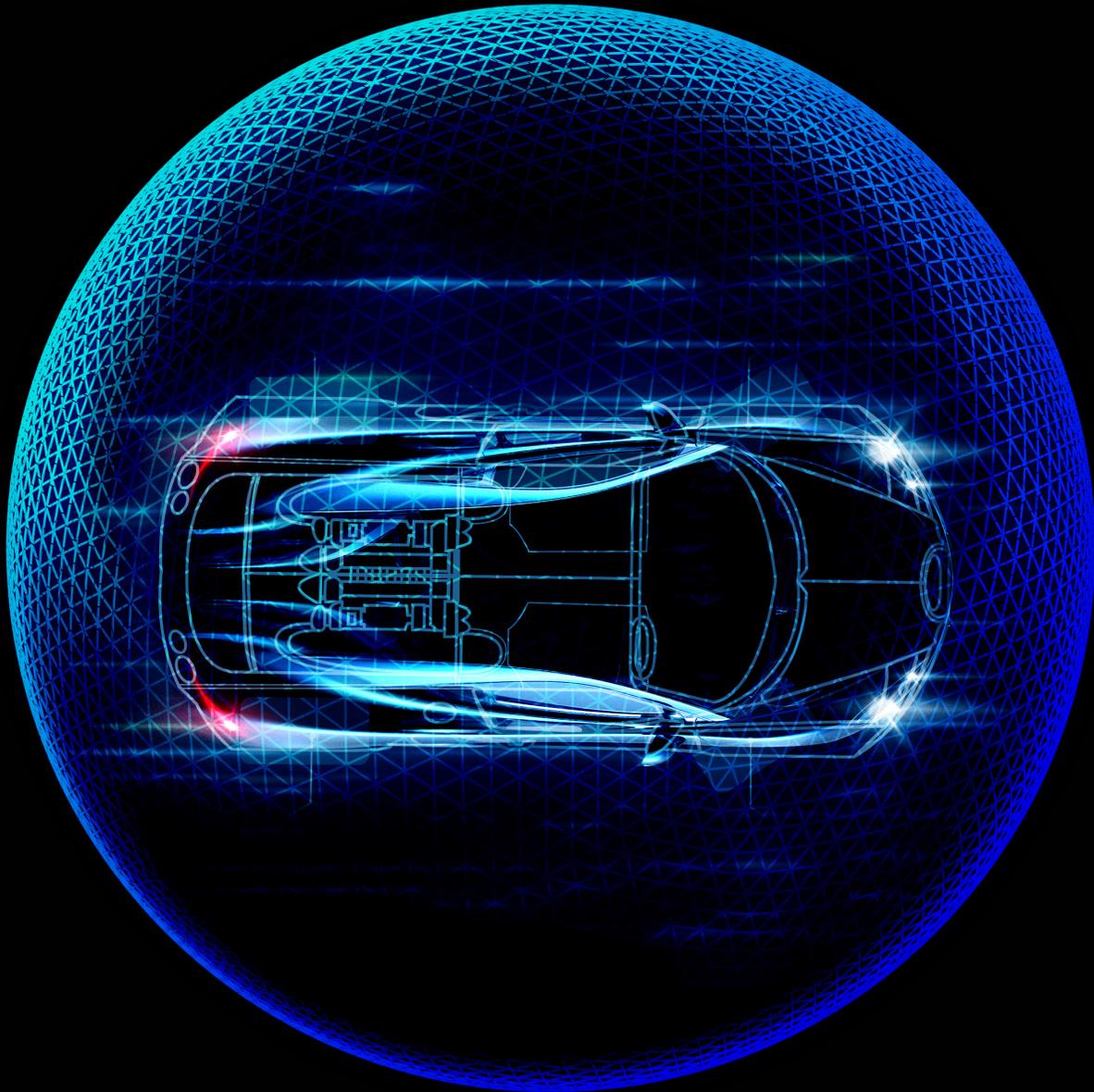


Deloitte.



Sitting in the driver's seat

OEM captive finance companies are positioned to disrupt the automotive insurance market

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Future of mobility: Transforming the automotive ecosystem

Automotive original equipment manufacturers (OEMs) and their captive finance companies are in a unique position to disrupt the motor vehicle insurance market. As OEMs consider the future of mobility (FOM) and its impact on new business models, products, and services, expanding their offerings to include vehicle insurance makes sense. What trends are generating automotive captives' interest in offering insurance? What should they do to act on this opportunity?

