Greening the Auto Sector: Electric Vehicle Incentives in COVID-19 Stimulus

ESG ESG Research

As the world continues to grapple with the COVID-19 pandemic, governments have been providing substantial stimulus packages to bolster their economies. While the primary focus of the funding is emergency economic relief, many countries have also embraced a "green recovery," with funding specifically targeting climate change resiliency and a sustainable transition. Some governments, especially in the European Union (EU), have attached green strings to stimulus funding directed to carbon-intensive industries, such as the automotive industry. These countries see economic stimulus packages not only as an opportunity for increased job creation and economic growth but also as a chance to accelerate the shift towards sustainable practices.

Although the pandemic led to a sudden reduction of greenhouse gas (GHG) emissions resulting from a number of factors including a steep decline in transportation demand, these drops are not predicted to have a lasting effect on global warming; progress on climate change mitigation will heavily depend on global policy action.[1] Corporate bailouts tied to environmental commitments, increased electric vehicle (EV) subsidies and infrastructure funding, and loans and grants for green projects are just some of the policy tools that could help transition to a more sustainable economy. Green-focused relief packages have the potential to reduce long-term GHG emissions, while also providing much needed stimulus to pandemic-impacted economies.

Countries that are not focusing on a green recovery and continue to direct large amounts of funding towards carbon intensive industries may fall out of step with changing global priorities, potentially creating economic headwinds as a result. In this research piece, Kroll Bond Rating Agency (KBRA) and ISS ESG[2] examine the implications these dynamics have for the automotive sector and, particularly, EV use in the United States (U.S.), France, and Germany.

Key Takeaways

- France and Germany are prioritizing a green transition with their stimulus packages, while climate change mitigation policies have been notably absent at the U.S. federal level.
- Data provided by ISS ESG shows that automotive manufacturers in the U.S., France, and Germany currently have comparable EV product offerings and each country's automotive sector is positioning itself towards long-term sustainability.
- France and Germany are increasing federal support for national EV use and a broader greening of the automotive sector. The U.S., however, is not and current EV subsidies are not being expanded, though this may change with the incoming Biden administration.
- These dynamics may have credit implications. Auto companies will likely need federal funding to transition to a more sustainable product offering. A lack of funding in the U.S. may decrease the competitiveness of American production and vehicle prices, while France and Germany may be able to boost their economies and increase employment in a post-COVID recovery.

[1] https://www.nature.com/articles/s41558-020-0883-0

Deep Dive: COVID-19's Impact on the Automotive Sector

The pandemic has taken a severe toll on the automotive industry, negatively impacting the supply chain and causing changes in consumer behavior. Globally, as people continue to work from home, transportation use, both public and private, has fallen dramatically. In the first half of 2020, car sales fell by more than one-third compared to sales during the same period in 2019 and global passenger vehicle sales are projected to fall by 23% in 2020.[3]

The International Energy Agency (IEA) estimates that around 2 million jobs are at risk globally in the automotive industry. This number represents nearly 15% of the manufacturing workforce in the sector.[4] In the EU, factory shutdowns impacted the jobs of at least 1.1 million workers directly employed by automotive manufacturers.[5] Germany accounts for almost half of these employees (49%), followed by France with 90,000 workers affected. In the U.S., the pandemic has impacted at least 150,000 unionized workers in the auto industry.[6]

Vehicle production has also fallen dramatically, mostly due to factory shutdowns; total EU production loss during the first nine months of 2020 accounted for 22.4% of 2019 production volumes.[7] The pandemic has also affected EU demand for passenger cars, which contracted by 25.5% over the first eleven months of 2020.[8] In this period, France and Germany saw a decline in demand of 26.9% and 21.6%, respectively. Moreover, although there were some signs of recovery in the European market during September (+3.1%), sales declined by 7.8% in October and 12% in November.[9] Germany and France's demand contracted by 3.6% and 9.5%, respectively.

