and services to customers located in India and Overseas information includes sales and services rendered to customers located outside India

Source: Company Financial Reports

**Tata Motors Limited (Consolidated):**

Metric	Unit	As at and for the nine months ended		As at and for the Fiscal	
		December 2023	2023	2022	2021
<b>Financial metrics (Consolidated)</b>					
Revenue from Operations	(in INRm)	3,179,414.60	3,459,669.70	2,784,536.20	2,497,947.50
Domestic <sup>(4)</sup>	(in %)	NA	32.98	29.02	20.18
Overseas <sup>(4)</sup>	(in %)	NA	67.02	70.98	79.82
EBITDA	(in INRm)	NA	NA	NA	NA
EBITDA Margin <sup>(1)</sup>	(in %)	14.10	10.70	9.60	12.20
EBIT	(in INRm)	NA	NA	NA	NA
EBIT Margin <sup>(2)</sup>	(in %)	7.90	3.60	0.70	2.60
Profit for the period / year	(in INRm)	142,781.60	26,898.70	(113,087.60)	(133,951.00)
Profit for the period / year Margin <sup>(3)</sup>	(in %)	4.49	0.78	(4.06)	(5.36)
Net worth	(in INRm)	678,267.70	453,217.90	445,612.40	552,467.20
Return on capital employed	(in %)	NA	NA	NA	NA
<b>Total Sales volume</b>	-	NA	1,335,819	1,086,734	902,648
Domestic	-	NA	NA	NA	NA
Exports	-	NA	NA	NA	NA

Note: Consolidated financials have been considered

For 9MFY24 data, quarterly filings by the respective organizations have been referred to. These are unaudited filings and CRISIL is not liable if the numbers are modified in the final FY24 audited reports later.

NA = Not Available in the data reported in Annual or Quarterly Reports by respective players

Source: Company Financial Reports

(1) EBITDA margin is defined as Profit before tax and exceptional items + Unrealized FX, Unrealized commodities + Finance cost – Other income (excluding government grant income) - Profit from equity accounted investees + Depreciation and amortization percentage of revenue from operation

(2) EBIT Margin is calculated as Profit before tax and exceptional items + Unrealized FX, Unrealized commodities + Finance cost – Other income (excluding government grant income) percentage of revenue from operation

(3) Profit for the period / year Margin is calculated as Profit for the period / year percentage of revenue from operation

(4) Domestic information includes sales and services to customers located in India and Overseas information includes sales and services rendered to customers located outside India

**Tata Motors Limited (PV business only):**

Metric	Unit	As at and for the nine months ended		As at and for the Fiscal	
		December 2023	2023	2022	2021
<b>Financial metrics (PV)</b>					
Revenue from Operations <sup>(1)</sup>	(in INRm)	379,226.60	478,678.30	315,149.00	166,062.40
Domestic <sup>(3)</sup>	(in %)	NA	NA	NA	NA
Overseas <sup>(3)</sup>	(in %)	NA	NA	NA	NA
EBITDA	(in INRm)	NA	NA	NA	NA
EBITDA Margin	(in %)	6.10	6.40	5.30	2.00
EBIT	(in INRm)	NA	NA	NA	NA
EBIT Margin	(in %)	1.60	1.00	(2.00)	(9.50)
Profit for the period / year	(in INRm)	NA	NA	NA	NA
Profit for the period / year Margin	(in %)	NA	NA	NA	NA
<b>Total Sales volume<sup>(2)</sup></b>	-	138,600	540,965	372,157	222,638
Domestic <sup>(2)</sup>	-	NA	538,518	370,354	222,074
Exports <sup>(2)</sup>	-	NA	2,447	1,803	564
<b>Total customer touchpoints</b>	-	NA	2,265	1,888	1510
Sales outlets <sup>(4)</sup>	-	NA	1,410	1,183	906
Service touchpoints <sup>(4)</sup>	-	NA	855	705	604

Note: PV segment financials have been considered from annual reports

For 9MFY24 data, quarterly filings by the respective organizations have been referred to. These are unaudited filings and CRISIL is not liable if the numbers are modified in the final FY24 audited reports later.