Converging forces are transforming the way people and goods move about, leading to a new global automotive ecosystem:

- **Powertrain technologies** are changing how OEMs design, develop, and build vehicles. Battery, hydrogen, and fuel-cell electric vehicles offer higher energy efficiency, lower emissions, and greater energy diversity than traditional engines; many players are innovating in this space.
 - **Stronger and lighter materials** are continuing to decrease vehicle cost and weight while improving passenger safety.
 - **Advances in telematics/connected vehicles** are a huge upside in the expanding Internet of Things (IoT). New vehicles are being outfitted with vehicle-to-infrastructure (V2I), vehicle-to-vehicle (V2V), and communications technologies, so every car can know precisely where every other car is on the road. This may lead to a decrease in frequency and severity of insurable events; it also may enable increased efficiency and reliability in the claim validation process.
 - **Shifts in mobility preferences** are already underway. Perhaps unsurprisingly, younger generations are leading the way toward shared and/or pay-per-use mobility in place of owning a car. According to Deloitte's [global automotive consumer study](#),¹ nearly 50 percent of Gen Y consumers like using a smartphone app for transport and already plan travel so they can multitask.
- Future-state commuters also will look for seamlessly managed, **multimodal transport** from point A to point B (e.g., car > subway > bus/bike/walk) that will be enabled by capabilities and services delivered via a combination of public sector/government and commercial players. A mobility manager will help consumers evaluate options and pick the right choice for their daily travels, requiring a more versatile and bundled product offering.
 - Perhaps the most exciting advancement is **autonomous vehicles (AV)**.² Once thought to be science fiction, some major OEMs and tech companies are in the advanced stages of developing driverless systems. The question is, when and how will AV become more mainstream and widely adopted?

We view this convergence as spawning a future in which different types of vehicles will predominate (see figure 1 on next page). These different future states will coexist, particularly in the United States, with different geographic locations (e.g., rural) and consumer demands making the operating environment more complicated.³

Forecasts suggest that by 2020, 90 percent of new cars will have embedded connectivity, and all new cars will be connected by 2025.⁴ Similarly, 30–40 percent of all US commercial and government vehicles are currently equipped with telematics; it's estimated that this percentage will be closer to 50 percent in a couple of years.⁵

Future states of mobility

Future state 1 looks much like the world today where individuals own and drive their cars. Although continuing the introduction of driver-assist technologies may lead to reduced accidents, the full effects of increased safety and freeing drivers' time are not realized until vehicles are entirely automated.

Future state 2 can be thought of as the Uber and Lyft models, where mobility is consumed as a service (not a product), but there is still a human behind the wheel.

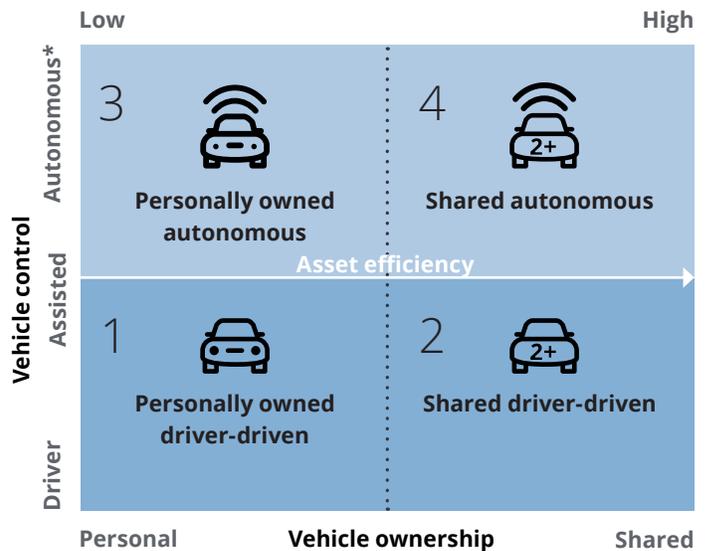
Future state 3 has individuals owning their cars like they do today, but they are no longer responsible for driving them. The use of AVs will significantly change how actuaries model the risk of loss, with driver behavior and claim history becoming decreasingly relevant.

Future state 4, the most revolutionary model, imagines an autonomous service where a driver is no longer necessary. This scenario would result in the proliferation of large fleets and would shift insurance focus from personal liability to commercial insurance that covers catastrophic systems failure.

From a consumer perspective, economic savings is expected to be a key incentive for adopting future states 2, 3, and 4. By our estimation, the cost per mile of vehicle travel is almost \$1 today, including vehicle depreciation, financing, insurance, and fuel, as well as the value of the individual driver's time.⁶ Cost per mile could decrease by nearly two-thirds in future state 4 because of increased asset utilization, reduced fuel consumption, and regained productivity time, among other factors.⁷ The low-cost economics of autonomous driving and shared mobility should

support mainstream adoption, with ride-sharing services such as Uber or Lyft powering the deployment, testing, and adoption of autonomous vehicles. Adoption will likely vary strongly by geography, with autonomous vehicles dominating in urban and suburban areas by 2040.

Figure 1. Converging forces will give rise to the emergence of four future states of mobility, which will exist in parallel with different types of vehicles predominating



* Fully autonomous drive means that the vehicle's central processing unit has full responsibility for controlling its operation and is inherently different from the most advanced form of driver assist. It is demarcated in the figure above with a dotted line. Source: Deloitte Future of Mobility analysis.