Similarly, in the U.S., analysts and industry experts predict a 15% decline from 2019 in total vehicle sales.[10] However, some auto companies have shown signs of recovery and experienced a rebound from the third to the fourth quarter. For example, GM's sales fell 12% in 2020 but increased 5% year-over-year (YoY) in the fourth quarter.[11] Similarly, Fiat Chrysler's sales were down by 17%, but the company saw a 1% increase in the fourth quarter, reducing the decline to 8% YoY in the last quarter.[12]

Forecasts estimate that 2020 global EV sales will drop by 18% but will maintain their share of total car sales at 3%.[13] In the first half of 2020, EV's market share in the U.S. remained stable, representing around 2% of new car registrations.[14] The European EV market, however, has fared better in 2020. Of total EU car sales, EV's market share has increased to 9.9% YoY in the third quarter of 2020.[15] In France and Germany, registrations of EVs during the first three quarters rose by 162.1% and 174.3%, respectively, compared to the same period last year. Despite the current economic situation, EV sales are expected to increase in the coming years. According to Bloomberg, EVs will represent 10% of global passenger vehicle sales by 2025 and 58% in 2040.[16] Some estimates are even more encouraging, projecting that EVs will comprise 60%-80% of global new car sales in 2050.[17]

[3] https://about.bnef.com/electric-vehicle-outlook/
[4] https://www.iea.org/reports/sustainable-recovery
[5] https://www.acea.be/news/article/interactive-map-employment-impact-of-covid-19-on-the-european-auto-industry
[6] https://www.ilo.org/wcmsp5/groups/public/---ed_dialogue/---sector/documents/briefingnote/wcms_741343.pdf
[7] https://www.acea.be/news/article/interactive-map-covid-19-impact-on-eu-automobile-production-up-until-septem
[8] https://www.acea.be/press-releases/article/passenger-car-registrations-25.5-11-months-into-2020-12.0-in-november
[9] https://www.acea.be/press-releases/article/passenger-car-registrations-26.8-10-months-into-2020-7.8-in-october; https://www.acea.be/press-releases/article/passenger-car-registrations-25.5-11-months-into-2020-12.0-in-november
[10] https://www.nytimes.com/2021/01/05/business/auto-sales-2020.html
[11] https://investor.gm.com/news-releases/news-release-details/gm-2020-sales-far-outperform-us-industry-fourth-quarter-and
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[15] https://www.acea.be/press-releases/article/fuel-types-of-new-cars-petrol-47.5-hybrids-12.4-electric-9.9-market-share-t
[16] https://about.bnef.com/electric-vehicle-outlook/
[17] https://news.ihsmarkit.com/prviewer/release_only/slug/bizwire-2020-10-20-overwhelming-number-of-new-car-sales-will-be-electric-vehicles-in-coming-decadesbut-gasoline-will-still-rule-the-road-in-terms-of-total-cars-in-use

Incentives for EVs

One of the most significant sources of GHG emissions is the transportation sector, accounting for about 16% of total global GHG emissions.[18] The sector contributes to 28%[19] and 27%[20] of GHG emissions in the U.S. and Europe, respectively. Road transport was responsible for 82% of the total emission from transport in the U.S., a higher proportion than in Europe (71.7%).

Many countries are working to increase EV use and curb emissions from the transport sector. Europe, the U.S., and China account for 90% of EV sales globally. On a country-level, the U.S. had the highest level of EV stock per capita in 2019 with 1.45 million EVs in use in 2019, compared to 1.75 EVs across all of Europe.[21] Between the U.S., Germany, and France, Germany has the highest level of production per capita, while the U.S. has the highest EV sales (see Figure 1).

Figure 1: 2018 EV Production and Sales by Country

Country	Units Produced	Units Sold	EVs Sold (Per 100,000 People)	EVs Produced (Per 100,000 People)
U.S.	335,000	358,000	109	102
Germany	205,000	66,000	79	248
France	59,000	46,000	68	88
Global	2,090,000	2,090,000	NA	NA

Source: International Council on Clean Transportation

These three countries also have federal incentive programs in place to increase EV sales and use; Germany and France have expanded these incentive programs as part of their COVID-19 stimulus funding. The U.S. does not currently have any incentives in its COVID-19 relief funding directed specifically towards the EV sector.

U.S.

