

Global Economic Development

Indonesia's and regional automotive landscape amid global economic challenges
and a road ahead to EV transition

17th GAIKINDO International Automotive Conference (GIAC)

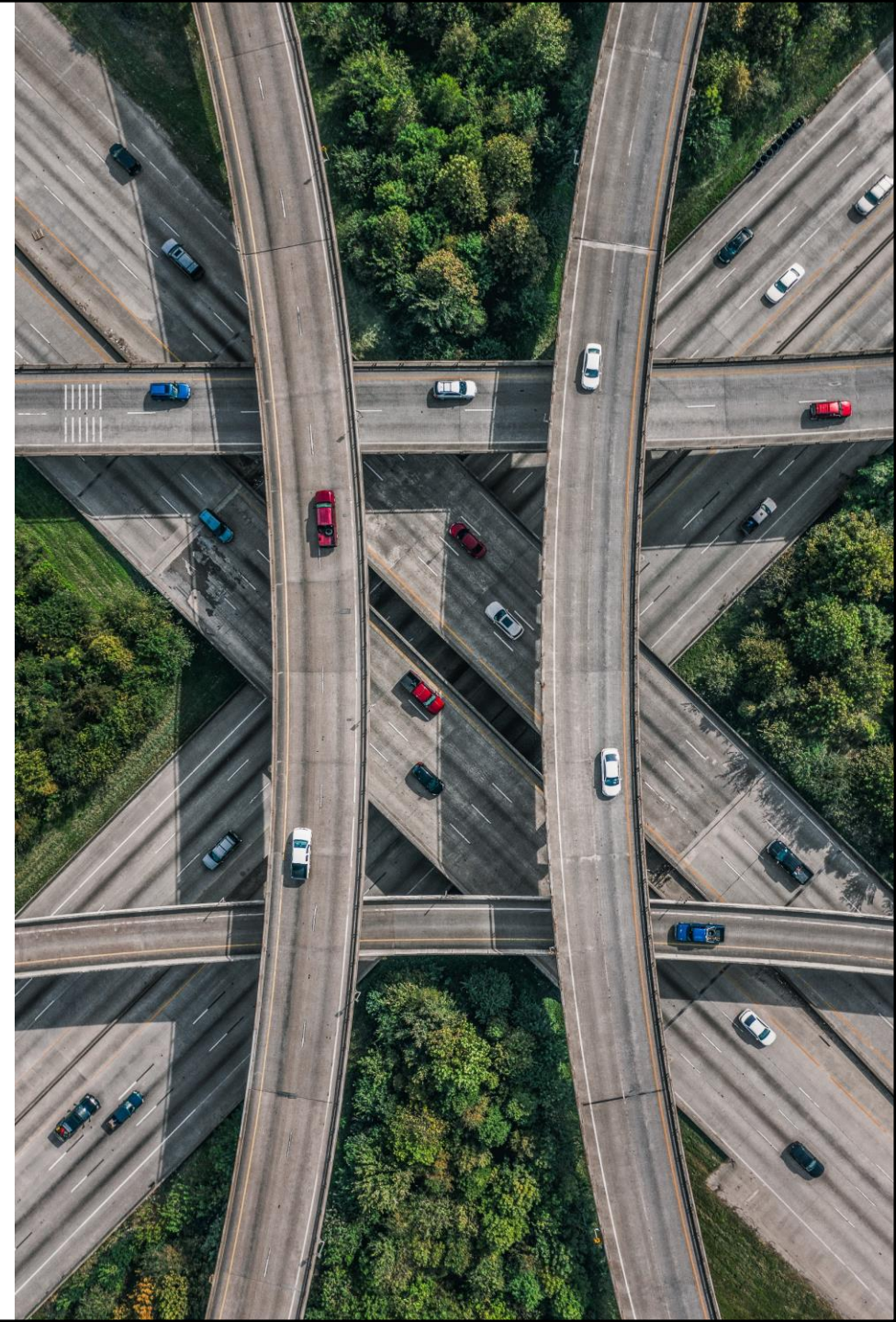
Jessada Thongpak

ASEAN Light Vehicle Production Forecast

S&P Global Mobility

Bangkok

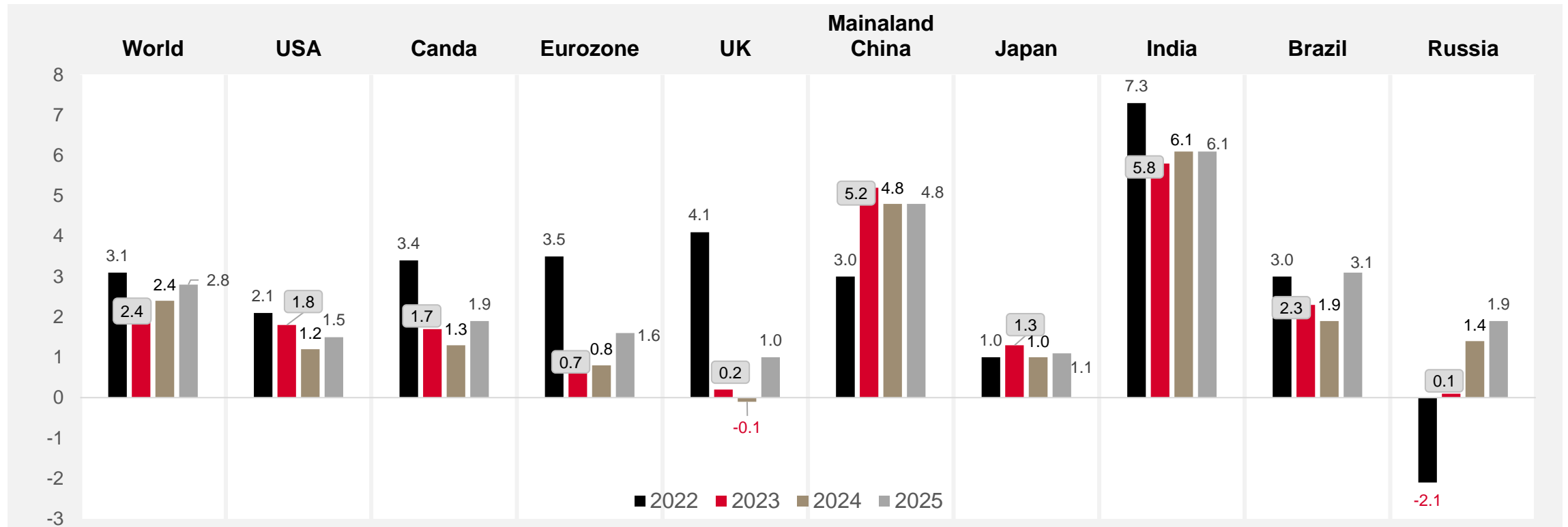
15th August 2023



Agenda

- Global Economic Outlook
- Global & ASEAN Automotive Outlook
- Indonesia Automotive Industry toward EV transition

Global growth: Mixed news for 2023, downward revision to 2024



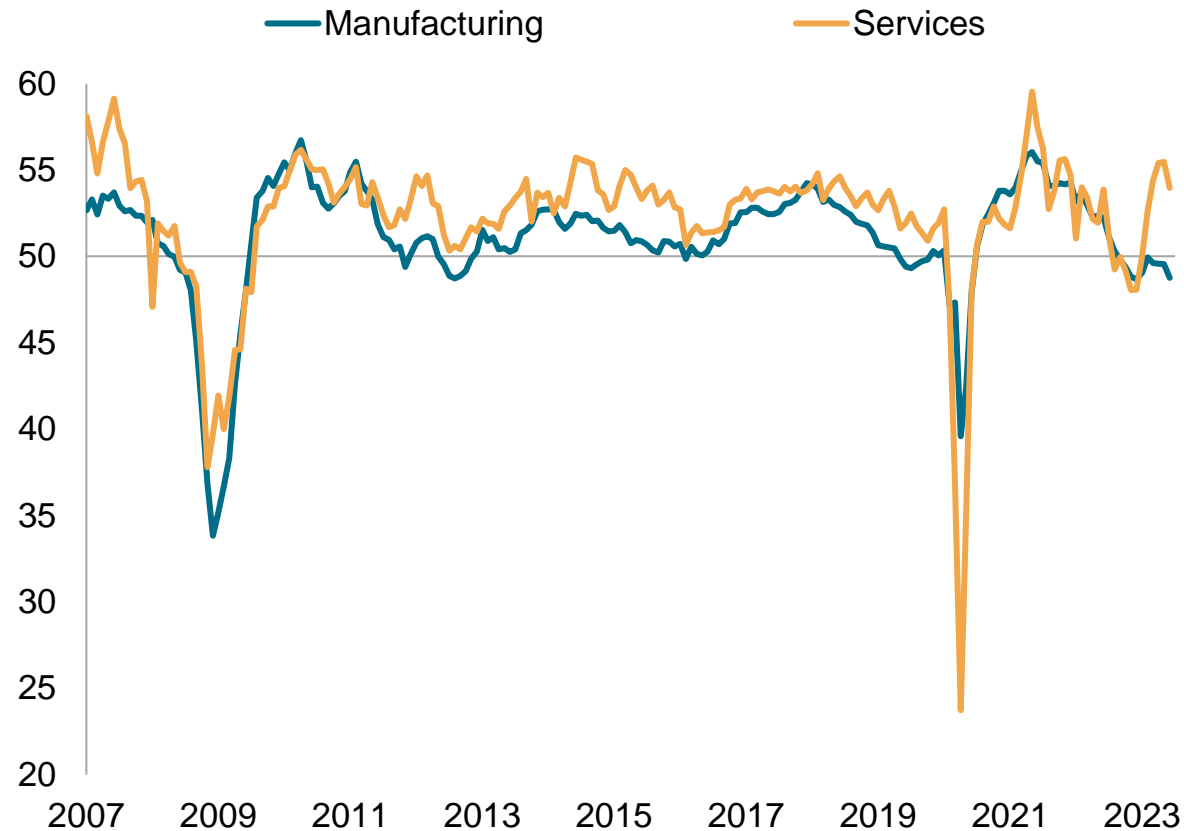
Source: S&P Global Market Intelligence.

- July’s global real GDP growth forecast for 2023 was unchanged at 2.4%, although this masks significant regional divergence.
- The growth forecasts for 2023 were revised markedly upward in North America, primarily reflecting the recent resilience of economic activity.
- In contrast, the growth forecasts for mainland China and parts of Europe were reduced.
- Moreover, we have again lowered the global real GDP growth forecast for 2024, to 2.4%.
- Moreover, we have again lowered the global real GDP growth forecast for 2024, to 2.4%.
- The lagged effects of tighter-for-longer financial conditions are expected to continue to weigh on economic activity.
- The J.P.Morgan Global Composite Purchasing Managers’ Index™ (PMI™) compiled by S&P Global fell to a four month-low in June.
- Both the services and manufacturing subindexes weakened, with the latter below the expansion threshold of 50.

Global PMIs: Losing Momentum

J.P.Morgan Global Output PMI™

(Index, over 50 signals expansion)



Source: J.P.Morgan; S&P Global Market Intelligence.

- Latest Global PMI indicates that global economy has grown for five successive months, primarily driven by a resurgence of service sector activity
- Manufacturing tipped back into decline after four months of tepid growth-s spell of expansion that had been fueled principally by supply chain improvement rather than rising demand
- The outperformance of services related to manufacturing was common for major economies recasts for 2023 except India, which continue to lead in global rankings. Eurozone was the worst performer, suffering a marginal contraction of output after five months of expansion. Growth meanwhile slowed to three-month lows in UK and US and slipped to four-month lows in Japan
- In Mainland China, the post-COVID-19 economic bounce lost pace, with output growing at slowest rate since January, significantly a marked slowing in service sector

Global consumer price inflation: Heading south, core rates key

- Global consumer price inflation is forecast to moderate further as supply and demand continue to rebalance and wage pressures ease.
- As near-term downward pressure on headline inflation rates from energy and food price effects fades, the evolution of core inflation will be key.
- Given softer industrial materials prices, the moderation in core goods inflation, which is already ongoing in some economies, will likely become more pronounced and widespread.
- This is already signaled by tumbling producer price inflation rates and weakness in surveys of industrial firms' pricing intentions.
- Services inflation is expected to be comparatively sticky, reflecting ongoing labor shortages and pent-up demand for some services.