NA = Not Available in the data reported in Annual or Quarterly Reports by respective players

Net Worth data is not available separately for PV segment.

(1) PV segment revenue from operations

(2) Volumes of passenger vehicles (including EVs)

(3) Domestic information includes sales and services to customers located in India and Overseas information includes sales and services rendered to customers located outside India

(4) PV outlets and touchpoints only (excluding EVs)

Source: Company Financial Reports

**Mahindra & Mahindra Limited (Consolidated):**

Metric	Unit	As at and for the nine months ended		As at and for the Fiscal	
		December 2023	2023	2022	2021
<b>Financial metrics (Consolidated)</b>					
Revenue from Operations <sup>(1)</sup>	(in INRm)	1,029,059.60	1,212,685.50	901,705.70	742,777.80
Domestic <sup>(1)</sup>	(in %)	NA	85.87	82.62	83.12
Overseas <sup>(1)</sup>	(in %)	NA	14.13	17.38	16.88
EBITDA	(in INRm)	NA	NA	NA	NA



Metric	Unit	As at and for the nine months ended		As at and for the Fiscal	
		December 2023	2023	2022	2021
EBITDA Margin	(in %)	NA	NA	NA	NA
EBIT	(in INRm)	NA	NA	NA	NA
EBIT Margin	(in %)	NA	NA	NA	NA
Profit for the period / year	(in INRm)	91,448.80	113,745.80	72,530.10	15,124.90
Profit for the period / year Margin <sup>(2)</sup>	(in %)	8.89	9.38	8.04	2.04
Net worth	(in INRm)	635,895.20	NA	NA	NA
Return on capital employed	(in %)	NA	NA	NA	NA
<b>Total Sales volume<sup>(3)</sup></b>	-	609,659 <sup>(4)</sup>	698,456	455,570	348,621
Domestic	-	NA	666,349	423,143	330,271
Exports	-	NA	32,107	32,427	18,350
<b>Total customer touchpoints</b>	-	NA	~1,850	NA	NA
Sales	-	NA	~1,250 <sup>#</sup>	NA	NA
Service	-	NA	~600 <sup>#</sup>	NA	NA

Note: Consolidated financials have been considered

For 9MFY24 data, quarterly filings by the respective organizations have been referred to. These are unaudited filings and CRISIL is not liable if the numbers are modified in the final FY24 audited reports later.

NA = Not Available in the data reported in Annual or Quarterly Reports by respective players

#: Available in secondary sources for passenger vehicle touchpoints only, however not available in Mahindra's Annual Report. Network size is not available for remaining years also.

(1) Revenue from operations excludes income from investments related to subsidiaries, associates and JVs. Domestic includes sales to customers located in India and service income accrued in India and Overseas includes sales and services rendered to customers located outside India

(2) Profit for the period / year Margin is calculated as Profit for the period / year percentage of revenue from operation

(3) Includes PV, CV, 3W and automotive exports

(4) 9M24 includes sales made by subsidiary company Mahindra Last Mile Mobility Limited which was demerged w.e.f. September 01, 2023

Source: Company Financial Reports

### Mahindra & Mahindra Limited (Standalone):

Metric	Unit	As at and for the nine months ended		As at and for the Fiscal	
		December 2023	2023	2022	2021
<b>Financial metrics (Standalone)</b>					
Revenue from Operations <sup>(1)</sup>	(in INRm)	736,544.50	849,602.60	574,459.70	446,298.70
Domestic <sup>(1)</sup>	(in %)	NA	94.06	93.29	95.25
Overseas <sup>(1)</sup>	(in %)	NA	5.94	6.71	4.75
EBITDA	(in INRm)	115,350.00	104,420.00	70,420.00	69,770.00
EBITDA Margin	(in %)	15.66	12.29	12.26	15.63
EBIT	(in INRm)	NA	NA	NA	NA
EBIT Margin	(in %)	NA	NA	NA	NA
Profit for the period / year	(in INRm)	86,795.90	65,486.40	49,352.20	9,841.60
Profit for the period / year Margin	(in %)	11.78	7.71	8.59	2.21
Net worth	(in INRm)	496,308.60	428,588.00	386,563.00	345,019.20
Return on capital employed <sup>(2)</sup>	(in %)	NA	18.13	14.67	6.73
<b>Total Sales volume</b>	-	NA	NA	NA	NA
Domestic <sup>(3)</sup>	-	NA	359,253	225,895	157,215
Exports	-	NA	NA	NA	NA

Note: Standalone financials have been considered

For 9MFY24 data, quarterly filings by the respective organizations have been referred to. These are unaudited filings and CRISIL is not liable if the numbers are modified in the final FY24 audited reports later.

