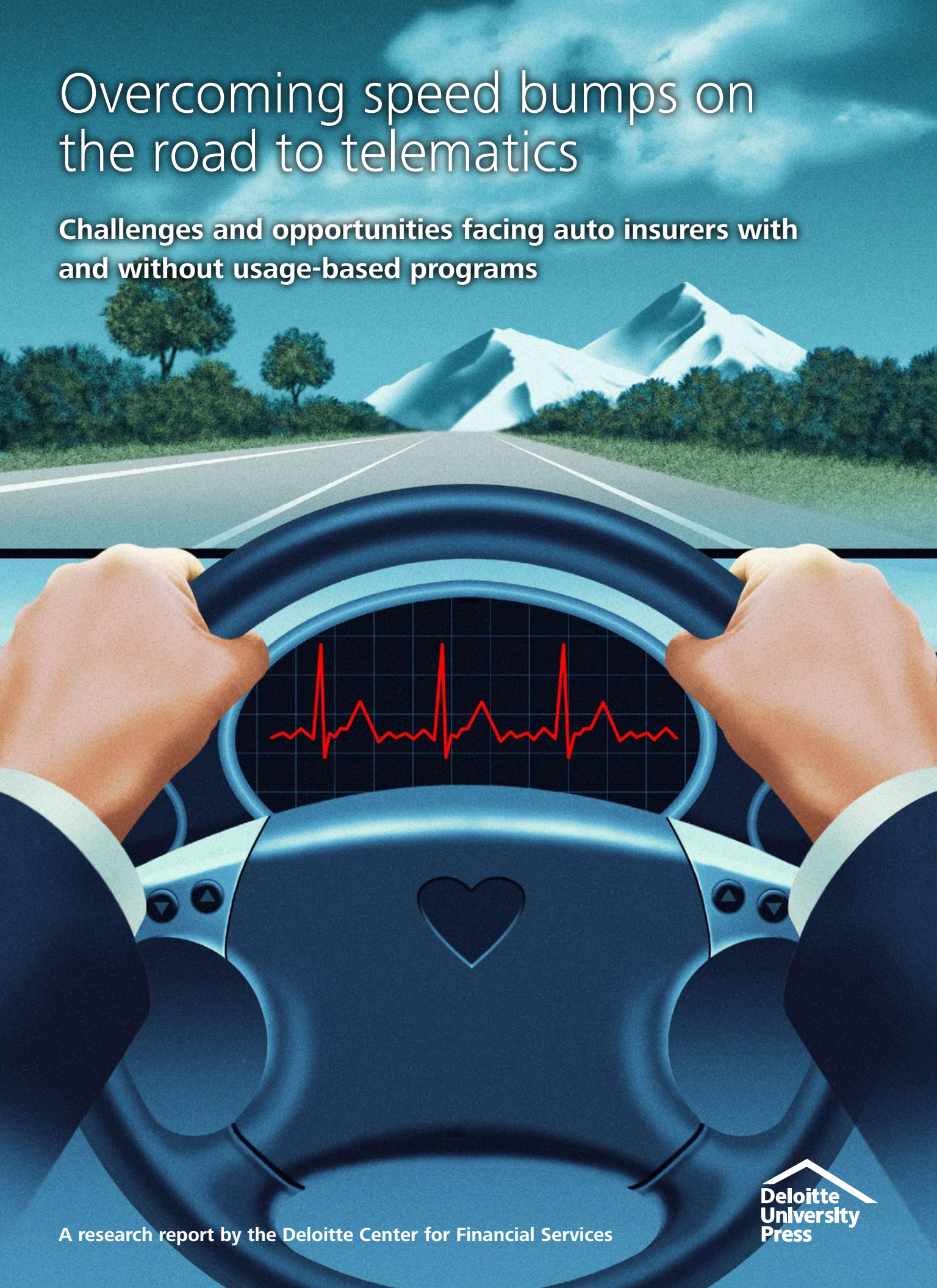
Overcoming speed bumps on the road to telematics

Challenges and opportunities facing auto insurers with and without usage-based programs



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About the authors

Sam Friedman is the insurance research leader at Deloitte's Center for Financial Services in New York. He joined Deloitte in 2010 after a three-decade career as a business journalist, most prominently as group editor-in-chief of property-casualty insurance publications, websites, and events for *National Underwriter,* where he published an award-winning blog and magazine column. At Deloitte, his research has explored consumer behavior and preferences in auto, home, life, and small business insurance. Additional studies have examined how financial services providers might more effectively help individuals finance their retirements, as well as the potential for greater privatization of federal flood insurance.