As the mix of miles traveled shifts from driver-driven to autonomous, our forecasts estimate an increase in total miles traveled, a decline in overall vehicle sales, and faster shifts in urban centers toward AVs and shared vehicles. The disruptive nature of this transformation will likely result in massive shifts of economic value for automotive ecosystem industries:



- **Automotive:** The decrease in personally owned vehicle sales shifts value to managing the end-to-end mobility experience.



- **Transport:** Seamless, multimodal transportation replaces traditional transportation in urban areas, requiring a multimodal manager to integrate services.



- **Financing:** Shared mobility service opportunities increase but may not offset lower levels of personal loans and leasing.



- **Technology:** Availability of AV hardware, software, and operating systems as well as mobility management technology and services will grow rapidly.



- **Insurance:** Coverage type shifts from pay-as-you-go, to pay-as-you-drive, to pay-how-you-drive, and as we move into autonomous shared mobility, from personal liability to catastrophic systems-failure insurance.

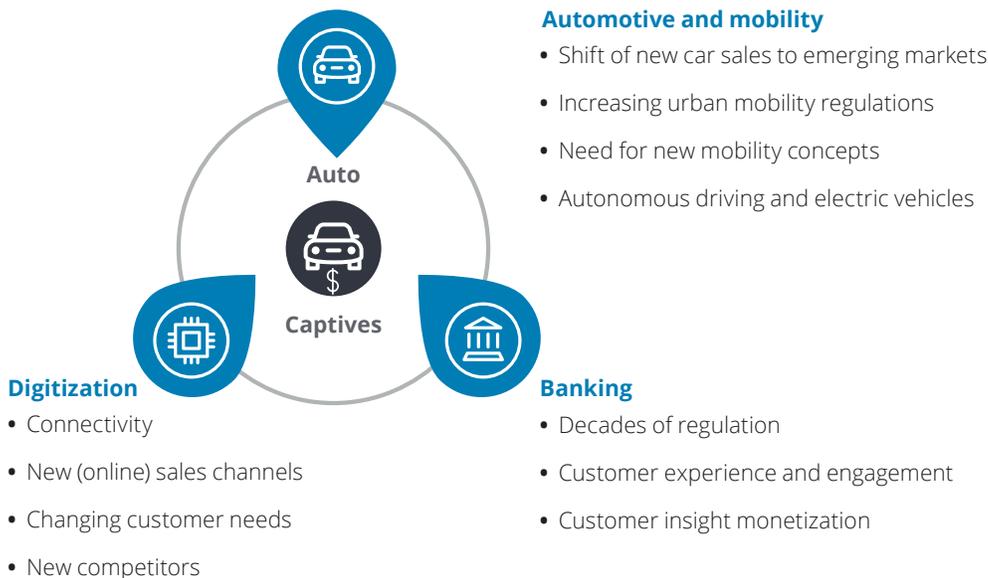
The future of mobility is generating a new future for captives

Captive finance companies, wholly owned subsidiaries of automakers, are a huge force in the auto lending business. In both 2016 and 2017, OEM captives had around 40 percent market share, second only to banks.⁸

For decades, the automotive captive finance business has been quite stable and lucrative for OEMs. Today, however, the status quo is being challenged by FOM, regulatory changes, financing digitalization, and other disruptions (see figure 2). Revenues, market share, brand value—everything OEM captives have built over decades is potentially at risk, or at least is going to change. Altogether, we posit captives may face more industry disruption in the next 10 years than they have in the previous 30.⁹

Given the disruptive impacts that the convergence of consumer, technological, and regulatory factors may have on the captive finance industry, Deloitte conducted a study, *Future of captives: What will be the core businesses of automotive captives in 2030?*¹⁰ to simulate how captives may change in response. The study utilized AI-based, trend-sensing tools using input from mobility analysts, market assessments, auto finance industry experts, geographic considerations, and auto finance executives. Based on this analysis, we identified 140 factors that could influence the future of captive organizations. A workshop with top auto finance executives then helped us determine two critical uncertainties: the fragmentation/concentration of the market, and the extent to which captives still have vehicles (i.e., assets) on their books.

