

INVESTMENT PERSPECTIVES

Changing climate, changing analysis: Focus on global autos

Climate risks are changing company fundamentals today. The global auto sector is one of the most affected.

We see advantages in firms with strong climate risk awareness, aligned management strategies, and ample financial strength.

This is the first in a series of notes in which we evaluate climate change's implications for specific industries.

Climate change is having an increasingly profound impact on company fundamentals.

Wells Fargo Asset Management (WFAM) is paying close attention to this evolution. In 2018, our firm created the WFAM Climate Change Working Group to help our analysts and portfolio managers more fully understand the investment implications of a changing climate. In partnership with WFAM's sector analysts, the group applies a rigorous research and investment process to assess climate risks' impact on companies and the value of their securities.¹

We will highlight our findings in a series of publications.

This piece focuses on global automakers and parts suppliers. In future pieces, we'll evaluate climate change's impact on the utility, energy, insurance, and sovereign sectors.

Primary findings of this note on autos and suppliers include:

- The auto sector appears to be approaching a cyclically negative inflection point. At the same time, secular, climate-driven policy and technology shifts are compressing firms' margins and increasing their capital expenditures.
- Transportation is likely to increasingly rely on electric vehicles (EVs) and alternative fuels. This transition presents both risks and opportunities to original equipment manufacturers (OEMs) and suppliers.
- We see advantages in firms that have strong awareness of climate change with which they demonstrate strategic consistency, pursue partnerships boosting their technology leadership, and exhibit the financial flexibility required to avoid distress and capitalize on growth opportunities. These strengths also reduce reputational and political risks as expectations rise around firms' commitment to containing climate change.

1. See "Risks of a Changing Climate, published November 1, 2019," for an introduction to the WFAM Climate Change Working Group and its strategy.

Tom Lyons

Head of Climate Change Working Group, Senior Portfolio Analyst

Garth Newport, CFA

Associate Portfolio Manager

Ambreesh Bansal, CFA

Senior Fixed Income Analyst

David Moon

Senior Fixed Income Analyst

Isaac Khurgel

Investment Strategist

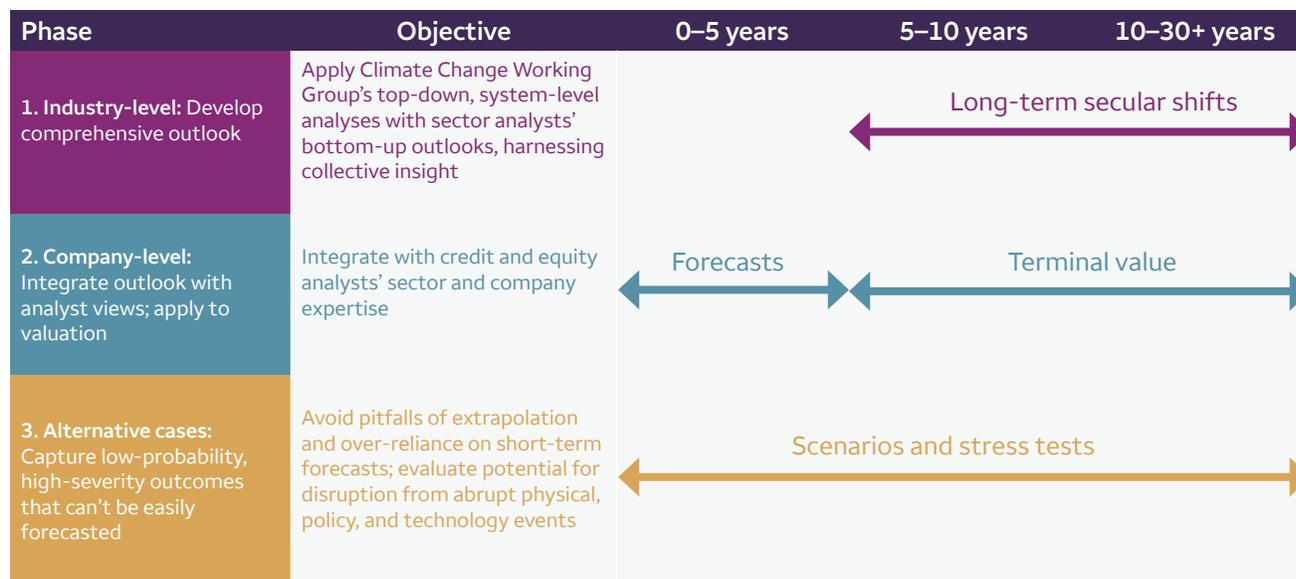
- We see heightened risk in firms that rely wholly on internal combustion engine (ICE)–based markets and lack capabilities in electric propulsion and alternative fuels.
- We illustrate the **WFAM climate risk evaluation framework** in action with the analysis of BorgWarner Inc. (BWA), a global supplier of engineered systems and components primarily for automotive powertrain applications.

WFAM’s framework to evaluate climate risks’ effects on security value

To fully understand climate change’s effects on the global auto sector, it’s essential to have a strong process for a range of industries. The focus: How do climate risks affect company fundamentals and security values? The effects are varied and complex. Let’s start with the role of risk:

- **Physical risk:** Direct or indirect risks arising from a changing climate—for example, exposure through owned assets or supply chains to risks such as sea-level rise or extreme weather events.
- **Transition risk:** Risks emerging from changing regulations, technology innovation, the cost of carbon, consumer preferences, and supply constraints as the world moves to a low-carbon economy in an effort to mitigate climate change’s physical risks. This includes political and reputational risks for firms that mismanage the climate transition and the indirect risk that the public sector and other investors will effectively boycott firms that are not responsive to climate risks.
- **Liability risk:** Risks organizations face from being sued for damages over their role in climate change. To date, more than 1,200 climate change cases have been filed in more than 30 jurisdictions.