Michelle Canaan is a manager with the Deloitte Center for Financial Services in New York. With a background in the financial services industry, Canaan joined Deloitte's Capital Markets practice in November 2000. Over the past 10 years, she has served as a subject matter specialist for Deloitte's Market Intelligence group, with a focus on the insurance sector. She produces insurance-related thoughtware for the organization's insurance practice as well as for external audiences.

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Overview

Have we reached a point of no return with telematics?

PERSONAL auto carriers are rapidly approaching a moment of truth when it comes to usage-based insurance (UBI) programs, in which a driver's behavior is monitored via a telematics device. That goes both for insurers that have already launched such products, as well as those that have remained on the sidelines for a variety of reasons.

Early adopters of UBI are gaining a wealth of first-hand experience and insights that stand to provide a long-lasting competitive edge against insurers that until now have been undecided about whether or when to follow suit, as well as those either unwilling or unable to do so. These trailblazers are rapidly collecting a critical mass of data that can be analyzed to reveal driver behaviors that provide a basis for greater precision in underwriting and pricing.

For example, current rating methods would likely rate two drivers identically if they had the same credit scores, automobiles, and demographics and lived in areas with similar geographic profiles. However, what if we knew through telematics observation that one of the insured persons drives his/her car one-tenth as much as the other, or at less risky times of the day? In that case, an insurer would be in a position to potentially leverage this new experiential information and underwrite the respective risks posed by the two drivers differently, as well as price their coverage more accurately.

Having such first-hand driving data at their underwriters' disposal could give existing UBI carriers a considerable leg up over those not using telematics, should the non-users remain on the sidelines for long. For example, standard carriers could lose profitable policyholders who are cherry-picked by UBI-capable insurers that have acquired the capability to discern driver risk more granularly. Trying to catch up with the frontrunners in the UBI race is also likely to be costly—even more so as time goes on and the early birds get a bigger head start.

Of course, early adopters still face many challenges in executing a viable telematics program. For one, widespread consumer acceptance is no certainty, given privacy concerns for some and skepticism among others as to whether having their driving so closely scrutinized will benefit them in the end, or perhaps even be used against them in a number of ways—and not just by their auto insurer. Indeed, a January 2014 survey

by the Deloitte Center for Financial Services exploring consumer use of mobile devices in financial services reveals that about half of the overall driving population is not open to the idea of UBI—at least for the moment.[1]

In addition, while regulators have been supportive in the early stages of telematics development, down the road their acceptance may depend on a number of factors, including the eventual impact on rates for those who fail to meet whatever standards are attributed to "less risky" drivers. There may also be regulatory resistance if drivers face higher prices just because they choose not to be monitored, for whatever reason.

In this report, we'll explore these and a number of other important considerations for carriers that have jumped in and made a splash in the UBI market. But we'll also address the concerns of those who have not yet taken this path but are interested in doing so, offering a heads-up about potential speed bumps on the road to creating telematics-based products.

For example, we'll examine how carriers interested in following the UBI leaders—but lacking the data, expertise, and/or capabilities to create their own telematics program—might leverage the services of third-party data aggregators to level the playing field when going up against much bigger competitors with far deeper pools of information at their disposal.

Last but not least, we'll explore how non-UBI carriers might compete against those offering telematics-based pricing and services.

Wherever a carrier stands on the subject, we may have already reached the point of no return when it comes to telematics and UBI. The genie is out of the bottle. The industry as a whole is not likely to go back to relying only on its traditional methods of assessing auto risks. A growing number of carriers will likely adopt behavioral-based telematics as a way to at least supplement traditional underwriting factors.

Indeed, before too long the use of sensory technologies that permit behavioral underwriting by insurers is likely to be expanded beyond auto insurance into homeowners, life and health coverages, and perhaps even non-auto commercial lines as well, such as workers' compensation. Smart homes, biometric monitoring, wearable technologies, and the Internet of Things are all developing trends that could support and accelerate such initiatives.

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But even if UBI is merely part of the natural evolution of auto insurance underwriting in an increasingly data-driven age, carriers of all stripes will likely need a strategy to respond to those that embrace telematics. Some will decide to go along for the ride, while the rest will have to figure out alternative routes to survive and prosper.

Creating a new niche

How big is the market for UBI products?