Figure 2. Disruptive forces in the captive finance market



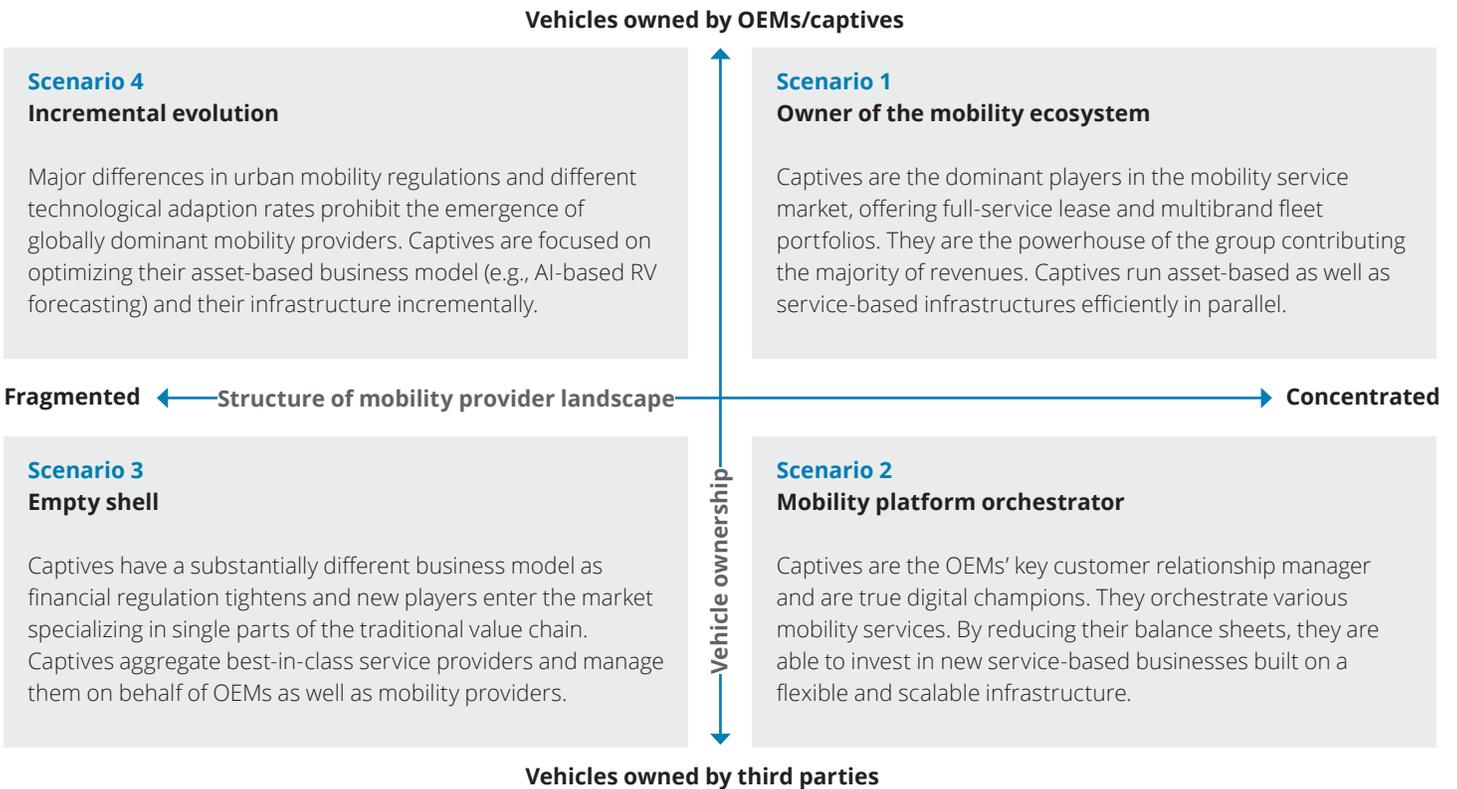
Source: *Future of captives: What will be the core businesses of automotive captives in 2030?*, Deloitte, 2018, <https://www2.deloitte.com/de/de/pages/consumer-industrial-products/articles/future-of-captives.html>.

When we placed the two critical uncertainties on opposing axes, four potential—albeit extreme—strategic scenarios or “states of being” emerged. In all four scenarios, captives had an increased reliance on service-based revenues such as fleet services, insurance, connected services, payments, mobility services, charging, and parking (see figure 3). These four states of being are not mutually exclusive and may coexist in individual geographies and markets.

Within both the future of mobility and the future of captives, disruptions in the mobility ecosystem are expected to affect both the transportation of people and the transportation of goods. As a

result, automotive manufacturers looking to grow future revenues and market share will likely need to offer new products and services that efficiently and cost-effectively meet customers’ changing transportation preferences. For OEM captive finance companies, this likely means progressing beyond traditional offerings of vehicle financing and leasing to provide, for example, fleet management/intermodal mobility packages and short-term rental and car-sharing. Among potential new products to consider: automotive vehicle insurance.

Figure 3. Future scenarios for captives
Four rather extreme, yet plausible, scenarios on potential business models and the role of captives in 2030



Source: *Future of captives: What will be the core businesses of automotive captives in 2030?*, Deloitte, 2018, <https://www2.deloitte.com/de/de/pages/consumer-industrial-products/articles/future-of-captives.html>.

How might the future of mobility reshape the futures of insurance and captive finance?