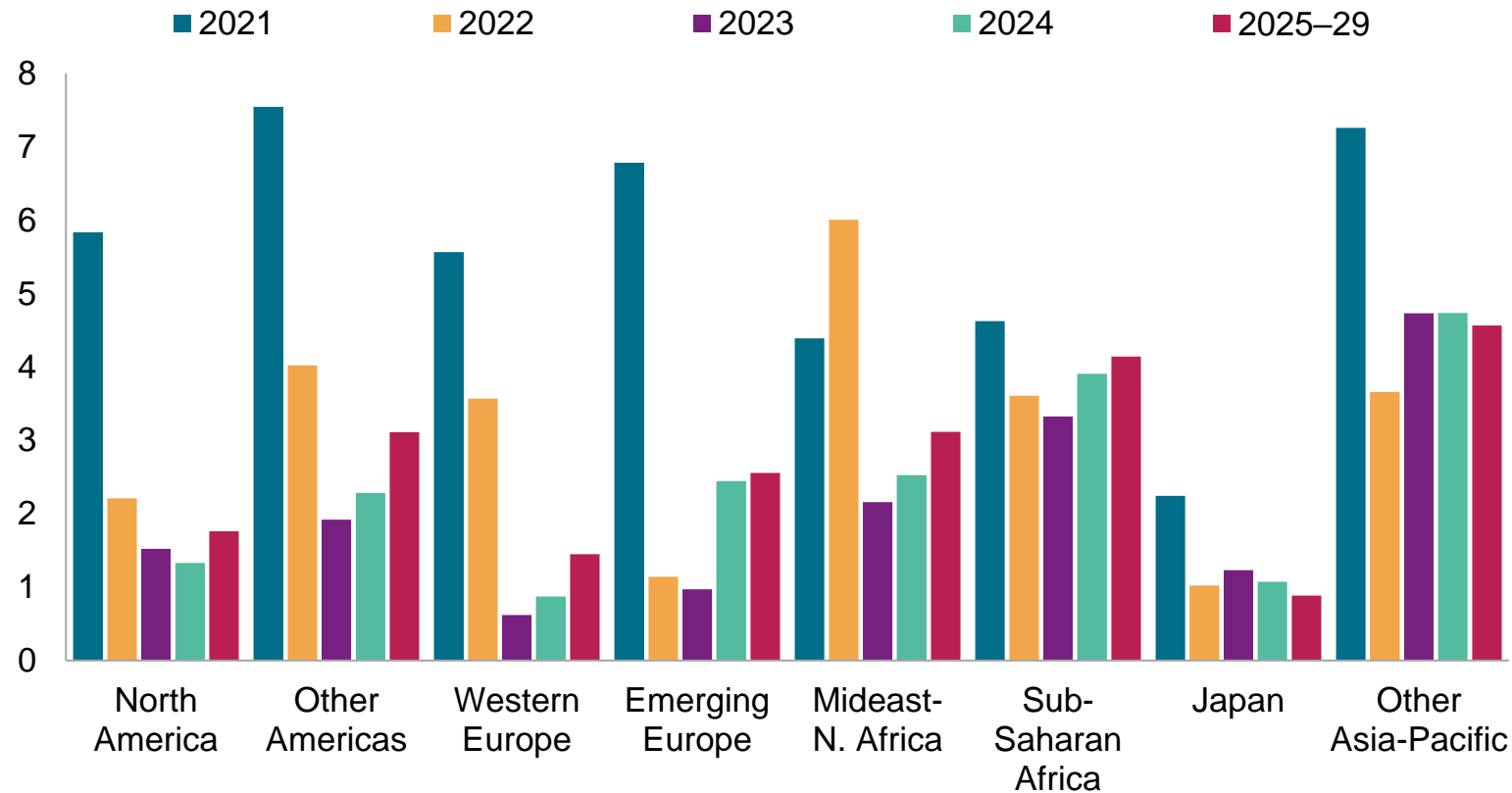
Consumer prices (% change)

Region	2022	2023	2024	2025
World	7.6	5.5	3.7	3.0
United States	8.0	4.1	2.7	2.6
Canada	6.8	3.5	2.0	2.4
Eurozone	8.4	5.4	2.5	1.9
United Kingdom	9.1	7.2	2.3	2.3
Mainland China	2.0	0.6	2.0	2.2
Japan	2.5	2.9	1.6	1.8
India	6.7	4.7	4.8	5.5
Brazil	9.3	4.7	3.6	3.3
Russia	13.7	3.7	3.7	3.7

Source: S&P Global Market Intelligence.

Moderate expansions in Asia-Pacific, the Middle East and Africa will offset weakness in Europe and North America

Real GDP (annual % change)



Source: S&P Global Market Intelligence.

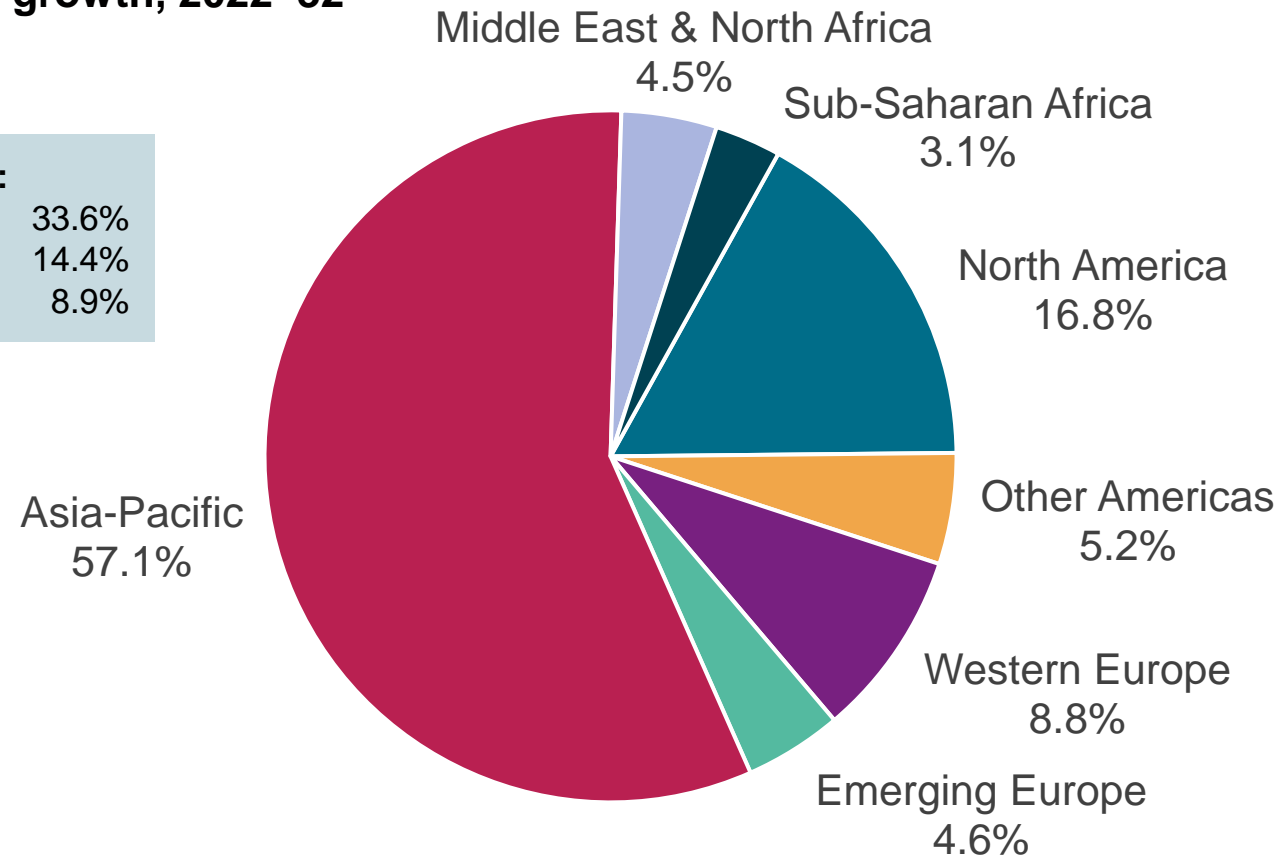
- Tightening monetary policies will restrain growth in Europe and North America during 2023.
- Growth in Latin America will slow markedly in response to weakening export demand and high interest rates.
- The ongoing Russia-Ukraine war and sanctions will limit growth in Emerging Europe.
- The retreat in energy prices from 2022 highs will slow growth in the Middle East and North Africa.
- Asia-Pacific will benefit from the reopening of mainland China and strong growth in India.

Asia-Pacific will account for 57% of world real GDP growth from 2022 to 2032

Percent of world real GDP growth, 2022–32

Notable contributions:

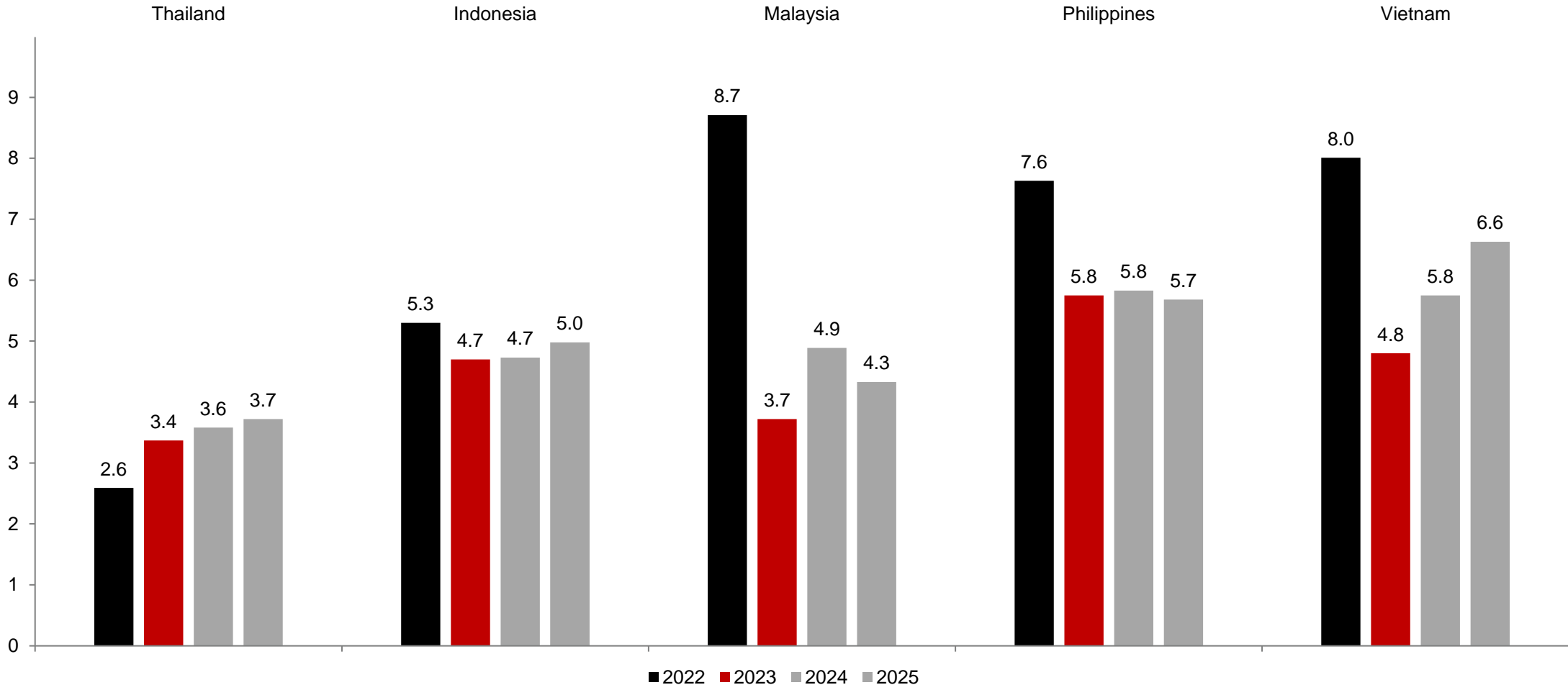
Mainland China	33.6%
United States	14.4%
India	8.9%



Source: S&P Global Market Intelligence.