Forecasting these trends accurately is not viable. However, it’s clear that the competitive environment is changing and that both risk and opportunity sets are expanding. To deepen our understanding of climate change’s investment implications, we’ve developed a three-phase process to capture how climate trends may affect firms’ long-term ability to compete, generate cash, and create security value:



Phase 1: Develop a comprehensive industry outlook for the global auto sector

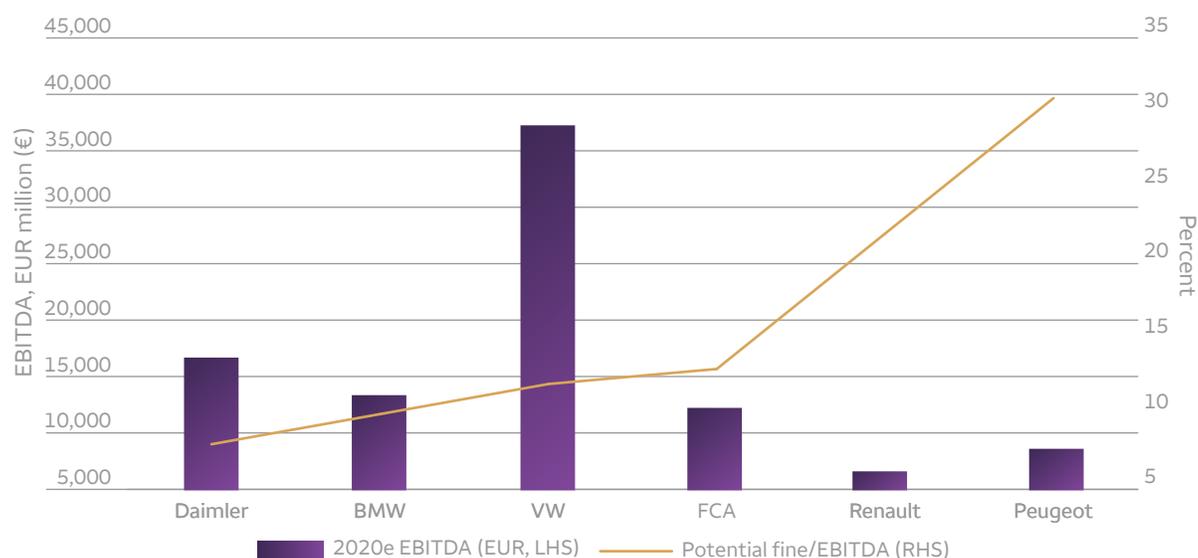
What is happening now: The auto industry appears to be approaching a negative inflection point:

- Chinese car sales declined 14% in the second quarter of 2019.
- Western European auto production declined 8% in the second quarter of 2019.
- The U.S., which has been relatively stable, is now seeing a slow erosion of sales, higher inventory (prior to recent strikes), and higher discounting.

These cyclical pressures coincide with new secular forces. Regulation is a prime mover. In Europe, emissions fines pose significant risks to automakers. In 2018, the European Commission (EC) passed stringent carbon dioxide emissions standards, requiring reductions of 15% by 2025 and 37.5% by 2030 (compared with a 2018 benchmark). Despite this regulation, not a single automaker was able to lower their emissions in 2018 from 2017 levels, partially due to diesel’s declining market share.

For this reason, many automakers now believe EVs are the only viable solution to meet the new EC emissions standards. Some automakers are now tolerating losses of roughly EUR 15,000 per EV sold. Their underlying rationale is that EVs will become more profitable as their production scale increases—and this will add more value than focusing on ICEs and paying fines under the stricter emissions regime.

Even if OEMs reduce 50% of excess emissions versus European Union targets, they could face large fines



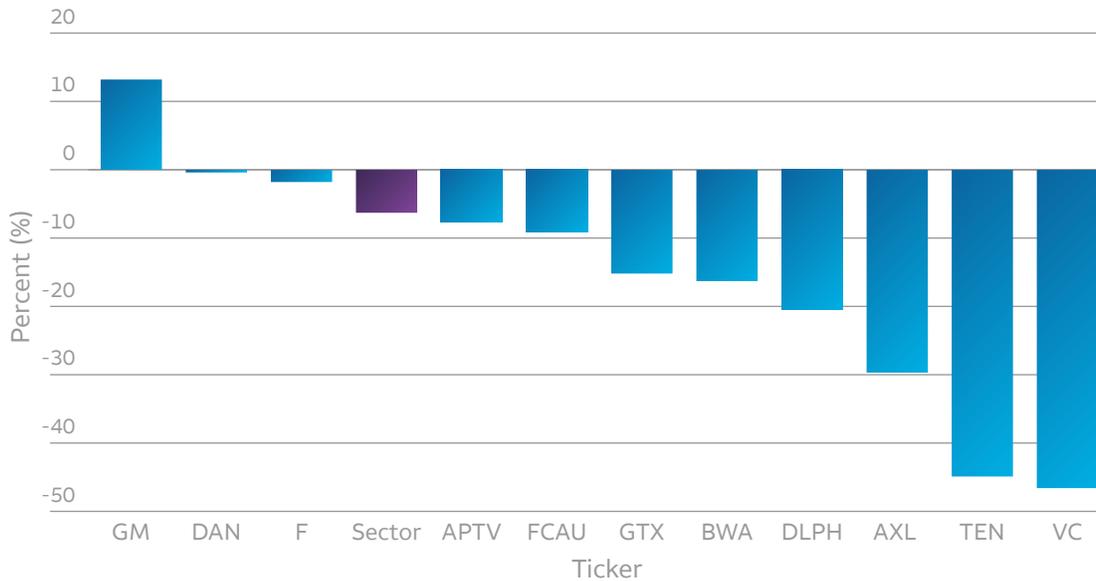
Source: ICCP, Bloomberg, company materials. Peugeot figures exclude emission credits purchased from Tesla. EBITDA: Earnings before interest, taxes, depreciation, and amortization

Countries and municipalities are legislating outright sales bans of new ICE vehicles. And they may institute the bans earlier than expected. For example:

- In the U.K., the transport secretary has already announced its ban may be brought forward by five years (from 2040 to 2035) to accelerate the take-up of EVs.
- The public sector, a powerful determinant of demand, has also made a pronounced shift to EVs.
- Meanwhile, large logistics corporations such as Amazon have announced fleet electrification plans.

Consistent with these trends, global research firm IHS Markit recently downgraded its 2019 forecast for auto sector production growth from +2.1% in January 2018 to -2.7% in June 2019. Moreover, most automakers have revised down their 2019 earnings-per-share (EPS) guidance. Interestingly, sales of new energy vehicles—including EVs and plug-in hybrids—grew 40% in the first seven months of 2019 (although, in context, this growth came from a lower base, as their share of total sales is only about 5%)

Year to date, analysts have made large downward revisions to 2019 EPS estimates



Sources: Bloomberg and Datastream

Looking further ahead: Secular change in the 2020s and beyond

Societies are expressing climate concerns through forceful regulations as described above. This presents a number of important questions: What are the fundamental implications of complying? Is compliance realistic? How will it affect the industry's competitive environment and structure?

To address these questions, the WFAM Climate Change Working Group evaluates a broad range of multi-decade climate scenarios. For example, the table below summarizes well-known scenarios constructed by the International Energy Agency (IEA). They project how many vehicles, across alternative fuel categories such as EVs, will be needed to achieve different climate outcomes. Each scenario involves major changes in automakers' and suppliers' product mixes.

