



**2022**

**CHIN POON**

# Investor Conference

No.17, Ln. 5, Sec. 2, Nanshan Rd., Luzhu Dist.,  
Taoyuan City 33852, Taiwan (R.O.C.)  
TEL: +886-3-322-2226  
Website: [www.chinpoon.com](http://www.chinpoon.com)

# Disclaimer

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The presentation contains projections & estimates of financial information as well as market and product developments for future periods. These projections & estimates are based on information currently available which we believe to be reliable, but they involve risks & uncertainties. Our actual results of operations & financial condition may differ significantly from those contained in projections & estimates. The projections & estimates should not be interpreted as legally binding commitments, but rather as flexible information subject to change occasionally.

# Main Topics

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- **Introduction**
- **Investors' Focus**
- **Performance in 2018~2022**
- **Global Auto Market**
- **Global EV Outlook**
- **Q&A**

# Introduction

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- **Company Profile**
- **Global Network**
- **Financial Position and ROE**
- **Specialty on Auto PCB**

# Company Profile

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**Company Name** : Chin-Poon Industrial Co., Ltd.

**Established** : September 26<sup>th</sup>,1979 (Listed since October 1996)

**Representative** : Tseng-Liu, Yu-Chih / Chairperson

**Business** : Rigid Printed Circuit Board

**Products** : HDI, Multilayer (~26L) , Single-Sided, Double-Sided, Heavy Copper(~14oz),  
High Frequency, Metal Base & Pedestal, Flexible-PCB, Cu Inlay & Busbar  
STH(Silver Paste Through Hole), Cu TH(Copper Paste Through Hole)

**Capital** : NT\$ 3.97 billions

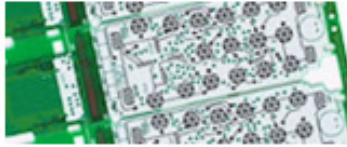
**Equity** : NT\$ 15.71 billions (2022Q3)

**Revenue** : NT\$ 18.22 billions (2021) and NT\$ 12.97 billions (2022Q3)

**Employee** : 7,100+ (Taiwan 3,000+ , China 3,000+ , Thailand 1,100+)

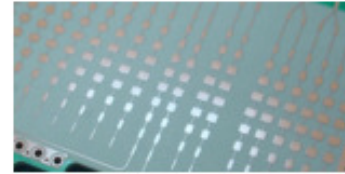
**Address** : No.17, Ln. 5, Sec. 2, Nanshan Rd., Luzhu Dist., Taoyuan City 33852, Taiwan

# Total Solutions for PCB



## SS/NPTH/STH/CPTH

Appliances \ TV Remote  
Controller \ Car Dashboard...



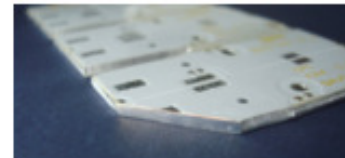
## High Frequency

ADAS Radar \ Satellite Antenna \  
Smart Antenna \ LNB...



## Multilayer (~26L)

Car ECU \ Server \ Telecom \  
Automation \ Medical...



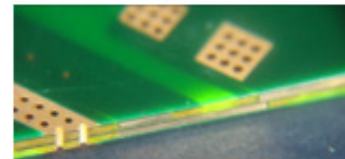
## Metal Base & Pedestal

LED TV BLM \ Traffic Lighting \  
Commercial Lighting \ Projector  
Light Source \ Car Lighting \ Elec.  
Braking...



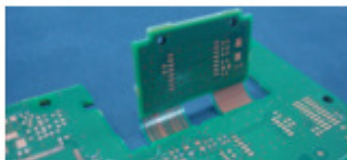
## HDI & IVH

Car Infotainment \ ECU \ ADAS \  
Camera \ Router...



## Heavy Copper (~14oz)

Car OBC \ Junction Box \ High  
Power Inverter \ Converter



## Flexible PCB

Car ECU \ Junction Box \ Car EPS \  
ADAS \ Household Appliances...



## Cu Inlay & Busbar

Elec. Braking \ LED Light Engine \  
Industrial Power Managing \  
Energy Storage \ High-Power  
Module

