



# Quo Vadis European Automotive Industry

BCG perspective on the future of the European automotive industry

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# Summary: Policy-makers, OEMs and suppliers need to act now



## Risk factors of the European automotive industry

In the past, European OEMs benefitted from **five long-standing competitive advantages**. However, these advantages are currently at risk:

- Technological leadership of the ICE technology. While the powertrain electrification resets the scale, ADAS & digitalization shift the focus
- Efficient production costs. Long-term higher energy prices & increasing lack of skilled labor puts Europe's industry at a disadvantage
- High brand value. New OEMs with better digital features & fully fledged omni-channel approach differentiate their go-to-market
- Favorable global geopolitics. De-globalization is straining the cost-efficient global supply chain setup & easy access to many sales markets
- High profits with JVs<sup>1</sup> in China. Innovative & cost-efficient local players are rapidly taking market share from European OEMs



## Outlook on the European automotive industry

The global challenges faced by the European auto industry create high uncertainty. The industry's future is at stake, with a range of outcomes possible based on actions taken by policy-makers, OEMs and suppliers. To provide clarity, we analyzed three scenarios:

- **Gradual decline:** The global market share of European OEMs tumbles from 26% to 12% by 2040 leading to a loss of €145 billion (-32%) GDP contribution per year, a loss of 1.5 million jobs (-37%) and a decline in European tax revenues of €34 billion (-36%).
- **Maintaining pace:** European OEMs stay competitive, and their market share only declines from 26% to 24% leading to a loss of €37 billion (-8%) GDP contribution per year, a loss of 300 thousand (-7%) jobs and a decline in European tax revenues of €3 billion (-3%).
- **Securing the lead:** European OEMs boost their global market shares from 26% to 32% by 2040 resulting in an additional GDP contribution of €70 billion (+15%) per year, an increase of 800 thousand (+20%) jobs and an uplift in European tax revenues of €25 billion (+26%).



## Recommended Actions

**European policy-makers, OEMs and suppliers need to act now** to avoid the worst consequences & regain advantages over the competition:

- Policy-makers must acknowledge the gravity of the situation, develop comprehensive industrial policy and encourage local ecosystems
- OEMs cannot rely on their current strongholds and must build new competitive advantages in BEV, ADAS, digital and production automation
- European suppliers must develop regional play for China, drive innovation in BEV, ADAS & digital and build supply chains for rare earths

# Classic competitive advantages of European Auto industry are under threat

## Classic advantages

## Source for advantage

## Emerging threats



Tech leadership



*Tech leadership in ICE vehicle development & product differentiation via high-quality vehicle engineering*



*New entrants in BEV (esp. Chinese & US) with strong differentiation in digitalization, connectivity & ADAS*



Cost advantage



*Cost-efficient production via leadership in industrial operations, economies of scale & low energy prices*



*Increasing energy prices, rising lack of skilled labor in Europe, and novel production methods by new OEMs*



Brand value



*High brand value and loyalty (esp. in China), distribution supported by strong wholesale dealer networks*



*New OEMs positioned as innovative brands and go to market with customer-centric omnichannel approach*



(Geo)-Political environment



*Globalized supply chains & value creation, enabled by free trade agreements & political industry support*



*Economic decoupling & sanction impeding global trade; challenging access to reliable, cheap raw earths*



Sales market China



*Chinese Joint Ventures allowing for local production and access to high-volume, high-margin sales market*