ASEAN Economic Outlook

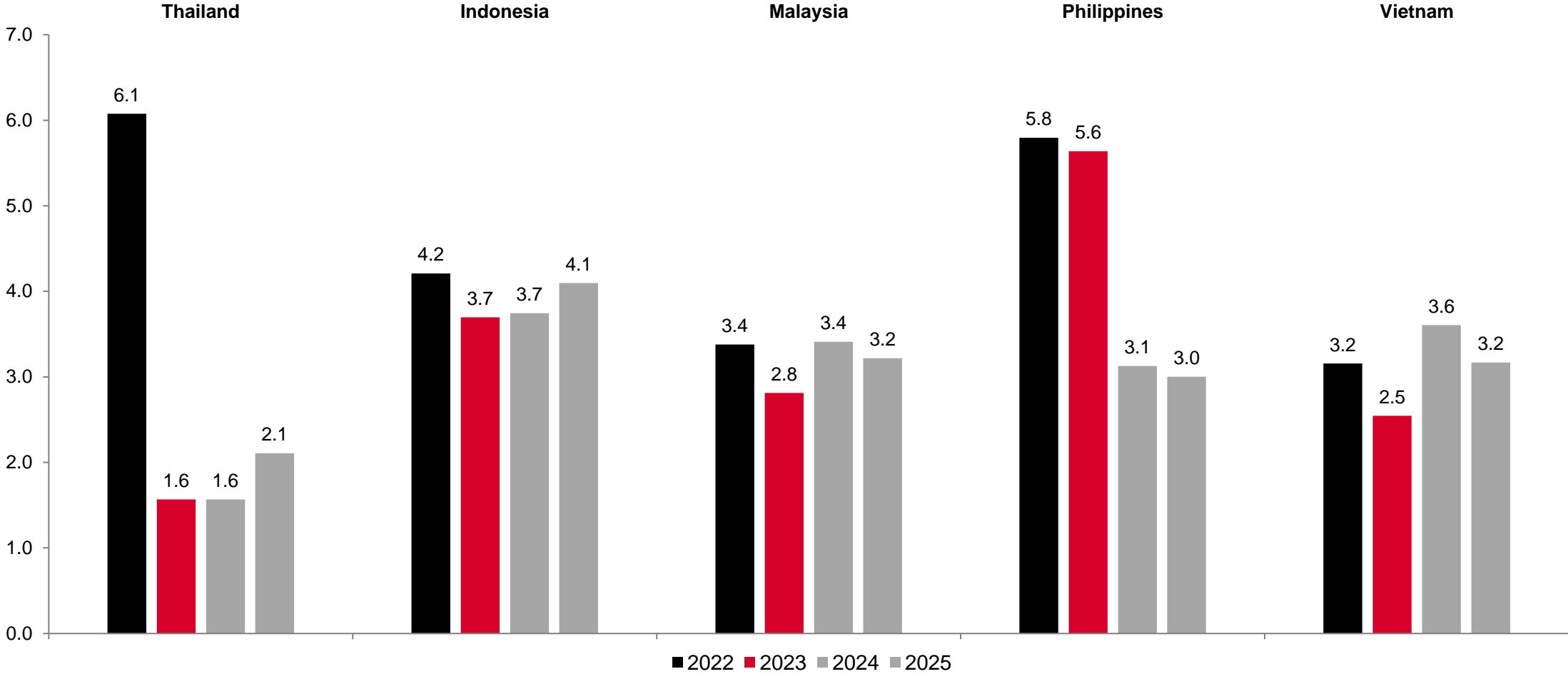
Real GDP (% change), Year-on-Year



Source: S&P Global Market Intelligence

ASEAN Economic Outlook

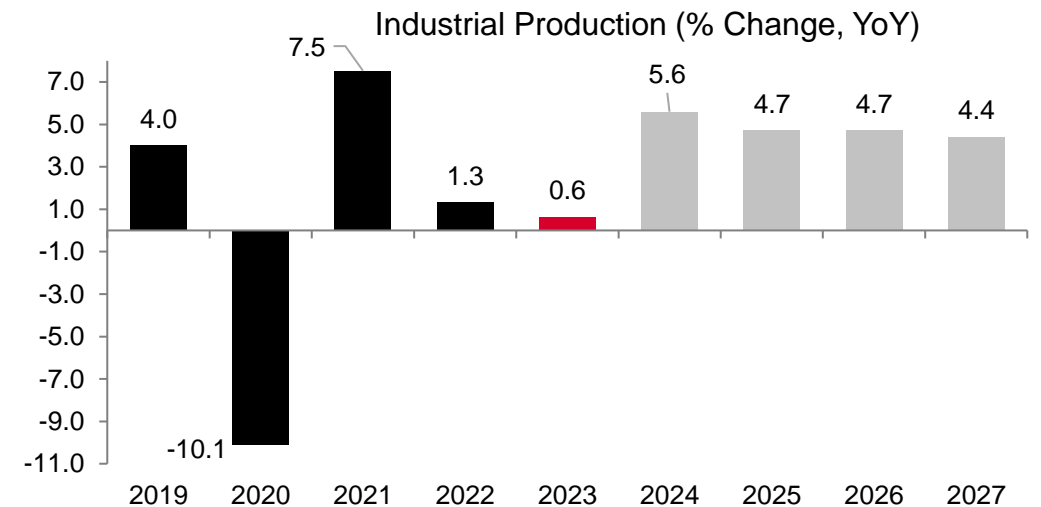
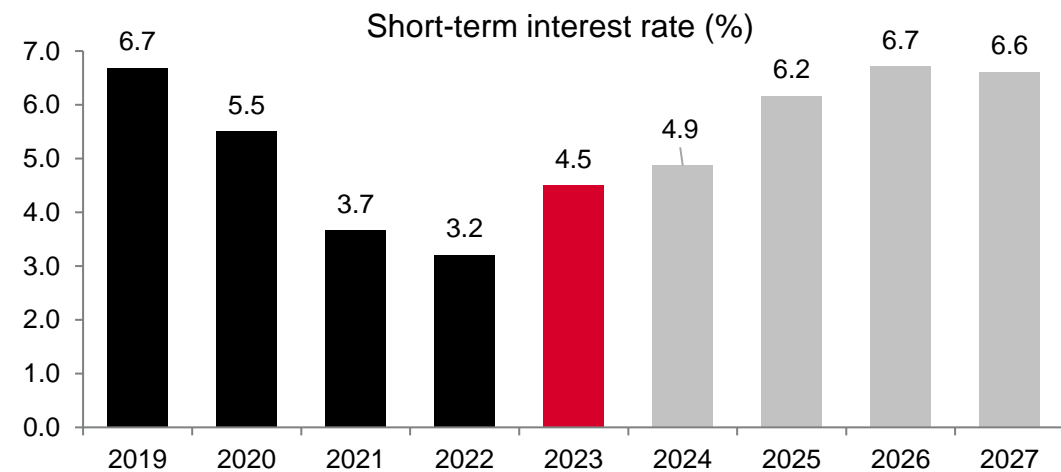
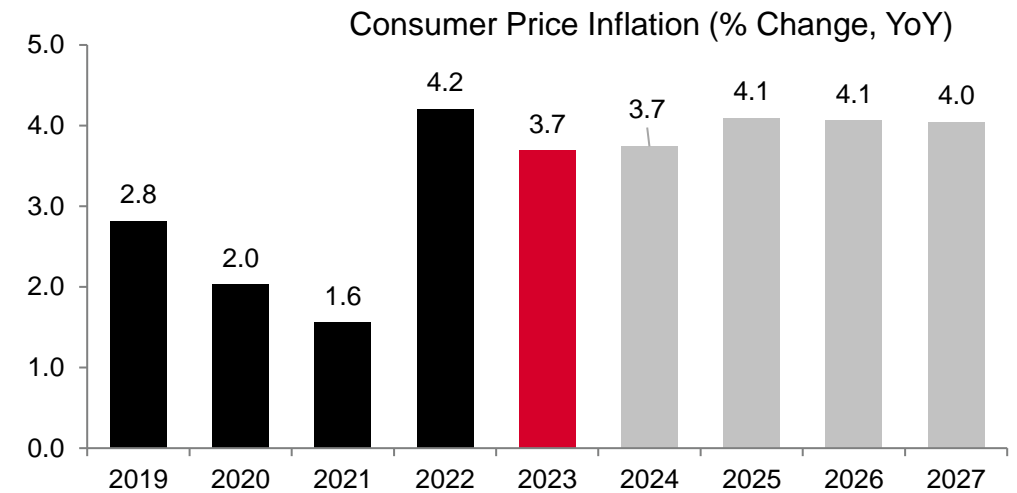
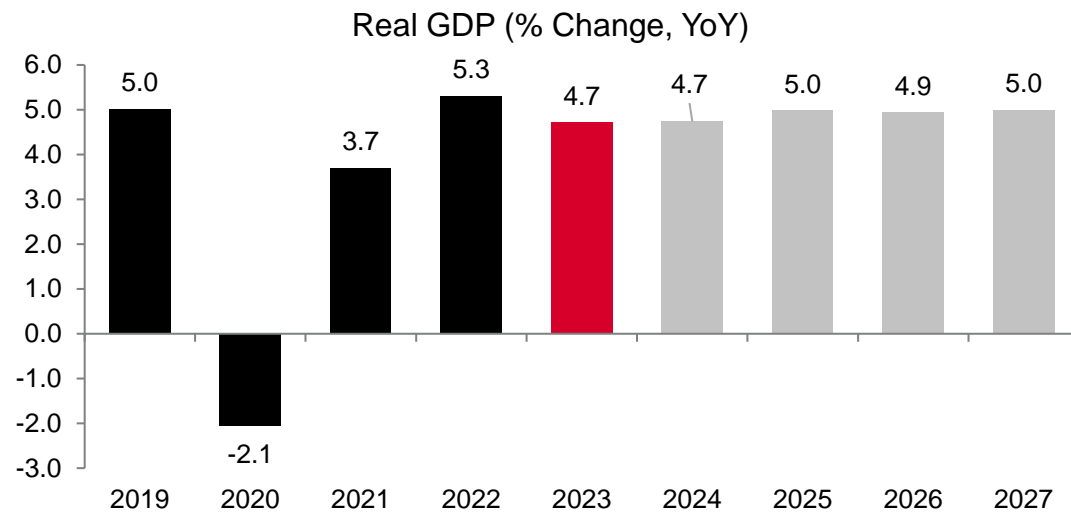
Consumer Price Index (CPI), Year-on-Year (%)



Source: S&P Global Market Intelligence

Indonesia Economic Outlook

Indonesia economy continue to face economic headwinds despite the better-than-expected GDP at 5.1% in Q2 2023

