AS TECH TRANSFORMS AUTO, DEALS ARE BOOMING

By Georg Keienburg, Christoph Gauger, Jens Kengelbach, Dominik Degen, and Pascal Bruckner

Although overall M&A activity may be stagnant, the auto industry is a global dealmaking bright spot. Record mergers, acquisitions, and investment activity attest to the magnitude of the technological and societal changes transforming the business.

Auto deals remained strong in the first half of 2019 after hitting a high of $82 billion in 2018, more than twice the industry's average deal value from 2010 to 2017. Noteworthy deals from the past 18 months include German car parts maker ZF Friedrichshafen's purchase of Wabco Holdings for $7 billion, to gain access to Wabco's semi-autonomous truck expertise. And Calsonic Kansei, which is owned by US-based private equity firm KKR, paid $6.5 billion for Fiat Chrysler's Magneti Marelli unit in a transaction that made Calsonic the seventh-largest independent car parts supplier in the world. Four trends are fueling the activity:

- Automakers and suppliers are using deals as a shortcut to innovation, scale, and growth.
- Traditional companies looking to expand into new products and services are competing—and partnering—with investor-backed tech firms looking for deals to scale up their businesses.
- Traditional automakers and suppliers are selling or spinning off assets that don't fit their strategy for the future.
- Activist shareholders looking for returns are prodding companies to make changes.

Auto companies must keep abreast of the dealmaking landscape to make the most of those trends. Otherwise, they could miss opportunities to improve their strategic advantages through targeted investments, acquisitions, or partnerships, or to divest legacy businesses.

A Strong Market for Auto Deals

Self-driving cars, alternative powertrains, and the shift toward mobility as a service are altering how the industry operates and

how companies in it will turn a profit. Leading automakers and suppliers are being challenged by an influx of new and well-funded entrants, tech giants, venture capital firms, and activist investors.

In the first half of 2019, the value of auto deals hit $45 billion, close to deal value in the first half of 2018. (See Exhibit 1.) In the same period, deal volume reached 390, compared to 479 in the first half of 2018. For the full year ending December 31, deal volume increased slightly, to 969 transactions, up from 960 in 2017.

Strong auto industry deal activity bucked overall M&A trends. Worldwide M&A activity fell in 2018 because of volatility in equity capital markets, decreasing valuations, and lingering macroeconomic anxieties, before stabilizing in the first half of 2019. In 2018, deal volume fell 4%, but total deal values rose 6%, primarily because of larger deals that were announced early in the year.

Auto deals aren't isolated to a single region. In the first half of 2019, companies in Europe and in Asia-Pacific, including Japan, each accounted for 36% of all deals, followed by the Americas (27%) and the rest of the world (1%). Transactions involving Europe-based companies attracted the most money, accounting for 53% of global auto M&A deal value, followed by Asia-Pacific (25%) and the Americas (22%).

Auto M&A activity in the Asia-Pacific region has grown substantially in the past two decades, especially in China. The country's booming auto industry coupled with the negative effects of the global recession on the US and European auto industries pushed the region's share of deal value from an annual average of 12% from 2000 to 2009 to about 38% from 2010 to June 2019.

What's Behind the Deal Boom?

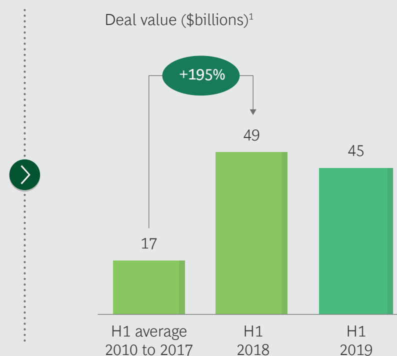
In a period of unprecedented transformation, auto companies are using deals to jump-start initiatives and gain access to technology, divest assets that no longer make sense for their strategies, and stay a step ahead of activist shareholders.