Survey reveals three basic consumer segments

FOR a variety of reasons, UBI programs based on telematics data-gathering will probably not be for every driver. Indeed, our general hypothesis that only certain segments will permit their driving to be monitored by insurers was validated by Deloitte's recent survey, which examined mobile technology experience, perceptions, and expectations among financial services consumers. The survey, conducted in January 2014, drew 2,193 respondents representing a wide variety of demographic groups, broken down by age and income, split evenly in terms of gender.

Respondents were asked about their willingness to be monitored by auto insurers through an app on their smartphone, as opposed to having to install an additional piece of equipment into their vehicle, or having a car in which such equipment was already included by the manufacturer.

While most drivers who have signed up for telematics programs are currently monitored by a special device that's part of their vehicle, going forward it's likely that such technology could be largely displaced by a mobile app. Not only would the use of smartphones for telematics monitoring lower insurer costs for device distribution and retrieval as well as data transmission, the technology would also enable consumers to get more immediate feedback.

The survey identified three distinct groups among respondents when asked whether they would agree to allow an insurer to track their driving experience through their mobile device if it meant they would be eligible for premium discounts based on their performance (figure 1). They were:

- **Eager beavers:** Over one in four said they would allow such monitoring, without stipulating any specific minimum discount in return.

- **Fence sitters:** The same percentage of respondents were a bit more cautious, noting they might get on board with UBI if the price was right, given a high enough discount to make it worth their while.

- **Naysayers:** A little less than half said they would not be interested in having their driving monitored under any circumstances.

Among those who were open to the idea of telematics monitoring, about one in five expect a discount of 10 percent or less, with the vast majority anticipating 6 to 10 percent (figure 2). About half expect between 11 and 20 percent (with 27 percent anticipating between 11 and

Figure 1. How open are drivers to having their behavior monitored?

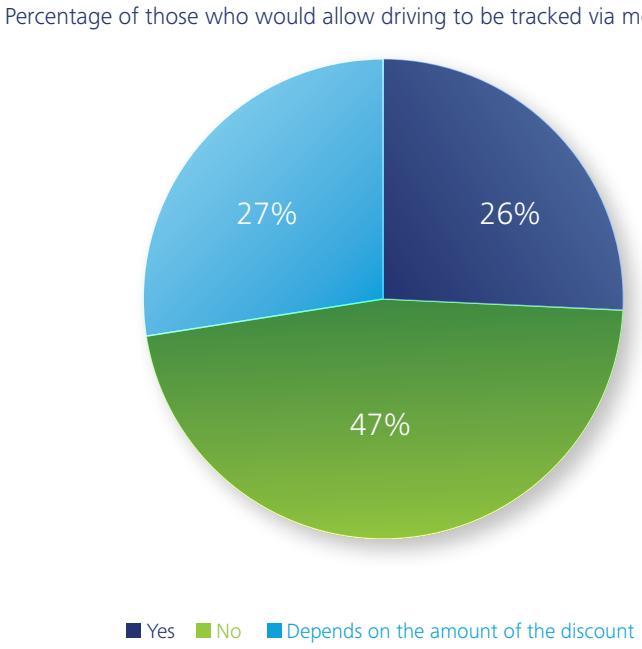

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Figure 2. How much do UBI policyholders expect to save on auto insurance?