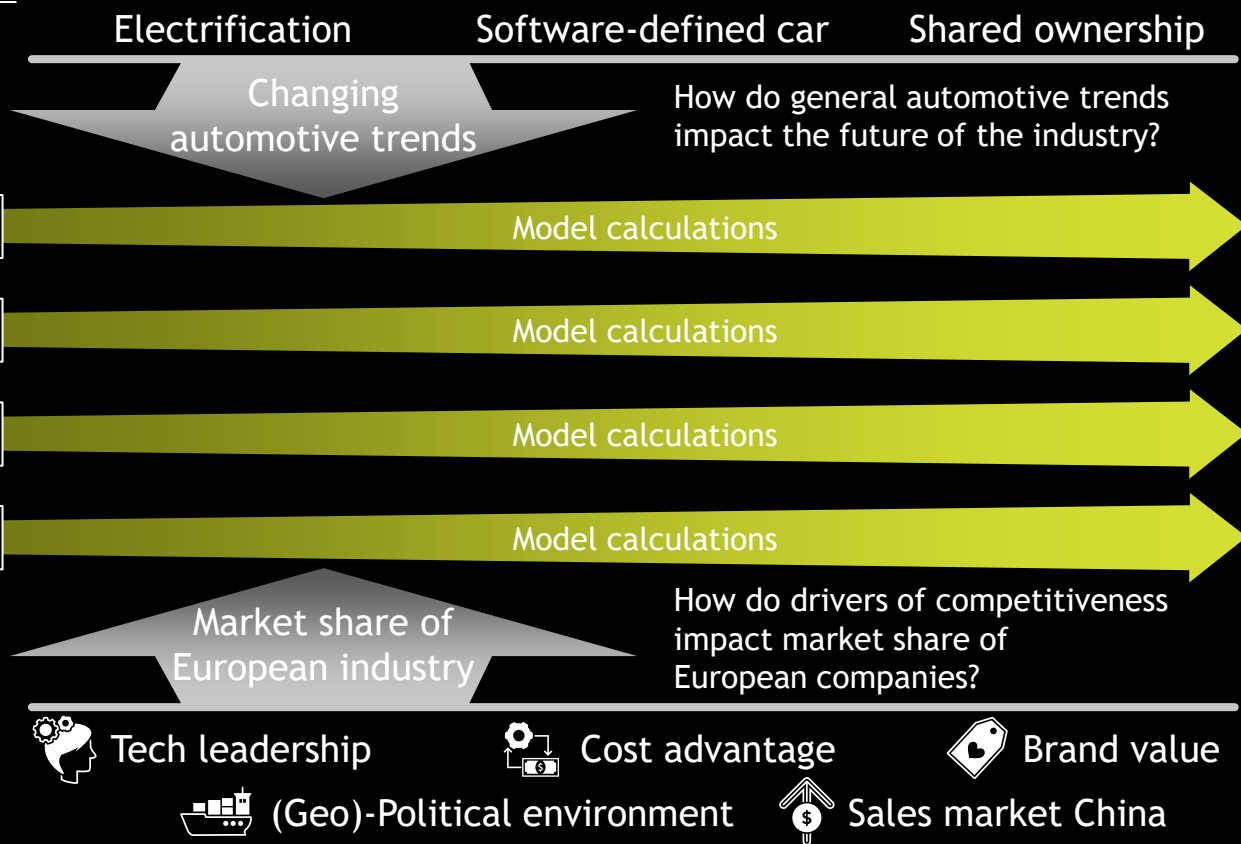
*Innovative & cost-efficient Chinese OEMs gaining market share, nationalistic consumer sentiment*