Automakers and suppliers use deals to fast-track innovation. As new mobility services and innovations remake the industry, deals help companies acquire technology and launch new business models faster than they could on their own. Companies also use deals to build in-house know-how and capabilities, and to "buy" the people with the digital skills they need

EXHIBIT 1 | Global Automotive Deal Activity Remains Strong

M&A deal values and volume increased substantially in 2018...

...and remained strong in the first half of 2019



Sources: Refinitiv; BCG analysis.
Note: Analysis is based on 8,173 M&A deals involving automotive acquirers, targets, and sellers announced from 2010 to June 30, 2019.
[1]Deal value includes assumed liabilities; figures have been rounded.

to develop new mobility concepts and services such as autonomous and electric vehicles.

As a result, tech companies have become a primary deal target, growing to 18.4% of total auto industry deals in the first half of 2019 from 8.5% in 2010, according to our analysis. In the first half of 2019, the value of auto-tech deals rose to 12.5% of total auto-deal value during the period, from about 8% in 2010. (See Exhibit 2.)

In 2018, Asia-Pacific-based companies were involved in half of all auto-tech M&A, with the remainder evenly split between Europe and the Americas.

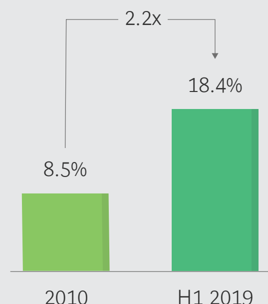
In the past 18 months, major auto players have been some of the busiest acquirers. Through its Smart Mobility subsidiary, Ford bought two transportation software startups—Autonomic for an undisclosed amount and TransLoc for $60 million—to expand its transportation and connected-car services. The French auto supplier Faurecia bought Clarion Electronics and Parrot Automotive in 2018 and in early 2019 combined them with a previous acquisition to form a business unit that makes dashboard electronics and low-speed adaptive driver assistance systems (ADAS).

In addition to outright acquisitions, car companies have formed alliances and joint ventures with established and new players in order to share transformation costs. In the beginning of 2019, a division of BAIC, China's state-owned automotive company, partnered with Didi Chuxing, the country's largest ride-hailing startup, on a joint venture to develop next-generation connected-car systems, including electric and hybrid vehicles and artificial intelligence. Earlier, BMW and Daimler merged their urban mobility services and pledged to invest more than $1 billion in the joint venture. Ford and Volkswagen formed a global alliance for autonomous and electric vehicles and mobility services, beginning with building custom trucks and vans.

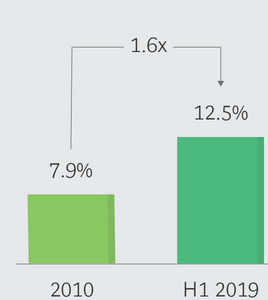
Beyond acquisitions and alliances, companies have launched venture funds to invest in technology innovation, either on their own or with partners. For example, Toyota teamed up with SoftBank on the Monet Technologies joint venture to invest in on-demand mobility and data analysis services and autonomous-vehicle mobility as a service. In addition, Toyota bought a $1 billion stake in Grab and will collaborate with the Asia-Pacific ride-hailing service through its mobility service platform division, which is working on such innovations as use-based car insurance and predictive vehicle maintenance. Toyota also created a sizable venture fund to invest in autonomous vehicle and robotic technology startups.

Exhibit 2 | Auto-Tech Deals Have More Than Doubled Since 2010

Portion of industry deal volume represented by auto-tech deals



Portion of industry deal value represented by auto-tech deals



Sources: Refinitiv; BCG analysis.
Note: Data analysis based on 3,284 M&A deals involving automotive acquirers announced from 2010 to H1 2019, including 367 that were tech-related.

Not all company-backed startups work out. In the first half of 2019, auto companies scaled back or shuttered several ventures. They include Ford, which closed Chariot, a shuttlebus ridesharing service, and GM, which ended its Maven car-sharing service in eight cities.

Established players compete with newcomers for deals. Historically, auto manufacturers, suppliers, and other industry incumbents vied mainly with one another for deals to acquire the latest technology or other attractive assets. Today, they compete for such deals with new entrants, some of which have higher market values than their own. (See Exhibit 3.)