At the federal level, the U.S. offers tax credits for some new models of EVs. The value of the credit is up to $7,500, depending on the make and model of the purchased vehicle and the buyer's tax status. The tax credits, however, begin to phase out when a car manufacturer has sold more than 200,000 EVs.[22] Manufacturers Tesla and GM have already been phased out of the plan. There have been attempts to raise the 200,000-vehicle limit by Congress and car manufacturers, but in late 2019, the Trump administration helped block these efforts.[23]

Many U.S. states have additional incentive programs to increase EV use. In January 2020, New Jersey (NJ) passed a law detailing broad climate goals. Expanding EV use in the state was a key part of the legislation, with a goal of 330,000 EVs on the road by 2025 and for 85% of all vehicles sold to be electric by 2040. The NJ law also includes increases in tax rebates for EV buyers, with the state pledging $300 million over the next 10 years.[24] California (CA) has also been increasingly turning toward EV use with a goal of 5 million zero-emission vehicles on the road by 2030. The state is pushing to get 250,000 EV charging stations built by 2025[25] and, in August 2020, approved $437

[18] https://www.climatewatchdata.org/ghg-emissions
[19] https://www.epa.gov/greenvehicles/fast-facts-transportation-greenhouse-gas-emissions
[20] https://www.eea.europa.eu/data-and-maps/indicators/transport-emissions-of-greenhouse-gases/transport-emissions-of-greenhouse-gases-12
[21] https://www.iea.org/reports/global-ev-outlook-2020#the-global-electric-vehicle-fleet-expanded-significantly-over-the-last-decade-underpinned-by-supportive-policies-and-technology-advances
[22] https://www.fueleconomy.gov/feg/taxevb.shtml
[23] https://www.bloomberg.com/news/articles/2019-12-16/trump-helped-nix-electric-car-tax-measure-sought-by-tesla-gm?sref=E8oVpDS3
[24] https://www.npr.org/2020/03/04/810418134/states-take-the-wheel-promoting-electric-vehicles
[25] https://www.cpuc.ca.gov/zev/

million to build approximately 40,000 stations.[26] CA also has the Clean Rebate Program, which provides up to $7,000 to residents when they buy or lease a new EV.[27] In September 2020, the state became the first in the nation to ban the sale of internal combustion engine (ICE) vehicles starting in 2035.[28]

France

Under France's bonus-malus system, French residents have been able to get up to €6,000 for the purchase of an EV through the ecological bonus program.[29] Residents are also able to utilize the conversion bonus plan, which, depending on income, provides between €2,500 and €5,000 when an EV buyer trades in an older petrol or diesel car.[30] France taxes the purchase of higher emitting vehicles, with the highest level of emitters paying up to €10,500 in surcharges, with a planned hike up to €20,000. EVs are also exempt from the country's annual vehicle tax, while higher emitting vehicles pay more. By 2040, France has vowed to end the sale of new diesel and petrol passenger cars and light commercial vehicles.[31] The government is also working on expanding EV charging infrastructure with a target of 7 million public and private charging stations by 2030.[32]

In May 2020, French President Emmanuel Macron announced an €8 billion stimulus package for the automotive industry, which was hard hit by the pandemic. The overarching goal of the relief package is to make France's auto sector more competitive and to green the industry.[33] Macron announced a new plan of producing 1 million EVs in the country by 2025. The stimulus funding will raise the ecological bonus scheme to up to €7,000 for the purchase of a new EV and will also invest over €1 billion into research and development for energy transition technologies like battery storage in the automotive sector.[34] The stimulus package also earmarks €5 billion to the French carmaker, Renault, in which the country holds a 15% stake. The company has agreed to triple EV production by 2022.[35] The government also announced an additional €1.9 billion for green infrastructure, which includes funding for EV charging stations.[36]

Germany

Like France, Germany provides an environmental bonus of up to €6,000 for the purchase of an EV, which is split between the federal government and the automotive sector.[37] Once purchased, EVs are exempt from the country's annual vehicle tax for up to 10 years. German Chancellor, Angela Merkel, has made EV use a priority in her Climate Protection Program 2030, which was unveiled in mid-2019. Merkel would like to see up to 10 million EVs on the road in Germany by 2030. Her plans also include expanding EV infrastructure, including 50,000 public charging stations over the next few years and a goal of 1 million charging stations by 2030.[38]

In early June 2020, Germany announced a €130 billion COVID-19 stimulus package that includes provisions to green the auto industry. €2 billion will target new technologies in the auto industry and an additional €2.5 billion will go specifically towards EV infrastructure and research and development on EV technology like batteries and