# Global Network

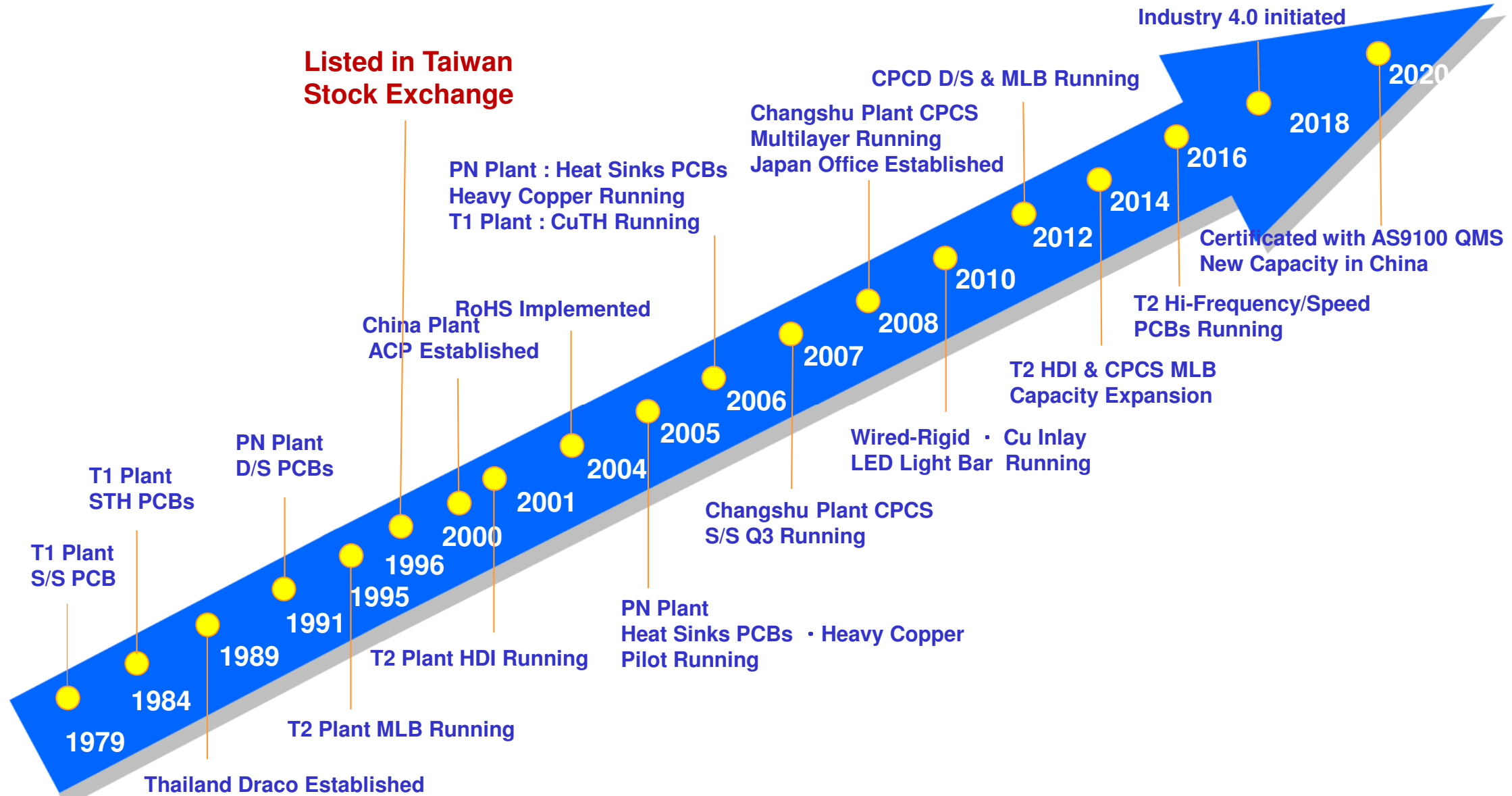


U.K.  
Spain  
Netherlands  
Germany

China  
Korea  
Japan  
Taiwan  
Thailand  
Malaysia

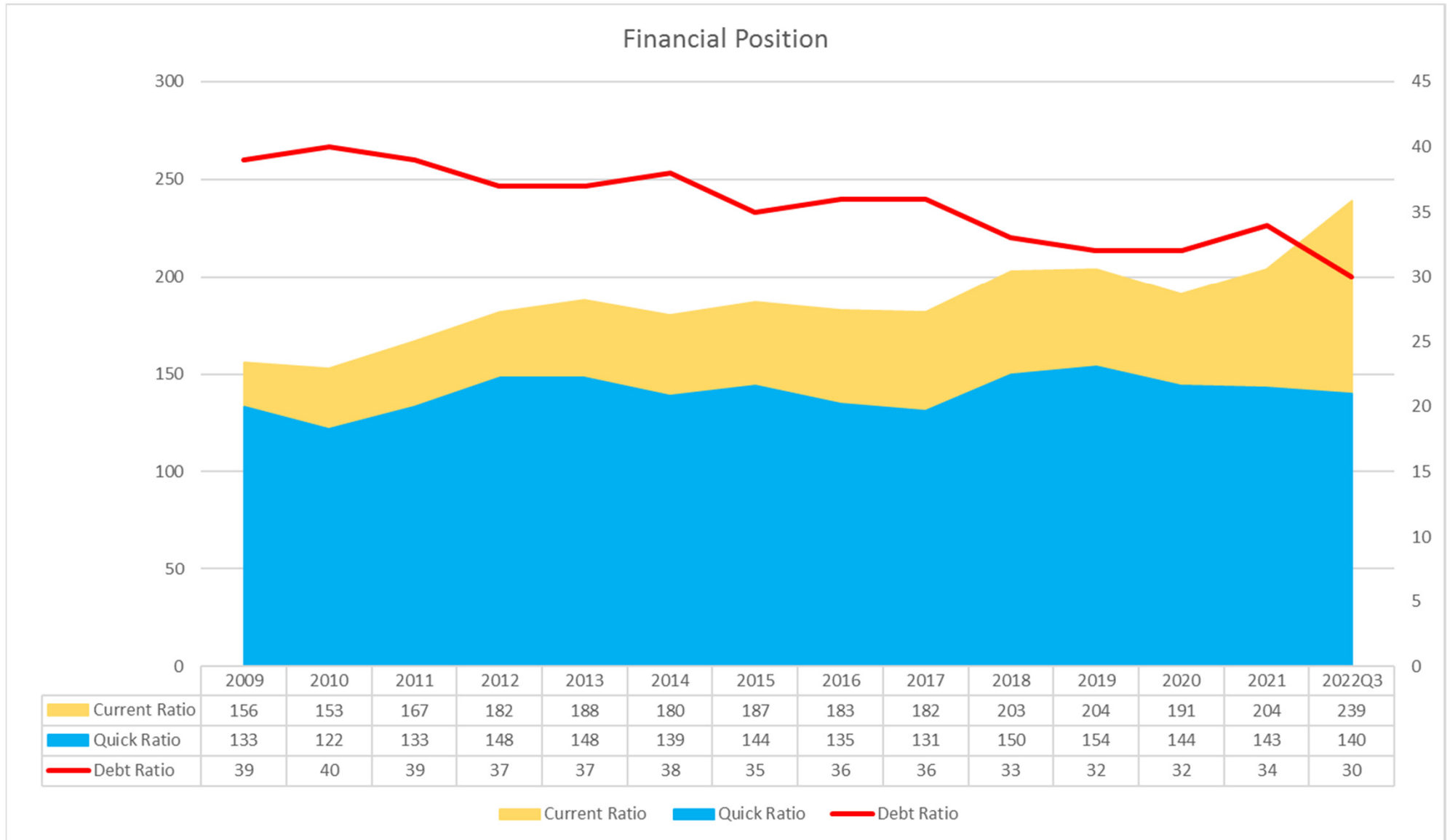
U.S.A.  
Mexico

# Milestone

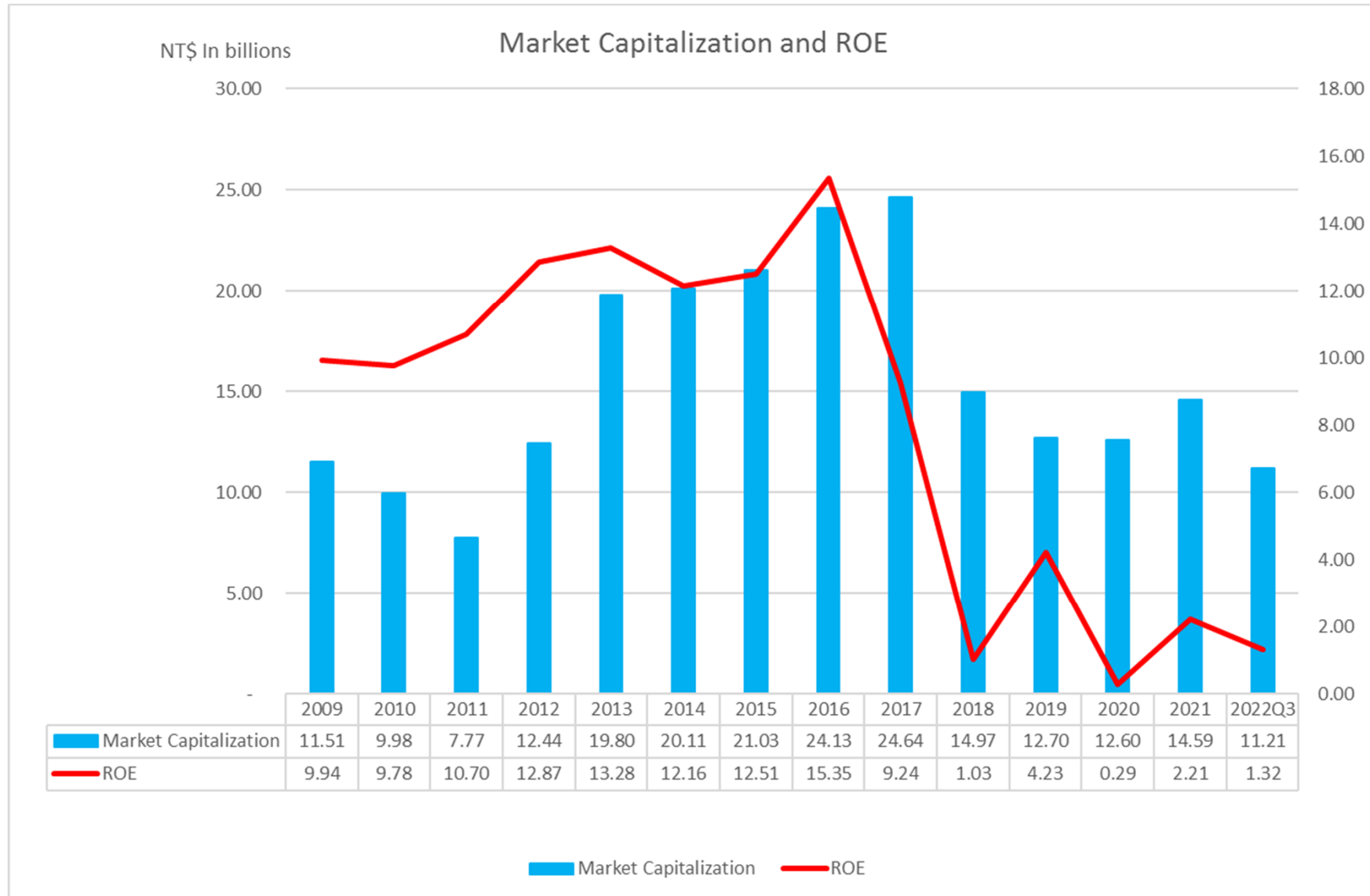




# Strong Financial Position

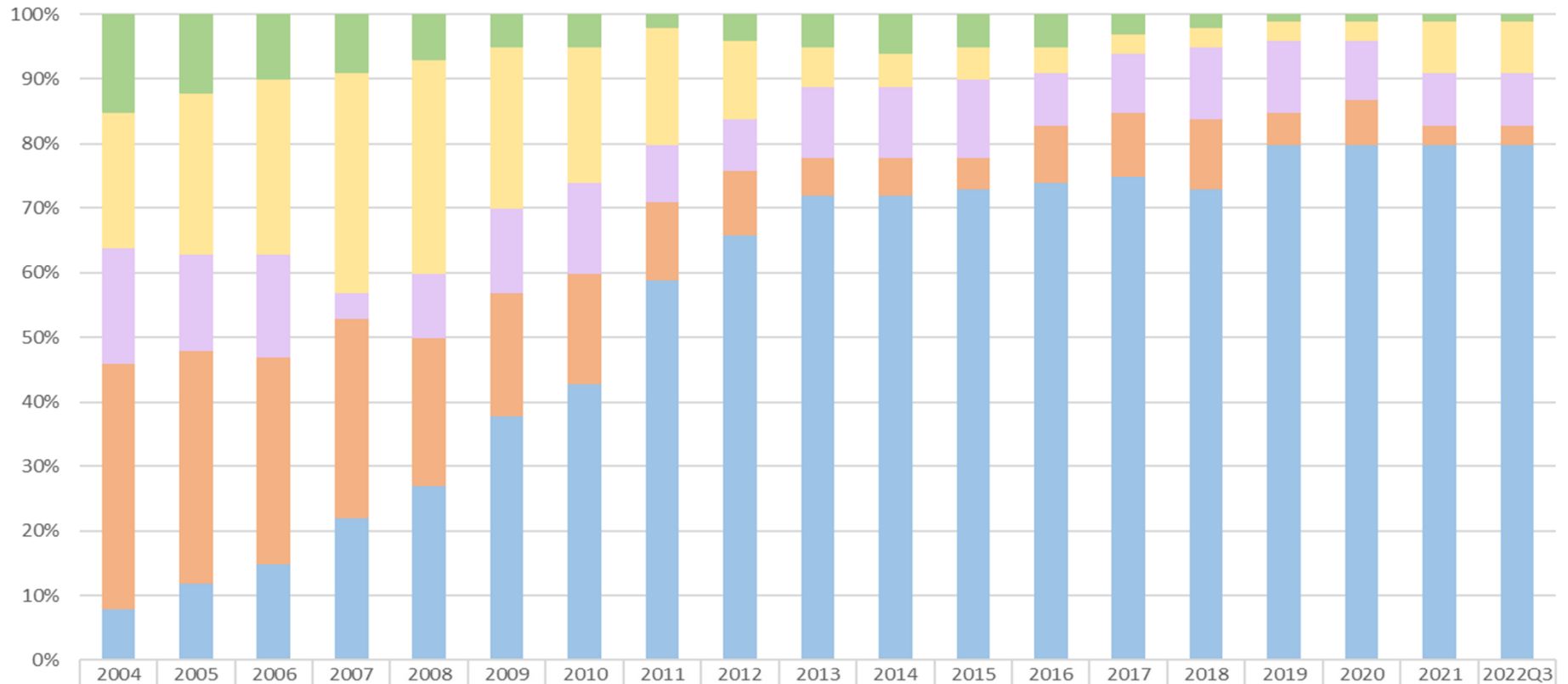


# Market Capitalization and ROE



# Specialty on Auto PCB

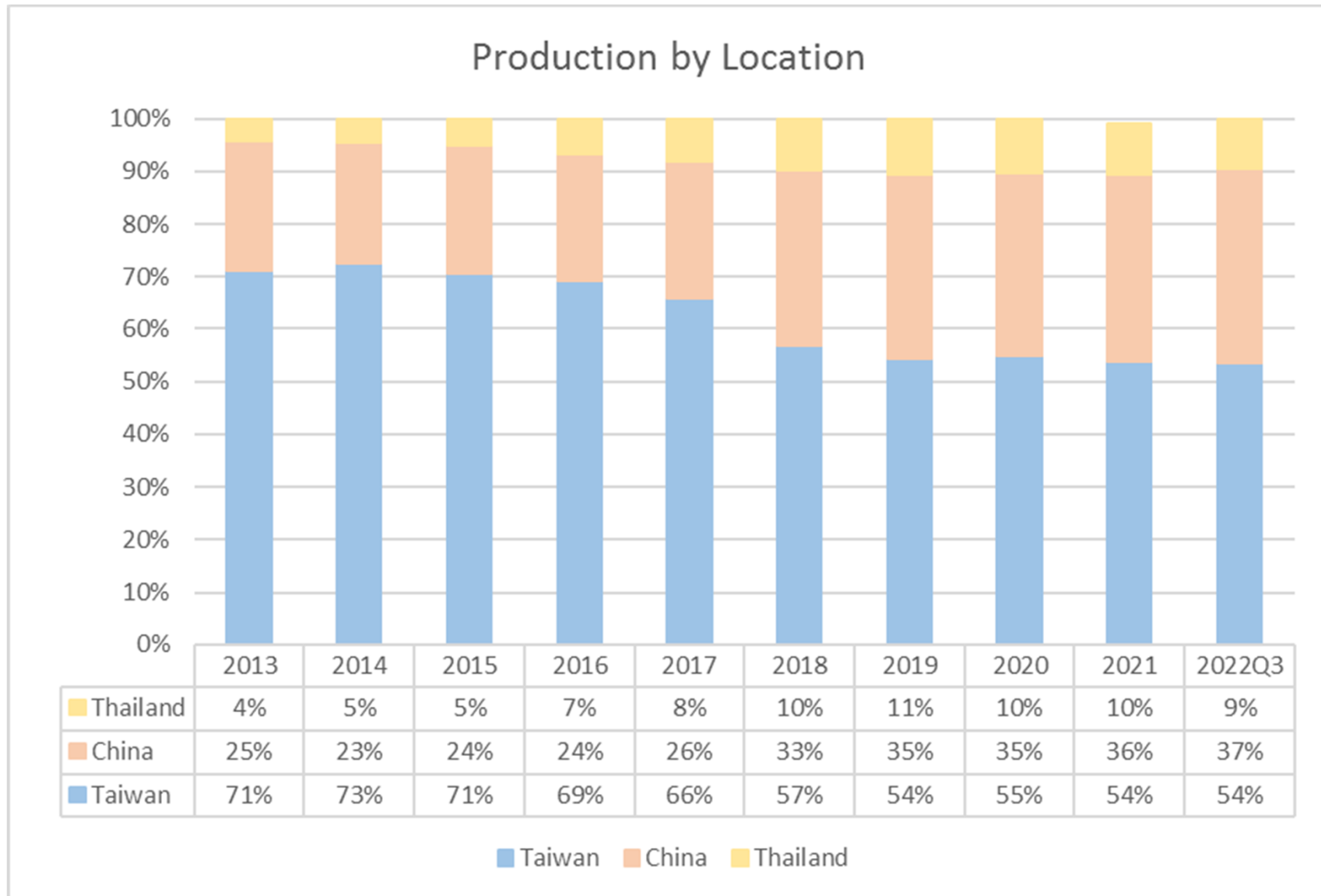
Applications



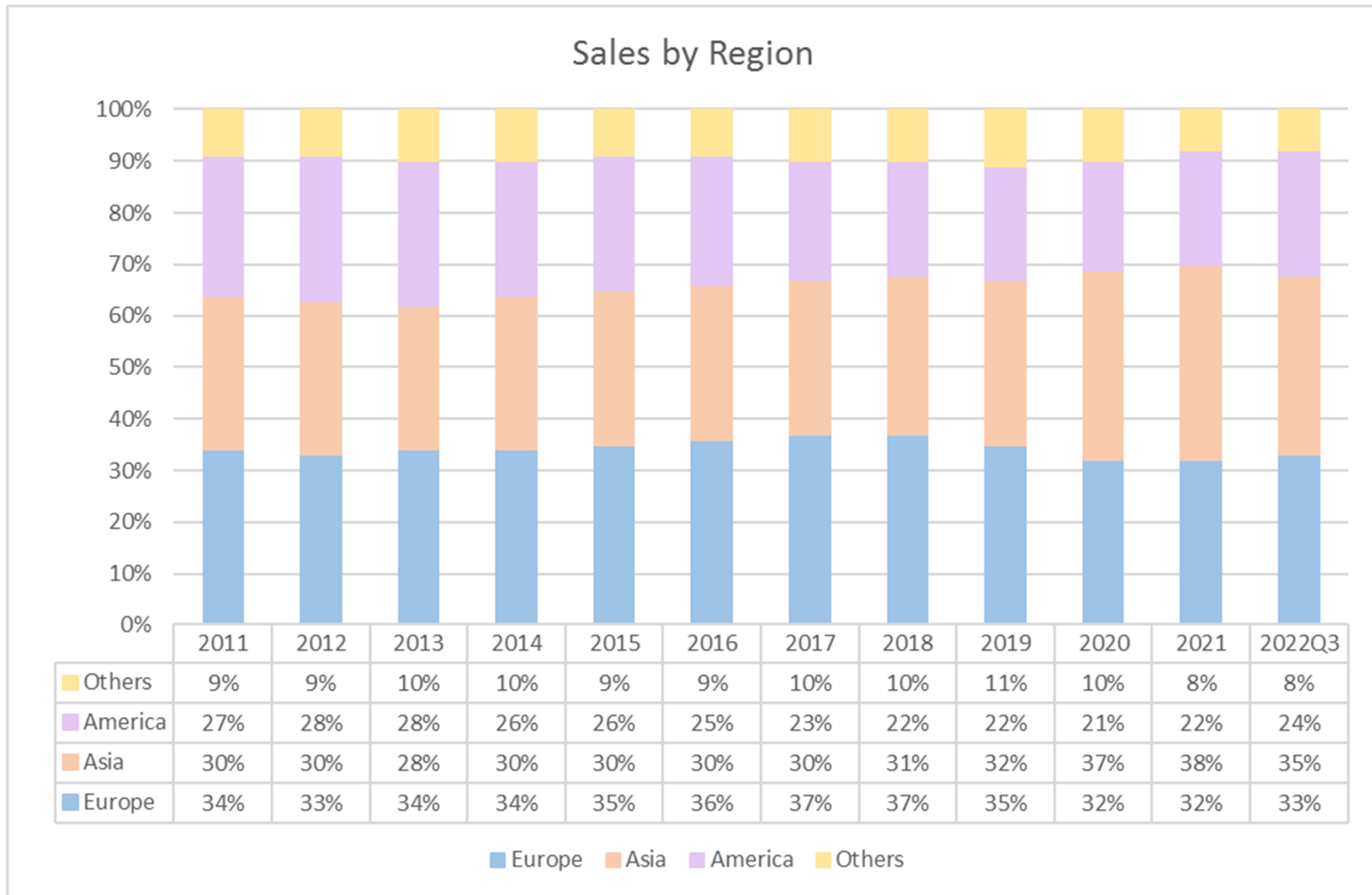
Others	15%	12%	10%	9%	7%	5%	5%	2%	4%	5%	6%	5%	5%	3%	2%	1%	1%	1%	1%
Telecommunication	21%	25%	27%	34%	33%	25%	21%	18%	12%	6%	5%	5%	4%	3%	3%	3%	3%	8%	8%
Industrial Electronics	18%	15%	16%	4%	10%	13%	14%	9%	8%	11%	11%	12%	8%	9%	11%	11%	9%	8%	8%
Consumers' Electronic	38%	36%	32%	31%	23%	19%	17%	12%	10%	6%	6%	5%	9%	10%	11%	5%	7%	3%	3%
Automobile Electronics	8%	12%	15%	22%	27%	38%	43%	59%	66%	72%	72%	73%	74%	75%	73%	80%	80%	80%	80%

Automobile Electronics Consumers' Electronic Industrial Electronics Telecommunication Others

# 54% of Production in Taiwan



# Chin Poon's Sales by Region

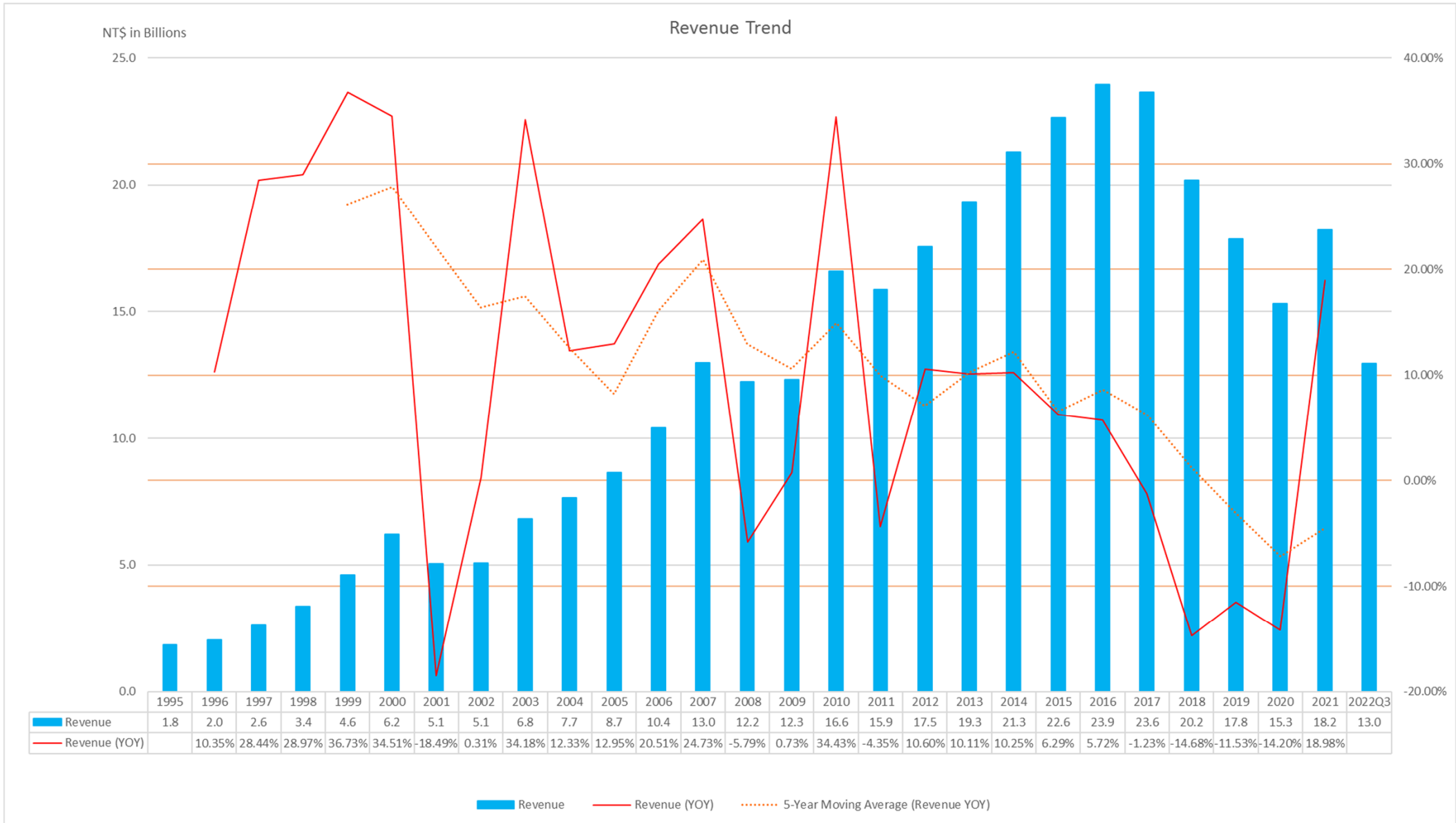


# Investors' Focus

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- **Revenue Trend**
- **Profitability Trend**
- **New Business**
- **Payout Ratio**
- **Capex**

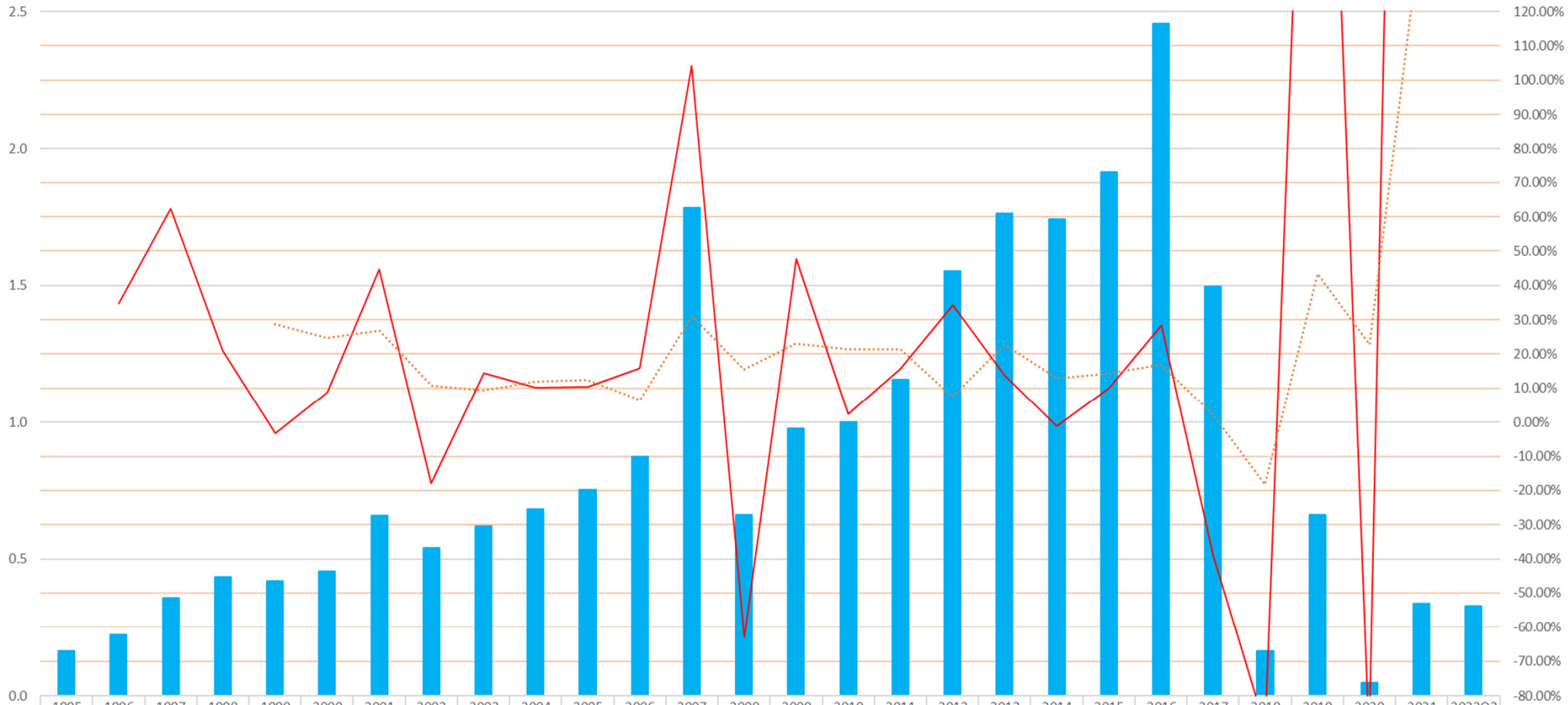
# Revenue Trend



# Profitability Trend

NT\$ in Billions

Profitability Trend

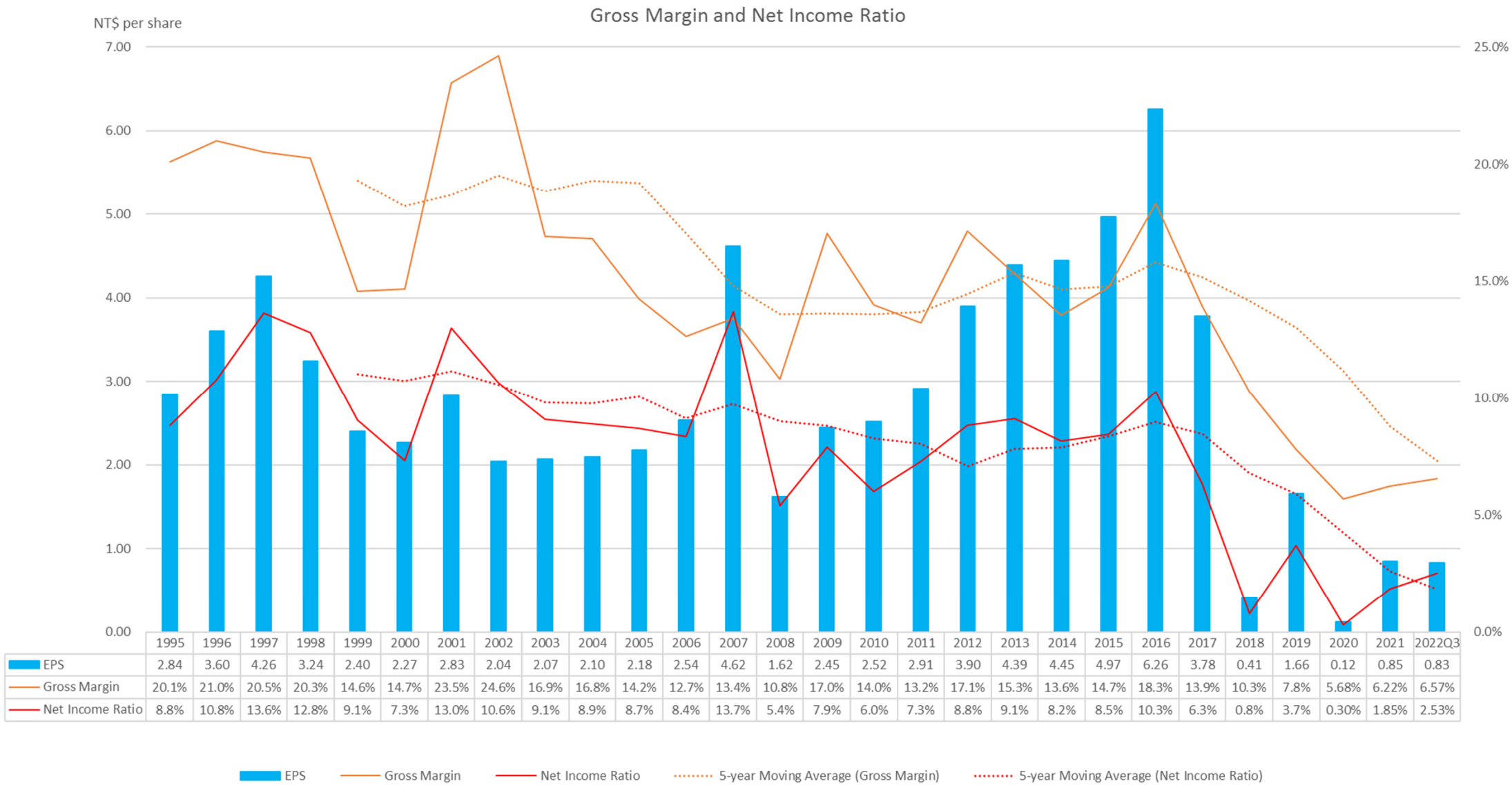


	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022Q3
Net Income	0.16	0.22	0.36	0.43	0.42	0.46	0.66	0.54	0.62	0.68	0.75	0.87	1.78	0.66	0.98	1.00	1.16	1.55	1.76	1.74	1.91	2.46	1.50	0.16	0.66	0.05	0.34	0.33
Net Income (YOY)		34.69%	62.44%	21.12%	-3.33%	8.79%	44.65%	-17.86%	14.42%	10.08%	10.51%	15.85%	104.26%	-62.95%	47.78%	2.48%	15.64%	34.18%	13.64%	-1.20%	9.92%	28.31%	-39.09%	-89.16%	306.83%	-93.08%	638.92%	

■ Net Income    
 — Net Income (YOY)    
 ⋯ 5-year Moving Average (Net Income YOY)



# Gross Margin and Net Income Ratio



# Status of New Business 1: Electric Vehicles

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In response to the decline in global sales of internal combustion engine vehicles in the future, our company has developed a number of new business.