Of today's most valuable mobility industry players, five are tech companies. One of them is the Waymo self-driving car division of Google parent company Alphabet, which analysts estimate has a higher valuation than Toyota, the world's largest automaker by market capitalization.

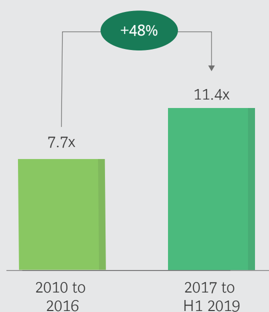
Auto companies that are on the hunt for the best technologies and capabilities compete with tech companies that are on the lookout for the same targets. These competitors, which are often fast-moving and startup-like, differ from traditional auto players in many ways, including in their business models, cultures, organizational structure and ways of working, and employee compensation.

New players and increased competition have changed the nature of auto industry deals. Consider, for example, valuing a mobility company, which might not have a multiyear track record, be profitable, or have gotten past the idea stage. Such valuations call for a different set of KPIs, including the capabilities and track record of the founder or startup team, the market potential of the product or service that's being developed, and the speed at which the firm could scale up a pilot into a sizable commercial offering.

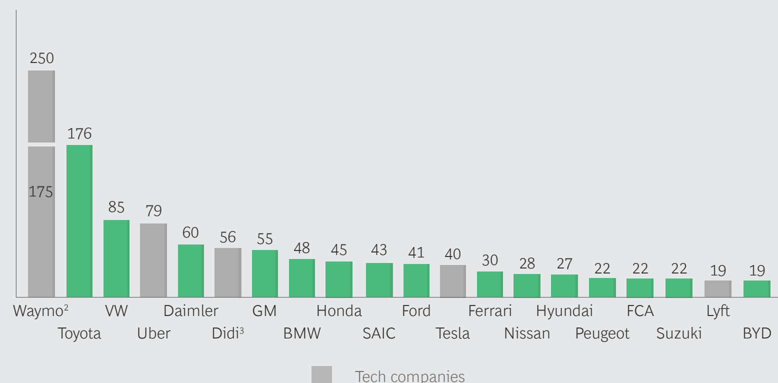
Venture capital and private equity firms are some of the newcomers zeroing in on tech deals, in particular deals for mobility as a service, e-commerce players, autonomous driving technology, drones, and concepts for flying cars. SoftBank, through its original $100 billion Vision Fund, has acquired stakes in a broad array of automotive startups. The company has stakes in ride-hailing companies such as Uber, Didi, and Grab; Uber's Advanced Technologies

EXHIBIT 3 | Auto-Tech Deals Have Led to Higher Industry Multiples and Equity Values

Automotive deal multiples



Top 20 mobility industry players by equity value



Sources: Refinitiv; S&P Capital IQ; Crunchbase; Jefferies; Morgan Stanley; BCG analysis.
[1]Equity value includes preferred equity; financial data as of June 30, 2019.
[2]From brokers' estimates.
[3]Funding round of December 20, 2017.

division, which is working on autonomous vehicle technology; GM's Cruise Automation self-driving-car unit; and Auto1 Group, an auto e-commerce franchise. Venture investors such as Kleiner Perkins and Sequoia Capital are pursuing similar deals. Tech giants such as Google and Apple have invested in companies making infotainment systems, high-definition mapping, self-driving cars, and other automotive technology.

Initially, auto manufacturers opted to acquire tech firms. Recently, more of them have begun to partner with other investors. One example is Toyota's $500 million follow-on investment in Uber; the deal valued the ride-hailing giant at $72 billion, which is greater than the market capitalization of established auto companies such as Ford and GM.

Teaming up with outside investors gives automakers a wider funding reach and limits their own investment risk. It's also external validation of their strategies. SoftBank's initial $2.25 billion investment in GM's Cruise in May 2018 valued the business at $11.5 billion, according to public sources, showing the world that leading investors would bet real money on autonomous vehicle technology. A year later, Cruise's estimated value had climbed to $19 billion, representing about a fifth of GM's overall equity value.