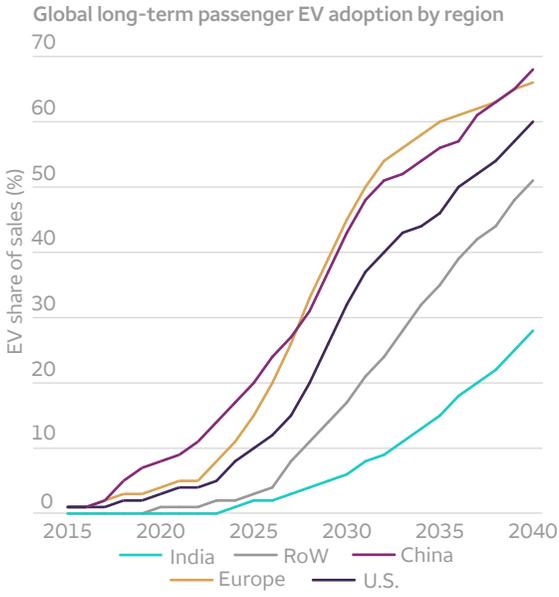
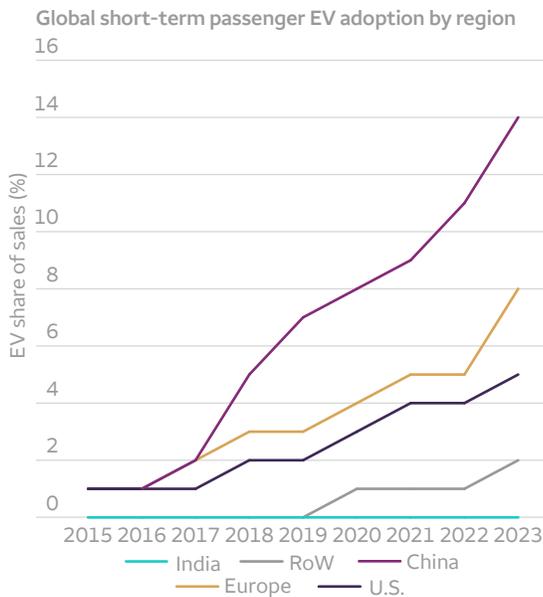
	Well below 2.7°C : End goal of Paris Agreement	2.0°C : Aggressive action	2.7°C : Commitments to date
Scenario	Vision of what's needed for <=1.5°C, then works back to present; 50% chance to limit warming to 1.75°C	Vision of what's needed for 2.0°C, then works back to present; 50% chance to limit warming to 2.0°C	Based on extrapolating current policies; warming 3.5° over time
Emissions	-20% by 2030 -100% by 2050	-15% by 2030 -50% by 2050	+20% by 2030 +50% by 2050
Policy and technology	Extremely ambitious policy spurs innovation, scale, and scope economies in batteries and infrastructure, allowing EVs to gain ~20% sales share in 2020s	More ambitious policy spurs innovation, scale, and scope economies in batteries and infrastructure, allowing EVs to gain ~20% sales share in 2030s	Current policy spurs sufficient innovation, economies to gradually mobilize EVs with robust growth delayed to 2030s and later
Social and political	Challenges are severe as much of ICE workforce displaced and/or relocated	Challenges are material as much of ICE workforce displaced and/or relocated	Challenges are contained as ICE workforce gradually displaced, relocated
Auto mix	All-electric and hybrids reduce ICE to single-digit % by 2060	All-electric and hybrids reduce ICE to ~20% by 2060	ICEs retain near 50% market share by 2060

Sources: WFAM and IEA

Scenarios like these are valuable because they emphasize the potentially radical changes that decarbonization may require for autos. However, they involve too much uncertainty to rely on directly in forming investment views. Many believe the scenarios understate the emissions reduction that will be required to limit warming to the indicated targets. Further, the scenarios can't account for unpredictable changes in technology and consumer behavior. Nonetheless, they prompt useful questions about difficult-to-foresee directions that the industry may evolve over the long term.

China and Europe are on track to lead EV uptake in the 2020s

We see strong prospects for EV adoption to accelerate in the 2020s. China and Europe are likely to lead EV growth as their regulations drive technology-driven expansion. German automaker Daimler recently announced it would reallocate its ICE research budget to EVs. Volkswagen (VW) took an even more aggressive stance by announcing plans for \$90 billion in EV capital expenditures. In the U.S., consumer preference and increasingly competitive economics will likely play a larger role in driving EV growth.



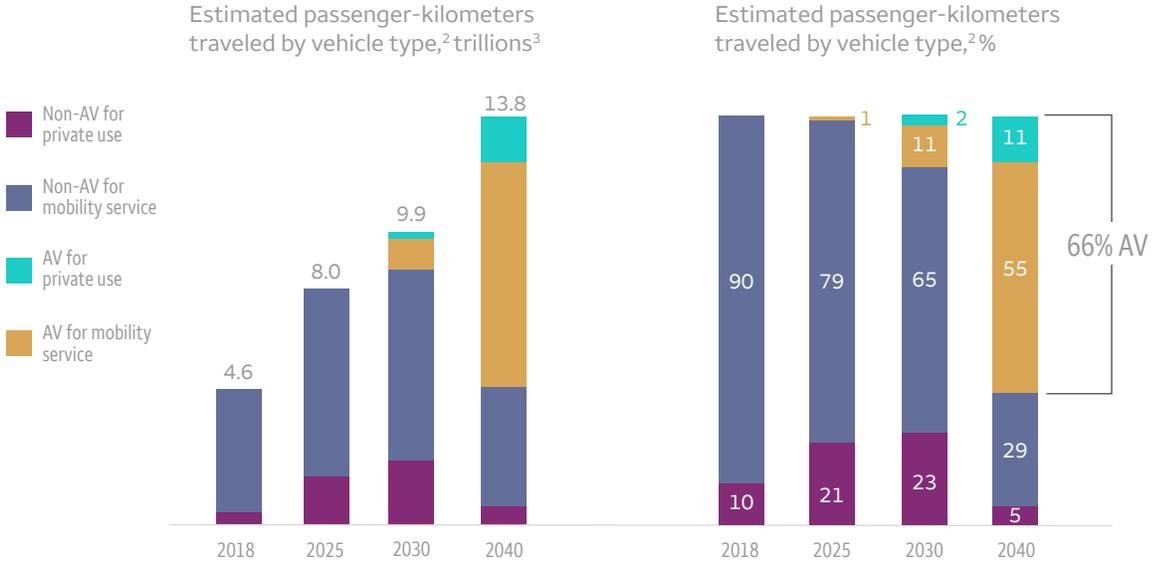
Sources: Bloomberg New Energy Finance and Datastream

Autonomous vehicles' impact should grow in the 2030s

The rise of autonomous vehicles (AVs) will become increasingly important in the 2030s. However, AVs are already affecting suppliers' and automakers' business strategies. AVs may not represent climate-focused technology in a direct sense, but they're fundamentally related to electrification. Without the higher-voltage features that electrification enables (such as active safety), it's unlikely firms would be as willing to invest in dedicated AV production platforms.