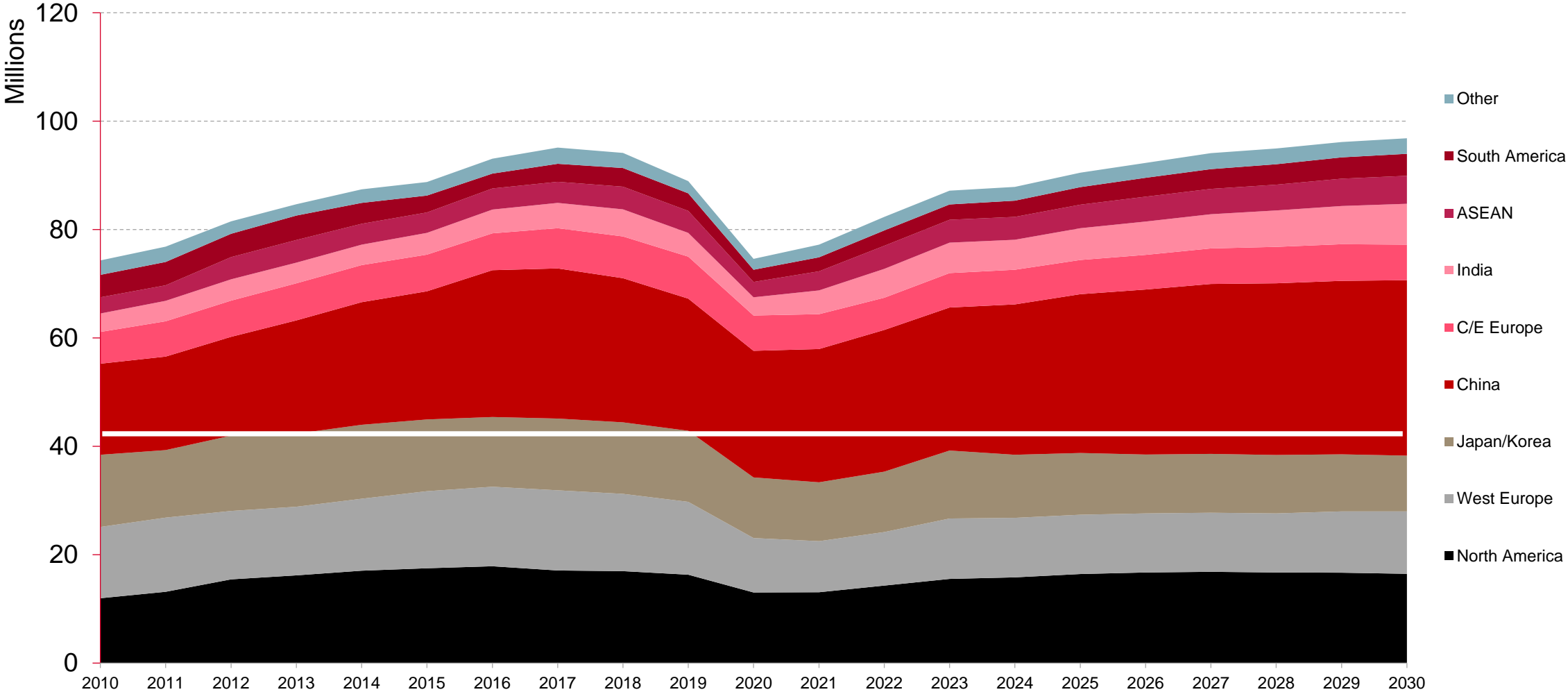


Source: S&P Global Market Intelligence

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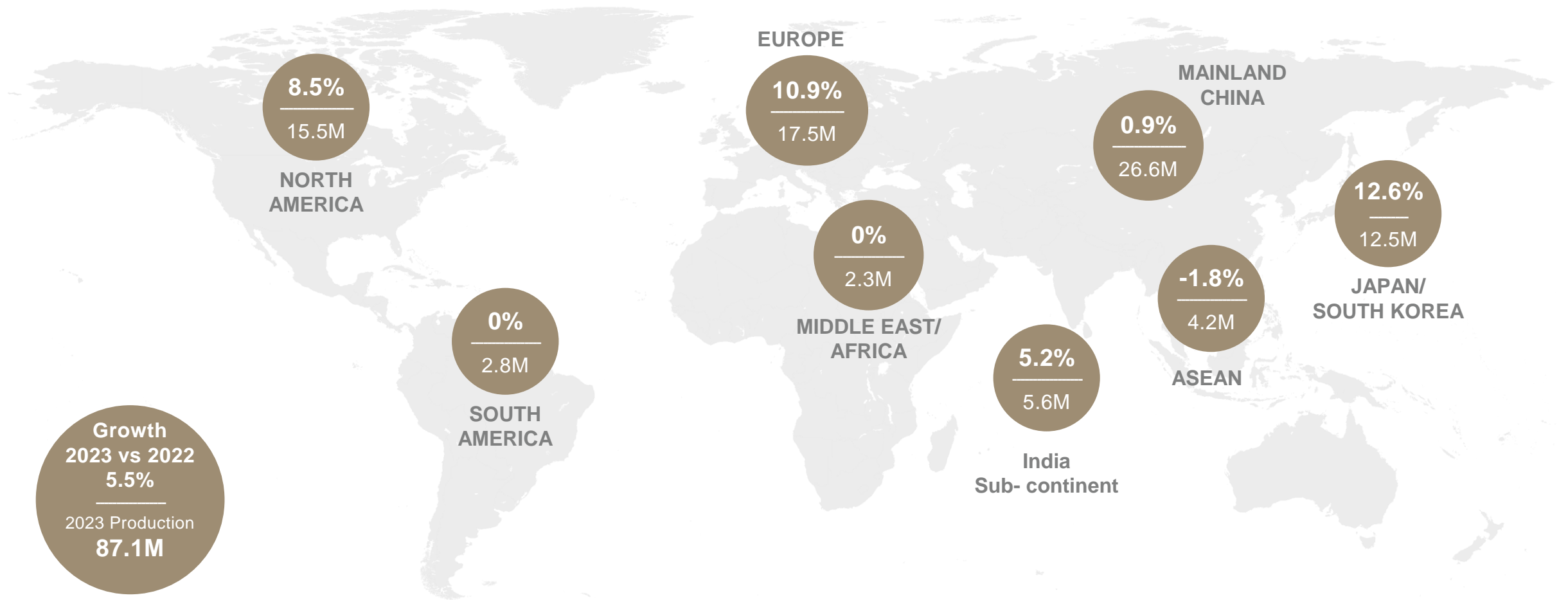
Global Light Vehicle Production Forecast



Source: S&P Global

Global Production Outlook

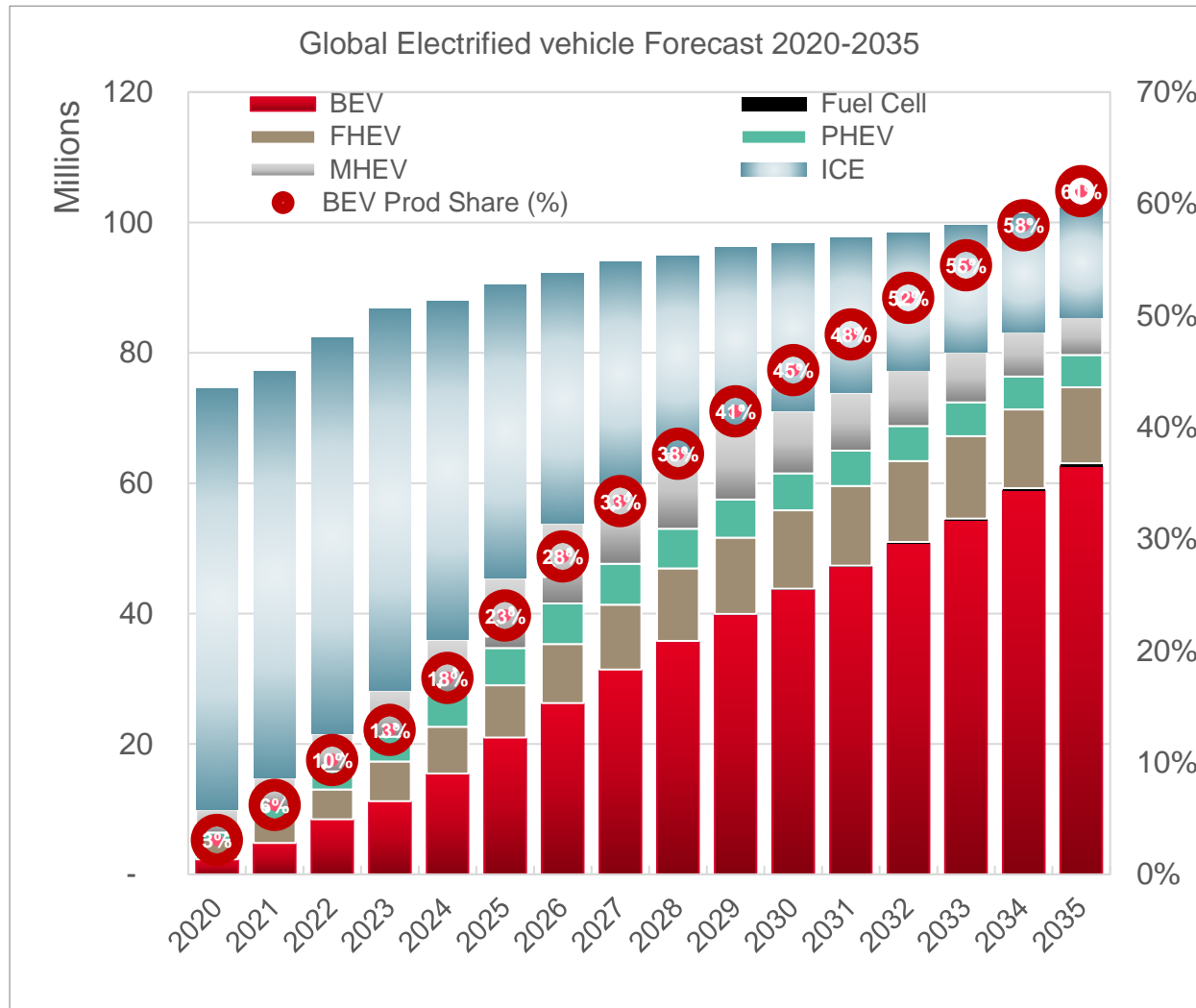
Mainland China pull ahead effects see softening outlook with production held to come in below 2022 levels, mature manufacturing bases in Asia, Europe and North America remain clearly positive