Three main supply chains in the EV business: the conventional automotive supply chain, the technology-oriented EV supply chain in the United States, and the Chinese EV supply chain. We have developed a comprehensive EV business in all of the supply chains, and have achieved the targets set last year .

Our EV products have been shipped to the following automotive supply chain.

1. The conventional automotive supply chain:  
Our major focus is on the conventional automotive supply chain. Currently, our products have been used in the EVs of VW, Stellantis, Toyota, Ford and etc. We are even the main supplier of a certain European ultra-luxury electric sports car.
2. The technology-oriented EV supply chain in the United States :  
We have developed business relationship with them in the early stage. Our products have been used in the EVs of Lucid Motors, Rivian, Fisker, GM Cruise, tesla, etc.
3. The Chinese EV supply chain:  
Our products have been used in the EVs from its conventional automotive supply chain and its technology-oriented EV supply chain in China.

# New Business 2: Telecommunication

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In response to the decline in global sales of internal combustion engine vehicles in the future, our company has developed a number of new business.

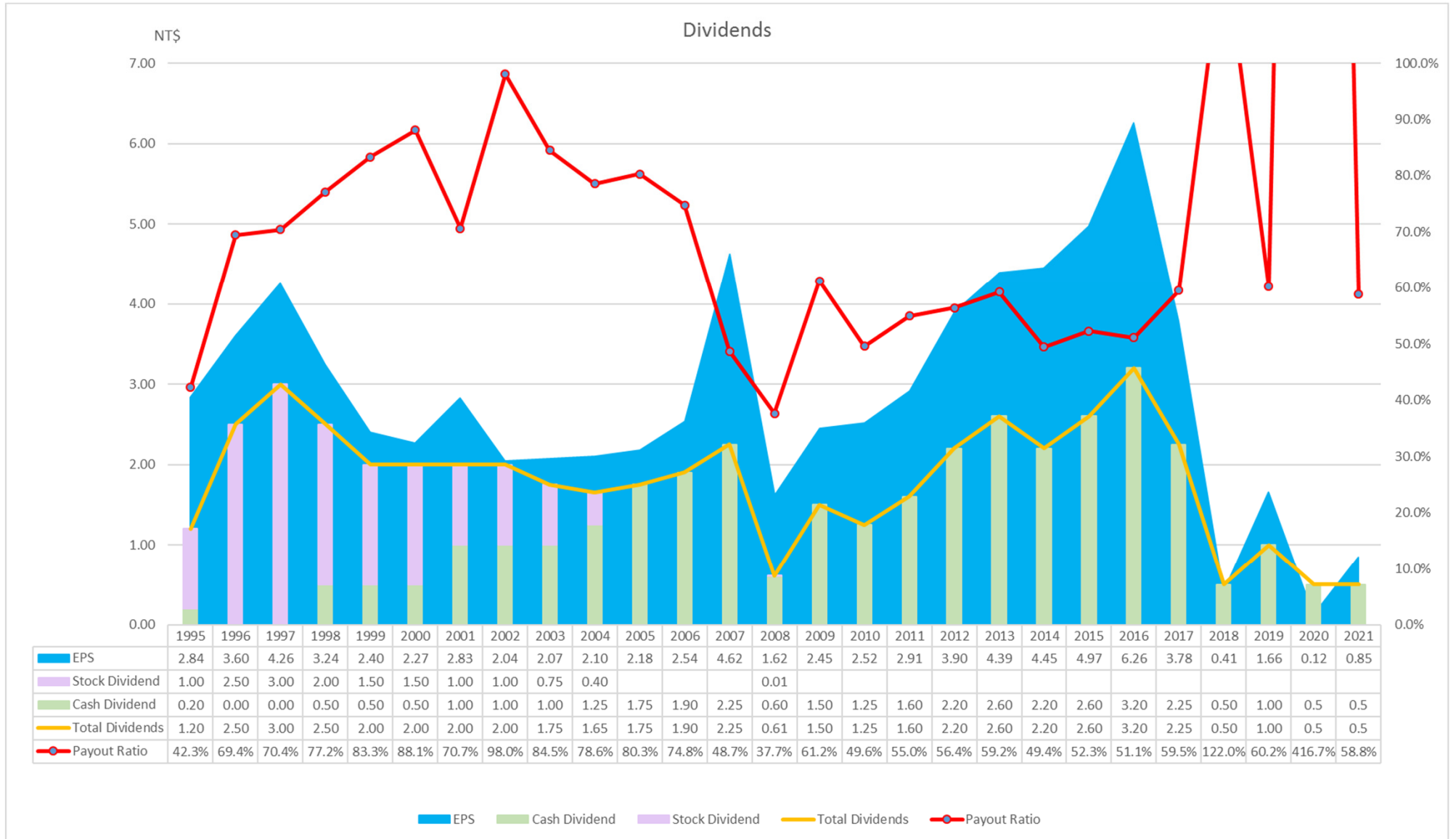
1. Low-Earth Orbit Satellites:

We have obtained the certification of the "AS 9100 Aerospace Quality Management System" in 2020. We have been actively developing the businesses of Low-Earth Orbit Satellites since then and have acquired business from a US-based low-orbit satellite manufacturer. In addition, we are developing several US-based companies.

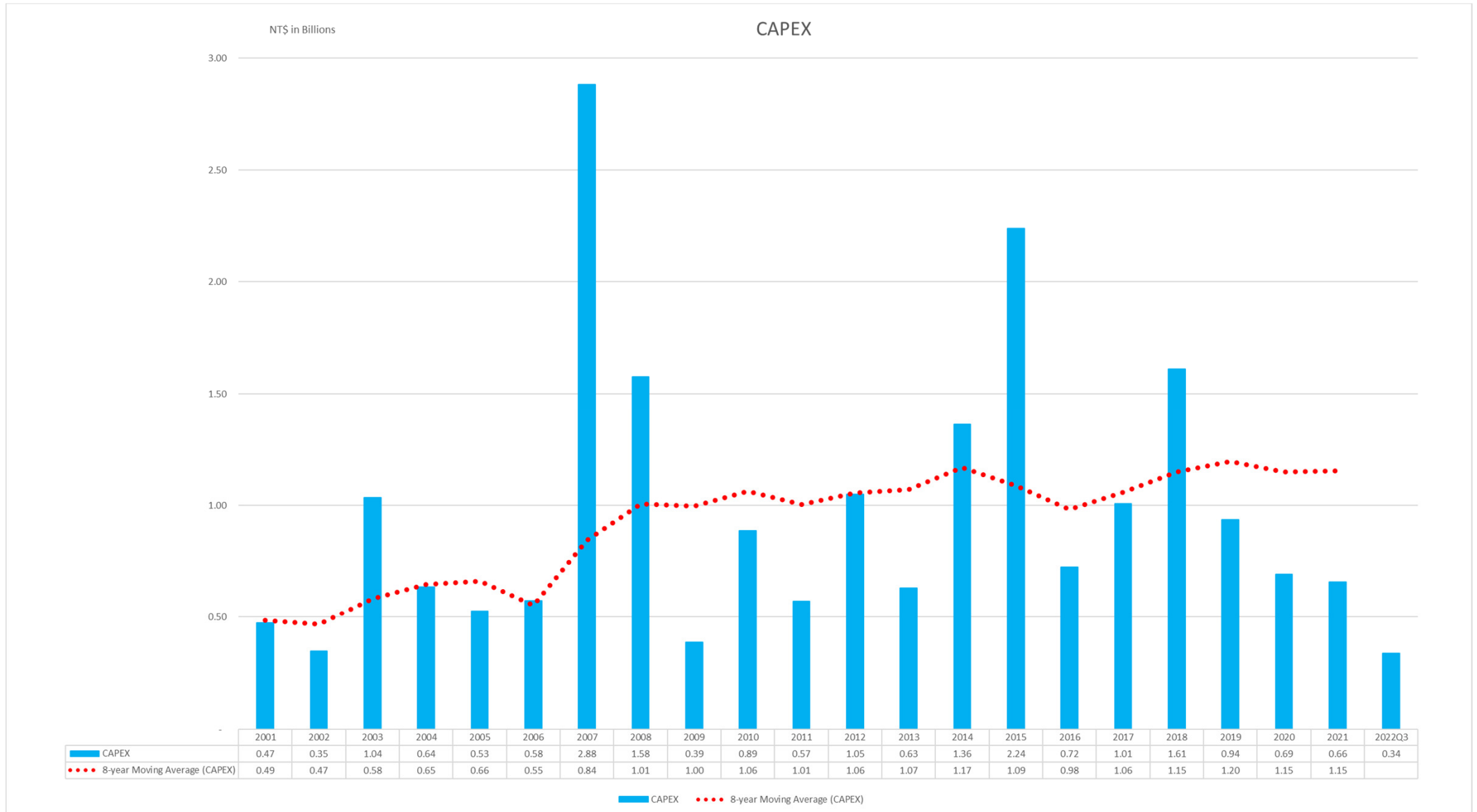
2. 5G communication:

We have been developing business with two leading European telecom manufacturers

# Payout Ratio



# CAPEX



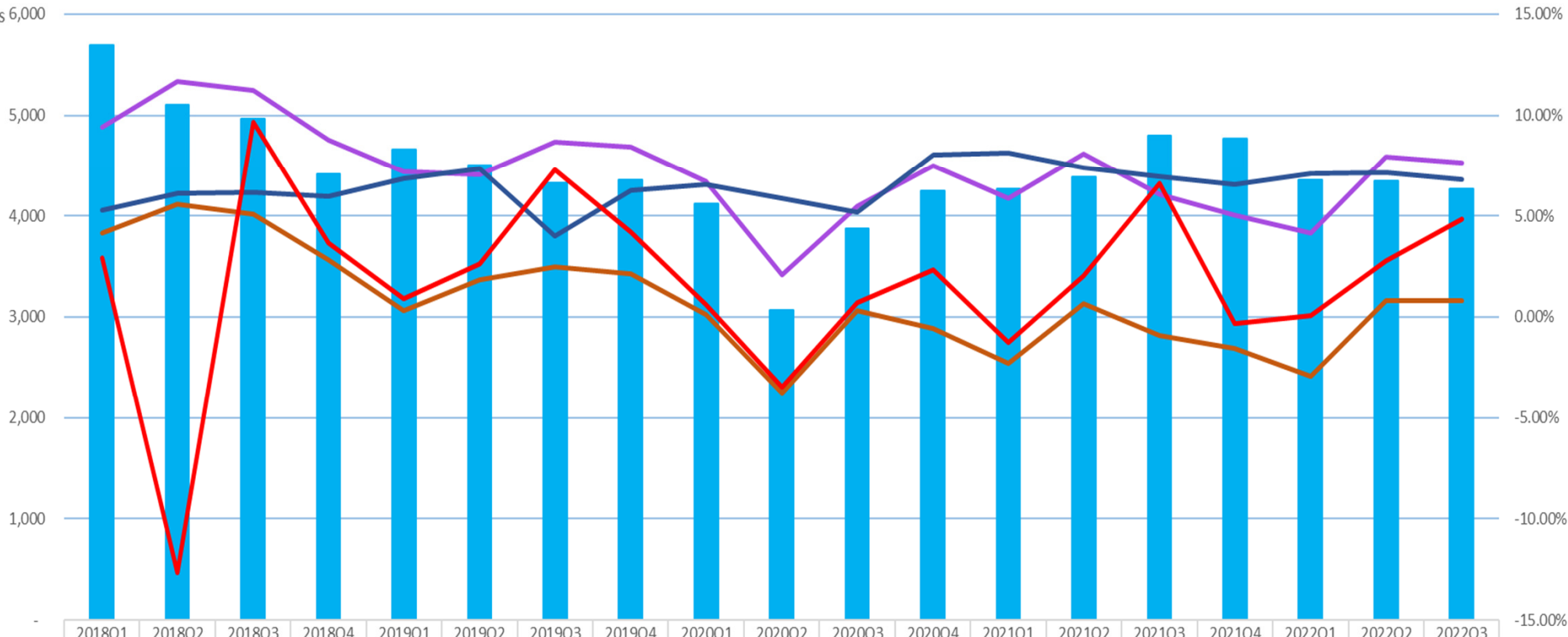
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# Performance in 2018 ~ 2022

# Performance of 2018 ~ 2022

Performance of 2018 ~ 2022

NT\$ in millions 6,000



	2018Q1	2018Q2	2018Q3	2018Q4	2019Q1	2019Q2	2019Q3	2019Q4	2020Q1	2020Q2	2020Q3	2020Q4	2021Q1	2021Q2	2021Q3	2021Q4	2022Q1	2022Q2	2022Q3
Revenue	5,690	5,103	4,966	4,415	4,664	4,500	4,326	4,358	4,124	3,068	3,875	4,247	4,267	4,382	4,796	4,774	4,356	4,347	4,268
Gross Margin	9.40%	11.67%	11.22%	8.79%	7.19%	7.04%	8.70%	8.41%	6.69%	2.08%	5.50%	7.47%	5.86%	8.07%	6.06%	5.01%	4.14%	7.95%	7.63%
Operating Expense Ratio	5.26%	6.12%	6.16%	5.96%	6.84%	7.34%	4.02%	6.27%	6.57%	5.85%	5.20%	8.05%	8.15%	7.40%	6.97%	6.55%	7.08%	7.13%	6.82%
Operating Margin	4.14%	5.55%	5.07%	2.83%	0.34%	1.84%	2.46%	2.13%	0.11%	-3.77%	0.30%	-0.58%	-2.29%	0.67%	-0.91%	-1.54%	-2.95%	0.82%	0.81%
Net Income Ratio	2.94%	-12.67%	9.65%	3.68%	0.91%	2.62%	7.31%	4.21%	0.61%	-3.48%	0.71%	2.35%	-1.26%	2.03%	6.63%	-0.32%	0.06%	2.76%	4.83%

Revenue Gross Margin Operating Expense Ratio Operating Margin Net Income Ratio

# FX Impact on Gross Margin

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## Simulated Gross Margin

$$= \text{Previous Gross Margin} + 0.8 * \text{FX Impact}$$

## FX Impact

$$\begin{aligned} &= 0.55 * \text{Percentage Change of USD/NTD} \\ &+ 0.35 * \text{Percentage Change of USD/CNY} \\ &+ 0.10 * \text{Percentage Change of USD/THB} \end{aligned}$$

### Note:

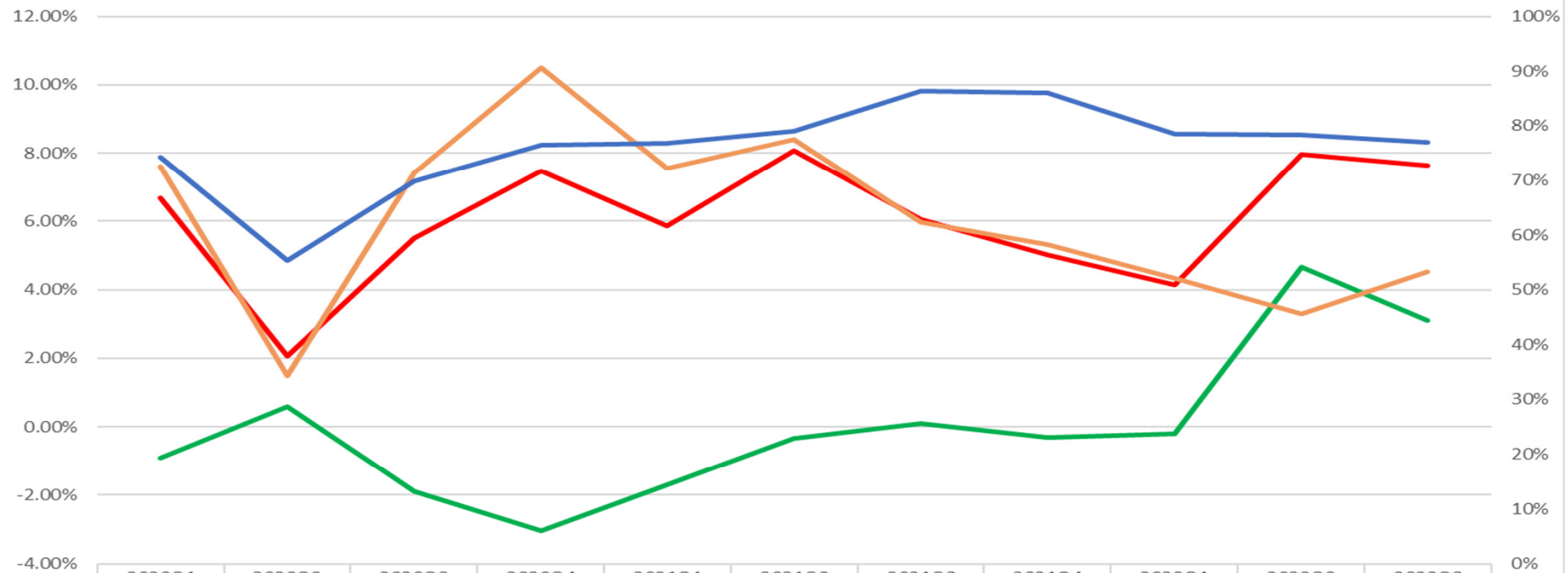
1. Use the multiplier of 0.8 for FX Impact because 90% of our revenue are in USD and some purchase in USD provides partial natural hedge for our revenue in USD.
2. Appreciation of USD/NTD, USD/CNY and USD/THB will have positive impact on our gross margin and depreciation of USD/NTD, USD/CNY and USD/THB will have negative impact on our gross margin. The multipliers of 0.55, 0.35 and 0.10 mean our production allocation factors of Taiwan, China and Thailand.