Industry consultants and automakers expect fleet ownership of AVs, including trucks, to pick up sharply in the late 2020s. Personal ownership is expected to grow significantly in the 2030s and 2040s. The software and hardware designed to enable AVs should mature steadily during the 2020s. This would allow the industry to invest more aggressively as the decade proceeds with the goal of growing revenue into the 2030s. Over the very long term—in the 2040s and beyond—AVs could actually reduce auto demand, despite an increase in total miles traveled. Higher utilization rates and the role of ride-hailing services would be the prime movers.

AVs will travel about 66% of total passenger-kilometers in 2040 according to McKinsey & Co.



2. Baseline scenario
 3. Figures may not sum, because of rounding
 Source: McKinsey & Company, "How China Will Help Fuel the Revolution in Autonomous Vehicles," 2019

A long-term perspective is essential to capture AVs' considerable impact on investment risk and security value. Despite the category's ability to alter the auto sector in virtually all parts of the value chain, it has only modest impacts on typical three- to five-year analytical horizons. We use long-term scenarios to capture AVs' far-reaching implications for risk and value.



In September 2019, Aptiv—a technology-focused auto supplier—announced an autonomous driving joint venture with Hyundai Motor Group valued at \$4 billion. The purpose: Develop a production platform for robotaxi providers, fleet operators, and automakers by 2022. This initiative could create efficiencies in research, development, and capital expenditures. By extension, the joint venture could potentially cause investors to assign more value to Aptiv’s autonomous capabilities. Similar partnerships are taking place, including Honda’s collaboration with GM’s Cruise and VW’s investment in Argo AI. We expect this trend to continue.

Alternative fuels will also play a role

Hydrogen offers an effective option to deliver energy with a low carbon footprint. Moreover, hydrogen-powered vehicles perform at high levels and can be refueled quickly. They can complement EVs to decarbonize the auto sector.

Consider the work of the Hydrogen Council, a consortium of 18 companies in the automotive, oil and gas, industrial gas, and equipment industries. Two years after the Paris Agreement, at the COP23 meeting in Bonn, Germany, the council presented its view of how hydrogen can help nations achieve the Paris climate targets. The council argued that if hydrogen is deployed aggressively, one-third of the global growth in hydrogen demand could come from the transportation sector. It believes that, by 2050, hydrogen-powered fuel-cell vehicles could win up to 20% share of the total vehicle fleet: 400 million cars, 15–20 million trucks, and about 5 million buses. In such an outcome, hydrogen would play a larger role in heavier and long-range segments and therefore contribute around 30% to the total emission reduction target for road transport.⁴

Industry structure and business models appear poised for change

The policy and technology trends outlined above require us to think about the role of new entrants, changing business models, and a shifting industry structure. Traditional auto manufacturing is evolving into a technologically broader set of activities that require substantial investments to the tune of tens or even hundreds of billions of dollars. This could be unmanageable for even the largest OEMs.

Further, technology firms often have stronger capability sets than today’s OEMs in areas like semiconductors, batteries, and consumer electronics. This may require OEMs to make greater use of partnerships, alliances, and acquisitions.

It’s impossible to accurately model where all the risks and opportunities lie. Some firms that exist today won’t in 10 years. Others will adapt, transform their presence across the value chain, and become stronger. The uncertain course of these transitions may reduce the market’s visibility into autos’ future performance and can, in turn, affect their security values today.

It's important to note that even in the most disruptive outcomes, we foresee traditional ICE vehicles remaining an essential source of value for auto firms. What could happen in the future?

- Momentum around climate policy, technology, and other innovations could stall. For example, if the European Union's ambitious emissions restrictions push OEMs nearer financial distress—perhaps in combination with a recession—regulators could allow more time to achieve compliance. So far, however, there are few signs that regulators are willing to relax the emissions limits and penalties themselves.
- Manufacturers such as VW that are moving more aggressively into EVs than other OEMs could underperform if consumer demand falters.
- The need to expand vehicle-charging infrastructure quickly and cost effectively could present challenges.
- The supply of key metals for batteries could become a constraint. Bloomberg New Energy Finance believes lithium supplies look sufficient through the mid-2020s, but new nickel and cobalt mining capacity will need development to meet growing demand.

Focus on auto suppliers: Long-term fundamental outlook

Near term (3–5 years)

The European auto industry, and by extension, parts of the global industry, must cope with regulated emissions limits.

- Electrification offers a growth opportunity, but we believe automakers' margins will compress as operating costs rise and capital expenditures increase. OEMs will likely pass cost pressure on to suppliers by requiring tighter margins on parts.
- New product launches may struggle to stay on time and budget in a more competitive market that includes new entrants from the technology sector. These conditions could threaten suppliers' credit quality and firm value.
- These risks are partly offset by robust existing order books, which may provide confidence in the companies' financial performance for the next few years. But uncertainty increases from there.

Intermediate term (3–5 years)

Regulation—and, increasingly, technology—will drive changes in the global auto industry’s structure, risk profile, and profitability.

Which competitive advantages will be required to succeed?

- In our view, parts suppliers should continue to see pricing pressure as OEMs attempt to recoup margin lost during earlier phases of EV development.
 - Given the risk of new entrants, automakers’ insourcing (creating and manufacturing parts in-house) will likely challenge suppliers’ ability to maintain current levels of profitability.
 - We expect the next cycle to be less profitable than the current one.
 - Parts suppliers should continue to play an important role in product innovation and cost savings for OEMs. However, the EV transition could make relationships between suppliers and OEMs more contentious.
- A steady transition to electrification, rather than an abrupt one, is probably the best hope for parts suppliers. This would ease the challenge of staying ahead on the technology curve while minimizing loss of volumes to automakers that insource.
- A more negative outcome for parts suppliers would involve an abrupt transition from ICEs to EVs by the auto industry. In this scenario, automakers would initially need to rely on stronger, more powerful suppliers. Here, intense margin pressure and/or insourcing by automakers could occur. In this scenario, automakers would insource parts development and manufacturing.
- Partnerships and alliances will likely be necessary for today’s automakers and suppliers to stay competitive—a phenomenon we’re already seeing.