Companies are divesting to raise funds for transformation. In addition to acquiring and investing, auto players are taking advantage of attractive valuations to sell or spin off legacy combustion-engine businesses and other assets in order to fund other initiatives and strengthen their balance sheets.

High deal multiples make it a good time to divest, because auto companies can get more for the assets they're selling. Since 2017, auto assets that have been sold have garnered an average of around 11 times earnings before interest, tax, depreciation, and amortization (EBITDA). That's a substantial increase from 2010 to 2016, when multiples were about eight times EBITDA. The difference can be attributed at least in part to the larger share of deals involving automotive tech companies, which have pushed up values.

At current multiples, management teams and boards are reviewing product portfolios to determine if they are still in the best position to generate the most value out of the assets or if those holdings would be better off under a different owner. In late 2018, Johnson Controls International sold its power solutions business, which makes lead-acid batteries for cars and light trucks, for $13.2 billion to a group led by investment firm Brookfield Asset Management. At the time, Johnson Controls described the sale as a "significant milestone" in its efforts to reorganize and streamline its portfolio. In another example of the trend, Cooper Standard Automotive sold its antivibration systems operations in France and India to German auto parts maker Continental, saying at the time that divesting would give the product line the "critical focus necessary to expand the business globally."

In some cases, a sale or initial public offering of a subsidiary generates fresh funds that a company can sink into a new venture. Continental has announced plans for a partial public offering by 2020 of its $5.6 billion powertrain division, which makes components for combustion-engine and electric vehicles. According to the company, a separate listing would help the powertrain division raise money and allow Continental to reorganize to become more agile.

Other companies have spun off legacy combustion-engine assets to streamline their products. Such a move allows the former parent company to focus on its remaining core assets while giving existing shareholders a stake in the new entity. In 2018, Honeywell International spun off its transportation systems division, which makes car and truck turbochargers and compressors, into a separate public company called Garrett Motion as part of a broad plan to simplify operations. In the same period, Swedish auto safety supplier Autoliv, supported by activist investor Cevian Capital, spun off its au-

tomotive safety electronics division into a $1 billion public company called Veoneer.

Automakers are joining suppliers to reshuffle corporate portfolios. Volkswagen, for instance, rebranded its truck and bus division Traton in advance of a June 2019 IPO intended to give the unit access to fresh capital and VW funds to reinvest in current and future endeavors. The automaker also moved its components business into a separate unit that serves all brands in the group.

Activist shareholders are targeting auto companies. As automakers and new mobility players compete for the best technology and talent, they have been targeted by activist investors that buy stakes and then launch shareholder resolutions to advance their own agendas. In 2018, activists targeted Hyundai, GM, Tesla, and Horizon Global, to name a few.

Activists may be emboldened by their access to capital, and their investments have more than doubled since 2016 as a result. They have conducted 26 auto-industry campaigns so far this year, on top of 53 in 2018. (See Exhibit 4.)

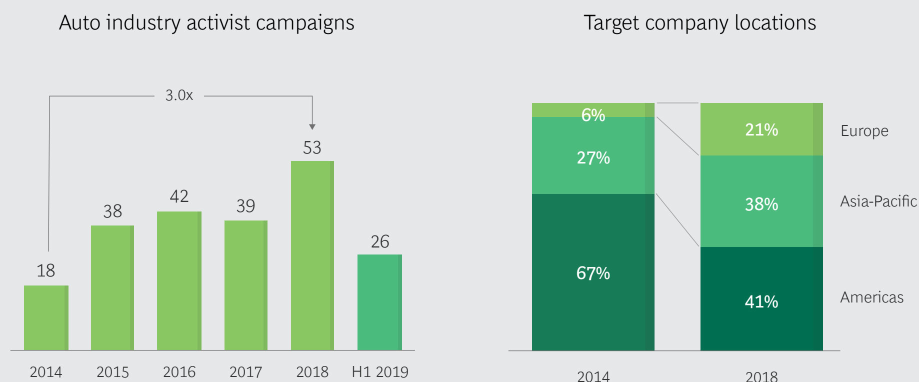
Five year ago, activists' campaigns targeted mostly US companies, but they have since gone global. The percentage of campaigns targeting companies in the Americas dropped from 67% to 41%, with the remainder focused on Asia-Pacific (38%) and Europe (21%).