# Gross Margin, FX Impact, Capacity Utilization 1

## Perspective 1

Gross Margin under the Impact of FX Change and Capacity Utilization (Q to Q)



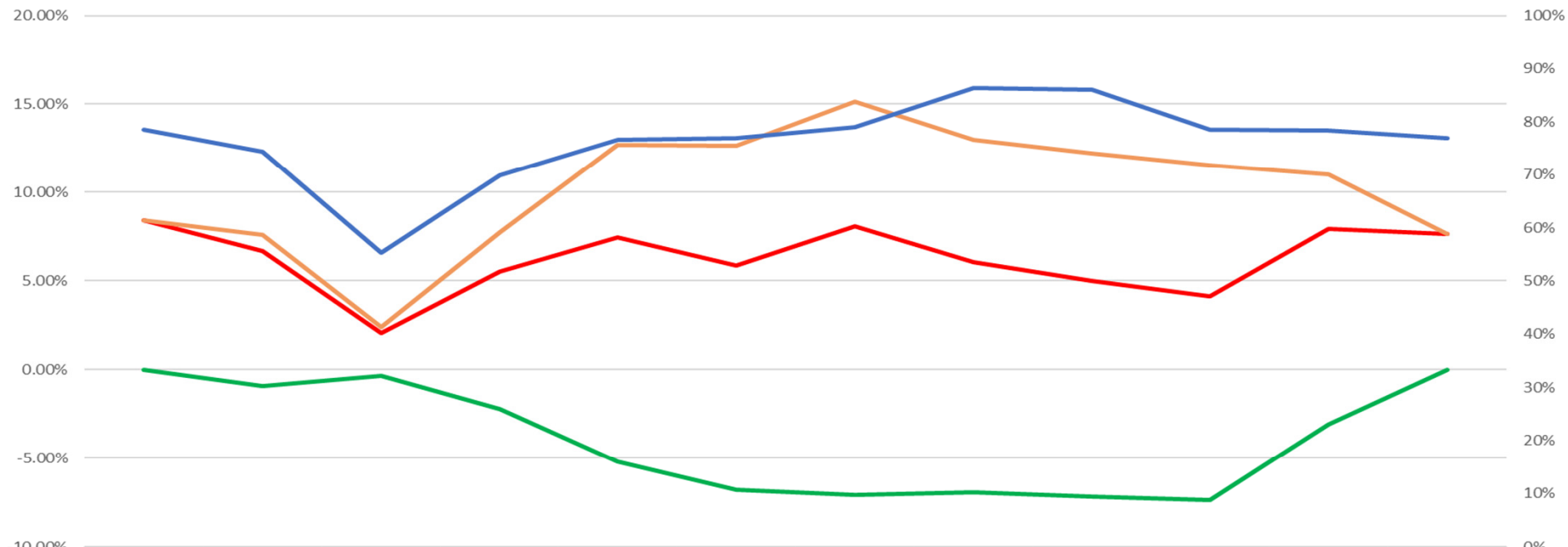
	2020Q1	2020Q2	2020Q3	2020Q4	2021Q1	2021Q2	2021Q3	2021Q4	2022Q1	2022Q2	2022Q3
FX Impact	-0.92%	0.59%	-1.91%	-3.04%	-1.70%	-0.33%	0.10%	-0.30%	-0.20%	4.67%	3.11%
Gross Margin	6.69%	2.08%	5.50%	7.47%	5.86%	8.07%	6.06%	5.01%	4.14%	7.95%	7.63%
GM minus FX Impact	7.60%	1.49%	7.41%	10.51%	7.56%	8.40%	5.96%	5.31%	4.33%	3.29%	4.53%
Capacity Utilization (left)	74%	55%	70%	77%	77%	79%	86%	86%	78%	78%	77%

FX Impact    Gross Margin    GM minus FX Impact    Capacity Utilization (left)

# Gross Margin, FX Impact, Capacity Utilization 2

## Perspective 2

Gross Margin under the Impact of FX Change and Capacity Utilization (Base 100 = 2019Q4)



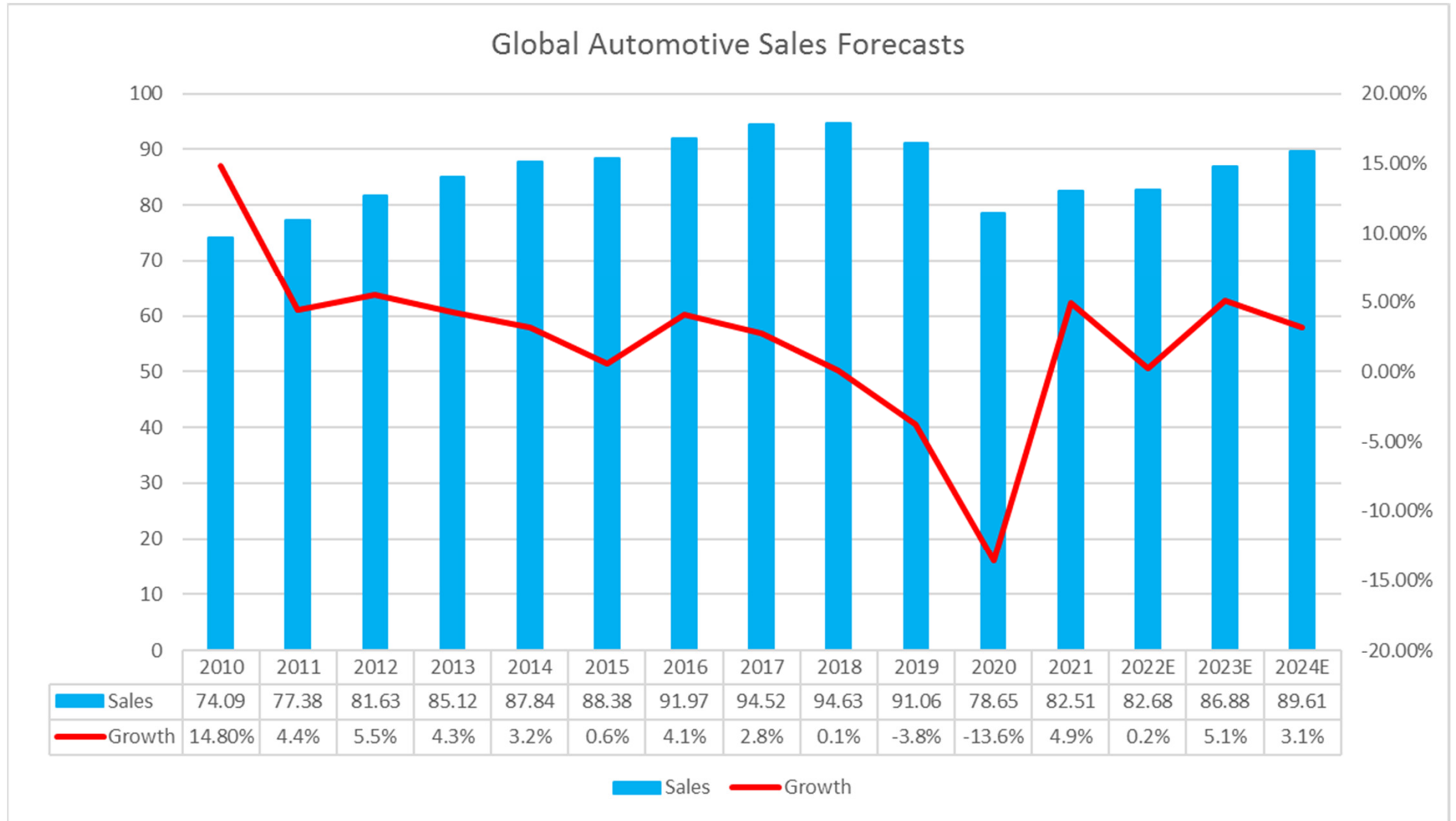
	2019Q4	2020Q1	2020Q2	2020Q3	2020Q4	2021Q1	2021Q2	2021Q3	2021Q4	2022Q1	2022Q2	2022Q3
FX Impact	0.00%	-0.92%	-0.32%	-2.23%	-5.20%	-6.81%	-7.08%	-6.94%	-7.19%	-7.38%	-3.07%	-0.03%
Gross Margin	8.41%	6.69%	2.08%	5.50%	7.47%	5.86%	8.07%	6.06%	5.01%	4.14%	7.95%	7.63%
GM minus FX Impact	8.41%	7.60%	2.40%	7.73%	12.67%	12.67%	15.16%	13.00%	12.20%	11.52%	11.02%	7.66%
Capacity Utilization (left)	79%	74%	55%	70%	77%	77%	79%	86%	86%	78%	78%	77%

FX Impact    Gross Margin    GM minus FX Impact    Capacity Utilization (left)

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# Global Auto Market

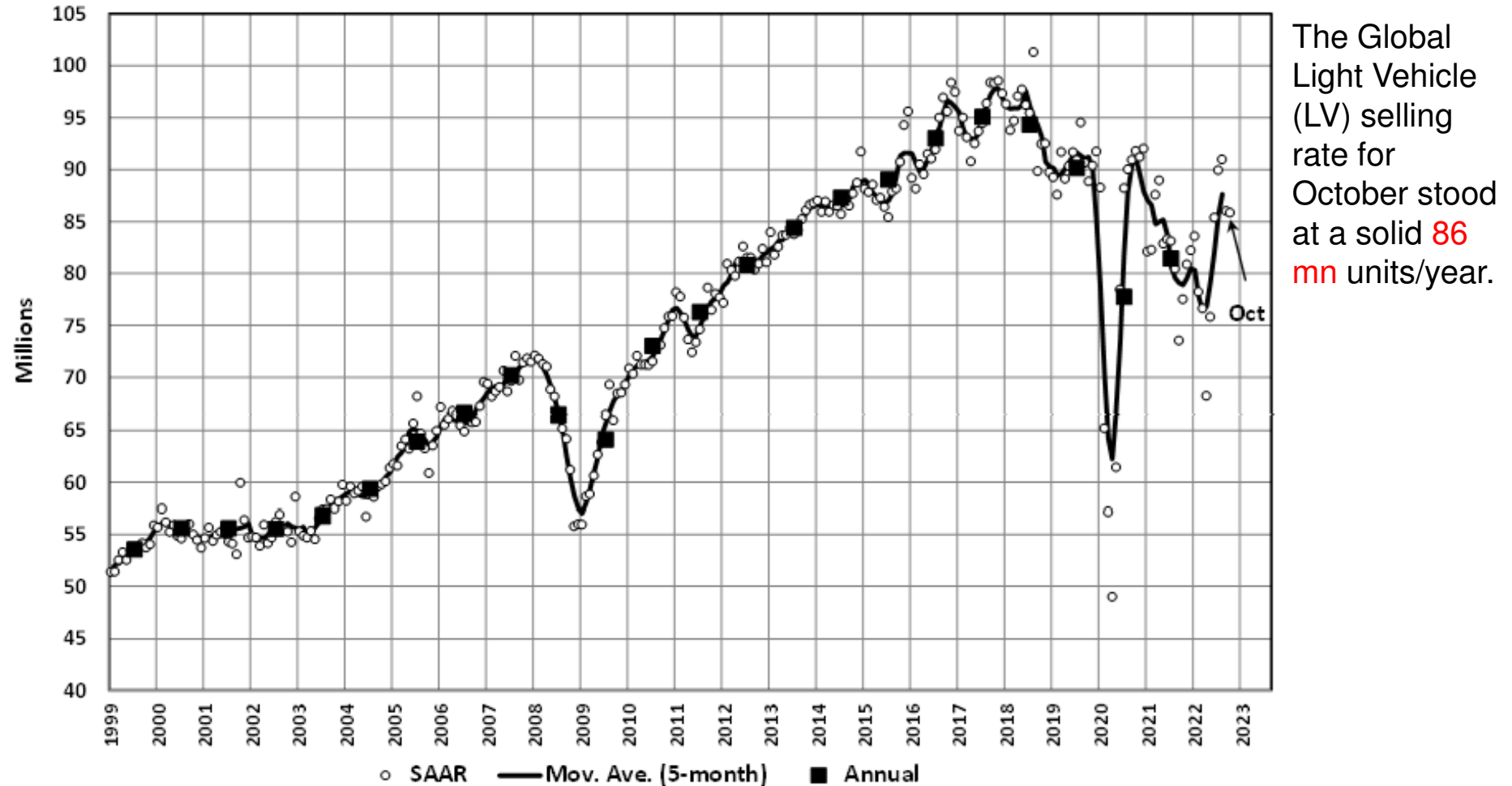
# Global Automotive Sales Forecasts



Sources: Nomura (Nov. 2022)

# Global Automotive Market

## Global Light Vehicle Sales



Sources: LMC Automotive Global Light Vehicle Sales Update  
<https://lmc-auto.com/news-and-insights/public-data/>

# How many cars in the world?

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“By the end of the first quarter of 2022, there were approximately **1.45 billion** vehicles in the world, of which about **1.1 billion** are passenger cars.”

Sources:

<https://www.whichcar.com.au/news/how-many-cars-are-there-in-the-world>

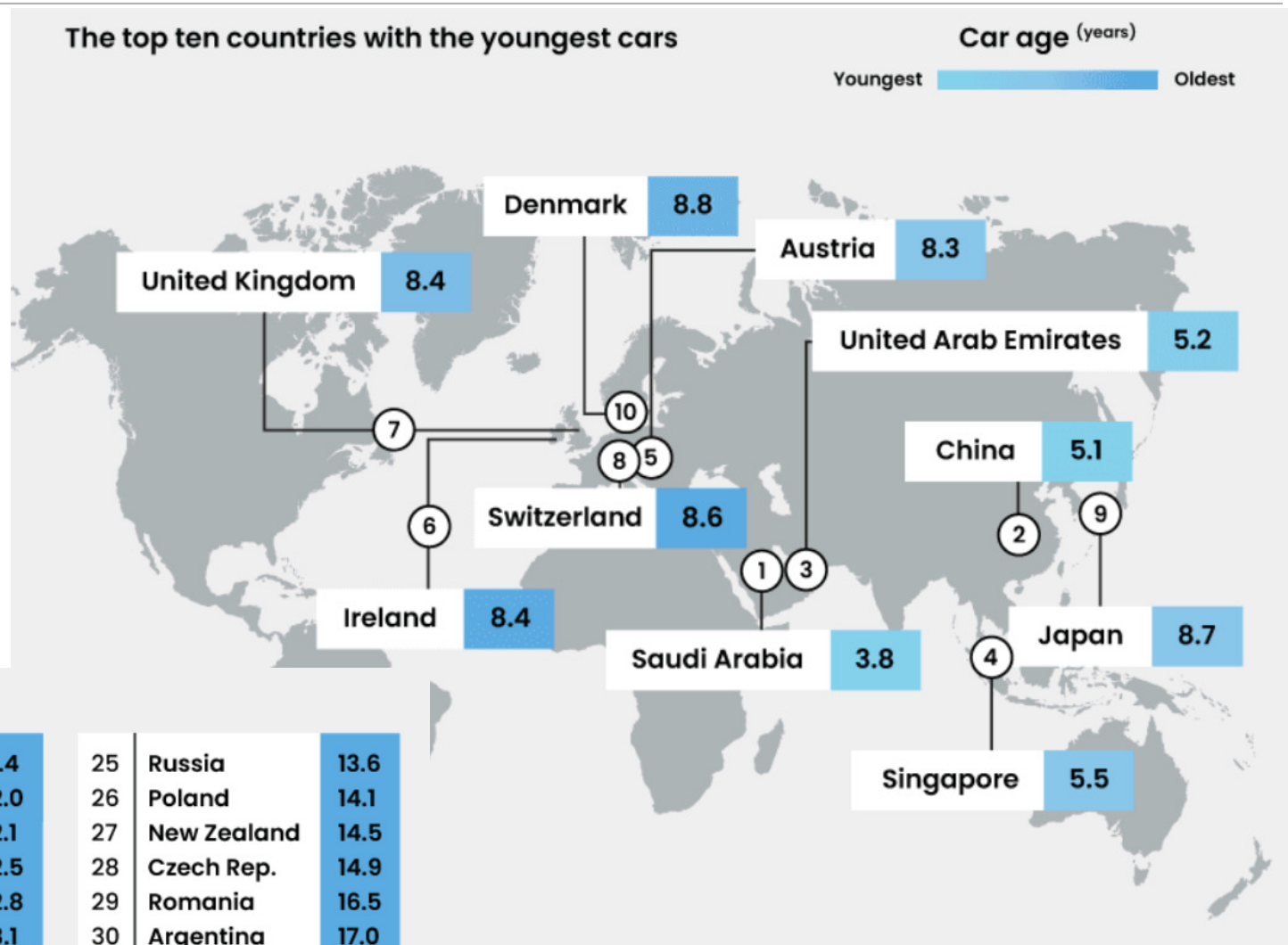
# Average Age of a Vehicle

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“The average age of a vehicle in the US will hit **12.3 years** in 2023, according to a projection by Hedges & Company. By contrast, the average age of a vehicle in Europe in 2022 is **11.8 years** according to the ACEA.”

Sources: <https://hedgescompany.com/blog/2022/02/how-old-are-cars/>

# Average Age of a Vehicle by Region



Here's how the rest rank

11	Belgium	9.1
12	Germany	9.6
13	Australia	9.9
14	Sweden	10.0
15	France	10.2
16	Norway	10.7
17	Netherlands	11.0
18	Italy	11.4
19	Mexico	12.0
20	United States	12.1
21	Finland	12.5
22	Portugal	12.8
23	Spain	13.1
24	Turkey	13.4
25	Russia	13.6
26	Poland	14.1
27	New Zealand	14.5
28	Czech Rep.	14.9
29	Romania	16.5
30	Argentina	17.0