Long term (from the late 2020s)

The industry will strive to regain relative stability with manageable profit margins and volumes for survivors.

- OEMs’ and suppliers’ product mixes would transform. Alternative transport modes and ownership models would apply pressure, as would AVs and ride-hailing services. Hydrogen and other alternative fuels would present opportunities and risks.
- Together, these developments would lead to a new competitive landscape that includes the technology sector as discussed above. It’s unclear which automakers and suppliers would enjoy the benefits of, or be disadvantaged by, this dynamic.
- We see two valuable advantages here for auto firms: technology leadership and the financial flexibility to weather difficult parts of the transition while capitalizing on opportunities to acquire new capabilities and expand into new markets.

Phase 2: Apply industry outlook to analysts' forecasts and valuations

Pulling it all together: Implications for a global auto parts supplier

So far we've discussed auto industry-level implications of climate change. Phase 2 applies this outlook at the company level. Here we use BWA as an example. BWA is a global parts supplier with a strong competitive position, balance sheet, and cash flow profile. BWA is an example of a company that's taking action in the face of the climate-related trends affecting the auto industry.

In 2016, the firm announced a new technology-agnostic strategy to diversify from ICE into EV markets and said it would expand its EV product mix over the next five years. BWA also increased its research and development spend across EV sectors while acquiring two firms to bolster its EV capabilities.

We evaluate the outlook's implications for analyst forecasts and valuations on two levels:

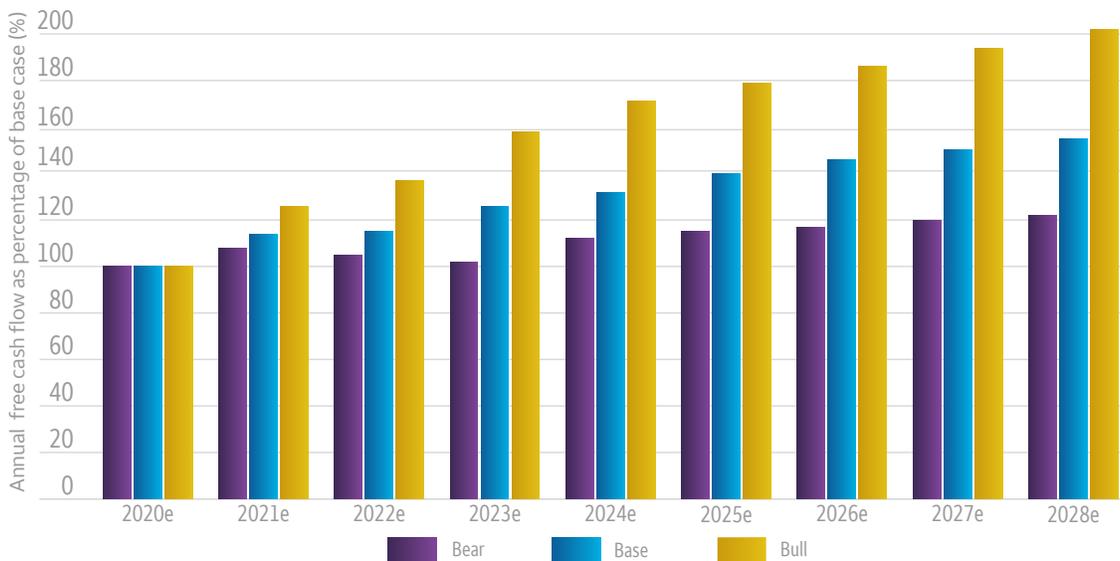
- **Business profile:** During our forecast period and beyond, risk rises with changing technology, increasing policy uncertainty, and increased competition from new entrants. Investors should demand a greater return on capital.
- **Financial profile:** In the coming 5 to 10 years, we forecast less cash generation, less capital return to shareholders but relatively stable leverage (barring lower-probability, higher-severity outcomes that fall outside of forecasts and are addressed in the next section).

We illustrate free cash dynamics through three cases: base, bear (more conservative), and bull (more aggressive). In each case, our forecasts extend 5 to 10 years. To value securities, we discount associated cash flows and then add a terminal value to capture all subsequent years. We make further adjustments in Phase 3, discussed below, to capture consequential risks that fall outside of forecasts and terminal value.

Base case	Bear case	Bull case
Most likely implications of climate risks for analyst forecasts	A more conservative version of the base case	A benign take on climate's implications for forecasts
<ul style="list-style-type: none"> • Top-line growth declines relative to levels achieved in the last cycle, as cyclical and competitive pressures make their presence felt. • Operating margins compress by 2% below the levels achieved in the prior cycle. This is due to electrification, new products, and the time required to achieve scale and scope efficiencies. • Capital intensity rises relative to history, given the need to invest in new products and processes. 	<ul style="list-style-type: none"> • Top-line growth falls more significantly than in the base case, reflecting a more cautious view of cyclical pressures. • Operating margins fall more sharply below those of the last cycle due to greater-than-foreseen expenses for manufacturing new EV products. • Capital intensity increases due to related new product development. 	<ul style="list-style-type: none"> • Top-line growth remains more resilient than in the base case thanks to lighter-than-expected cyclical pressures. • Operating margins are able to sustain levels of the last cycle. This could happen if BWA is more successful than expected in containing costs and maintaining pricing power. • Capital intensity remains flat relative to history.

Our analysis warrants caution. Free cash flow (cash from operations less capital expenditures and dividends), firm value, and credit quality are all weaker than they'd be in a world without climate risks (best approximated by the bull case). The following charts illustrate this point.