[26] https://www.reuters.com/article/us-usa-california-electric/california-approves-largest-ever-utility-program-to-expand-ev-charging-idUSKBN25N390
[27] https://ww3.arb.ca.gov/msprog/lct/cvrp.htm
[28] https://apnews.com/article/technology-gavin-newsom-california-4956d87b72b000a917eed27392d16d8b
[29] https://theicct.org/blog/staff/actions-speak-louder-words-french-commitment-electric-vehicles
[30] https://www.ecologie.gouv.fr/developper-lautomobile-propre-et-voitures-electriques
[31] https://theicct.org/blog/staff/actions-speak-louder-words-french-commitment-electric-vehicles
[32] https://www.ecologie.gouv.fr/developper-lautomobile-propre-et-voitures-electriques
[33] https://www.economie.gouv.fr/covid19-soutien-entreprises/mesures-plan-soutien-automobile#
[34] https://www.economie.gouv.fr/covid19-soutien-entreprises/mesures-plan-soutien-automobile#
[35] https://www.ft.com/content/8e84e13b-d02f-4d90-839d-f99c3a0c1d95
[36] https://www.economie.gouv.fr/plan-de-relance/infrastructures-mobilites-vertes
[37] https://www.bundesregierung.de/breg-de/themen/klimaschutz/umweltbonus-1692646
[38] https://www.bloomberg.com/news/articles/2019-11-05/germany-to-boost-electric-car-incentives-in-push-to-lift-demand?sref=E8oVpDS3

electromobility.[39] German gas stations will also be required to have EV charging stations available. The country has increased the environmental bonus to €9,000 towards the purchase of new EVs and lowered VAT on EV sales from 19% to 16%.[40]

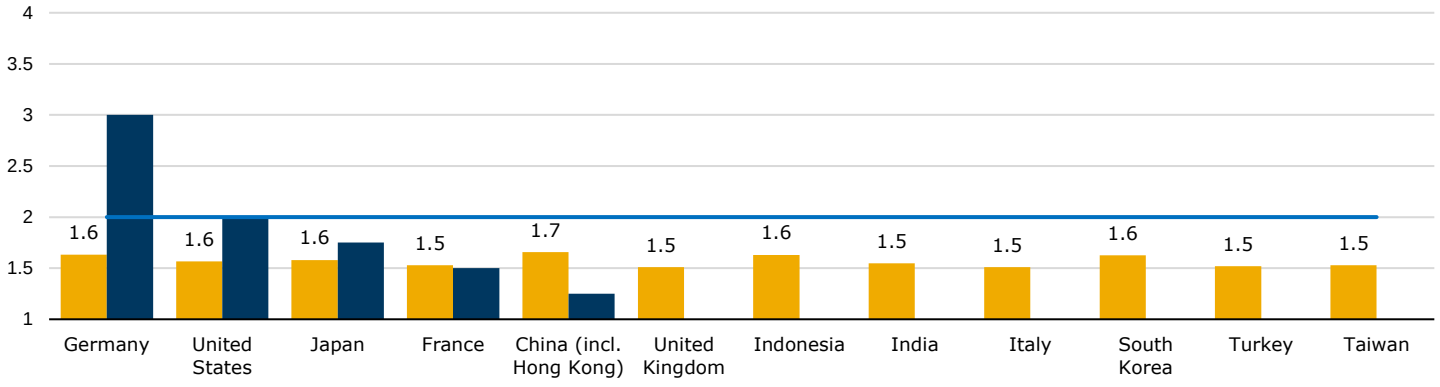
Who is leading the shift towards alternative drives?

Using data from ISS ESG, Figure 2 shows a country-level assessment of car manufacturers' current product portfolio and the companies' ability and strategy to shift to a more sustainable product offering.[41] ISS ESG's SDG Solutions Assessment (SDGA) gauges how a company's product offerings contribute to (or obstruct) the United Nations' Sustainable Development Goals (SDGs). On average, car manufacturers today trend towards obstructionist in ISS ESG's assessment due to their products' negative weighting on SDG 13, Climate Action. This is shown through the "current product mix" indicator in Figure 2.