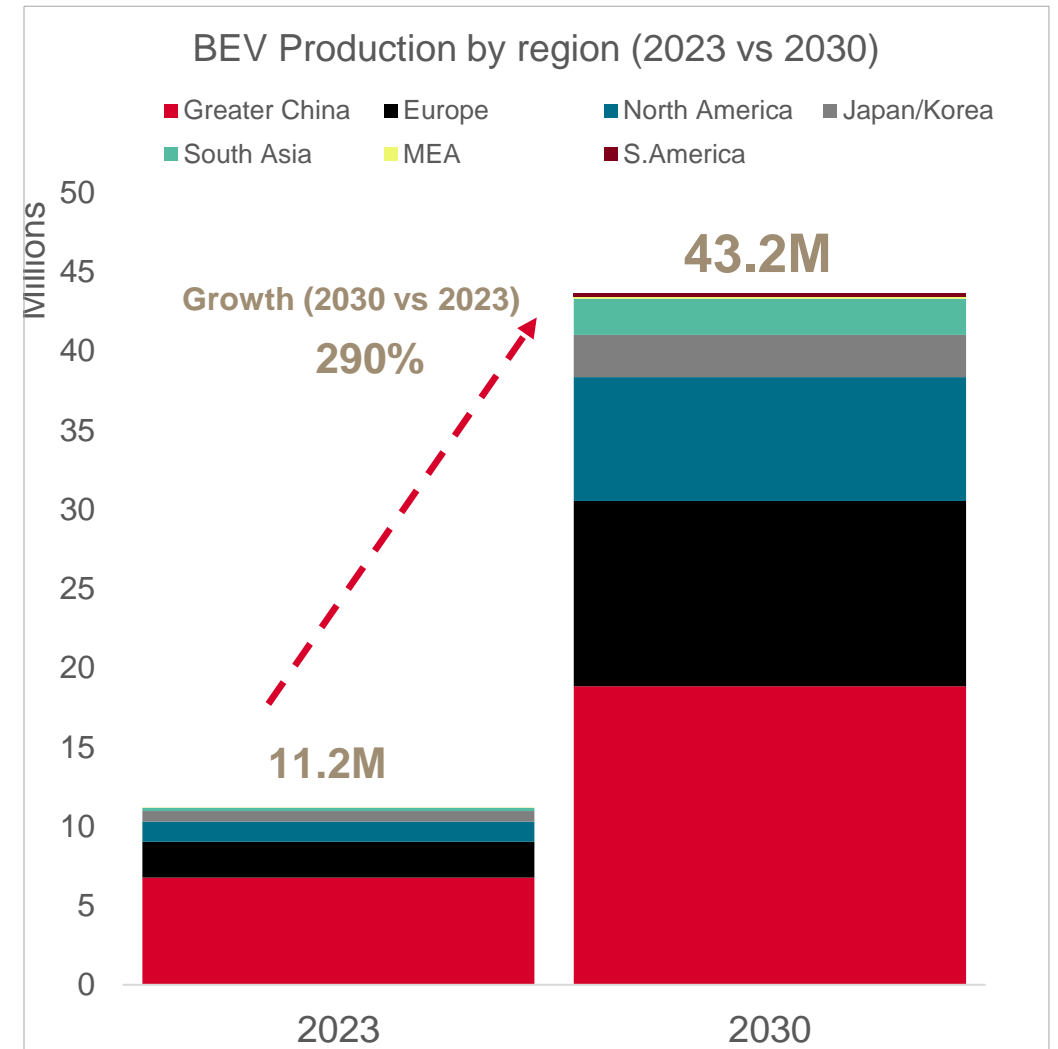
Source: S&P Global Mobility

Global Light Vehicle Battery Electric Vehicle (BEV) Production Forecast

Annual BEV production is paving the way to hit new record of 43M units, 44% of global production by end of decade

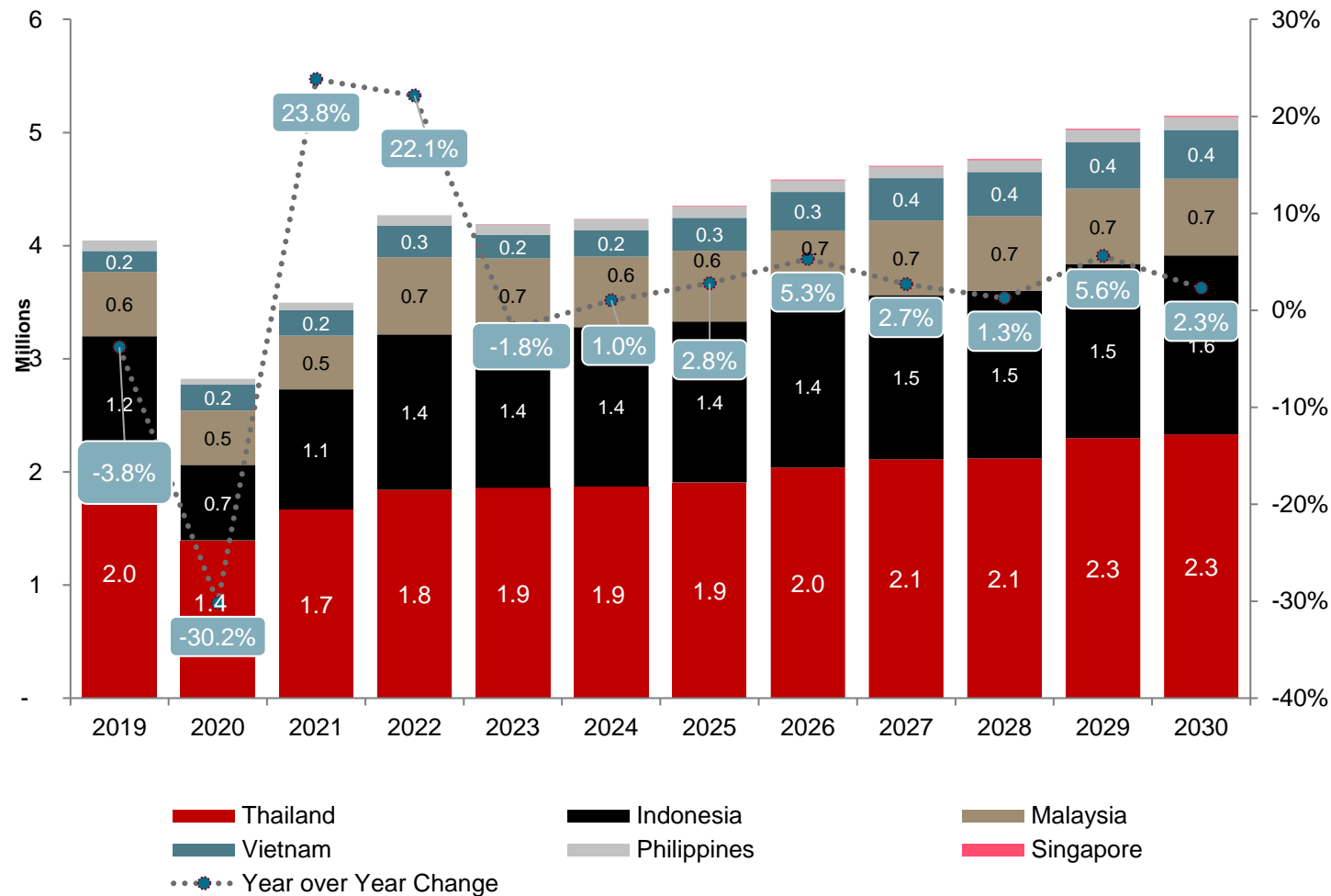


Source: S&P Global



Slower growth outlook in short-term, yet bracing to hit new record high beyond 2026

ASEAN LV Production Forecast 2019-2030

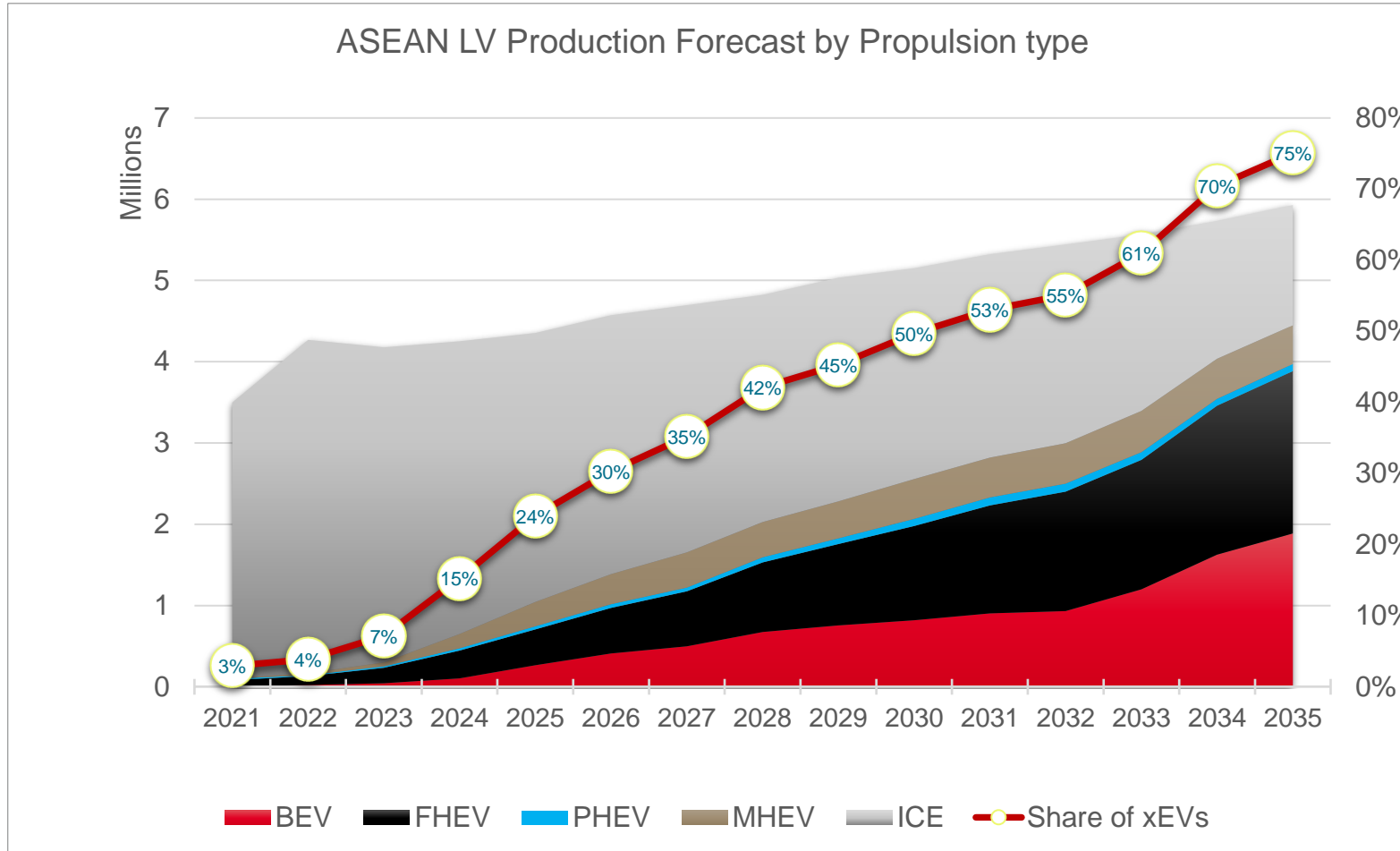


Source: S&P Global

- ASEAN's 2023 LV Production should maintain 2022 level of 4.2M units with a slight decline 1.8% year-on-year (y/y) given the slower market momentum during second-half post-the backlog fulfillments in first half across the region as well as the ongoing economic headwinds
- Semiconductor supply disruptions have eased, allowing OEMs to rebuild inventory
- Anticipated moderate annual growth 3.6% during the mid-term as it continues to hit the new record high in 2026 with nearly 4.6M, while long-term should maintain average growth of 3%, reaching 5M units in 2039
- OEMs are gearing up to launch more electrified vehicles mainly hybrid and battery electric vehicles (BEVs) mainly in Thailand and Indonesia thanks to government's EV incentives and regulatory framework.