Small changes in operating assumptions deliver large free cash flow differences

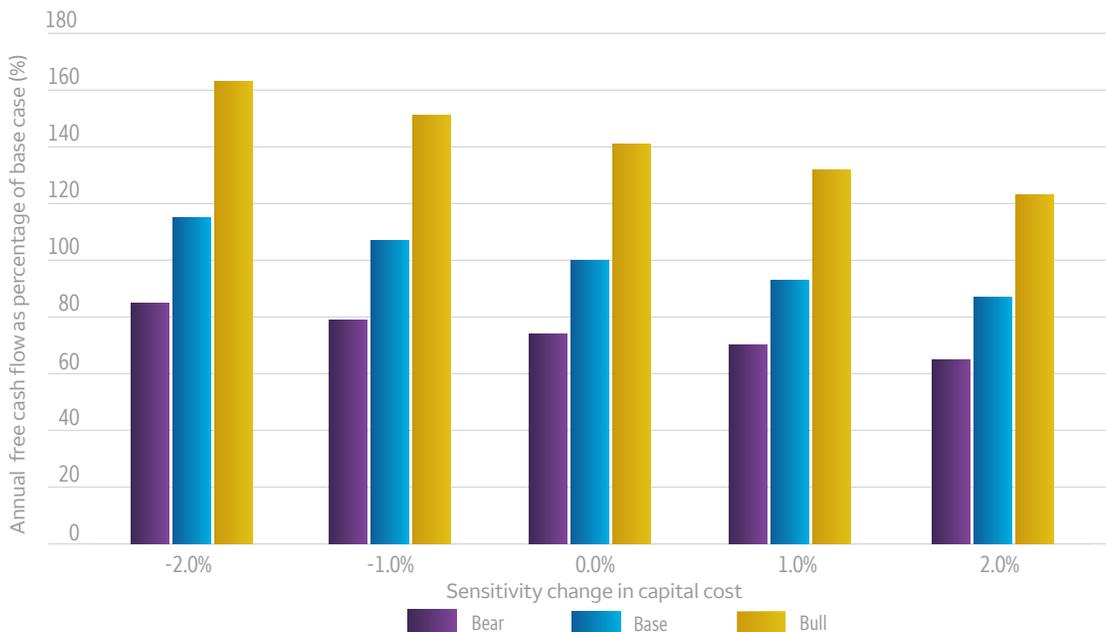


Source: WFAM

Increased business risk, expressed through higher costs of capital, also have a material impact. We capture these by assessing stock and bond values under a range of capital costs.

- New policies, new technologies, and a changing competitive environment increase risk and required return.
- Firm value is very sensitive to modest changes in capital cost. The base case's value declines about 15% with a 2% increase in capital cost. The bull case's value also declines roughly 15% with a 2% increase in capital cost, offsetting roughly half the value of its excess cash generation compared with the base case's.

Modest increases in capital costs drive sharp reductions in firm value



Source: WFAM

Nonetheless, BWA fares well in our analysis relative to most of its competitors. The company’s currently strong financial profile, deliberate efforts to adapt to new markets, and robust relationships with automakers help protect its fundamentals. For the foreseeable future, we expect BWA to generate positive, albeit reduced, free cash. We also expect its credit profile to remain solidly investment grade for the next several years at least.

BWA’s credit profile is stronger than many competitors’
(US\$000 except as indicated, 12 months that ended June 30, 2019)

	Magna	Borg	Schaeffler	Valeo*
Revenue	40,173	10,182	14,366	19,405
EBITDA	4,257	1,687	2,040	2,394
Total debt	5,306	2,162	3,670	5,566
Cash and equivalents	769	916	767	2,411
EBITDA margin	11%	17%	14%	12%
EBITDA/interest expense	15.5	12.9	5.1	5.0
Debt/EBITDA	1.2	1.3	1.8	2.3

Source: WFAM, company materials (*estimated)

Moreover, we expect ICEs—by far BWA’s largest market today—to remain an important part of the vehicle mix in even the most disruptive climate outcomes. In a recession, for example, momentum around climate policy, technology, and other innovations could slow significantly. EV share growth could also face political pressure if it threatens too many jobs. Indeed, consulting firm AlixPartners, quoted in Bloomberg News⁵, says it takes 40% fewer hours to assemble an electric motor and battery than it takes to build a traditional ICE and transmission. While OEMs transitioning into EVs could unlock valuable new markets, it could also lead to losses if consumer demand falters or if subsidies disappear too quickly.

We believe BWA is taking a measured approach to electrification. The company is diversifying its exposure across auto technologies and transitioning gradually into electrification. In our view, BWA offers a lower-risk investment proposition than others in its field that focus exclusively on ICEs or exclusively on EVs.



We are cautious toward traditional powertrain suppliers as EVs and other new autos require fewer and lower-cost components than do traditional ICEs. By 2030, total earnings before interest and taxes (EBIT) from the global powertrain supply business could decrease by more than half to around \$10 billion from over \$20 billion today. Some suppliers may offset this decline by providing parts for hybrids and battery electric vehicles (BEVs). However, we estimate that this profit pool will generate less than \$5 billion of EBIT. All-electric EV products are more commoditized (40% of the manufacturing cost of an electric car is for the battery), and therefore, overall profitability will be squeezed. Ten years may seem a long way out, but long-term bond investors must question the refinancing risk in this sector. This trend is already relevant for automakers’ purchase decisions given three-year product design and seven-year life of car platforms.

5. “They Don’t Need Us Anymore”: Auto Workers Fear Electric Unrest, Bloomberg News, September 2019

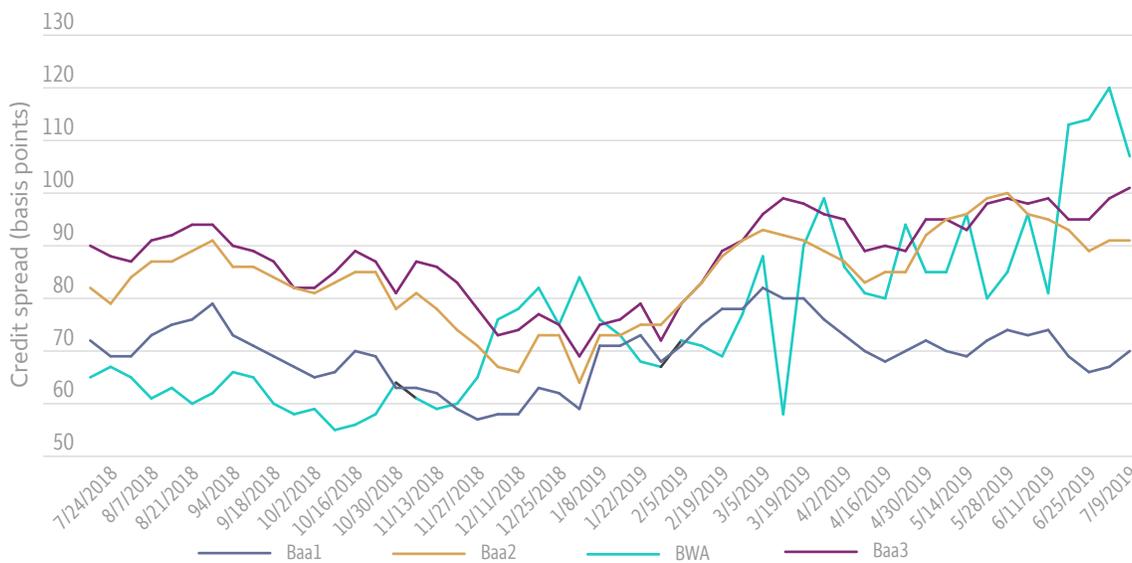
The market's reaction has been consistent with our analysis

Credit insights

- The slope of BWA's credit curve, between 5- and 30-year maturities, has steepened much more than those of other firms across investment-grade credit-rating categories. Steep curves generally reflect expectations that risk will increase over time.
- This steepening coincided with VW's diesel scandal, the rise of EV growth expectations, and strategic repositioning by automakers and suppliers.
- We believe these factors—combined with macroeconomic-, tariff-, and commodity-driven risks—contributed to steepening in BWA's credit curve.