ISS ESG also has Corporate Rating assessments, which evaluate a company's strategy to shift towards a more sustainable product portfolio and measures the ambitiousness of such business strategy goals (both in absolute terms and relative to the industry). Measurable and quantifiable targets are considered positive, so a concrete sustainability pledge expressed as a net sales target would score higher than a broad commitment without specific targets. This is shown in Figure 2 through the "strategy shift" indicator.

These assessments are continually reviewed as the automotive industry is experiencing a disruptive technology change and issuer strategies are evolving constantly. As the mobility sector undergoes a transformation, hybrid drives are considered a short- to medium-term bridge technology, whereas pure electric drives have the potential to be a long-term solution and therefore score higher grades in the ISS ESG rating.

Figure 2: Car Manufacturers' Current Product Offering and Strategic Commitment



Sample size=37
Source: ISS ESG

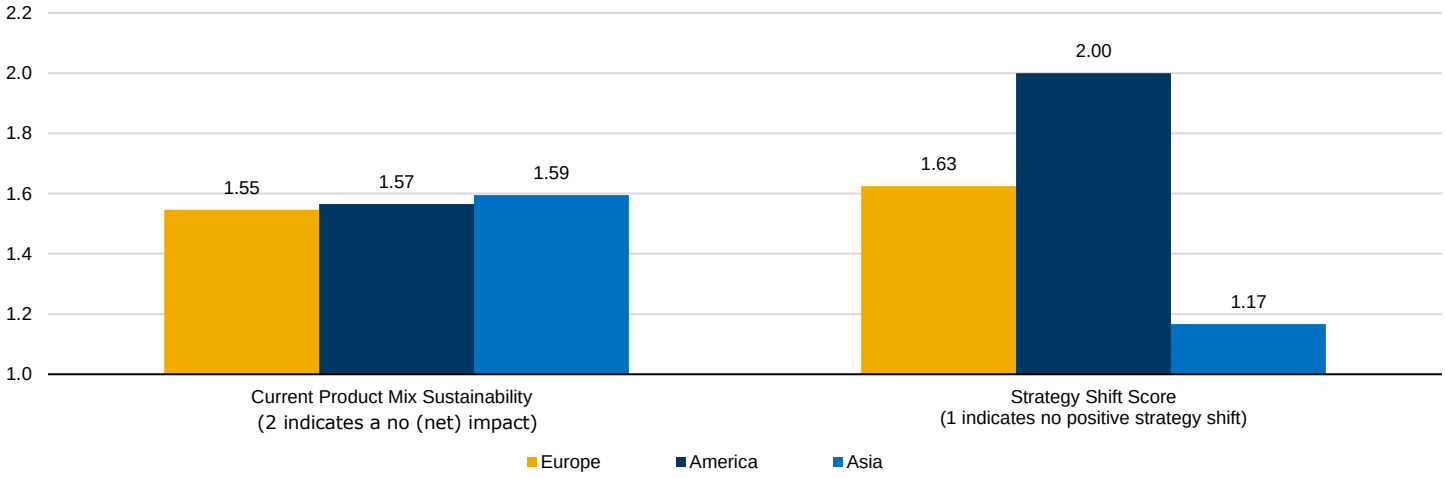
Globally, automobile companies share a similar product portfolio and are still largely focused on ICE vehicles, with a global average of 87% skewing towards a negative contribution to the SDGs. Hybrid and EV sales account for a low proportion of total sales for most car manufacturers. Only 33% of car manufacturers achieved mild hybrid sales of over 1% of total sales. The figure is even lower for plug-in hybrid cars and EVs, at 25% and 22% of car

[39] https://www.cleanenergywire.org/news/germany-gives-energy-transition-some-extra-boost-economic-stimulus-programme
[40] https://www.reuters.com/article/us-health-coronavirus-germany-autos/germany-rebuffs-gasoline-auto-lobby-with-radical-electric-plan-idUSKBN23B0XG
[41] This data is as of August 2020 and includes all automotive manufacturing companies within ISS ESG's rated universe.

manufacturers, respectively. However, these numbers are expected to rise sharply in the coming years due to increased regulatory requirements like emission limits and the phasing out of combustion engines. Only 28% of companies analyzed showed a strategy shift towards an environmentally beneficial product portfolio, but this number is also expected to rise as manufacturers strive to meet expectations from governments and customers.