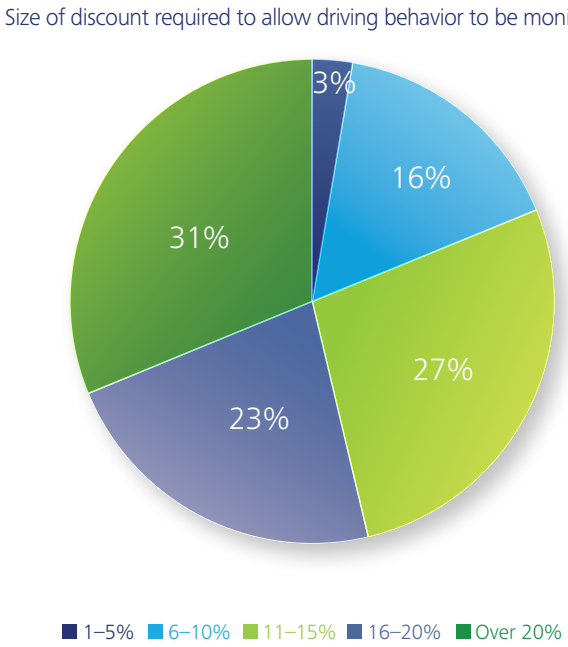

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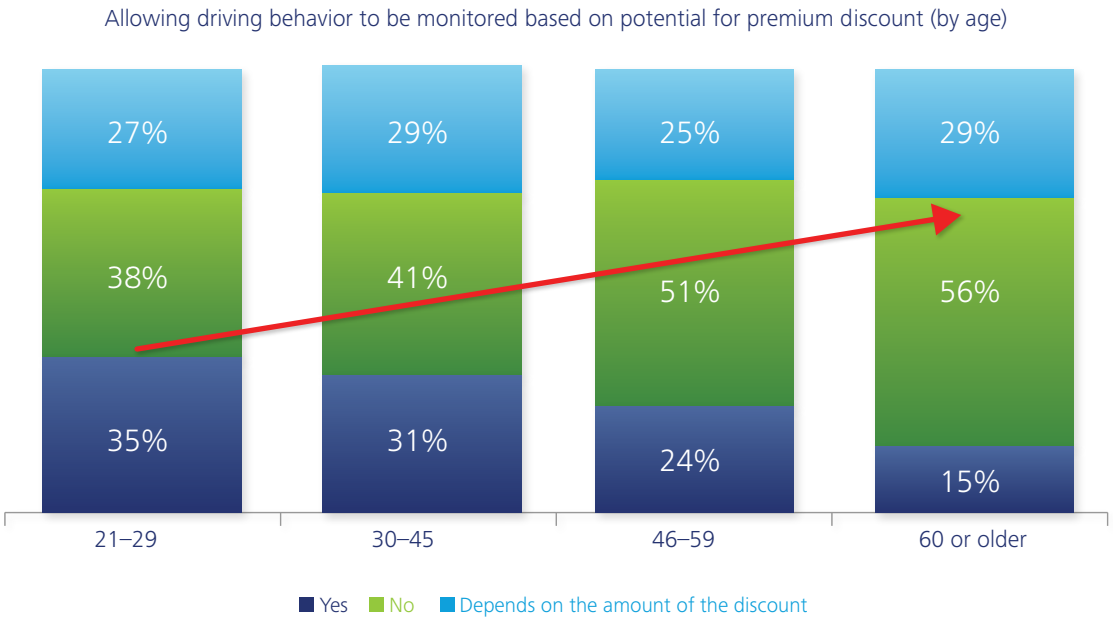
Figure 3. Age is a factor in openness toward telematics



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15 percent), while nearly one-third think they would be entitled to discounts over 20 percent.

When broken down by various demographic factors, age was the biggest differentiator (figure 3). Nearly two-thirds of respondents aged 21–29 were willing to give UBI a go, compared to only 44 percent of those 60 or older. More than twice as many in the 21–29 age category than in the 60-or-older group (35 versus 15 percent) said yes to telematics without stipulating a particular discount. This trend was somewhat less pronounced but still significant when comparing respondents under 30 to those in the 46–59 segment, among whom only 24 percent would allow monitoring with no stipulated discount.

Younger respondents were also less likely to expect a discount of over 20 percent—26 percent of the under-30 crowd compared to 38 percent of those aged 46–59 (figure 4). This could be because fewer older consumers are open to the idea of monitoring in the first place (perhaps out of "Big Brother" concerns, or the fact that they did not grow up in a fully Web-connected environment), and therefore would demand a bigger financial incentive before allowing an insurer to monitor their driving. Or it could be that the older segment, making more money on average than the youngest segment, is less likely to be won over by a relatively small discount—at least in dollar terms.

Income was not a differentiating factor, which was surprising considering that one might expect those with less discretionary funds to place more emphasis on how much they would save on their auto insurance premiums by signing on to a UBI program. Yet, only about 30 percent of both the highest (above $100,000) and lowest (below $50,000) income groups surveyed said the size of the discount would determine whether they would allow their driving to be monitored (figure 5). Expectations about the size of the discount in return for signing on were also similar across income segments (figure 6).