BWA's credit curve has steepened sharply versus other corporate issuers

The differential between BWA's 5- and 30-year credit spreads increased far more than firms in the Baa1, Baa2, and Baa3 categories during the year that ended August 1, 2019.

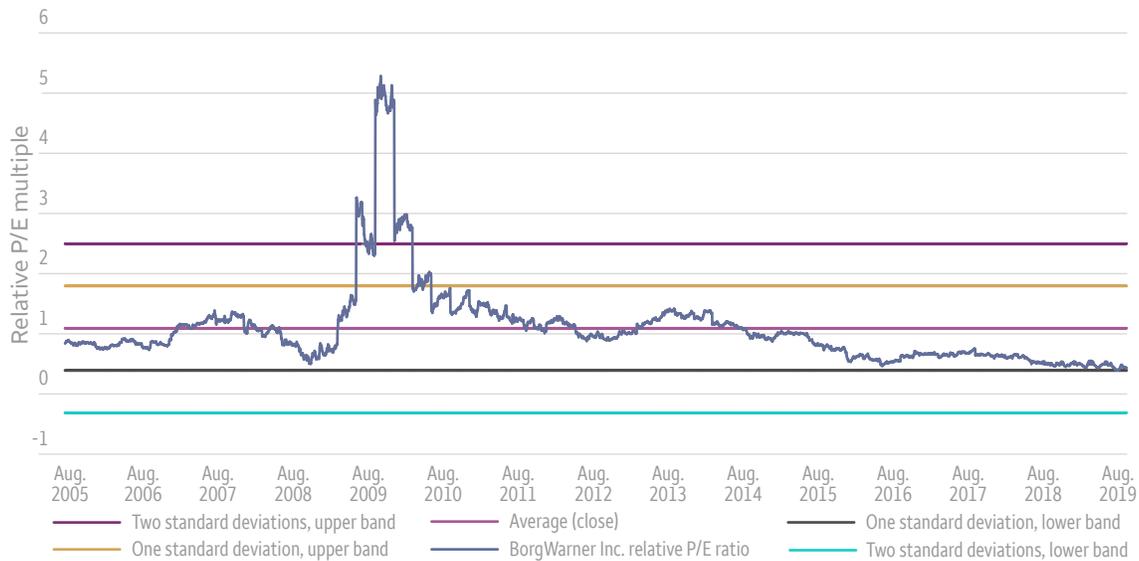


Source: Bloomberg and Moody's

Equity insights

- As of October 2019, BWA's shares were trading at lower multiples relative to the S&P 500 Index than they were during the Great Financial Crisis and during the prior industry downturn in 2006. We should note BWA's shares have been trading somewhat above other precrisis valuation multiples like enterprise value to sales, showing potential for more price sensitivity to risk aversion.
- As in credit, shares' down-trade has corresponded closely with an increasing focus on climate risks, as well as the rise in macroeconomic and commodity concerns.

BWA's shares now trade below precrisis trough multiples



Source: Bloomberg

Phase 3: Evaluate alternative cases with low probability and high severity

Thus far, we've summarized the first two phases of our process: creating an outlook for the OEM and supplier industries and applying this outlook to analysts' forecasts and valuations. The third and final step is to assess alternative cases that can't be easily captured by forecasts but meaningfully affect our investment view. The number of possible outcomes in this category is of course too great to fully assess. We focus on outcomes that appear most consequential for security value, both positive and negative.

Let's return to BWA's example.

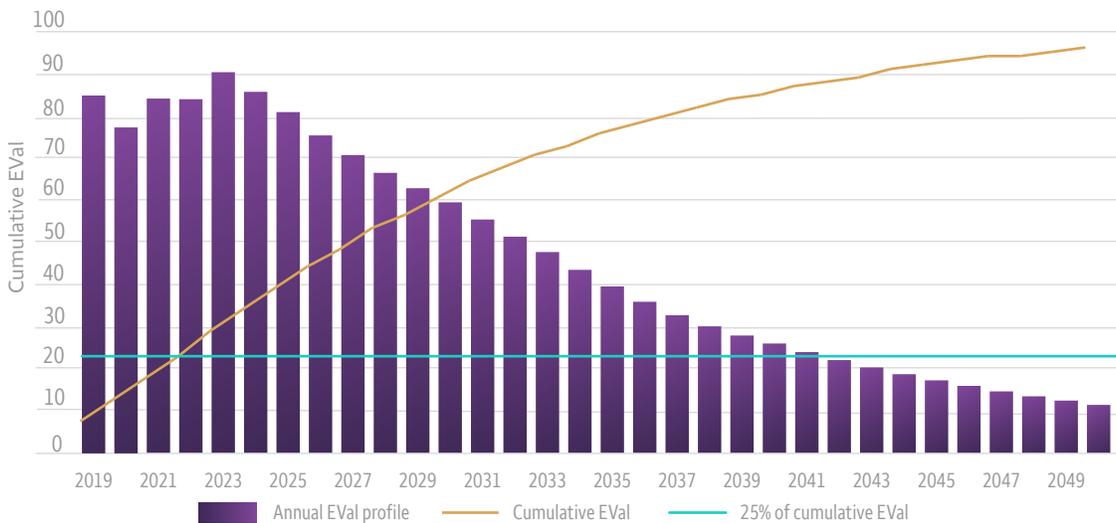
Exceptionally positive alternative cases generally require major improvement in OEM economics

- It's possible that electrification will deliver extremely valuable opportunities for firms like BWA to supply new technologies and products to OEMs.
- However, automakers are careful to avoid relying too heavily on any one supplier.
- Moreover, suppliers don't currently have much pricing power. OEMs are in too weak of a financial position to allow suppliers additional profitability. OEMs' ongoing consolidation; increased scale; and the ability, if advantageous, to produce parts themselves all challenge BWA's ability to achieve major increases in profitability.
- BWA and other tier-one suppliers have dominated distribution channels and relationships with the major automakers, which is positive. However, these suppliers may struggle to innovate as quickly as technology-focused new entrants that possess greater electrification and AV expertise.