NA = Not Available in the data reported in Annual or Quarterly Reports by respective players

(1) Revenue from operations excludes income from investments related to subsidiaries, associates and JVs. Domestic includes sales to customers located in India and service income accrued in India and Overseas includes sales and services rendered to customers located outside India.

(2) Reported ROCE is defined as Profit before interest and tax / (Average Total Equity + Average Total Debt for the period)

(3) Passenger vehicles only

Source: Company Financial Reports

## Risk profiling of OEMs

### Latest Outstanding Credit Rating

Company name	Credit rating agency	Short term outstanding rating	Long term outstanding rating	Date of credit rating
<b>Maruti Suzuki</b>	CRISIL	CRISIL A1+	CRISIL AAA	December 2023
<b>Hyundai Motor India</b>	CRISIL	CRISIL A1+	CRISIL AAA	January 2024
<b>Tata Motors</b>	CARE	CARE A1+	CARE A1+	March 2024
	CRISIL	CRISIL A1+	CRISIL AA	February 2024
	ICRA	[ICRA] A1+	[ICRA] AA	July 2023
	MOODY'S	-	Ba3	November 2023
	S&P	-	BB+	November 2023
<b>Mahindra &amp; Mahindra</b>	CARE	CARE A1+	CARE AAA; Stable	FY23
	CRISIL	CRISIL A1+	CRISIL AAA; Stable	FY23
	ICRA	[ICRA] A1+	[ICRA] AAA; Stable	FY23
	India Ratings & Research	IND A1+	IND AAA; Stable	FY23
<b>SkodaAuto Volkswagen India</b>	ICRA	[ICRA]A1+;	[ICRA]AA+ (Stable) / [ICRA]A1+;	April 2023
	India Ratings & Research	IND A1+		August 2023

Source: CRISIL Ratings, ICRA, CARE, India Research & Ratings, Company websites

# Threats and Challenges to the Automotive Industry

## Demand Side

- **Slowdown in economic activities impacting buying decision**

India's GDP growth is projected to be 6.8% for fiscal 2025 and is expected to grow at a CAGR of 6% to 8% between fiscals 2024 and fiscal 2029. Any moderation to GDP growth may have an impact on the incomes of people at large and hence the decision to buy passenger vehicles.

- **Above or below normal monsoons**

We have considered a normal monsoon scenario while forecasting domestic sales for fiscal 2025 as well as forecast till fiscal 2029. If rains are not normal and there is a scenario like El Nino or La Nina, then farm activities and farming output could be impacted which could adversely affect farm related incomes, rural sentiments, food prices and thereby inflation. This could further impact demand for passenger vehicles.

- **Impact of changing interest rates scenario**

A sustained high level of inflation could lead to rate hikes by the central bank thereby impacting interest rates. The transmission of past rate hikes by the Monetary Policy Committee (MPC) have largely played out amid tight liquidity conditions. There could be further rise in market lending rates in the near term on account of many other macroeconomic conditions thereby leading to an increase in lending rates impacting cost of purchase. This along with regulatory measures to clamp down risky lending by NBFCs could moderate domestic passenger vehicle demand in fiscal 2025.

- **Increase in vehicle cost of ownership**

A vehicle's cost of ownership is determined by its cost of acquisition and cost of operations, and both have a significant impact on the demand. The cost of vehicle acquisition rises when OEMs transfer the impact of increased manufacturing costs to the customers. In the past, the industry has seen price hikes owing to several reasons like emission norms implementation, increase in raw material prices and general inflationary hikes. These are also likely to push vehicle prices upwards going forward. Auto finance rates are also pivotal in determining affordability.