Implications for automotive insurance

From an insurance perspective, automotive coverage is headed for major change as customers' coverage needs evolve and new insurance models emerge based on shifts in mobility (see figure 4).¹¹

Figure 4. New insurance models are expected to emerge based on shifting stakeholder needs

Future state	Model	Stakeholders	Coverage model	Mostly similar	Mostly new	
Incremental change	Traditional personal auto insurance	Vehicle owner	Individual	Remains similar to today, though likely with more usage-based elements as telematics adoption grows	●	
A world of car-sharing	Fleet (e.g., yellow cab, limo)	Vehicle owner	Commercial	Remains similar to today	●	
	Rental cars	Vehicle owner	Commercial	The growing sophistication of telematics devices, specifically mobile devices, may enable driver-centric liability policies	●	
		Vehicle owner	Individual		●	
	Owner/operator (e.g., Uber, black car)	Vehicle owner	Individual/commercial	Coverage packages configured for ride-sharing services may greatly expand		●
The driverless revolution	Personal autonomous vehicle insurance	Vehicle owner	Individual	Liability is likely to shift to the AV manufacturer, while the owner remains responsible for comprehensive coverage		●
		AV system manufacturer	Commercial			●
Accessible autonomy	Commercial autonomous vehicle insurance	Vehicle owner	Commercial	Commercial fleet owners will require comprehensive policies, while the AV manufacturer will be responsible for liability		●
		AV system manufacturer	Commercial			●

Source: John Matley, Malika Gandhi, Emily Yoo, Bill Jarmuz, and Stefan Peterson, *Insuring the future of mobility: The insurance industry's role in the evolving transportation ecosystem*, Deloitte University Press, 2016, <https://www2.deloitte.com/insights/us/en/focus/future-of-mobility/mobility-ecosystem-future-of-auto-insurance.html?id=us:2el:3dc:dup3160:awa:dup:fom:dcpromo>.

Near-term incremental change is likely to be characterized by the increased use of in-car telematics (the long-distance transfer of computerized information) to understand driver behavior and the move to usage-based or pay-as-you-drive insurance (see sidebar).

Telematics adoption is key to future of usage-based insurance

The combination of increased connectivity and telematics presents a burgeoning opportunity for OEM captives to develop usage-based insurance (UBI) programs over the next decade. The market for telematics adoption and UBI policies is estimated to grow at a CAGR between 35 percent and 50 percent over the next five years (through 2022).¹² Demographic shifts and the openness to UBI policies will drive this expansion: Most Millennials are interested in a UBI policy, and 84 percent rate these policies as a fairer way to price insurance.¹³

There are two general categories of telematics-driven insurance products: Pay-how-you-drive (PHYD) insurance uses driving behavior to assess risk and price premiums. PHYD products are aimed at improving pricing models for drivers who are lower risk than traditional rating models would suggest.¹⁴ Pay-as-you-drive (PAYD) insurance is primarily focused on accurately monitoring mileage driven and pricing policies appropriately based on that mileage. PAYD products range from low-mileage discounts to short-term and on-demand products.¹⁵

For many telematics programs, insurers can define the monitoring period as either provisional (e.g., 30–90 days) or permanent (for the life of the policy). Provisional programs are more common, but permanent programs are increasing as insurers explore the benefits of telematics-driven claims and value-added services such as preventive maintenance alerts, geofencing, and driver curfews,¹⁶ and as the price associated with capturing, transmitting, and storing data comes down.

What is the life span of telematics and UBI programs? Some view them as an interim step to autonomous vehicles. If driverless cars are available to the public within five to seven years, those vehicles could significantly reduce accident rates over today's cars, and the value of leveraging telematics data for insurance will probably go down.

Over the long term, the increasing use of car-sharing and development of fully autonomous vehicles likely will cause traditional personal and commercial auto premiums to shift substantially in four key areas:

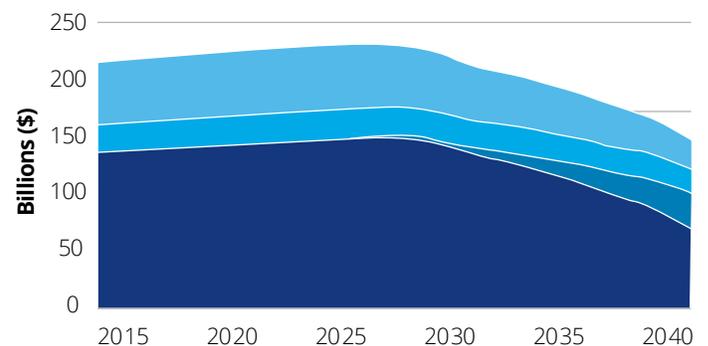
- Advanced vehicle technology will reduce loss frequency but could increase severity.
- The premium mix will move away from traditional auto policies and decline overall (see figure 5).
- Demographic and geographic forces will shift mobility consumption unevenly across each cohort.
- Commercial auto and product liability premiums will become a larger percentage of the market as vehicle ownership and control changes over time.

Figure 5. Premium model outputs—by coverage

Coverages

Traditional liability	Encompasses both personal and commercial lines auto liability for non-AVs. Decreases as vehicles become safer.
AV products liability	Emerges as autonomous vehicles proliferate.
Comprehensive	Largely unchanged, as this coverage is marginally affected by AVs.
Collision	Premiums decline as the frequency of collisions decreases.

Premium need by coverage type



Source: Matley et al., *Insuring the future of mobility: The insurance industry's role in the evolving transportation ecosystem*, Deloitte University Press, 2016, <https://www2.deloitte.com/insights/us/en/focus/future-of-mobility/mobility-ecosystem-future-of-auto-insurance.html?id=us:2el:3dc:dup3160:awa:dup:fom:dcpromo>.