Sources: <https://www.confused.com/car-insurance/average-cars-around-the-world>

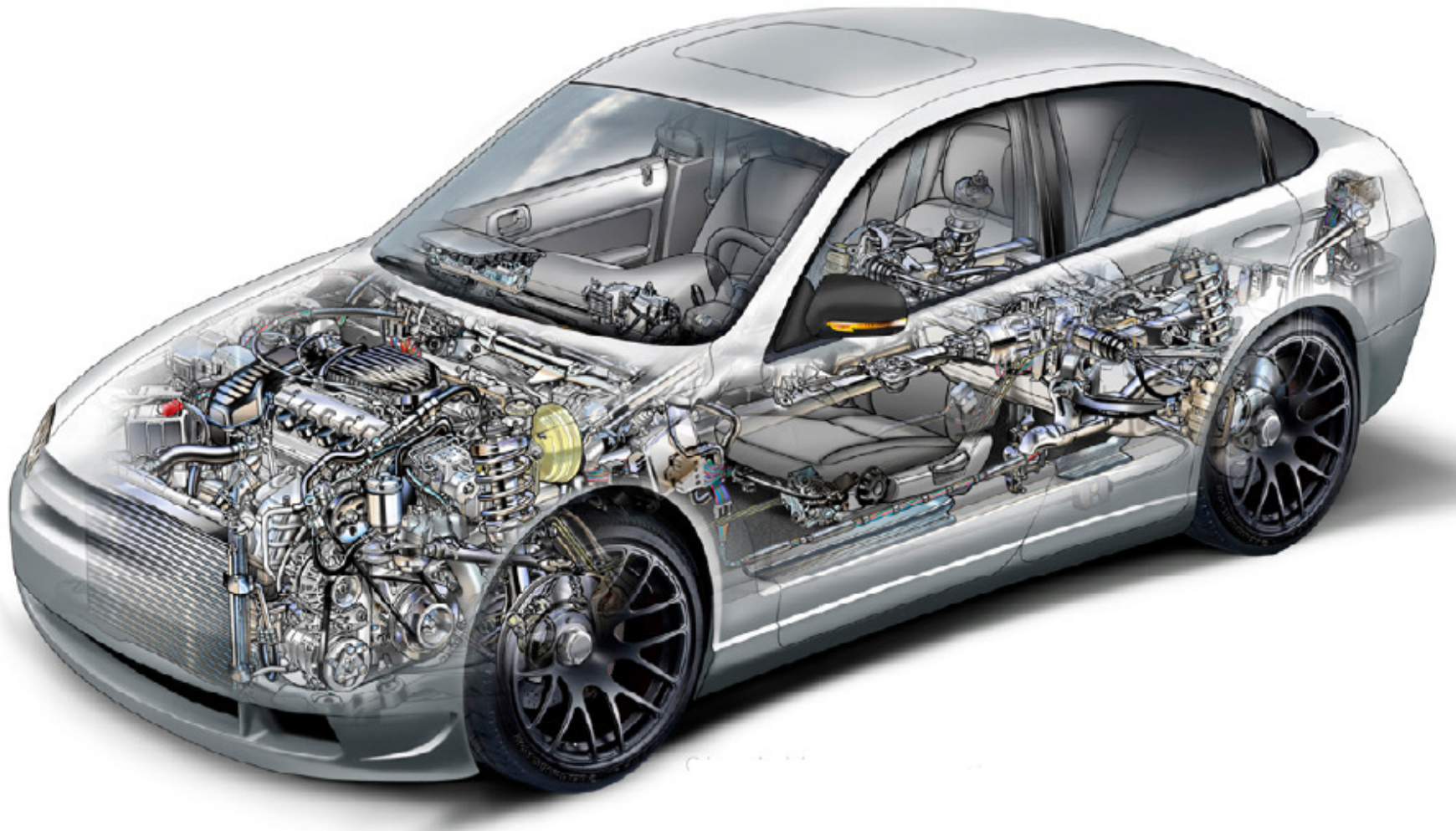


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# Global EV Outlook

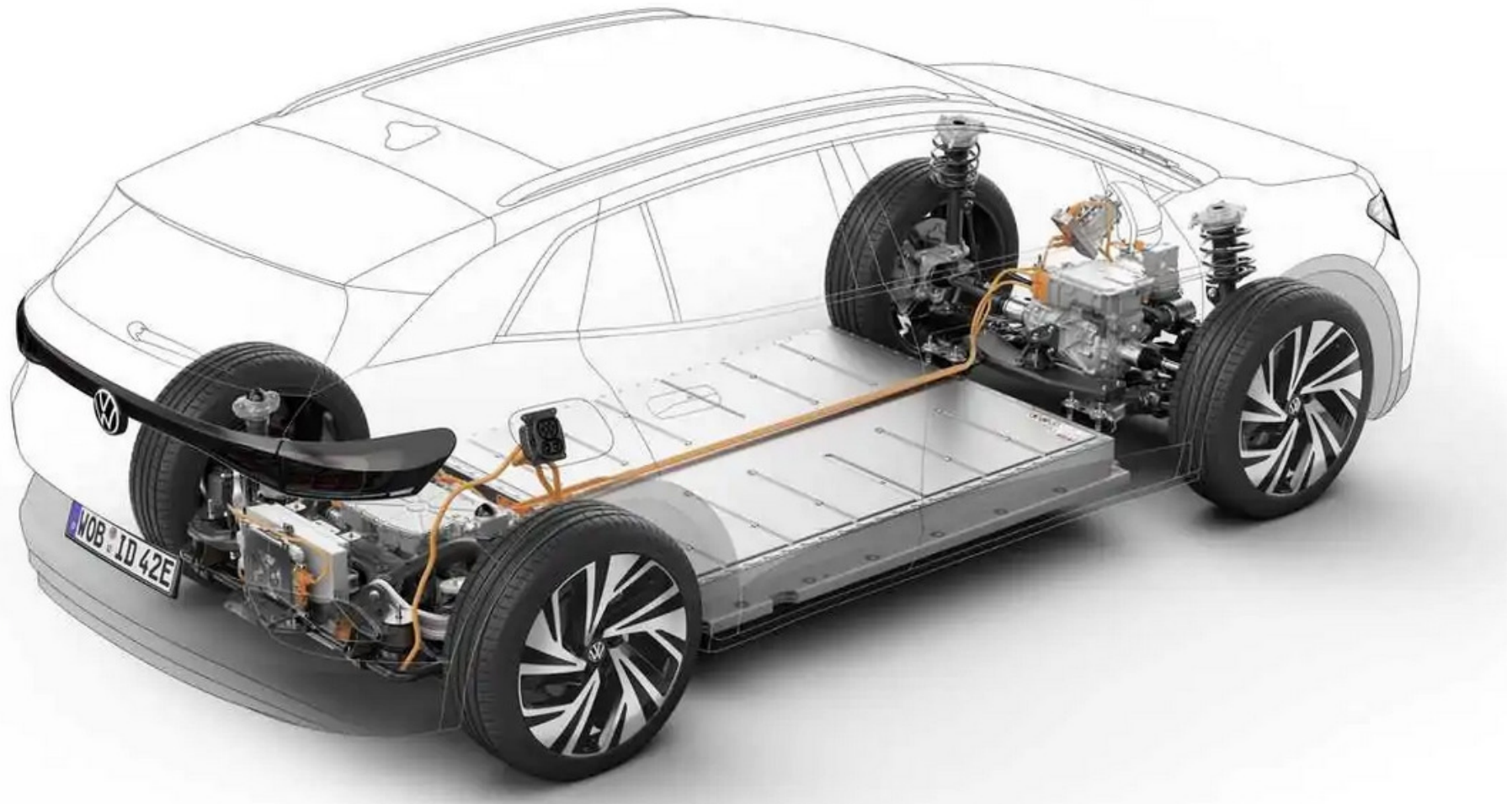
# ICE Vehicle

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Sources: Aventus July 2020

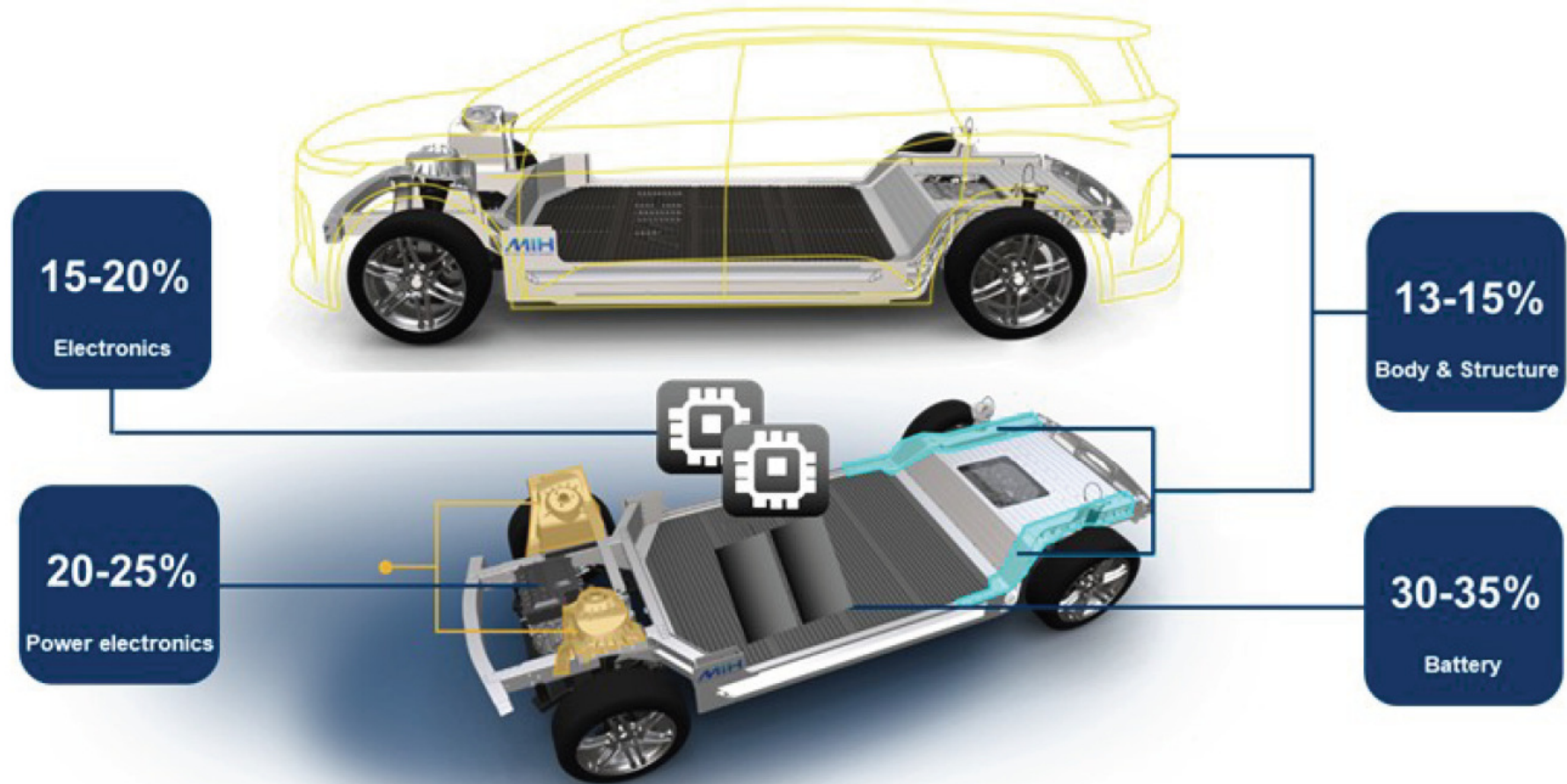
# Electric Vehicle: VW ID.4



Sources: [https://insideevs.com/news/514802/volkswagen-id4-awd-prices-specs/?utm\\_source=RSS&utm\\_medium=referral&utm\\_campaign=RSS-all-articles](https://insideevs.com/news/514802/volkswagen-id4-awd-prices-specs/?utm_source=RSS&utm_medium=referral&utm_campaign=RSS-all-articles)



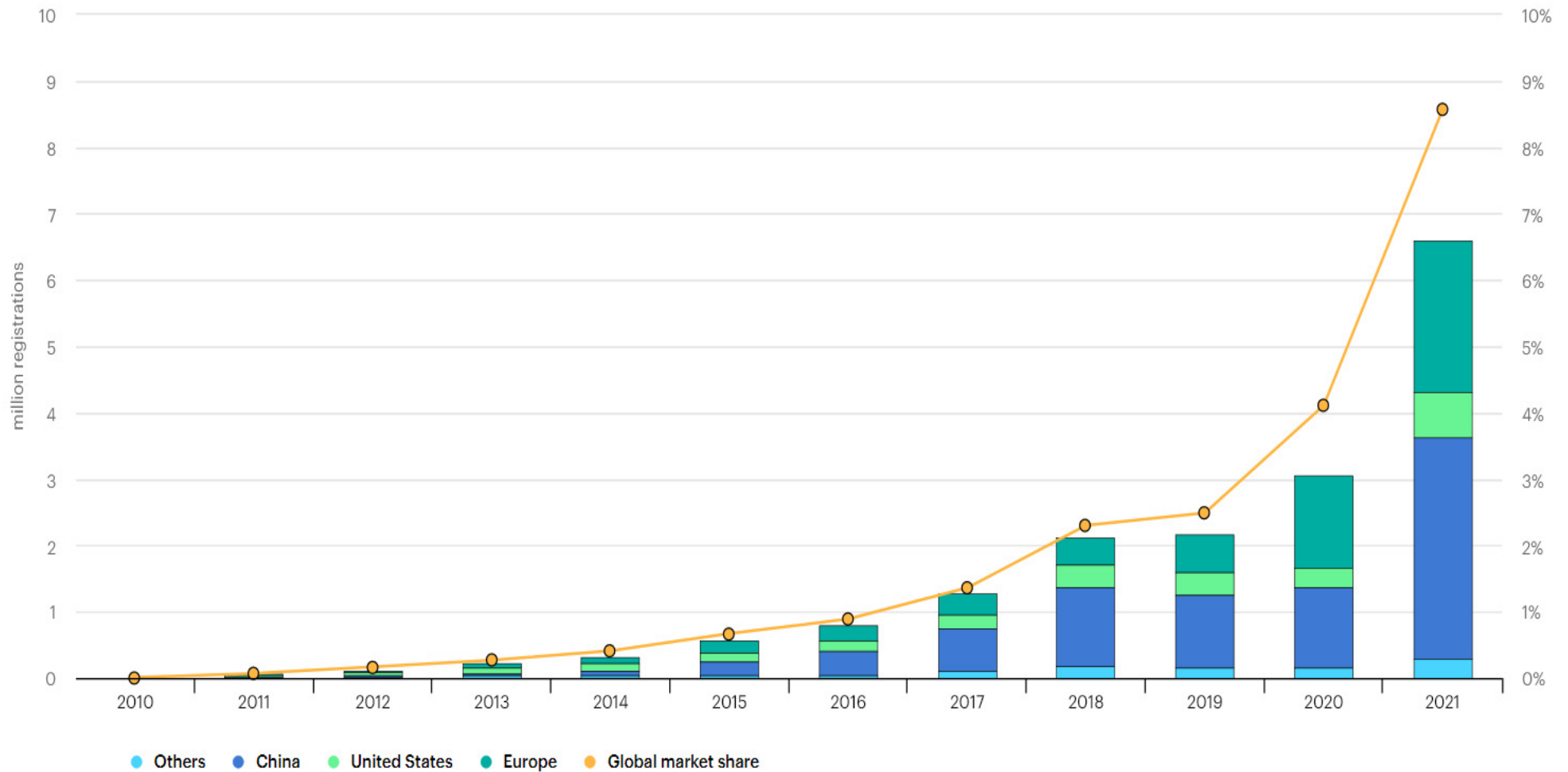
# EV Cost Breakdown by Key Components



Source: Hon Hai, Morgan Stanley Research

Sources: Morgan Stanley August 2022

# Global EV Sales: the Past 1

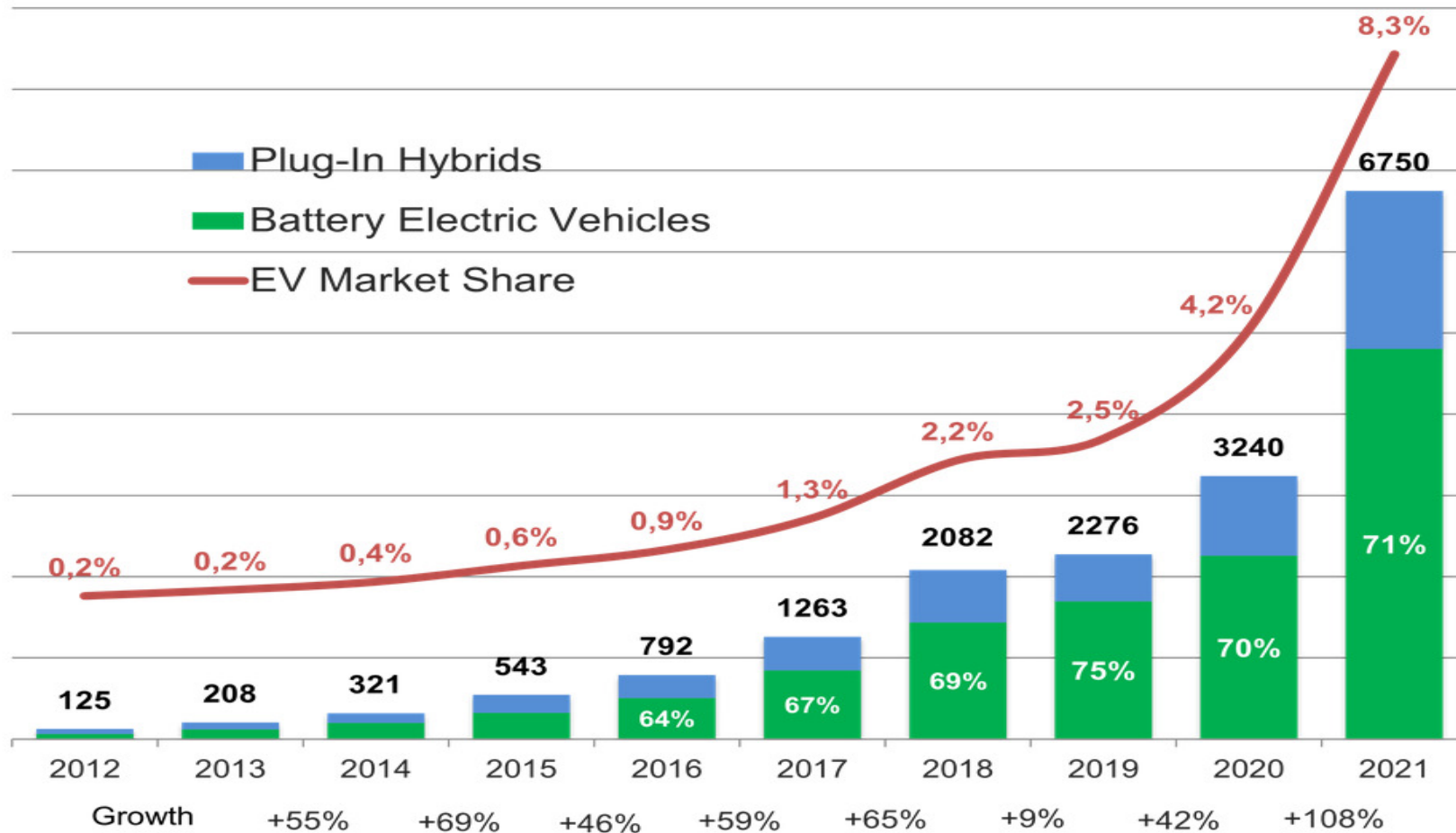


Sources: IEA October 2022

# Global EV Sales: the Past 2

GLOBAL BEV & PHEV SALES ('000s)