# Comprehensive model built to assess the future role of the auto industry

Schematic

Role of auto industry today

Future role of auto industry





# We modelled three future scenarios for the European auto industry



## 1 Gradual decline

Chinese & US OEMs lead in EV, connectivity and ADAS; EM<sup>1</sup> OEMs enter

EU OEMs with high production cost due to energy prices & labor cost

Lower brand value as US & Chinese OEMs attract customers with tech

Siloed markets as global geopolitics harm international trading relations



## 2 Maintaining pace

Strong challenge by EU OEMs in ADAS, digital & battery tech ability

Competitive production cost due to better energy sourcing & automation

Brand value retained although with more challenge from foreign OEMs

Limited economic decoupling with notable presence of EU OEMs in CN



## 3 Securing the lead

European OEMs pioneering in ADAS, connectivity & battery technology

Cost advantage due to green energy technology & high automation levels

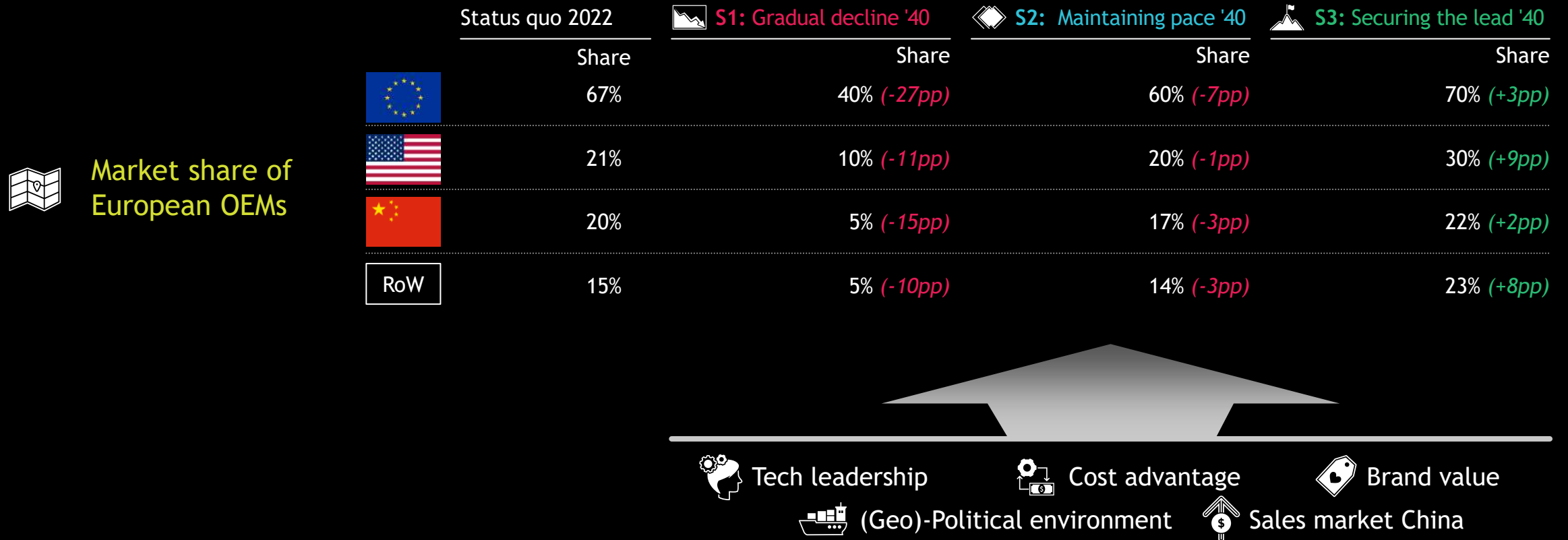
Brand connection elevated through personalized technology experiences