As the prevalence of car-sharing and driverless cars increases, individual/family auto ownership is likely to fall and fleet ownership (by OEMs or rental car companies) is likely to rise; the risk profile will shift from vehicle driver to owner; and the need for new insurance coverage types will emerge. Commercial policy sales may outpace individual sales. Insurers also may need to consider the impact of safer vehicles, new vehicle designs, and new sources of risk and liability on their underwriting models.¹⁷

The financial stakes are high: Private passenger auto insurance totaled \$215 billion in premiums in 2016 (more than one-third of the \$613 billion US property & casualty [P&C] insurance market)¹⁸ and offers considerable future economic value to be captured. Yet, tomorrow's personal automotive insurance market will look quite different than it does today. We project that:

- Individual premiums will continue to grow steadily in the 2020s; however, as car-sharing/ride-sharing and autonomous vehicle adoption expands, the premium mix will likely move away from traditional auto policies and decline overall.
- The confluence of car-sharing/ride-sharing and AVs will ultimately tip premiums toward new models of insurance. These models¹⁹ will account for as much as 80 percent of premium need in the future (roughly \$107 billion), representing approximately half of current personal auto premiums.²⁰

On the commercial insurance side, the sharing economy will generate greater near-term opportunities in underwriting fleet coverage and gap coverage, as individuals choose to use their personal vehicles for ride-sharing. In addition:

- Commercially insured premiums will remain relatively constant over the next four years until the adoption of AV begins. In the longer term, however, these premiums are projected to decrease from approximately \$35 billion in 2016 to about \$25 billion in 2040.²¹
- The rise of AVs will move liability away from the driver/owner to the vehicle manufacturer, which is likely to self-insure product liability rather than purchase traditional commercial coverage. We anticipate that product liability premiums will increase to account for 17 percent of total premiums by 2040.²²
- Given that autonomous technology is likely to be most effective on highways, both in reducing accident frequency and creating operational efficiencies, insurers whose portfolios are predominantly composed of long-haul/interstate miles will likely be impacted sooner.

As FOM progresses toward widespread adoption of fully autonomous/multimodal vehicles, it is expected to propel change along the entire automotive insurance value chain (underwriting and risk management, distribution, claims management, and investing) and spur demand for alternative insurance products and services. Two of these alternatives—self-insurance and bundled coverage—may create market barriers for traditional insurers and open the door to new entrants:

Self-insurance. Autonomous vehicle manufacturers and commercial fleet operators may reach a scale that allows them to self-insure in ways similar to what large transportation and logistics companies do today. Premiums for car-sharing and ride-sharing, personal autonomous, and shared autonomous vehicles are particularly vulnerable.

Bundled coverage. Insurance coverage may be bundled with products or services, such as autonomous vehicle leases, vehicle subscriptions, or car-sharing and ride-sharing fees. Insurers may face challenges reaching end users due to the positioning and product bundles offered by mobility providers and other intermediaries.

Operational complexity also is likely to increase for automotive insurers because they will need to serve new segments and provide new coverage types. For example, an increased focus on commercial lines sales and relationships for shared vehicles and product liability-related coverage is anticipated, making partnerships with intermediaries (e.g., car-sharing services, AV manufacturers)

advantageous versus traditional sales channels. Also, new classes of data and technologies with varying safety implications are expected to increase the complexity of underwriting. Insurers that can better understand the implications of these data and technologies for risk profiling could have a distinct competitive advantage. In addition, significantly more data will be collected and available for analysis when a claim is filed. Autonomous and connected vehicles' "black boxes" can help make the determination of fault easier, and fraudulent claims will likely be substantially reduced. When paired with falling premiums, this increased complexity could result in a wave of consolidation among auto insurers.

Implications for captive finance companies

Deloitte analysis shows that the environment in which automotive captives compete will undergo fundamental changes for the next several decades. Our *Future of captives* study²³ sees FOM propelling OEM captives more deeply into the services segment as they derive less and less of their profits from traditional loan/lease financing. This comes with a fundamental mind-set shift from focusing on one-time sale of assets toward focusing on recurring revenue over the full customer and vehicle lifetime. If captives can create flexible automotive insurance services that add value and provide a seamless customer experience in this dynamic environment, customers and the market will likely reward that leadership.

Why are automotive captives well positioned to disrupt the insurance market?

With nearly 40 percent market share in 2016 and 2017, captive finance companies are already a major force in the auto lending/leasing business.²⁴ And, insurance is not new to OEM captives; many already have referral arrangements in which the dealership sells a car, refers the insurance business to a traditional insurance company, and receives a commission. Other OEMs operate a “white label” business by rebranding an insurer’s products as their own and offering them directly to vehicle buyers.

We see in the next five to ten years the historically inflexible automotive credit and leasing business evolving, in certain markets and segments, to a more flexible model for new, used, and shared vehicles that could include bundled services such as insurance. Potentially, OEM captive finance companies are well positioned to disrupt and lead tomorrow’s vehicle insurance market through their evolving product offerings. OEM captives have strong existing assets they can use to deliver a variety of insurance solutions (see figure 6).