Figure 4. Younger drivers would generally expect a lower telematics discount

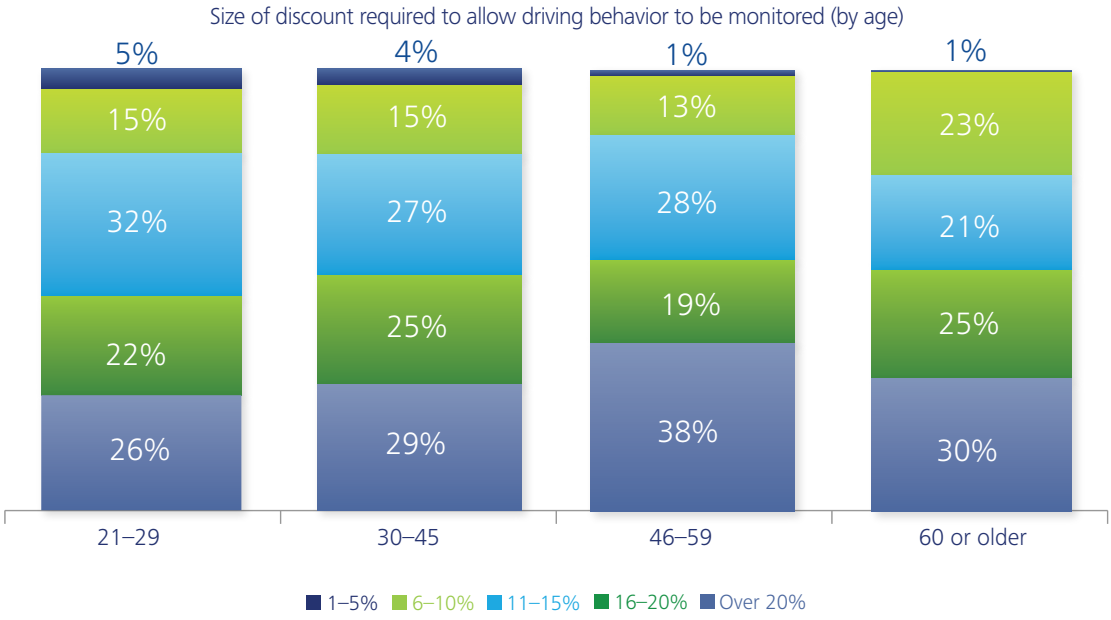

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Figure 5. Income not a big differentiator in telematics acceptance

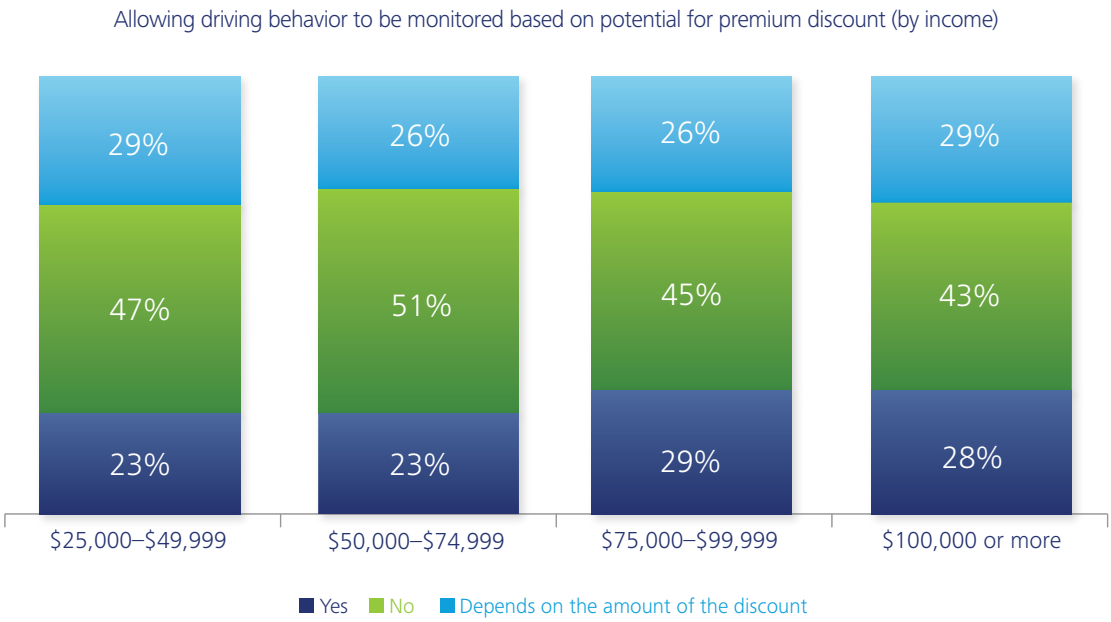

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Figure 6. Discount expectations similar despite income differences