Open trade relationships enabling high value creation outside EU

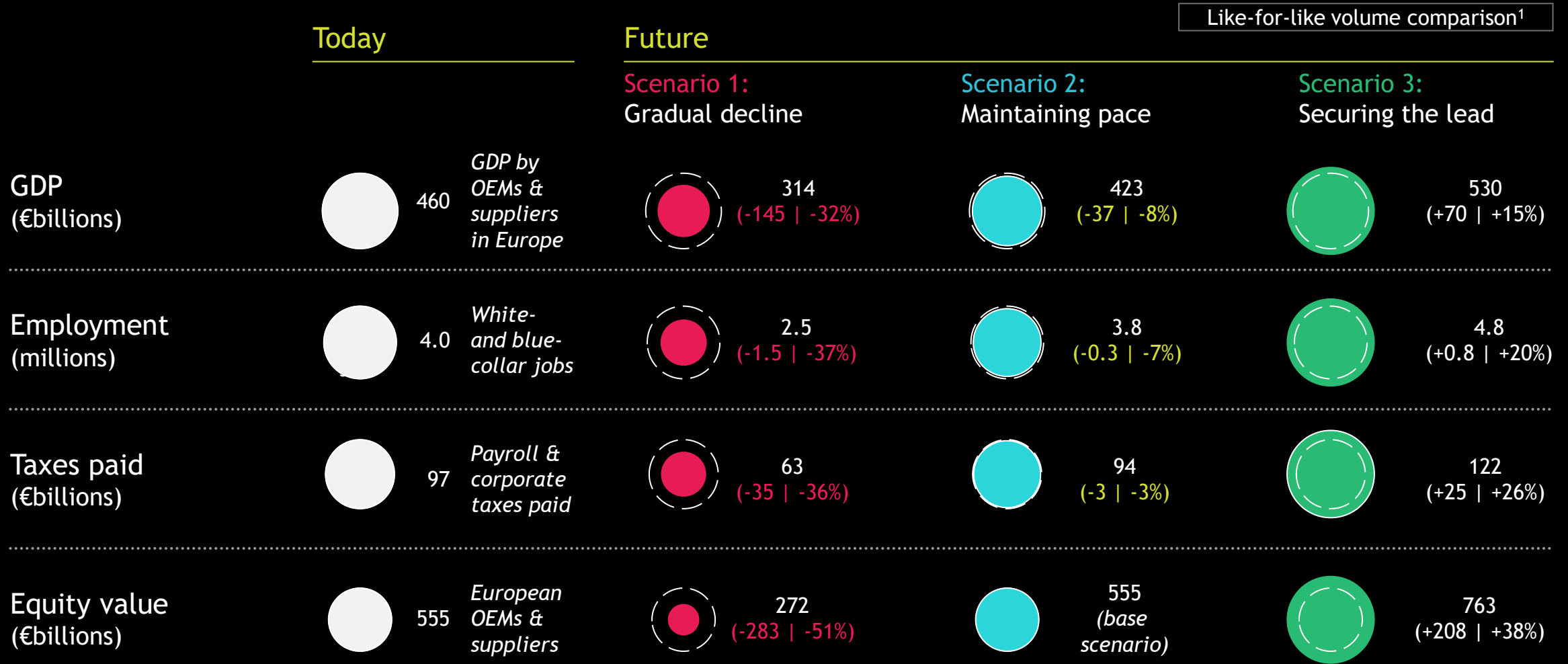
Poor prospects for European Auto industry

Beneficial development for European Auto industry

# Drivers determine the competitiveness of European OEMs at home and abroad



# Role of the European auto industry is at the crossroads



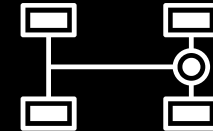
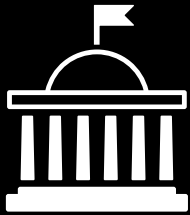
1. For comparability, forecast is based on constant total volume in future vs. today.  
Source: BCG analysis

# Key observations on the role of the European automotive industry

- **Base scenario sees role of automotive industry in Europe declining** vs. today driven by loss of market share across the world, mainly to new Chinese, but also to US and emerging-market OEMs
- **Significant downside risk** due to difficulty in BEV differentiation, reduced cost competitiveness, and competition from new OEMs means that GDP, employment and tax contributions **could shrink by up to 35% vs. today**
- **Considerable GDP & profit opportunity in software**, but European industry challenged in capturing overseas share, as China develops own local-for-local AD & connectivity SW and US hold major software capabilities which it will export
- **Overall, downside risk higher than upside potential** given today's outsized role, **yet considerable opportunity** for European auto industry **to create advantage** and be a growth engine for Europe - action urgently required



# Now is the time for European policy-makers, OEMs and suppliers to act



## Policy-makers

- Develop clear industrial policy for business location and local industry
- Enable local ecosystem to build sustainable competitive advantage
- Ensure minimal disruption to global trade and continued access to foreign markets

## European OEMs

- Do not rely on current stronghold - competition in European market will intensify dramatically
- Build new competitive advantages in BEV, ADAS/AD, digital, cost - the strengths of today will not be the ones of tomorrow
- Rise to the severity of the challenge - today's BEV dynamic in China is looming for Europe in the future

## European suppliers

- Develop regional play for China - drive business with right partners to plant seeds for future
- Drive innovation and capabilities in future trends - BEV, ADAS/AD, digital
- Build resilient supply chains both for rare earths & commodities and manage costs

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