Figure 6. Automotive OEMs have strong existing assets to deliver tomorrow’s motor vehicle insurance solutions



Point of sale

OEMs can offer customers (for new, used, or shared/fleet vehicles) certain insurance packages as a bundled service when they buy or lease their car (e.g., the cost of insurance could be included in the cost of the vehicle, at least for the first year). Such options may be particularly appealing to Millennial buyers, who typically seek a seamless, integrated, on-demand buying experience.

Lean architecture and processes

OEMs that provide insurance services can leverage their existing technology architectures and processes to improve the customer experience and cut costs. Automated claims handling, for instance, may change the nature of claims management going forward. It's also possible that an OEM can offer less expensive insurance coverage because its distribution costs are lower.

Risk transfer

The proliferation of sophisticated, built-in car components will produce a risk shift from driver to embedded in-car systems (and ultimately, the OEM). Consequently, it is a logical step for car manufacturers to also sell insurance packages.

Data and connected services

Automotive OEMs that use in-car telematics have access to much better driver and car systems-related data than do insurance companies (which tend to use aftermarket plug-in devices and smartphones). OEMs can capitalize by selling the data to insurance companies, partnering with insurers, or—as stated earlier—providing tailor-made products and services.

In one example, General Motors' OnStar Division pairs with Progressive Insurance to share driving data. OnStar customers who consent to share their personal driving data are monitored for 90 days. At the end of the period, OnStar provides a detailed driving assessment to the driver for their review. After the assessment, drivers can choose to share the driving data and evaluation information with Progressive Insurance through its Snapshot discount program.²⁵

Thanks to their brand reputation, customer relationships, and operational assets, automotive OEMs can offer highly customizable vehicle insurance products across the value chain, giving them an opportunity to own the entire automotive life cycle, from manufacturing to selling to insuring the vehicle. They could extend that opportunity further and provide a seamless customer experience by bundling insurance with an extended warranty and other services at the point of sale. For example, Hyundai Capital America is partnering with MetLife Auto & Home to offer customers in the lender's new vehicle subscription program, Hyundai Plus, insurance and maintenance bundled into one monthly bill. MetLife predicts the program is less expensive than if consumers bought their auto insurance separately.²⁶

Where to play and how to win in the auto insurance market

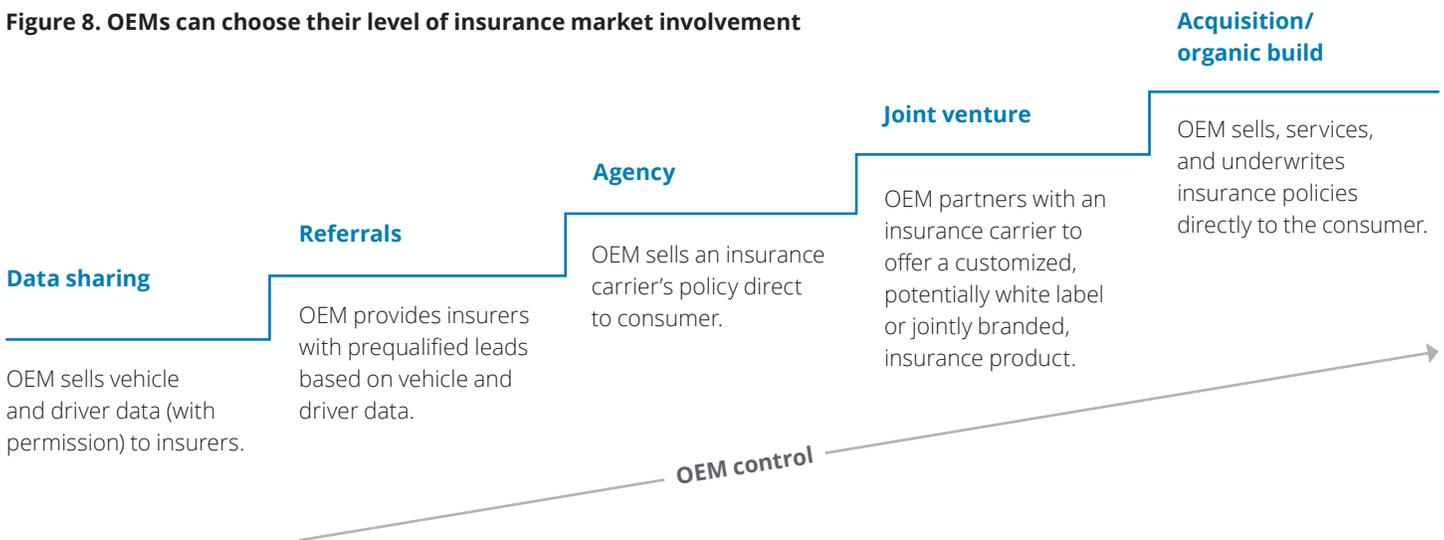
The opportunity exists for OEM captive finance companies to enter and/or expand their presence in the automotive insurance business—if they choose to take it. OEMs' strategy can be expressed as a series of choices in the "playing to win" framework (see figure 7).