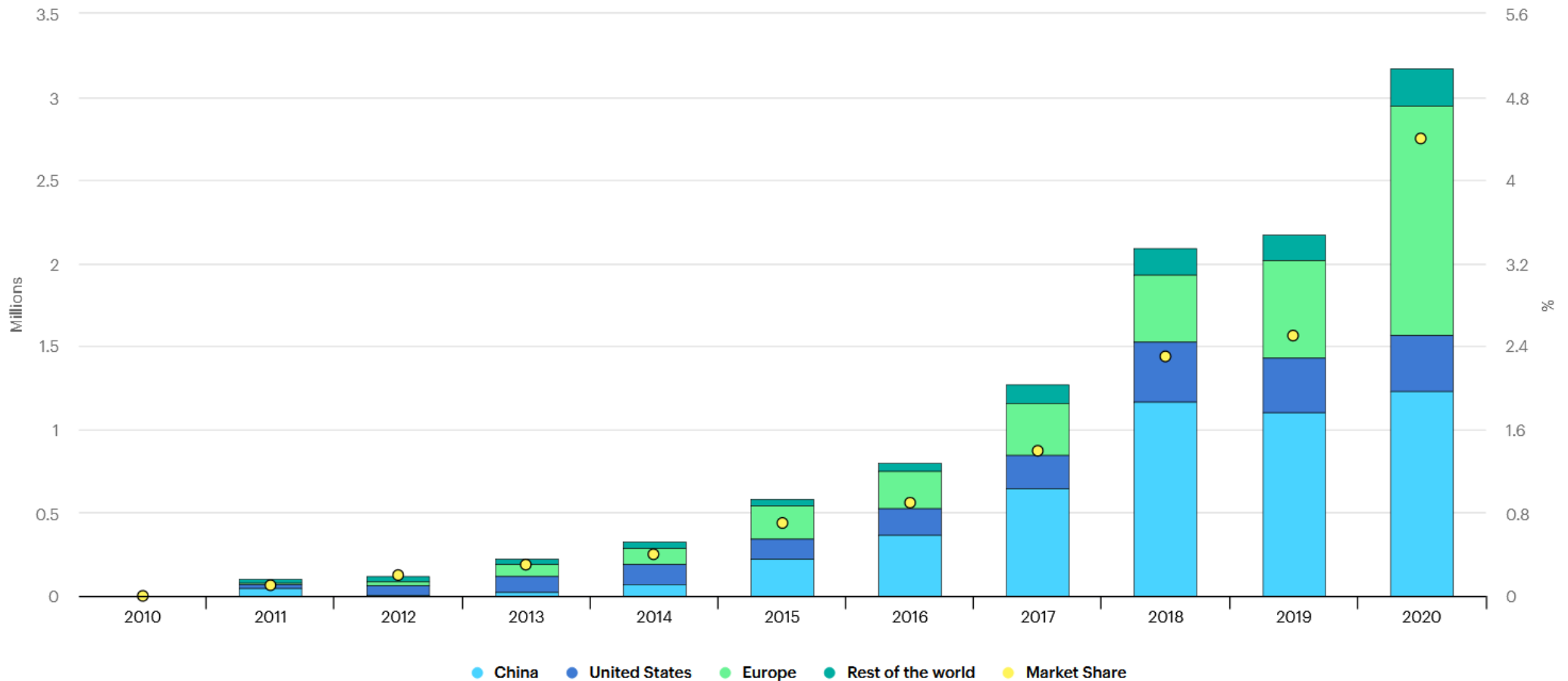
EV VOLUMES



Sources: ev-volumes.com 2022

# Global EV Sales: Europe the Largest in 2020

Global electric car sales by key markets, 2010-2020e

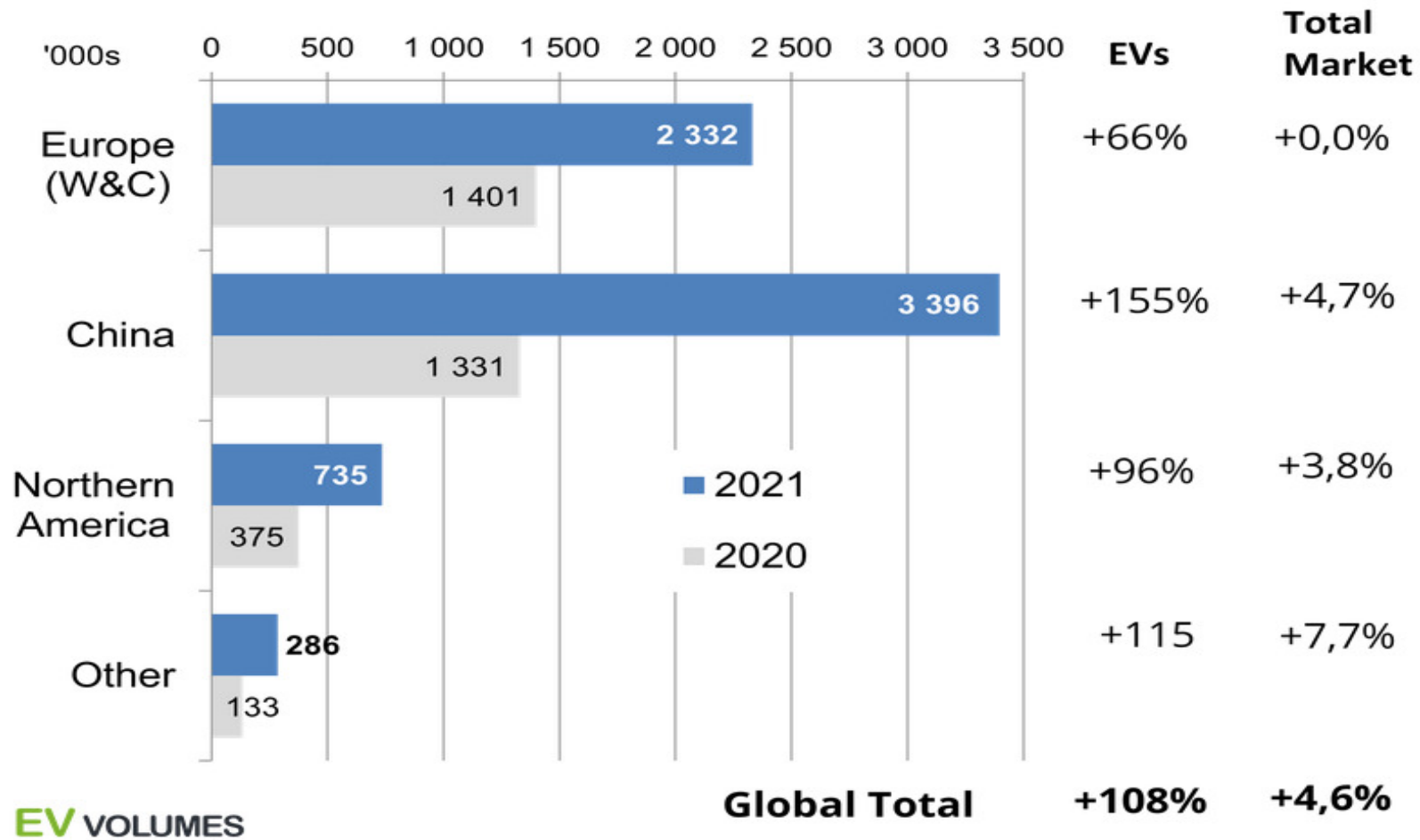


Note: Europe (1.4 million) overtook the China (1.2 million) as the world's largest electric vehicle (EV) market for the first time.