ASEAN is bracing for the EV transition, shifting from ICE to electrifications

Government's EV policy developments and incentives playing a very significant role for industry transition

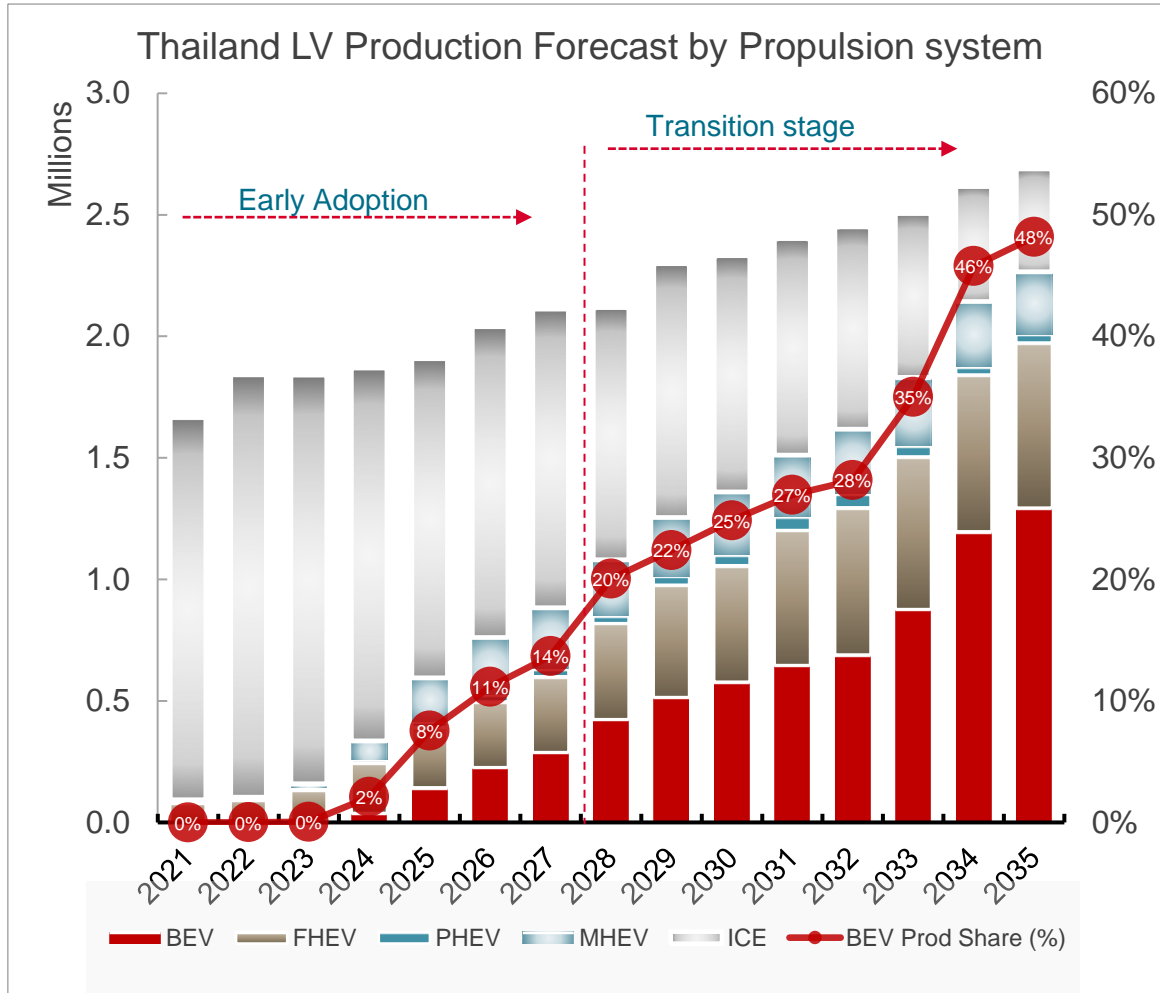


- Surging growth for electrified vehicle during 2023-2025 is driven by demand for hybrid vehicles in Indonesia and Thailand
- Internal combustion engine (ICE) vehicles should maintain the majority through long-term
- By 2030, ASEAN's BEV production is forecast to reach nearly 0.8M units, or 15% of total production, however, accounting for only 2% of global BEV production (42M units)
- More product rollout plans for HEV/PHEV and BEVs amid intensifying competition in the region
- Government's EV incentives and subsidy programs continue to spur demand for electrified vehicles

Source: S&P Global

EV transition in Thailand is now taking place much faster than expected earlier

Surging demand trend for xEV driven by gov's incentives and affordable price tags: Much more BEVs rollouts in a pipeline



Source: S&P Global

Numbers at a glance

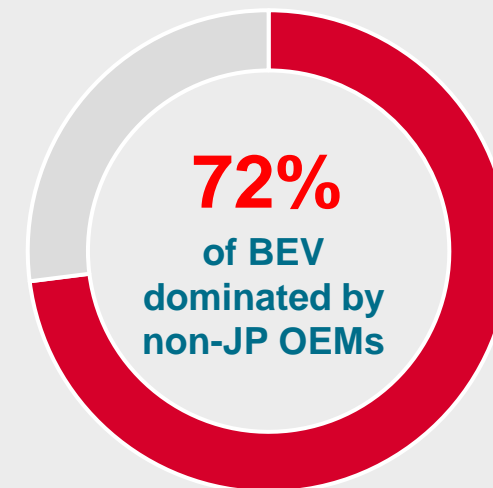
48%

BEV Production will reach 48% of Thailand production, surpassing 1M vehicle in 2035

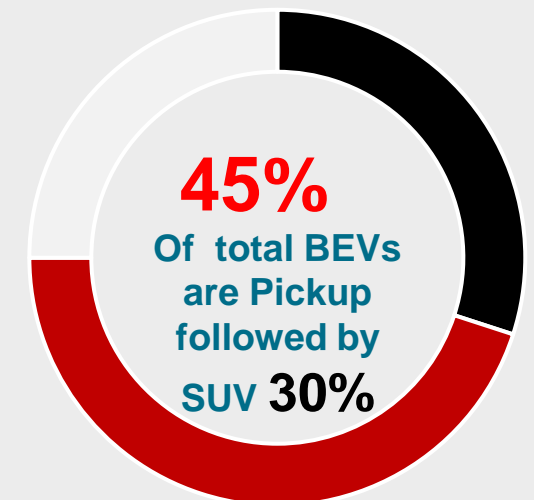
2M xEVs

Of vehicles produced in 2035 are combined outputs of MHEVs, FHEVs, PHEVs and BEVs

BEV Production in 2030



BEV by bodytype in 2030



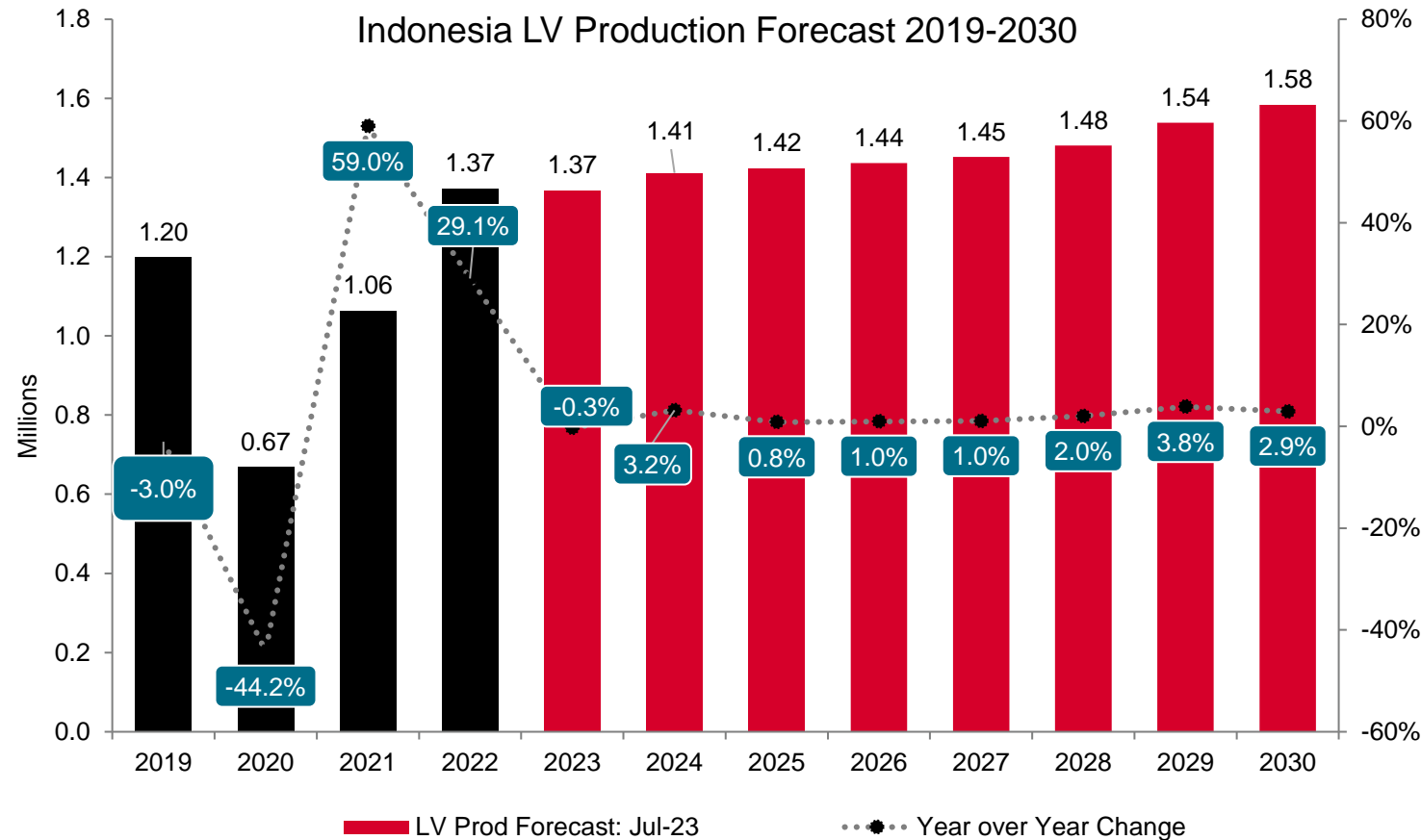
Source: S&P Global

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Anticipated moderate growth amid the post-crisis global economic slowdown

A resilient domestic demand and export momentum will continue to drive overall production