Figure 7. Playing to win: Insurance strategy "cascade"



Options range from a primary focus on data monetization to an OEM-owned insurance operation (see figure 8) and ultimately depend on the level of control the OEM desires.

Figure 8. OEMs can choose their level of insurance market involvement



With so many potential places to play and ways to win, OEM captives should consider the alternatives carefully and determine what they are trying to achieve. The process starts by determining:

- **What does winning look like?** Considerations include complementary revenue and profitability, customer and brand loyalty, customer experience, and integration with mobility strategies.
- **Where to play?** As noted in figure 6, OEMs and their captives have strong existing assets; the question is how do they best leverage those assets? Do the captives need to play a greater role in insurance delivery as the market changes with the future of mobility?

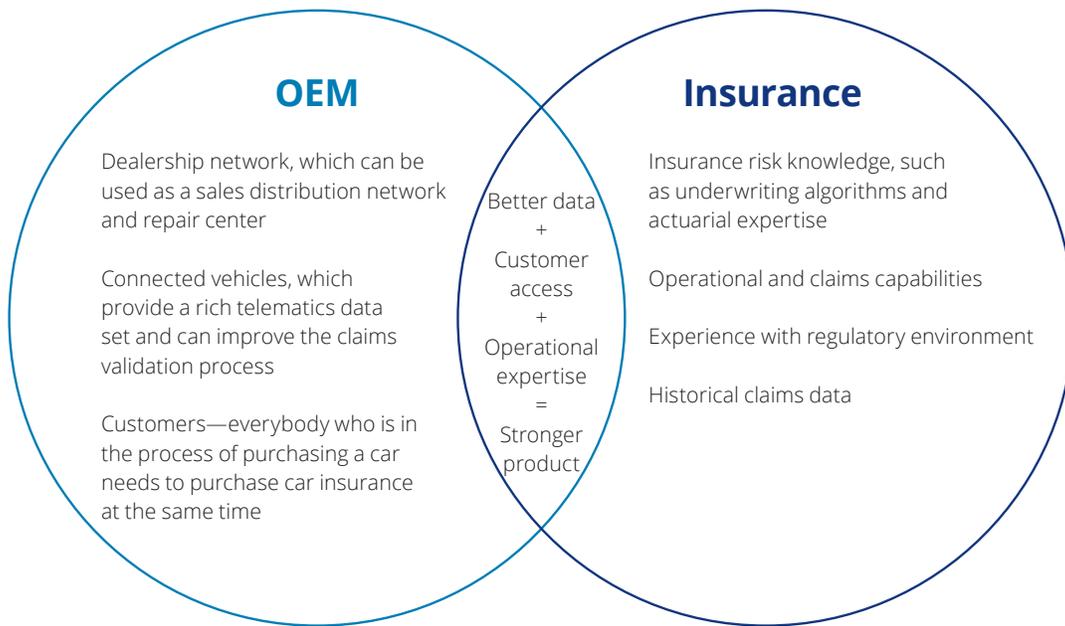
- **How to win?** Depending on a company's risk tolerance, there are many options available. What assets and/or capabilities do OEMs and their captives have that are valuable to their customers and, potentially, to insurers?

When answering these questions, each captive will start in a different place based on its legacy brand and value proposition, strategic assets such as telematics data, risk tolerances, strategic aspirations, and overall vision and strategy for the future of mobility. Captives' chosen level of involvement determines their level of control, as well as the complexity, resource requirements, and cost of the initiative.

A preparatory step is to look for nearer-term points of OEM/ insurance intersection to use as a market entry point and unlock future value (see figure 9). These may include data and analytics (OEM sells insurer telematics data to use for underwriting), distribution channels (OEM dealership sells insurance products at PoS), and the repair supply chain (insurers process the claim; OEMs perform the work). Which capabilities and employee skill sets does the OEM have or need to acquire to succeed in one or more

of these spaces (e.g., data management and advanced analytics, underwriting, customer experience design, regulatory compliance, risk management, cybersecurity)? Which parts of a function does the OEM want to retain or outsource? What is the best business model to use—data provider, referral business, "white label" product offerings, captive/insurer partnership, or OEM homegrown insurance provider?

Figure 9. OEM and insurance capabilities can unlock value in future mobility



There are advantages and disadvantages for each business model; developing proofs of concept may clarify the way forward. Captives also should keep their options open to reflect the dynamic nature of FOM developments and potential insurance industry response, which may be to explore expanded and new alliances with OEM captive finance companies as a ticket to survival in a potentially shrinking market.

OEM captive finance companies are in a unique position to grow revenues and market share in the automotive insurance market. They are key players in shaping the future of mobility; produce and own unparalleled vehicle and driver data; and, through their dealers, possess direct access to potential insurance customers. You could rightly say they are sitting in the driver's seat.

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