Sources: IEA Jan. 2021

# Global EV Sales: China the Largest in 2021

## BEV+PHEV SALES AND % GROWTH



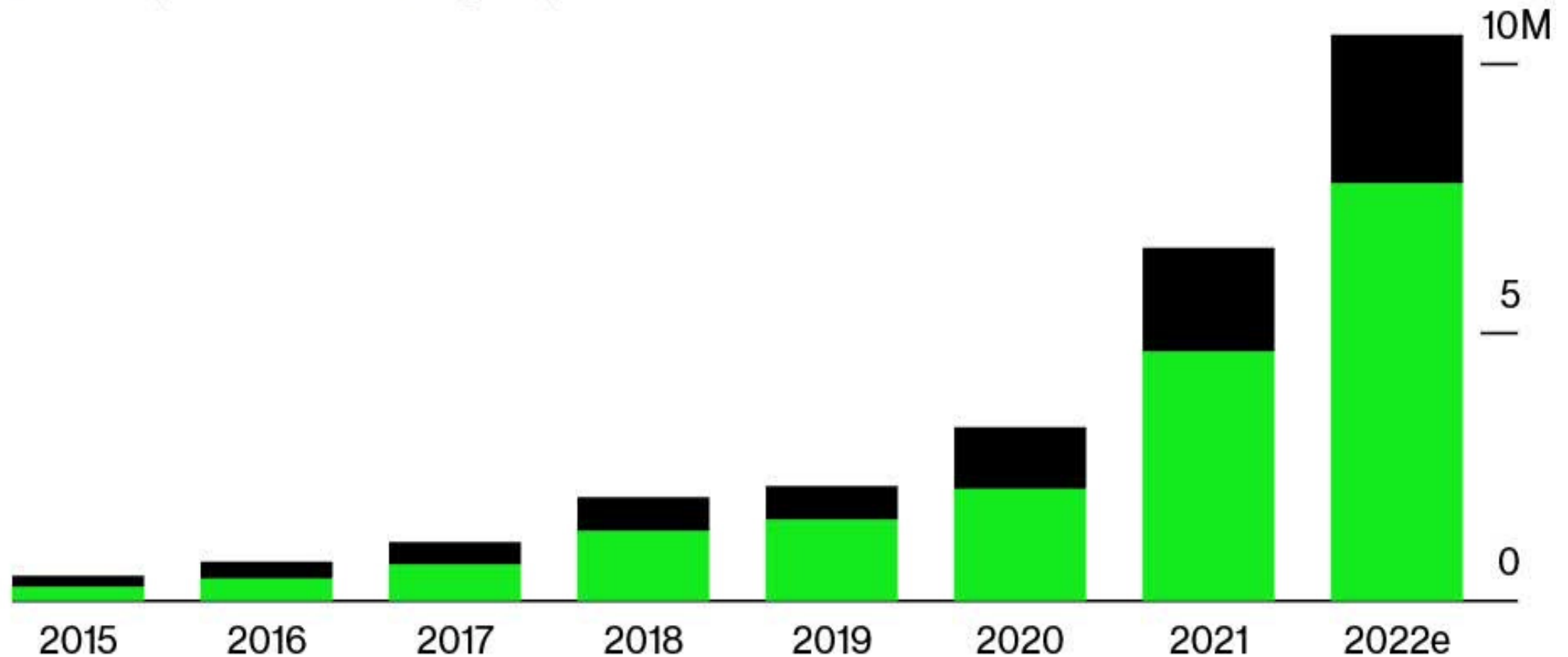
Sources: ev-volumes.com 2022



# Global EV Sales: this year 1

## Global passenger electric vehicle sales by drivetrain

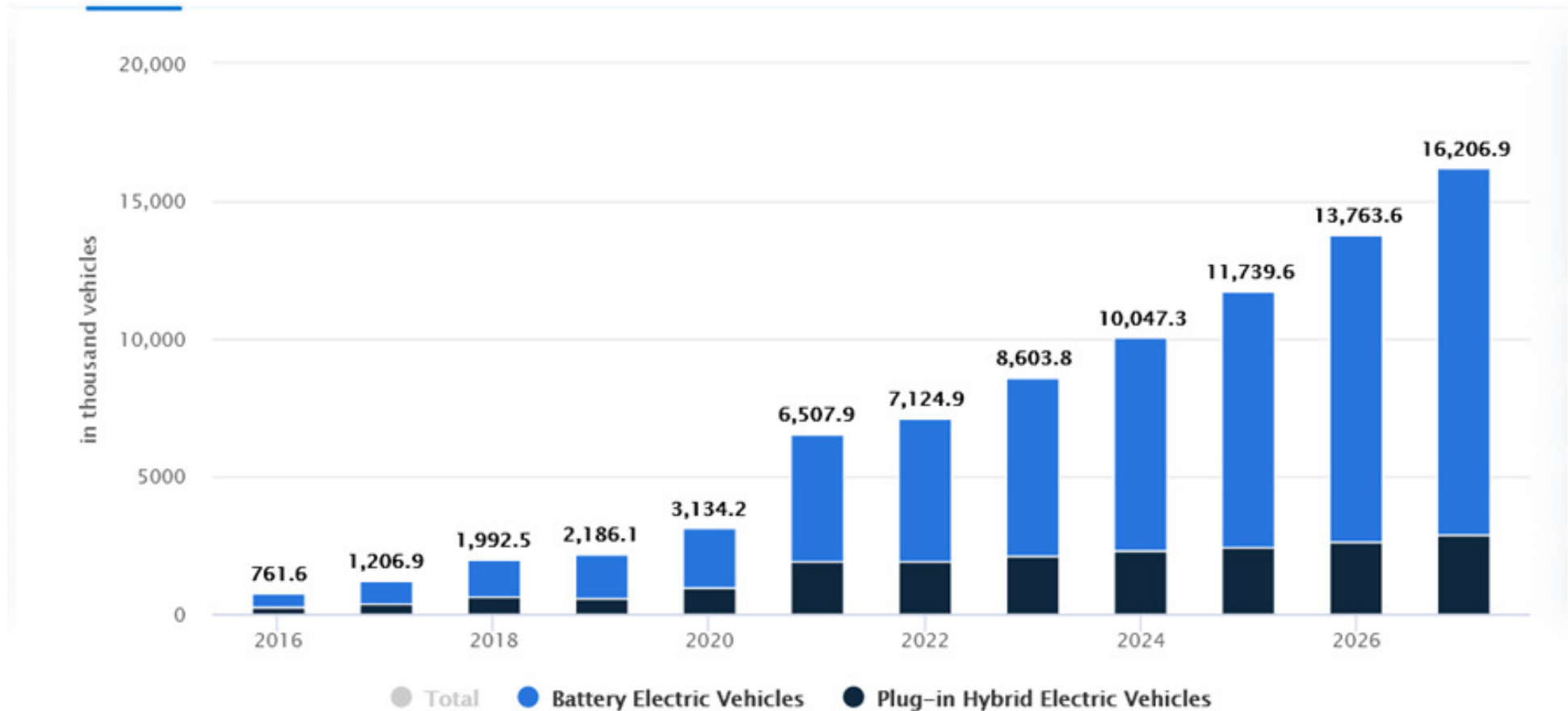
■ Battery electric ■ Plug-in hybrid



Source: BloombergNEF

# Global EV Sales: this year 2

## VEHICLE SALES

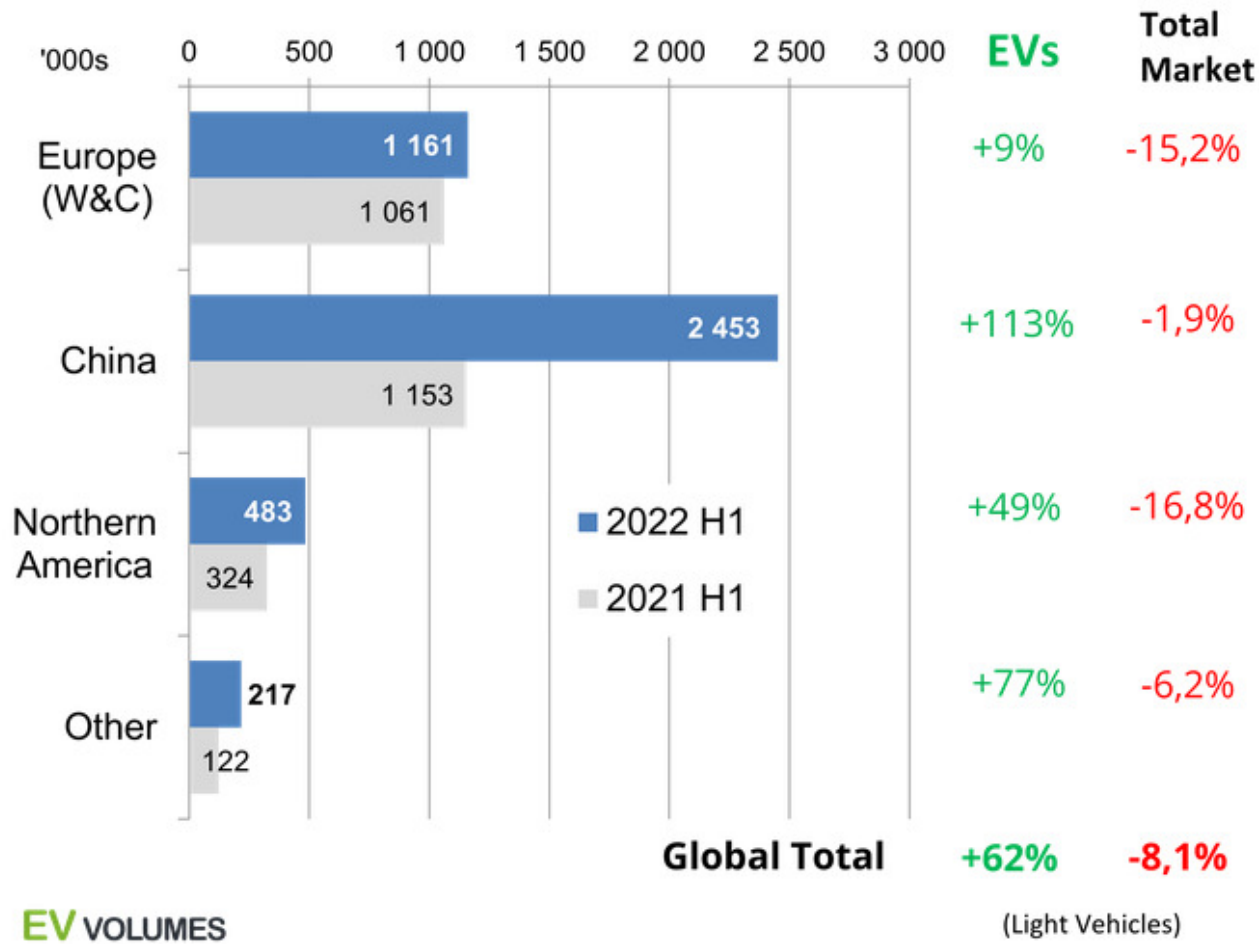


Most recent update: May 2022

Source: Statista

# Global EV Sales by Region: this year 3

BEV+PHEV SALES AND % GROWTH FOR 2022-H1 vs 2021-H1

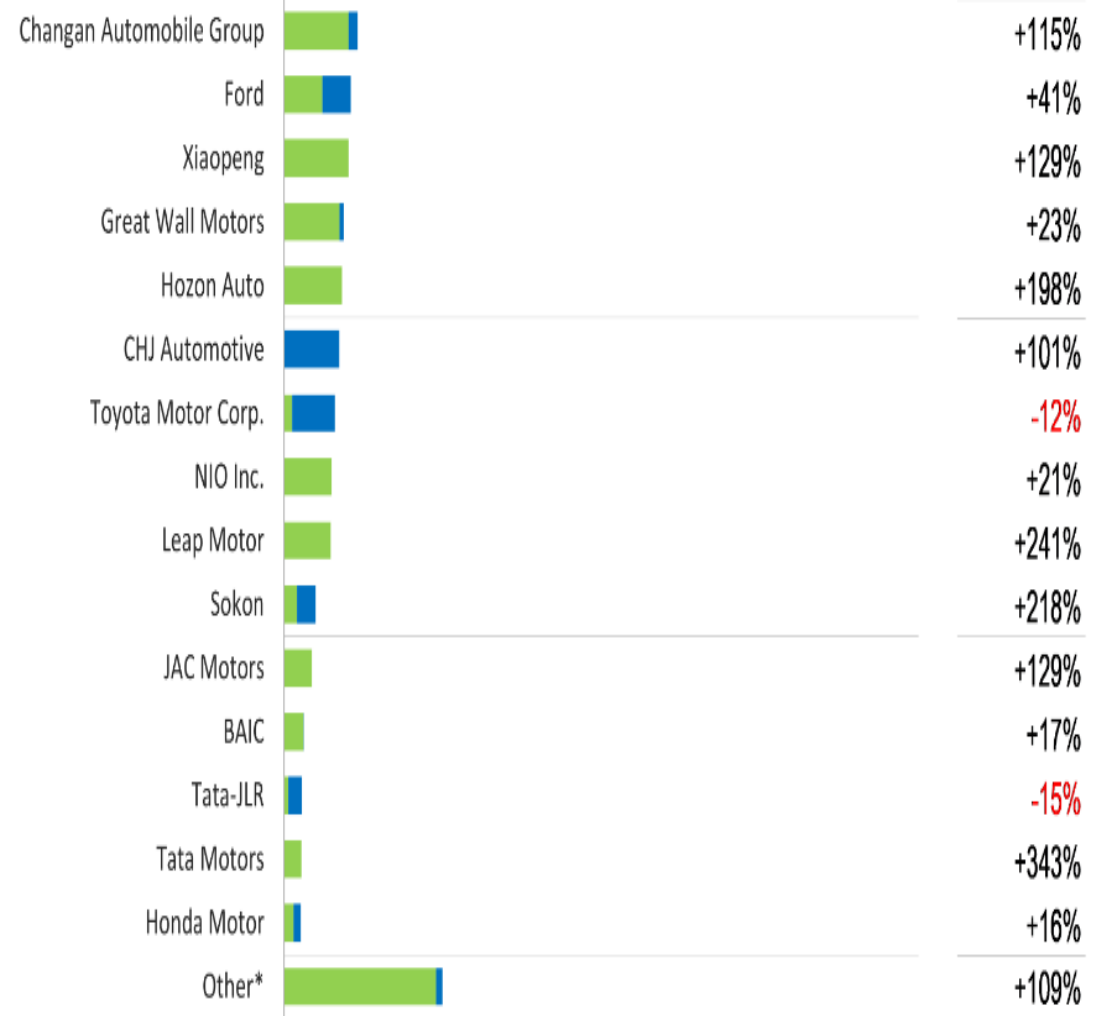
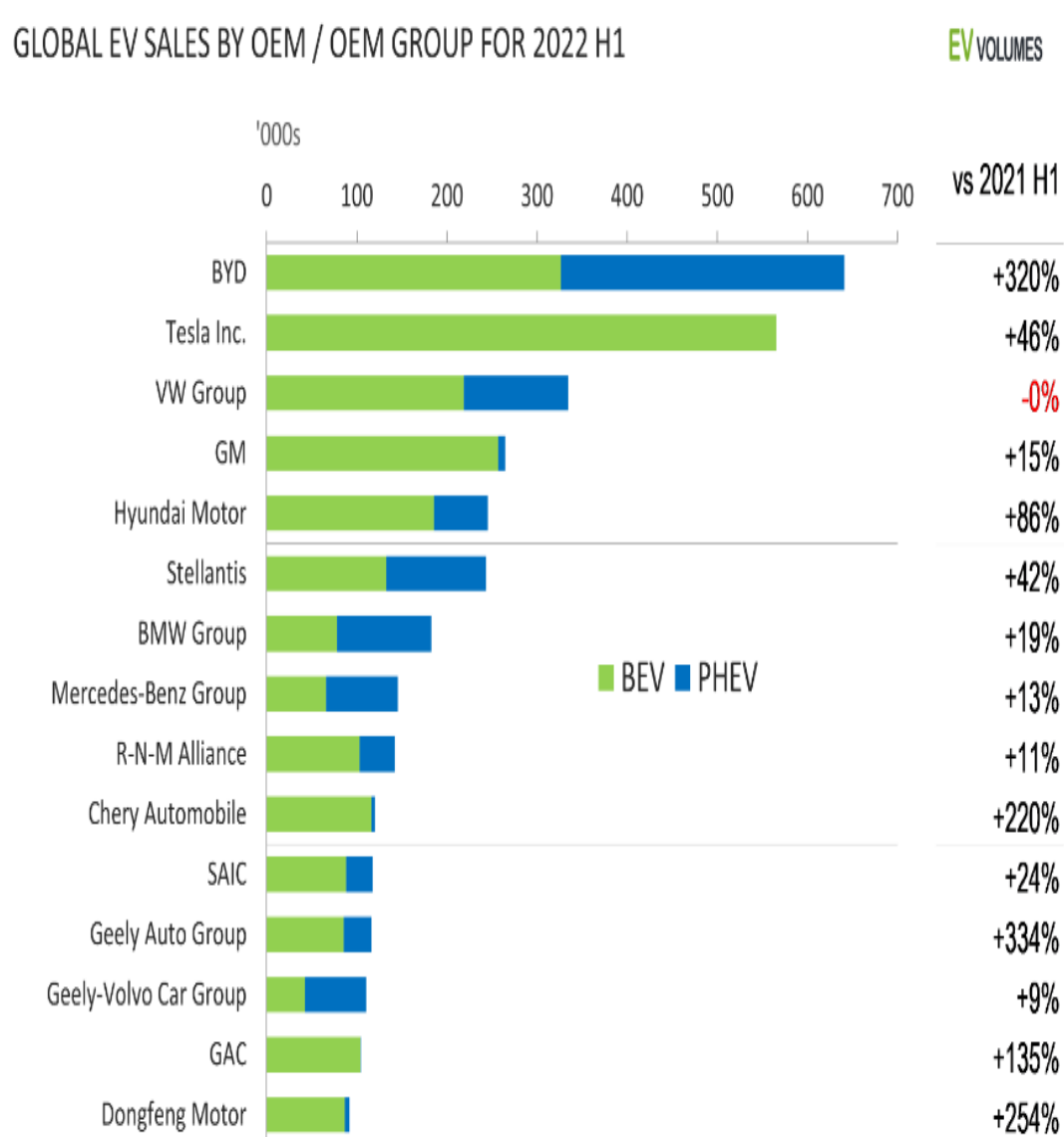


4,314 thousand electric vehicles were sold in the first half of this year. China's sales ranked first. Europe's was second, but only near to half of China's.

Sources: ev-volumes.com 2022

# Global EV Sales by Manufacturer: this year 4

GLOBAL EV SALES BY OEM / OEM GROUP FOR 2022 H1



\* Subaru, Suzuki, Mazda, Yema, Yudo, Yogomo, JMC, Jemmell, Seres, Yunque, Aiways, Karma, and 10 more

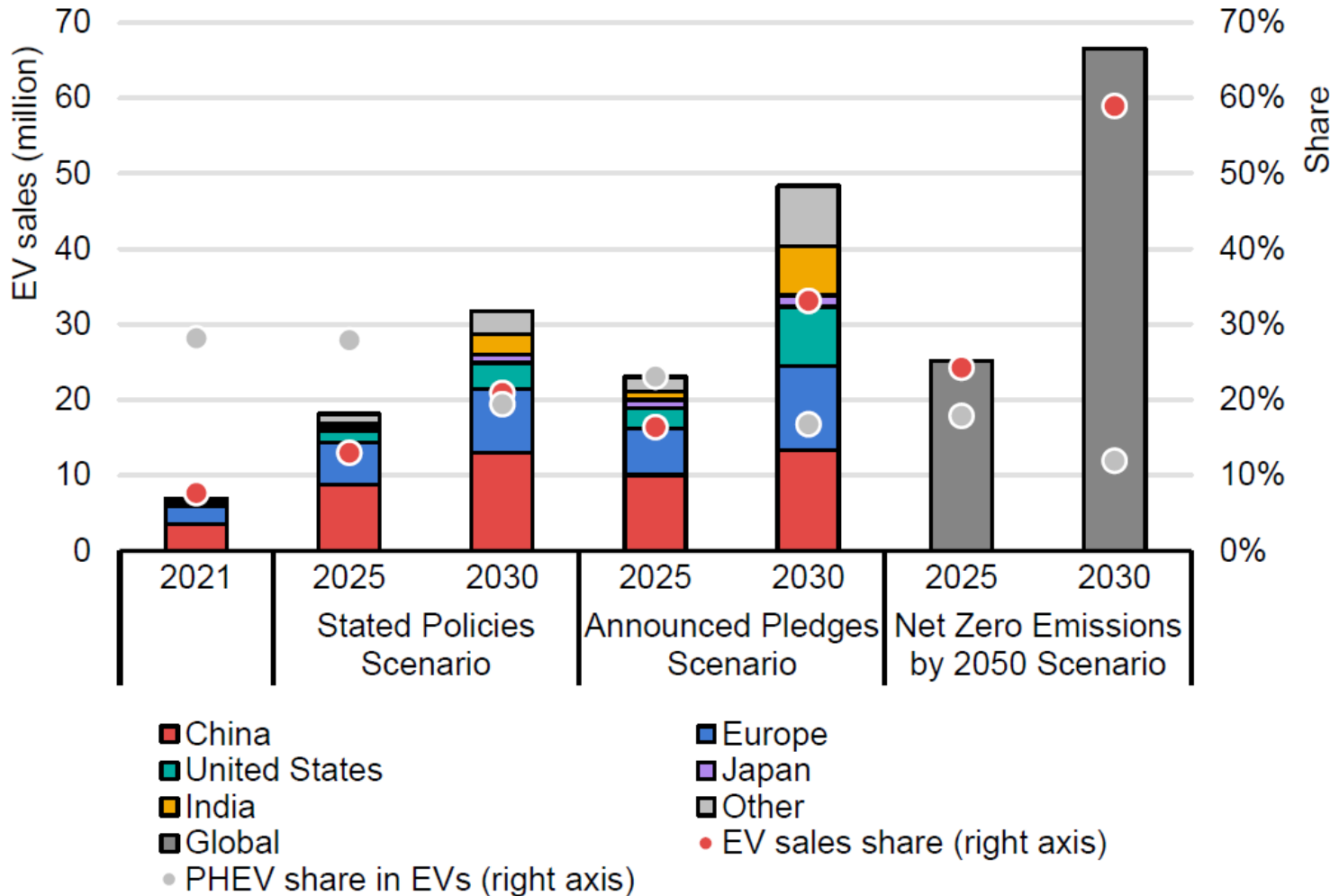
Source: EV-volumes - Aggregated Sales / Registrations by Country

Light Vehicles

Sources: ev-volumes.com 2022

# Global EV Sales: the Future 1

Global EV sales by scenario, 2021- 2030



In the Stated Policies Scenario, total EV sales reach **18 million in 2025** and **over 30 million vehicles in 2030**, representing respectively 13% and over 20% of all road vehicle sales.

In the Announced Pledges Scenario, based on the targets and pledges that go beyond stated policies, the global EV sales reach **beyond 21 million in 2025** and **more than 45 million vehicles in 2030**, achieving a sales share of 33% in 2030.

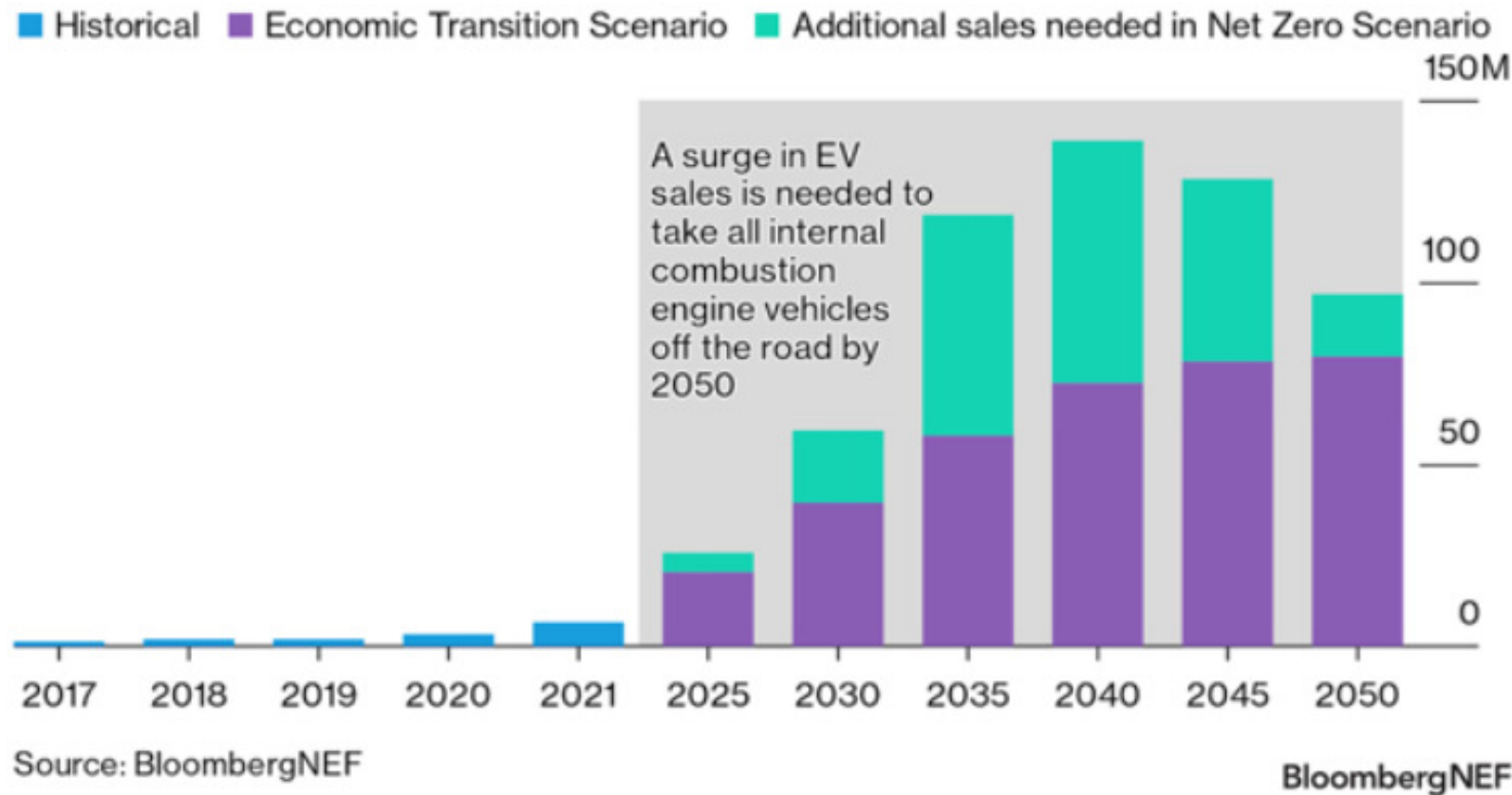
For comparison, in the Net Zero Scenario, the global EV sales reach **near 25 million in 2025** and **over 65 million vehicles in 2030**, achieving a sales share of almost 60% in 2030.

Sources: Global EV Outlook 2022 (IEA May 2022)

# Global EV Sales: the Future 2

## Pedal to the Metal

Annual passenger electric vehicle sales must ramp up significantly to achieve zero tailpipe emissions



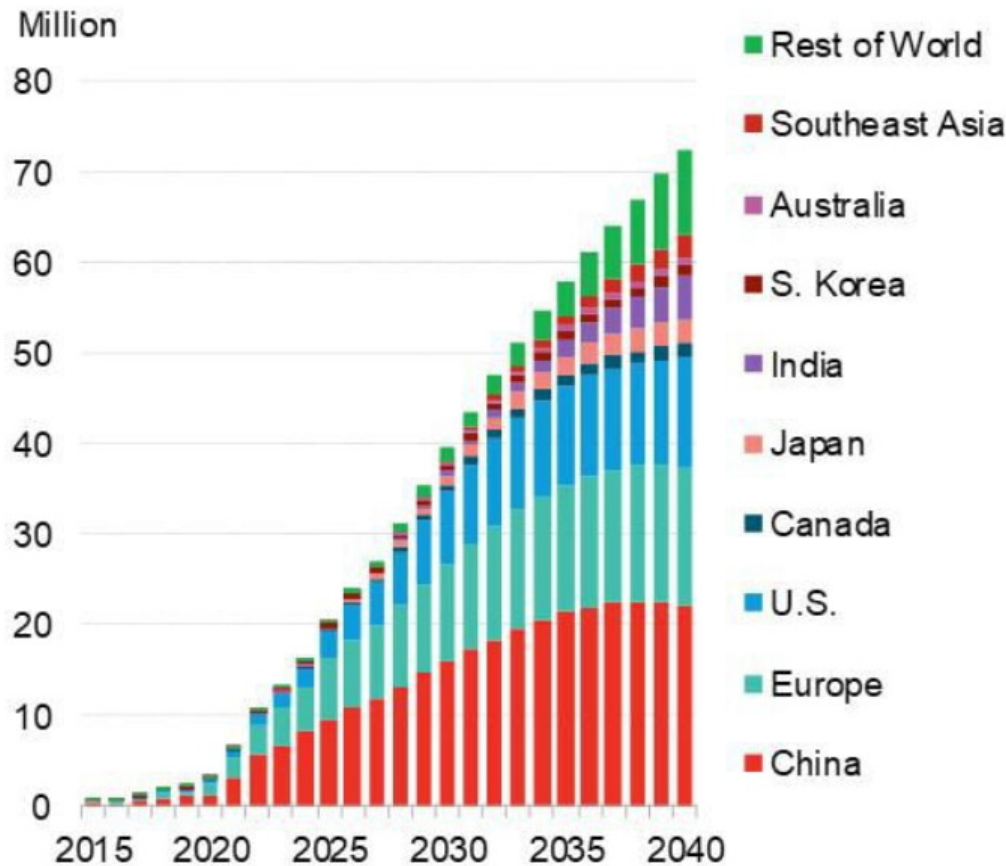
“Under BNEF’s Economic Transition Scenario – which is primarily driven by techno-economic trends and market forces, and assumes no new policies are enacted – annual passenger EV sales are estimated to more than triple by 2025, to close to 21 million, and rise to nearly 80 million in 2050.”

Sources: Bloomberg New Energy Finance August 2022 )

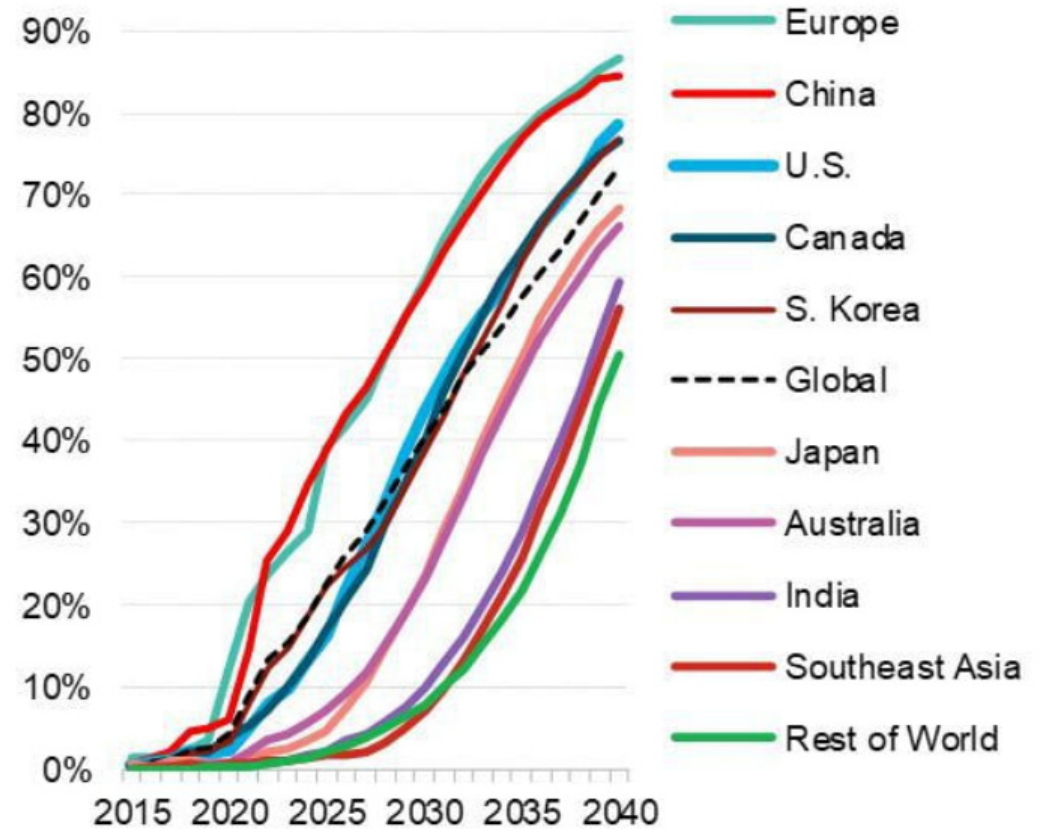


# Global EV Sales: the Future 3

**Global long-term passenger EV sales by market - Economic Transition Scenario**



**Global long-term EV share of new passenger vehicle sales by market - Economic Transition Scenario**



Source: BNEF. Note: Europe includes the EU, the U.K. and EFTA countries. EV includes BEVs and PHEVs.