The cost of operations for a customer are directly impacted by fluctuations in crude oil prices and INR USD exchange rates, that cause rise in fuel import costs and overall fuel prices. Geopolitical issues like the Russia-Ukraine war, the war in Israel etc. could also impact fuel prices thereby having a bearing on the passenger vehicle demand.

- **Increase in traffic density on account of increasing congestion**

Increasing traffic congestion on roads especially in urban centers is leading to longer transit times, which is also causing a rise in air pollution due to excessive burning of fuel. This problem is leading to more and more people preferring to use public modes of transport, and is also driving the growth of public transport systems like metro, e-buses, ride hailing etc. The traffic congestion is expected to rise further owing to rapid urbanization, which could lead to customers deferring personal vehicle purchases going forward.

- **Price escalations on account of regulatory push**

Based on European emission standards, the Indian government has introduced the Bharat Stage (BS) norms, which are being implemented in a phased manner in the country. For the BS-VI stage 2 norms, applicable from fiscal 2024, companies have invested in the relevant technology, research, and

development, and signed joint ventures (JVs) with global players. These norms have resulted in price hike for vehicles across segments owing to the introduction of new technologies to meet new emission regulations. Going forward, new emission norms are likely to be announced, which could potentially raise vehicle prices as well.

The PV industry has been conforming to safety regulations (such as mandatory installation of ABS/CBS, airbags, manual lock in anti-locking systems, seat belt warning system, speed warning system etc.) in new models. The Bharat New Car Assessment Program (BNCAP) was also launched by Ministry of Road Transport and Highways (MoRTH) in 2023 with an aim to enhance the road safety of passenger cars by increasing the vehicle safety standards of these vehicles. This has increased the manufacturing cost per vehicle leading to price hikes and could further raise prices as and when newer safety norms will be announced in the future.

- **Inherent cyclicality of the domestic PV business**

The passenger vehicle industry has close linkages with growth in GDP as well as business cycles impacting incomes of probable customers thereby making the industry susceptible/vulnerable to these changes. This cyclical nature of the passenger vehicle industry poses constant challenges to the industry players as they have to constantly manage vehicle dispatches and network inventory optimally and profitably.

## Supply Side

- **Geo-political risks and infrastructure bottlenecks**

Certain global events have a pronounced impact on the automotive industry. In the past few months, global trade has been held back by disruption at two critical shipping routes. Attacks on vessels in the Red Sea reduced traffic through the Suez Canal - the shortest maritime route between Asia and Europe. Several shipping companies diverted their ships around the Cape of Good Hope. This led to increase delivery times especially for companies with limited inventories. A severe drought at the Panama Canal has forced authorities to impose restrictions that have substantially reduced daily ship crossing, slowing down maritime trade. This has disrupted supply chains for the automotive industry.

Commodity prices and prices of precious metals like palladium, platinum and rhodium are also impacted by geopolitical tensions and extreme weather shocks, which impact the input costs for OEMs. The conflict of Gaza and Israel could escalate further into the wider region, which produces about 35% of the world's oil export and 14% of gas exports. Risks due to continued attacks in the Red Sea and the ongoing war in Ukraine have generated fresh adverse supply shocks to global recovery, with spike in food, energy, and transportation costs. Container freight cost have sharply increased since October 2023 till January 2024 as the situation in Middle East was volatile. Further geoeconomic fragmentation could also constrain the cross-border flow of commodities causing additional price volatility, and uncertainty for the automotive industry.

The INR/USD exchange rate also directly impacts the input costs and fuel prices. A weak INR exchange rate puts the burden on OEMs for deciding whether or not to pass on the costs to the consumer. Often these fluctuations are absorbed by the OEMs which may negatively impact their overall margins.

- **Dependence on imports for key raw materials**

Many OEMs in India are still dependent on suppliers based out of locations outside India for critical components including transmission systems, electronics, semi-conductors, magnets, rare earth materials etc. to name a few. While the government is trying to reduce dependence on these imports by driving several initiatives like Make In India, Atmanirbhar Campaign, PMP, PLI scheme and enabling FDI across sectors, it may take some time for the OEMs to localize. Until then dependence on imports for certain components will continue to carry an inherent risk from supply, pricing and other risks which may emanate out of global macro-economic situations.