According to BCG analysis, about one-third of all activist demands are M&A-related, a strategy we believe is likely to continue to drive auto deals. Shareholder activists use mergers or acquisitions to go after companies' existing corporate portfolios in order to fast-track changes that could have significant financial impact. In addition to Cevian Capital, Elliott Management is one of the most active activist investors in the automotive industry. In 2018, Elliott bought a stake in British engineering company GKN and subsequently supported the company's $11 billion takeover by turnaround specialist Melrose Industries.

How Auto Companies and Suppliers Can Respond

As the industry transforms itself to build and sell new mobility products and services, it will continue to attract new players, money, and deals. In fact, there's little doubt that auto deals will remain strong for the foreseeable future. Automakers and suppliers and other traditional industry players can take the following steps to make the most of these business dynamics.

EXHIBIT 4 | Activists Have Targeted More Auto Companies in More Places



Sources: Activist Insight; BCG analysis.
Note: Analysis based on 216 activist campaigns from 2014 to H1 2019 with target companies in automobiles, auto parts, recreational vehicles, trucks, and other vehicle manufacturing; auto dealerships; and parts stores and wholesalers.

- **Be clear on portfolio strategy and capital allocation.** Companies must decide what role they can and want to play in the future auto and mobility industry value chain. After determining their strategic direction, they should identify gaps in their assets and capabilities and assess the best way to fill them, whether internally or through a merger or acquisition. Such a review can also uncover assets that aren't aligned with future goals and could be divested to fund the journey.

- **Take a different approach to tech deals.** Tech companies are a breed unto themselves, with their own culture and working environment. Consequently, auto manufacturers can't approach a tech deal the same way they would traditional M&A. And because tech companies are popular acquisition targets, they attract more interest and higher valuations. Auto players must offer a clear value proposition in order to convince target companies to join forces and to win over the target's management team. To do that, auto companies need to understand the target's technology, business model, and culture. They need a compelling vision for how the parties will collaborate in the future, including how the collaboration will be structured, what activities will or won't be integrated, and how they will use the auto company's existing size and global reach to scale and commercialize new products and services. In addition, tech company founders expect a high degree of entrepreneurial freedom after an investment or buyout; giving them that is often vital for retaining top talent.

- **Set up an ecosystem for success.** As auto companies do different kinds of deals and more of them, their already complicated ecosystems become more complex. Because of the new economics of the industry, including higher valuations for tech companies, auto companies need to consider alternatives to outright acquisitions. It is often faster, less expensive, and less risky to form partnerships or to invest in a startup to gain access to technology or customers. Companies can also incubate ideas for new businesses in-house if doing so would cost less and the resources are available.

Tracking and managing all those moving parts isn't easy, but it could be the difference between a strategy that works and one that doesn't. Companies must successfully integrate M&A targets. They must structure joint ventures and partnerships so that all partners benefit. They must manage minority investments in startups and tech companies so collaboration and innovation thrive. And they must plan for the fact that in a fast-paced, tech-driven industry, not all investments succeed. To maximize their wins and minimize their losses, companies must continuously review their portfolios, joint ventures, and partnerships as well as acquisition opportunities. They must also make timely decisions about shedding nonperforming assets to free up capital for growth.

AUTO DEALS SHOW no signs of letting up. Legacy auto companies need to keep tabs on financing and investment trends and on new players in order to update their strategies and make changes of their own volition. Otherwise, they could find themselves missing lucrative opportunities or, worse, with activist shareholders breathing down their necks.

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