Sources: Electric Vehicle Outlook 2022 (Bloomberg New Energy Finance) June 2022

# How many EVs can be made by 1 GWh?

Battery Capacity	kWh per vehicle	how many vehicles
1 GWh	100	10,000
1 GWh	80	12,500
1 GWh	70	14,285
1 GWh	60	16,666
1 GWh	50	20,000

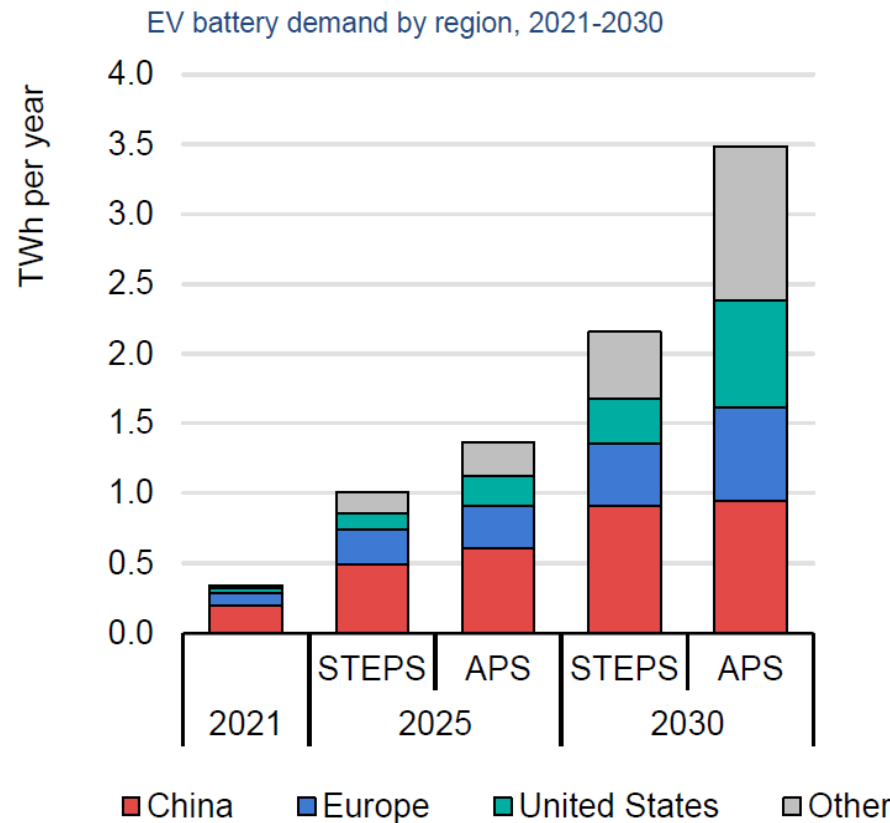
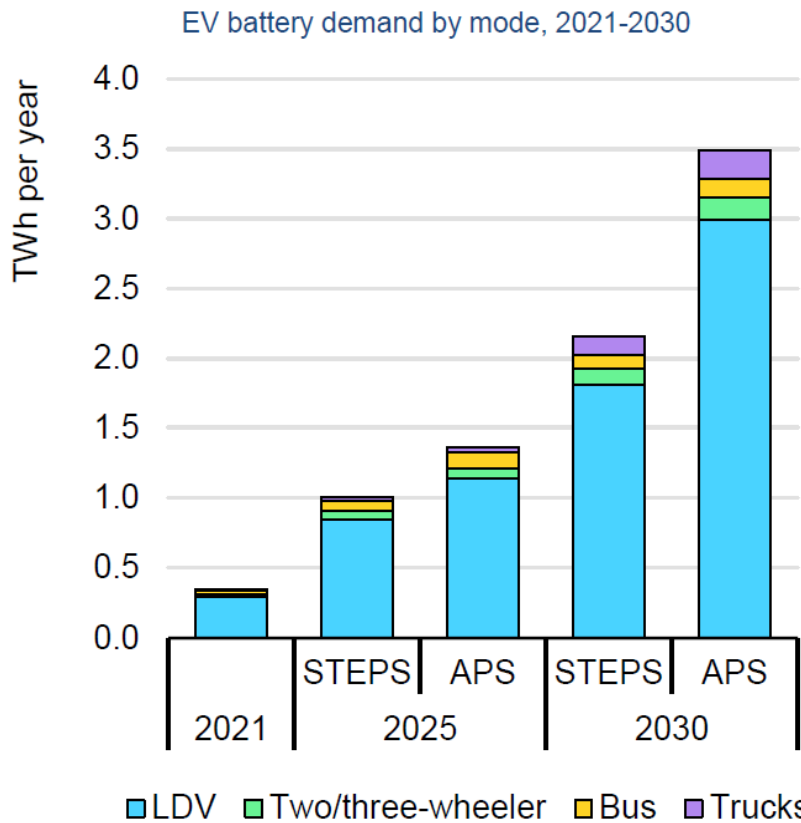
Note:

1. A Watt Hour (Wh) is a unit of measurement for power over a period of time (an hour), or in our case, a way of measuring capacity. One Watt hour is equal to one Watt of average power flow over an hour, which is 3600 joules.
2. The average price of battery was **USD 132 per kWh** in 2020. (IEA May 2022)
3. The average battery capacity of battery electric vehicles (BEVs) was **55 kilowatt-hours (kWh) in 2021**, down from 56 kWh in 2020, whereas the average capacity increased for plug-in hybrid electric vehicles to **14 kWh in 2021**, up from 13 kWh in 2020. (IEA May 2022)
4. Average battery sizes for new BEVs range from 48 kWh to 67 kWh for cars. The trend of increasing battery capacity is expected to continue, with BEVs reaching an average driving range of **350-400 km** by 2030, which corresponds to battery sizes of **70-80 kWh**. (IEA June 2020)



# Global EV Battery Demand: the Future 1

Battery demand surges in all regions driven by battery electric cars



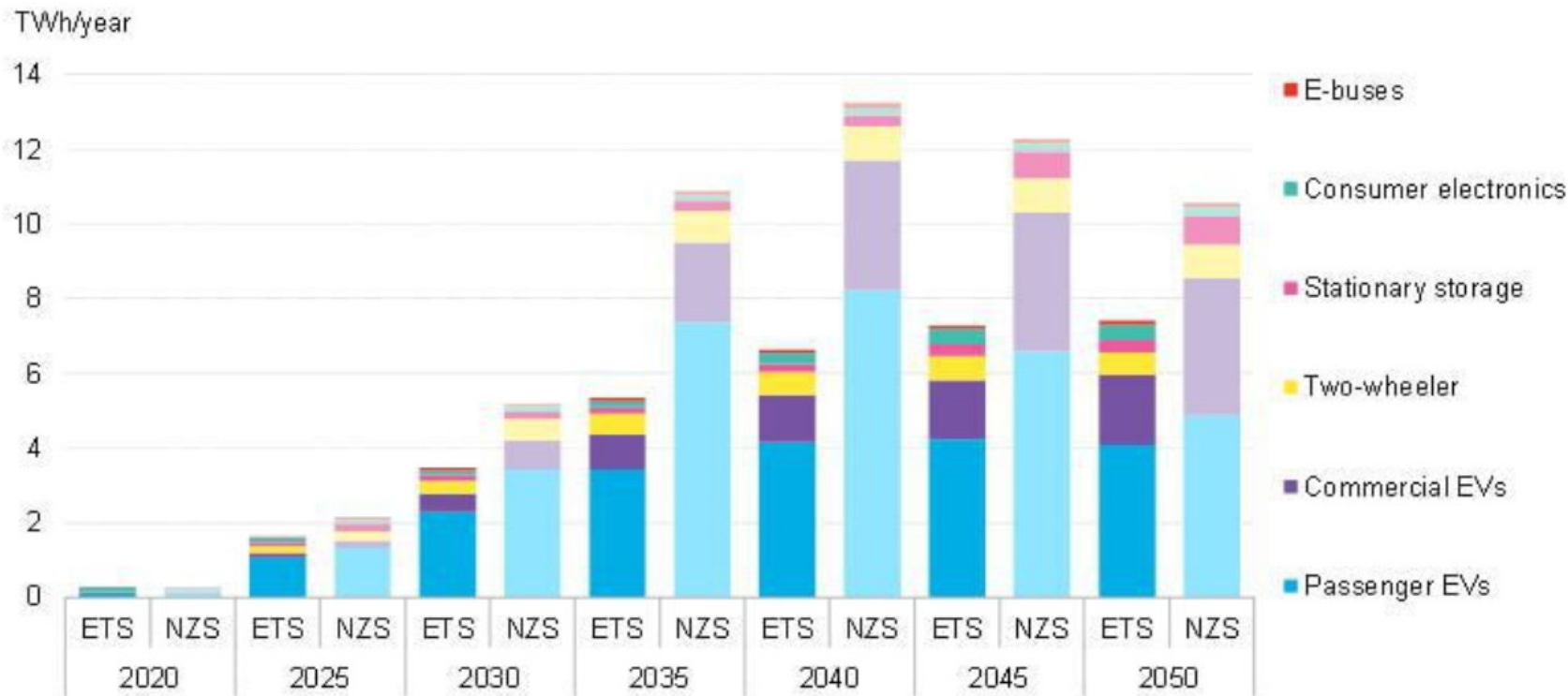
Battery demand in 2030 reaches **2.2 TWh per year** in the Stated Policies Scenario and **over 3.5 TWh per year** in the Announced Pledges Scenario.

Notes: STEPS = Stated Policies Scenario; APS = Announced Pledges Scenario; LDV = light-duty vehicle.

Sources: Global EV Outlook 2022 (IEA May 2022)

# Global EV Battery Demand: the Future 2

## Battery demand outlook under BNEF's Economic Transition Scenario and Net Zero Scenario



Source: BNEF. Note: Consumer electronics and stationary storage demand are assumed to be the same under both scenarios. ETS is the "Economic Transition Scenario" and NZS is the "Net Zero Scenario".

By 2030, EV battery demand grows to **3.486 GWh (3.5 TWh)** in the Economic Transition Scenario. Manufacturers have announced plans totaling **4,151 GWh (4.2 TWh)** of annual capacity due by 2025.

Sources: Electric Vehicle Outlook 2022 (Bloomberg New Energy Finance) June 2022

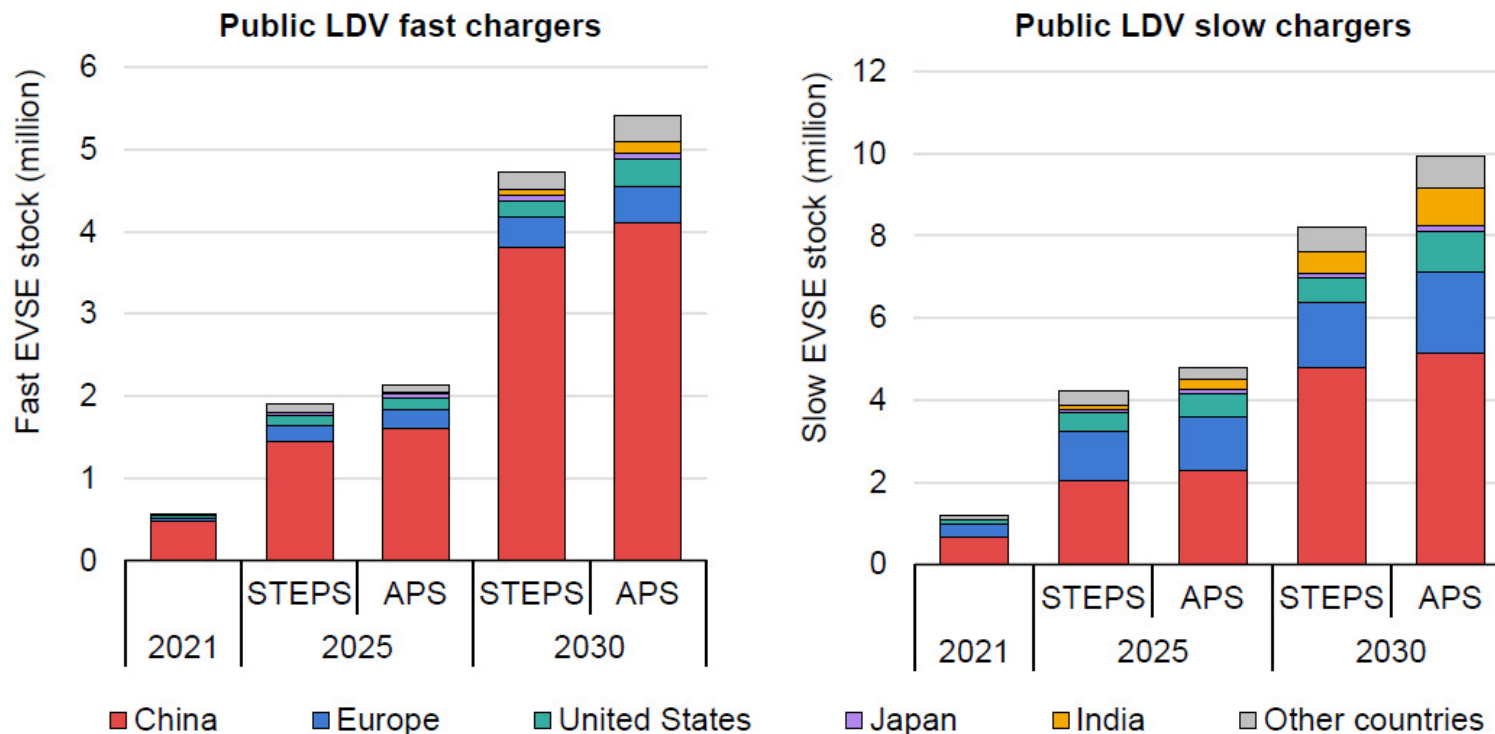
# 2021 Global EV Battery Production Capacity

Region	GWh	%
China	655	75.2%
EU	60	6.9%
USA	57	6.5%
Korea	41	4.7%
Japan	36	4.1%
Southeast Asia	8.7	1.0%
Other	13.3	1.5%
<b>Total</b>	<b>871</b>	<b>100%</b>

Sources: Global Supply Chains of EV Batteries (IEA July 2022)

# Global EV Chargers 1 : Public Ones

## Public LDV chargers by region and scenario, 2021-2030



Notes: STEPS = Stated Policies Scenario; APS = Announced Pledges Scenario; EVSE = electric vehicle supply equipment; RoW = rest of the world. Regional projected EVSE stock data can be interactively explored via the [Global EV Data Explorer](#).

Sources: Global EV Outlook 2022 (IEA May 2022)

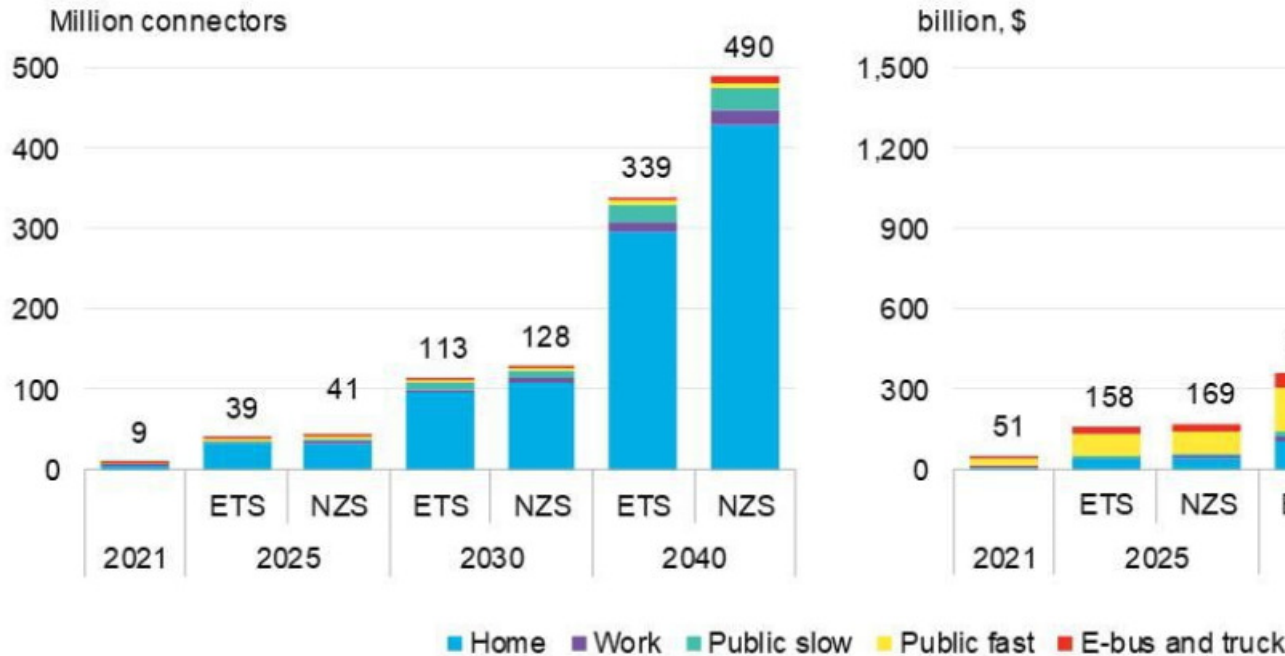
Publicly accessible chargers accounted for **almost 10%** of global LDV chargers in 2021, of which 1.2 million were slow and a half a million were fast chargers.

There are more than **8 million public slow charging points** and **almost 5 million public fast charging points** by 2030 in the Stated Policies Scenario.

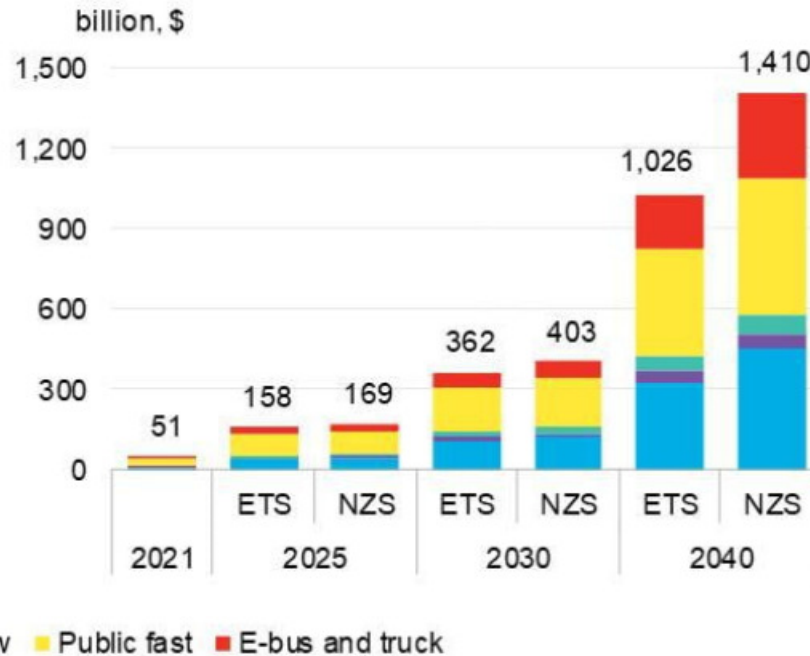
In the Announced Pledges Scenario, there are nearly 10 million public slow chargers and 5.5 million public fast chargers by 2030.

# Global EV Chargers 2 : All Types

**Global electric vehicle charging network by charger location and scenario**



**Cumulative investment in the global electric vehicle charging network by charger location and scenario**



EV charging infrastructure is a trillion dollar market opportunity over the next 20 years. By 2040, between 340 and 490 million chargers are needed across all locations globally, with the total dominated by home chargers. Compared with the previous page, between 113 and 128 million chargers are needed in 2030, which is about ten times the demand of 13 million for public chargers estimated by the IEA.

Source: BNEF. Note: Excludes two-and-three wheelers. Investment includes hardware, installation and maintenance costs. ETS = Economic Transition Scenario. NZS = Net Zero Scenario.

Sources: Electric Vehicle Outlook 2022 (Bloomberg New Energy Finance) June 2022

# Q & A



# Thank You

IR Contact: Alex Hsiao

Tel: +886-3-322-2226

e-mail: [spokesman@cppcb.com.tw](mailto:spokesman@cppcb.com.tw)