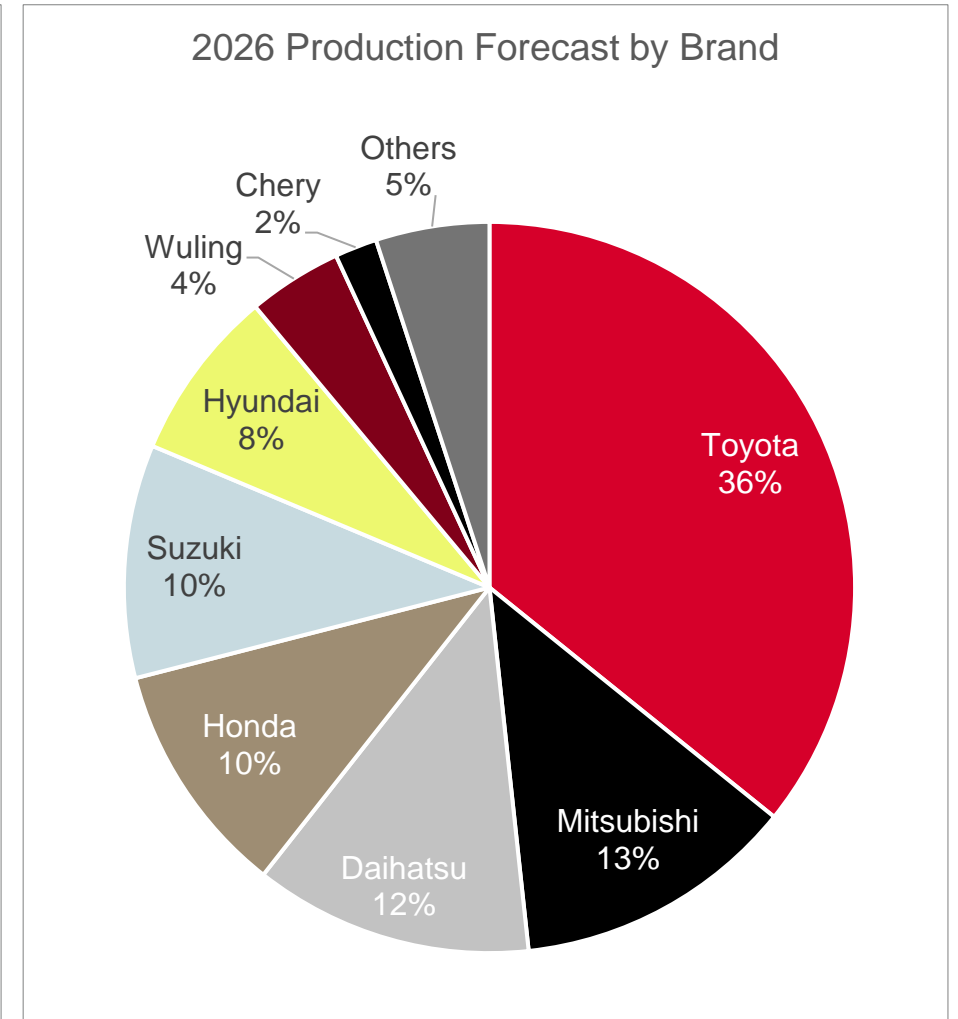
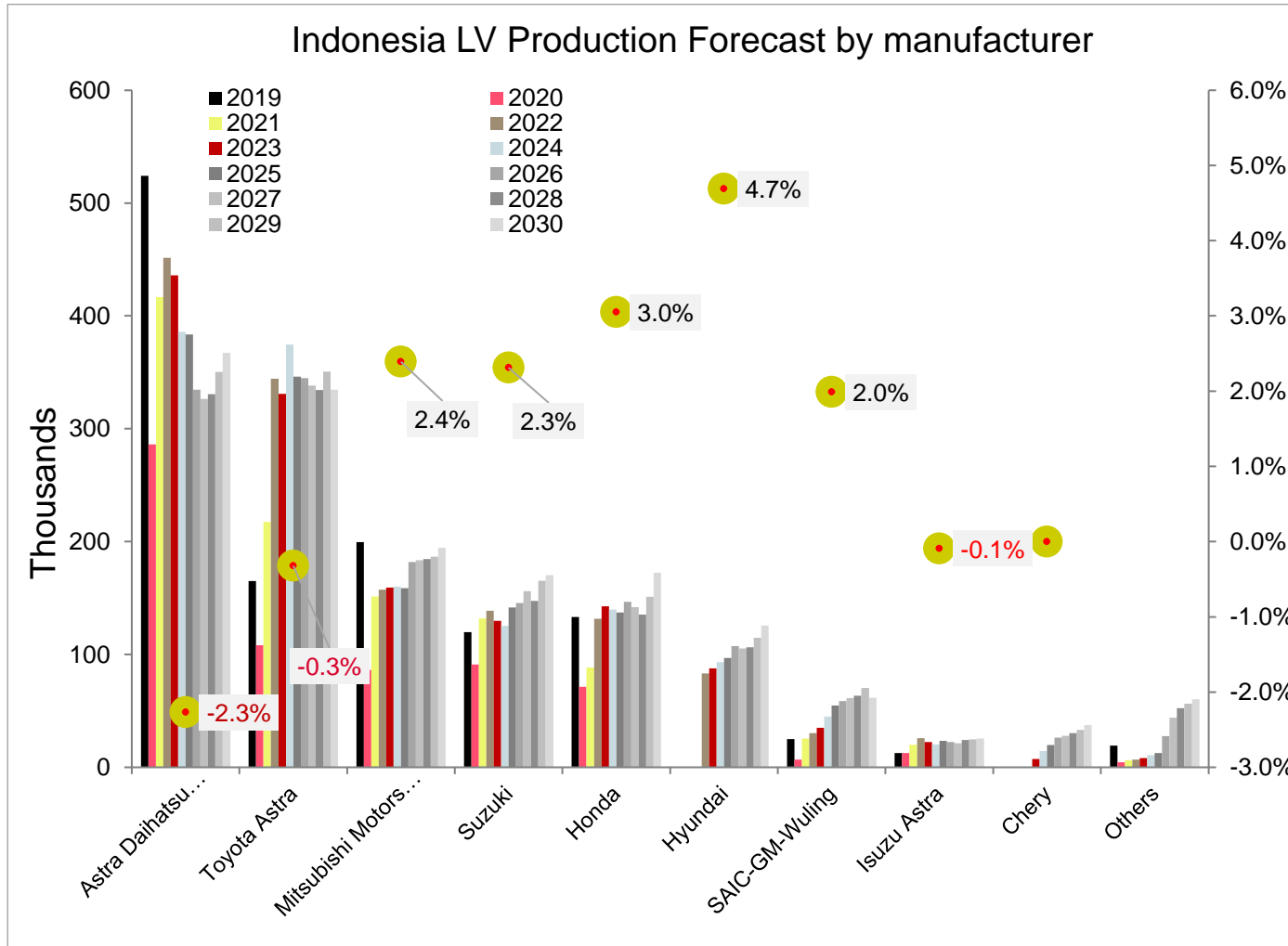


- Having recorded historic growth over 29% y/y in 2022, Indonesia's 2023 light vehicle production is now expected maintain last year's level with 1.37M units due to the pull-ahead demand effect since 2022 as well as high inflation and interest rate hikes
- Export momentum of mainstream B-segment MPVs and SUVs to ASEAN and other emerging markets will remain robust, accounting for 40% of country's production, or over 0.5M units
- Anticipated moderate slower growth through mid-term with annual production of below 1.5M units as industry normalize post-crisis
- Government's tax incentives /policies for battery electric vehicle (BEVs) are expected to drive demand significantly through longer-term

Source: S&P Global

J-OEMs continue to dominate production, however, with only slight growth

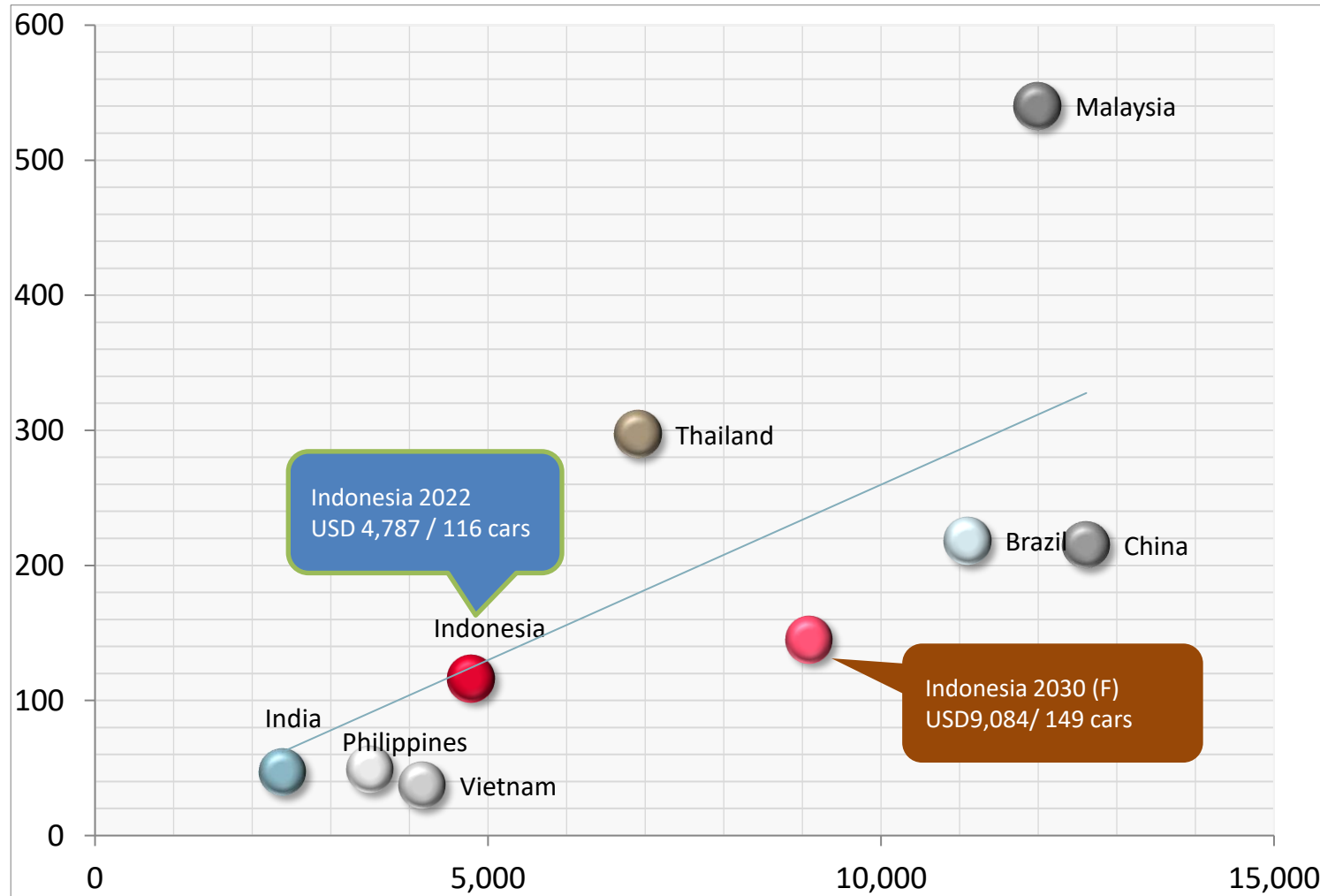
Major OEMs losing its share to non-JOEMs given uprising demand trend for electrified vehicles from C-&K-OEMs



Source: S&P Global

Growth Potential from Low to High Density

GDP per capita (USD) Vs. Vehicle density (per 1,000 population)

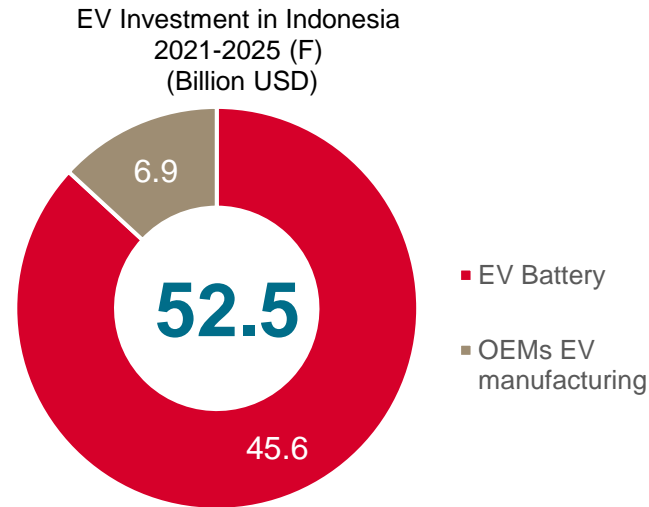


Source: S&P Global

- In 2013, Indonesia's vehicle Parc density once recorded as the lowest in the region with only 76 cars/ 1000 population, however, significantly expanded to 116 (per 1000) 2022 largely driven by robust demand and stable economic fundamentals
- Parc density is anticipated to reach 149 vehicles / 1000 population on the back of increasing GDP per capita of USD9,084 as automotive market will continue to expand
- Rising purchasing power from middle class / working population will play a significant role in new vehicle purchase
- Shifting demand trend from motorcycle to passenger vehicles will help drive market expansion

EV Investment in ASEAN

Indonesia is taking the lead in EV investment in the verge of abundant critical raw materials for EV battery