Exceptionally negative alternative cases, in contrast, are possible if present trends continue

- The industry may transition away from ICEs in a more rapid and disruptive fashion than the market seems to anticipate. IHS Markit, quoted in Bloomberg⁵, predicts the introduction of new gas-powered engine families will drop to zero in 2022, down from nearly 70 in 2011, as automakers shift spending to electric propulsion. The market for a wide range of parts used in ICE vehicles—such as mufflers, fuel tanks, and transmissions—may shrink between 6% and 20% by 2025, according to a study from consulting firm Deloitte.
- Investors may have reduced visibility into primary drivers of suppliers’ long-term performance. Existing order books generally extend only a few years out. After this, confidence in how much cash suppliers can generate diminishes quickly. Reduced visibility could weigh heavily on suppliers’ security values.
- Despite this, the value of post-2023 cash flow now accounts for about 75% of investment bank enterprise value estimates, according to our analysis. The chart below illustrates. Further loss of confidence in suppliers’ longer-term competitiveness could have severely negative consequences for today’s stock and bond prices. Failure to adapt could greatly reduce the amount investors are willing to pay today for longer-term cash flow.
- We’ve seen this value collapse precipitously in other cases, including smaller retailers and high-cost energy producers. We’ve also seen it in more financially distressed auto parts suppliers.
- Too much focus on healthy near-term leverage and too little focus on longer-term, sustainable asset value has caused many negative shocks in corporate debt markets in the past.

>75% of market-implied enterprise value (EVal) derives from post-2023 cash flow



Sources: Bloomberg and WFAM (data as of September 2019)

5. “They Don’t Need Us Anymore”: Auto Workers Fear Electric Unrest, Bloomberg News, September 2019

Conclusion

BWA's example provides an excellent summary of our conclusions on how climate risks are likely to affect the OEMs and suppliers. In the near term, four factors are likely to tighten profit margins and increase capital expenditures:

- The auto sector's approaching cyclical inflection
- Heightened concerns about the physical effects of climate change
- A less forgiving regulatory environment
- And, in response, a quickened pace of technology change

Over time, a more dynamic competitive environment marked by more rapid technology innovation would reduce performance visibility and require higher costs of capital. Together these prospects put downward pressure on forecasts, at least for now. Further, we're assessing longer-term opportunities in the auto sector with more caution and with a broader range of potential outcomes. Many of these fall outside conventional forecasts and require specialized analysis.

We see advantages in auto and parts supplier companies that demonstrate strong awareness of climate risks, strategic consistency, partnerships boosting technology leadership, and financial flexibility to capitalize on the transitional environment. We believe these advantages allow firms to better manage policy and technology risks. Critically, they also reduce inevitable reputational and political risks as expectations rise around firms' commitment to containing climate change.

This marks our first in-depth report exploring the sector-specific implications of climate change. WFAM's Climate Change Working Group and sector analysts will continue evaluating climate's impact on global industries using a consistent process. Look for our next piece, as we continue illustrating how our interdisciplinary mix of top-down and bottom-up research seeks to uncover important climate-related market insights.

We want to help clients build for successful outcomes, defend portfolios against uncertainty, and create long-term financial well-being. To learn more, investment professionals can contact us:

- To reach our U.S.-based investment professionals, contact your existing client relations director, or contact us at WFAMInstitutional@wellsfargo.com.
- To reach our U.S.-based intermediary sales professionals, contact your dedicated regional director, or call us at 1-888-877-9275.
- To reach our U.S.-based retirement professionals, contact Nathaniel Miles, head of Retirement at Wells Fargo Asset Management, at nathaniel.s.miles@wellsfargo.com.
- To discuss environmental, social, and governance (ESG) investing solutions, contact Hannah Skeates, global head of ESG at Wells Fargo Asset Management, at hannah.skeates@wellsfargo.com.

CFA® and Chartered Financial Analyst® are trademarks owned by CFA Institute.

The views expressed and any forward-looking statements are as of December 1, 2019, and are those of Tom Lyons, head of Climate Change Working Group, senior portfolio analyst; Garth Newport, CFA, associate portfolio manager; Ambreesh Bansal, CFA, senior fixed income analyst; David Moon, senior fixed income analyst; Isaac Khurgel, investment strategist and/or Wells Fargo Asset Management. The information and statistics in this report have been obtained from sources we believe to be reliable but are not guaranteed by us to be accurate or complete. Any and all earnings, projections, and estimates assume certain conditions and industry developments, which are subject to change. The opinions stated are those of the author and are not intended to be used as investment advice. Discussions of individual securities, or the markets generally, or any Wells Fargo Fund are not intended as individual recommendations. The views and any forward-looking statements are subject to change at any time in response to changing circumstances in the market and are not intended to predict or guarantee the future performance of any individual security, market sector or the markets generally, or any mutual fund. Wells Fargo Asset Management disclaims any obligation to publicly update or revise any views expressed or forward-looking statements.

Stock values fluctuate in response to the activities of individual companies and general market and economic conditions. Bond values fluctuate in response to the financial condition of individual issuers, general market and economic conditions, and changes in interest rates. Changes in market conditions and government policies may lead to periods of heightened volatility in the bond market and reduced liquidity for certain bonds held by the fund. In general, when interest rates rise, bond values fall and investors may lose principal value. Interest rate changes and their impact on the fund and its share price can be sudden and unpredictable. Investing in environmental, social, and governance (ESG) carries the risk that, under certain market conditions, the investments may underperform products that invest in a broader array of investments. In addition, some ESG investments may be dependent on government tax incentives and subsidies and on political support for certain environmental technologies and companies. The ESG sector also may have challenges such as a limited number of issuers and liquidity in the market, including a robust secondary market. Investing primarily in responsible investments carries the risk that, under certain market conditions, an investment may underperform funds that do not use a responsible investment strategy.

Wells Fargo Asset Management (WFAM) is the trade name for certain investment advisory/management firms owned by Wells Fargo & Company. These firms include but are not limited to Wells Capital Management Incorporated and Wells Fargo Funds Management, LLC. Certain products managed by WFAM entities are distributed by Wells Fargo Funds Distributor, LLC (a broker-dealer and Member FINRA).

FOR INVESTMENT PROFESSIONAL USE ONLY—NOT FOR USE WITH THE RETAIL PUBLIC

INVESTMENT PRODUCTS: NOT FDIC INSURED ▪ NO BANK GUARANTEE ▪ MAY LOSE VALUE