- **Commodity and input material prices**

For example, pricing and availability of commodities like steel and aluminum can be volatile due to numerous factors beyond our control, including general domestic and international economic conditions, geopolitical tensions, extreme weather shocks, import duties and tariffs and foreign currency exchange rates

- **Availability of skilled manpower**

The automotive industry is undergoing continuous and rapid technological change in terms of introduction of new powertrains like electric, hybrid and CNG, more stringent emission norms leading to enhanced and sophisticated emission systems in the vehicle, lightweighting, enhanced safety via Advanced Driver Assist Systems, growth of embedded software technology and driver controls, etc. These continuous advancements have led to a constant demand for skilled manpower in the industry. Currently few OEMs are taking initiatives in developing the new age skills inhouse or participating in skill training initiatives by associating with various educational institutions and the government.

However, there will still be an ever growing demand for skilled manpower as the automotive industry will continue to undergo technological advancements in the future and hence availability of manpower could turn out to be a challenge in case of demand supply mismatch. Also, with respect to commercial applications of passenger vehicles with new technologies and features being introduced, drivers will have to be imparted with training for better/efficient use of the vehicle which will also be a challenge in the near term.

- **Technology risk**

With ever changing technology also comes the risk of obsolescence of older technologies. The automotive industry today faces the challenge of adapting newer technologies by either upgrading the older technologies or introducing new ones, thereby posing a risk in terms of capability development, investments, skill development, technology development and product development as well. For example, the field of battery technology is continuously evolving with current LFP and NMC battery technologies being challenged by newer technologies like solid state battery, LTO etc. Electric and hybrid technologies are also continuously evolving. Therefore, going forward, OEMs have to be cautious in terms of investing in technology and ensure positive yields.

- **Increasing competitive intensity**

The competitive intensity in the automotive industry is expected to increase with easing import duties, PLI schemes and FDI norms that will encourage foreign passenger vehicle OEMs to enter India. Also, with newer technologies finding ground in the automotive industry we are seeing a global trend of the entry of newer players increasing in this industry. There could be a possibility of these players entering the Indian passenger vehicle market in the future as well. Hence competitive risk will be high.

## Long Term Policy Roadmap

- **Changes in GST rates and import duty structure**

Any change in the tax structure whether direct or indirect can have an impact on the demand for the passenger vehicle industry. In order to encourage electric vehicles (EVs), the government has reduced taxes on EVs from 12% tax to 5%, much lesser than internal combustion engine vehicles (28% and additional CESS also in some cases). Also, the excise duty on petrol is a variable which the central and state government decides, which again has a high correlation with the PV industry sales. Going forward, the GST structure will be one of the key factors in driving non-ICE powertrain adoption as well as investments in the country.

The government also recently launched a scheme to promote electric passenger cars in India under which import duty concession is offered for OEMs who set up domestic manufacturing facility in India with a minimum investment of USD500 million. Under this scheme, the imported vehicles would attract a reduced customs duty of 15% with maximum CIF (Cost, Insurance & Freight) value of USD35,000. This policy will enable foreign OEMs to set up manufacturing base in India, and also enter the domestic sales market, which will also intensify competition in the industry. Any changes to the scheme will have an impact on demand.

- **Localization norms**

The government is encouraging localization across sectors, especially in automotive sector via policies like PLI for Automotive Technology, PLI for Advanced Cell Chemistry, Phased Manufacturing Program, Atmanirbhar Bharat and Make in India. While the end goal of localization is to reduce import dependence, and bring down overall manufacturing costs, it also involves significant initial capital investments from several stakeholders within the automotive industry. While the government has designed the schemes to support investments by offering several subsidies and import duty benefits, there are still concerns around the meeting the eligibility criteria and availing the benefits. Going forward, simplification and better tracking of the policies will ensure localization in India. The progress of the vendors tied up with individual OEMs would also lead to a change in the risk profile of the industry from a supply side perspective.

- **Adhoc changes in policies**

Another challenge that the industry is facing is frequent changes in policies which makes it difficult for auto industry stakeholders not only to ensure adherence but also commit investments. Overall policy stability and transparency will be required going forward to ensure smooth technology transition and localization in the country.

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