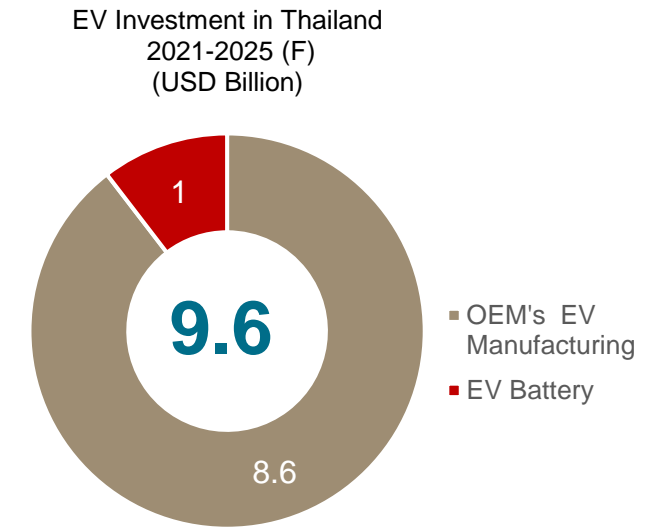


EV Battery Investment

- **BASF /Eramet**
- **CATL** (partnership with ANTAM &IBC)
- **Ford** (JV- Vale/Zhejiang Hanyou)
- **Glenclore** in partnership with ANTAM
- **Foxconn**
- **Hyundai-LG Energy JV**
- **LG Energy**
- **Tesla** (*Nickel Purchasing deal in 2022*)

OEM's EV investment

- **Hyundai Motors**
- **Toyota**
- **Chery**
- **Mitsubishi Motors**
- **BYD**
- **SAIC-GM-Wuling**



EV Battery Investment

- **CATL / Horizon Plus**
- **DTS Draexlmaier**
- **BYD Components**
- **Honda**
- **Mine Mobility**
- **Thonburi Energy Storage**
- **SVOLT Energy Technology**
- **Toyota**

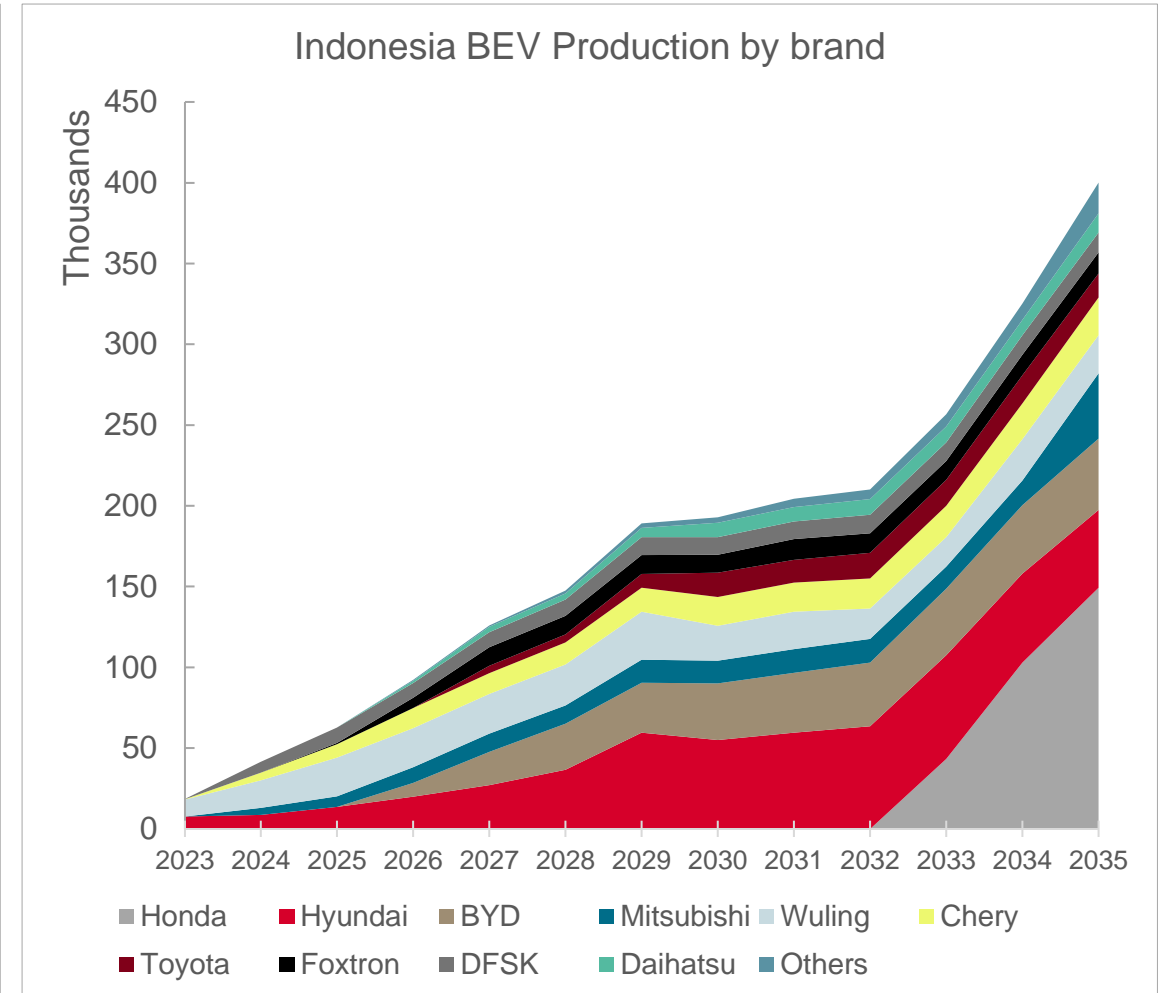
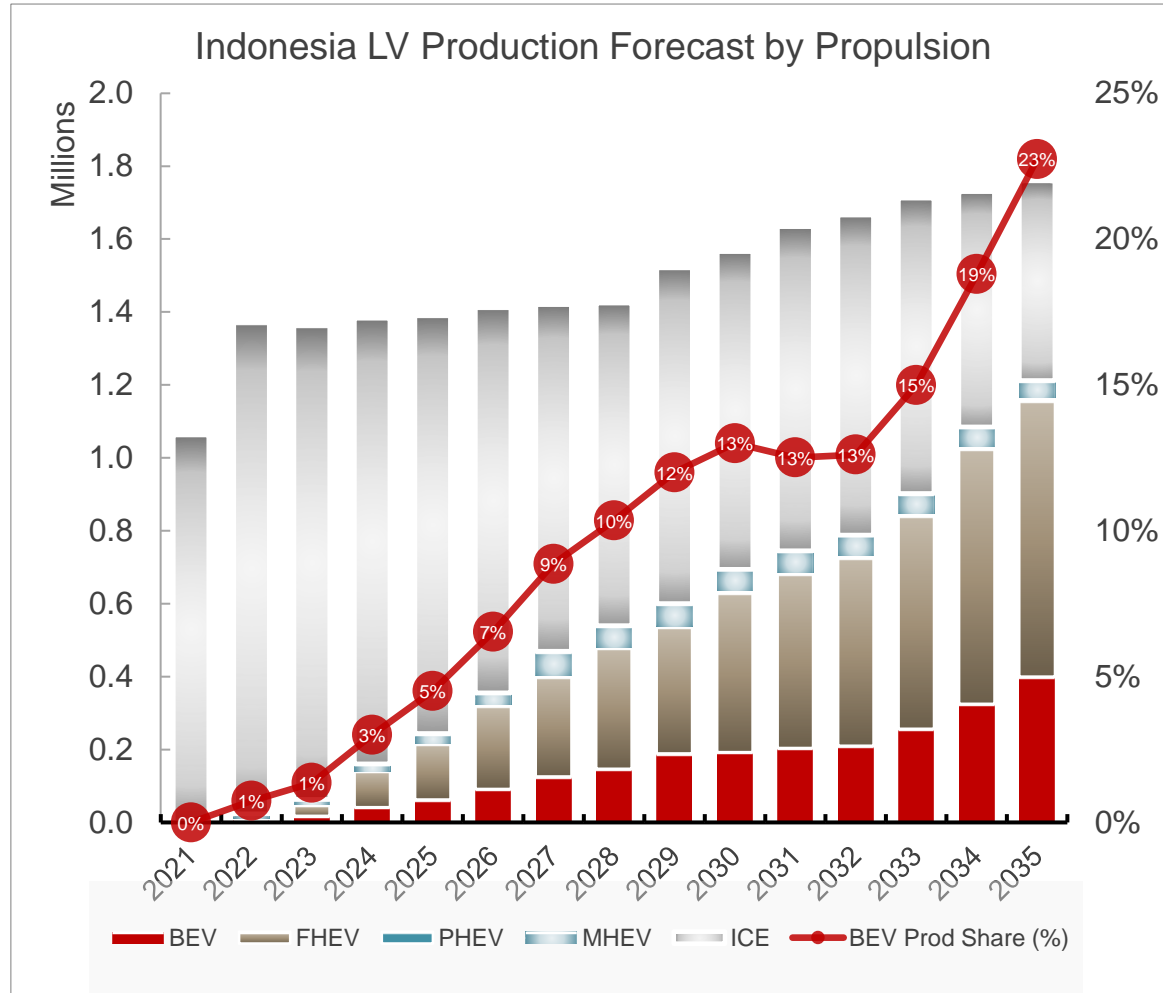
OEM's EV investment

- **BYD**
- **Changan**
- **Great Wall Motor**
- **Honda**
- **Horizon Plus (Foxconn/PTT)**
- **Mercedes Benz**
- **Neta**
- **SAIC (MG)**
- **Toyota**
- **Chery (TBC)**
- **GAC (TBC)**
- **Ford (TBC)**
- **Geely (TBC)**

Source: Data compiled by S&P Global Mobility : June 2023

ICE will maintain the mainstay while hybrid vehicle is on the rise

K&C-OEMs are taking the lead in BEV segments — small entry BEVs could be the game changer



Source: S&P Global

Key challenges for Indonesia's EV growth



Regulatory framework / Incentives & Subsidies

- More attractive tax reductions & subsidies for electrified vehicles particularly during transition period
- Cleaner Nickel mining /smelting process with ESG compliance
- Policies on critical raw materials of EV battery



EV Ecosystem Development

- Global demand for Nickel Manganese Cobalt based EV battery (NMC) continue its dominance in global EV battery suggesting sustainable growth through longer-term
- Public EV charging infrastructure development and expansion



OEM's BEV product and manufacturing strategies

- Affordable A-segment BEV, replacing LCGC segment- the next big thing!
- Indonesia-built BEVs for global market



Consumers

- EV transition could take place earlier before 2030 driven by shifting demand trend from ICE to FHEVs and BEVs
- Rising purchasing power from huge population of middle-income to Millennium car buyers
- Technology driven over brand royalty

Source: S&P Global

Key Challenges for Indonesia auto industry (Short-Mid/Long-term)

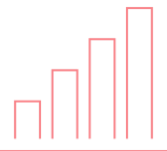
- Gov's incentives may not attract gain traction enough. Long road ahead for major OEMs



- In short-term, government's VAT reduction for BEV from 11% to 1% should drive demand limited volumes
- Government should reconsider subsidy schemes for HEV and BEV in a bid to drive demand during transitional period
- Country's rich nickel reserves will attract huge investment, yet largely for EV battery manufacturing
- Government's EV ambition to produce EV by 20% of total production in 2025 seems far from reality



- Charging infrastructure and BEV prices remains the key concerns through longer-term
- As world's biggest reserve of nickel, Indonesia is expected to become one of global EV battery manufacturing base following expanded investment from global EV battery producers as well as export ban of critical minerals such as nickel
- Global demand for nickel as critical raw material of EV battery is expected to continue beyond 2030
- J-OEMs are lagging behind C-/K-OEMs in BEV development even in mid-term, yet focusing on hybrid vehicles still
- Mainstream and affordable BEVs could be a game changer particularly for Chinese and Korean OEMs in short-mid/term



- Stable annual GDP 4.8% (2023-2030) estimated; production is forecast to record CAGR 3.9% (2024-2030)
- Parc Density anticipated to grow from 58 car/1000 population in 2022, among the lowest in the region, but will expand to 73 cars /1000 in 2030, a growth 26%, suggesting huge opportunity to grow
- Surging export potentials for ICE/electrified MPVs/SUVs through longer-term for Middle East/Africa and South America

Source: S&P Global

Q&A

Thank you

Jessada.Thongpak@spglobal.com