Product offerings across Europe, Asia, and North America are very similar today, with a bit of an edge for Asian car manufacturers due to their early adoption of (mild) hybrid cars. While leading now, the strategy shift research indicates that Asian manufacturers are less inclined towards a radical strategy shift in the coming years. Regionally, America is leading in terms of their strategic commitment and shift in strategy, potentially yielding the sharpest disruption from combustion engine towards EVs (see Figure 3). European manufacturers provide a more balanced picture, with some companies embracing electromobility while others are holding back. On a country-level, Germany leads in the strategy shift indicator and is currently best positioned for the move away from fossil fuel engines.

Figure 3: Current State vs Strategic Commitment by Region



Source: ISS ESG

European governments, particularly France and Germany, are promoting a green transition through current stimulus packages, which puts their nation's manufacturers in a potentially advantageous position. However, it is important to note that individual companies are differently prepared to respond to changes in demand. In America, where public spending has been less generous, companies have responded to the changing market environment and shift in public sentiment towards sustainability.

Credit Implications

At present, the EV markets in the U.S., Germany, and France are on a relatively level playing field, according to data from ISS ESG. As countries continue to roll out COVID-19 stimulus packages, the EU has prioritized green incentives in their relief funding. As a result, France and Germany have directed large amounts of stimulus money towards EV use and a broader greening of the automotive sector. In contrast, the U.S has no plans on tying stimulus money to EVs and attempts to expand subsidies in the country have been thwarted. This is likely to change with the incoming Biden administration, which has vowed to accelerate the deployment of EVs, among other green initiatives.

An increasing number of governments, including some leading vehicle markets, are imposing bans or setting targets for phasing out internal combustion engine cars.[42] As countries continue to set environmental regulatory requirements and carbon emission targets, this can increase costs for auto companies. In France and Germany, federal funding directed towards these industries can help companies transition towards sustainable development and production. The U.S. may lose its competitive edge with potential declines in auto production and sales, as production costs and vehicle prices increase without incentives at the U.S. federal level.

While investment requirements may impact a company's growth prospects, a manufacturer with strong access to capital markets and stable cash flow streams will ultimately fare better. Companies that are better positioned to receive government stimulus and avoid harsher regulatory pressure will have an edge over competitors. Additionally, automotive companies should consider how changes in technology may impact profitability and sales as consumers increasingly turn to EV use. Transitioning to a greener industry may also lead to job creation in new industries, such as battery production.

U.S. carmaker Tesla was one of the first companies to produce all-electric vehicles on a large scale, and it continues to be a major player in the global EV market. In 2019, Tesla had the largest market share of global EV sales at 16.2%. Tesla also accounted for around 80% of EV registrations in the U.S. in the first half of 2020. The company has sold more Model 3 electric sedans worldwide in 2020 than the next five most popular all-electric cars combined. However, European automakers are quickly catching up. French carmaker Renault saw an 80% increase in EV registrations YoY and at the end of November, it led year-to-date European EV sales.[43] Tesla's Model 3 was the bestselling EV in Europe last year. Volkswagen, which has pledged to produce 3 million EVs by 2025, also saw EV sales rise when its ID.3 hatchback became the bestselling EV in Europe in October. Current projections show that Tesla's sales in Europe are poised to fall by at least 30% in 2020, perhaps a sign that France and Germany's stimulus plan is working to boost European EV production and sales.[44]

Conclusion

Shifting to EVs is likely to be a profitable strategy for automakers over the longer-term as consumer preferences continue to shift towards sustainable solutions and manufacturing scale is achieved. KBRA believes that a clear commitment to EVs, and other sustainable technology, is critical for a company to remain competitive in the global automotive sector. A green shift in the automotive industry is also likely to deliver net benefits to society, reducing GHG emissions and other pollutants, while also creating jobs in a post-COVID world.

[42] https://theicct.org/blog/staff/global-ice-phaseout-nov2020
[43] https://en.media.groupe.renault.com/news/renault-leader-of-ev-sales-in-europe-9c0d-989c5.html
[44] https://www.forbes.com/sites/jimcollins/2020/12/01/tesla-sales-have-fallen-off-a-cliff-in-europes-greenest-car-markets-in-2020/?sh=3e0cd7522872

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