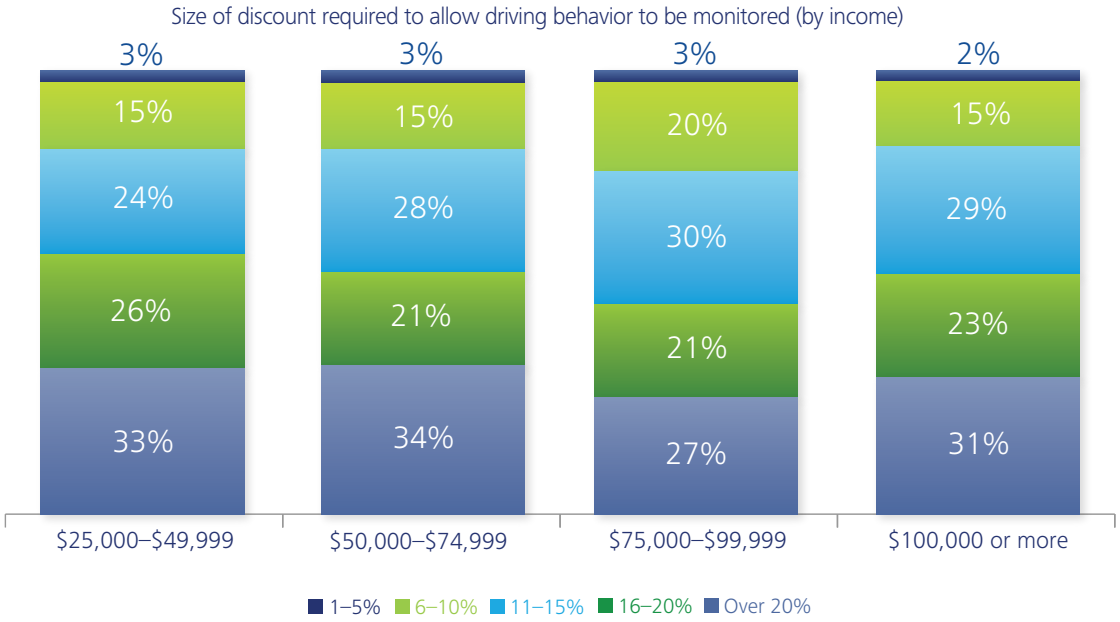

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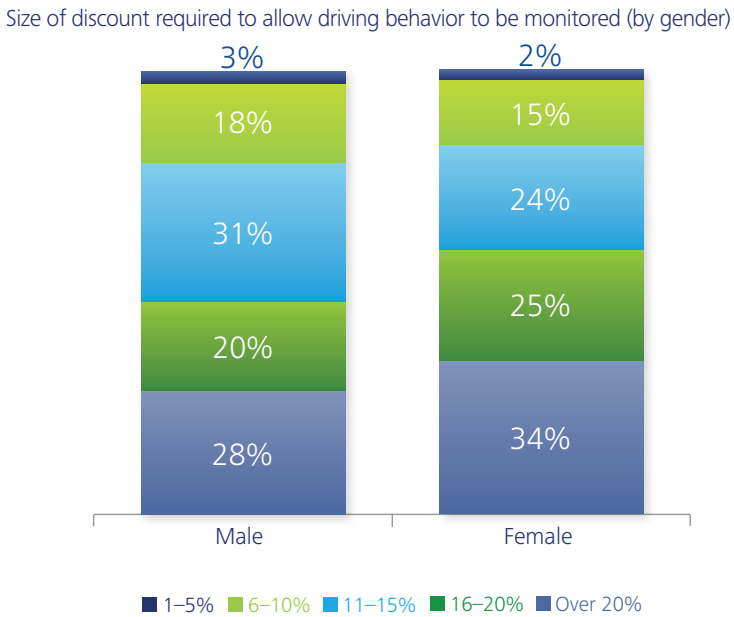
Figure 7. Gender gap seen in telematic discount expectations



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However, given the fact that higher-income consumers are generally considered potentially more valuable to insurers, seeing a significant segment of that coveted group open to the idea of UBI without worrying about the size of the discount could be a positive factor for telematics marketers.

While gender did not make a major difference in whether a respondent would allow insurers to monitor their driving, women did generally expect a higher discount for doing so (figure 7), with 59 percent anticipating a rate break of 16 percent or higher (including 34 percent who expect more than 20 percent) compared to 48 percent among men (with 28 percent looking for a discount of 20 percent or higher).

What are the implications?

Looking at the big picture, with nearly half of the respondents in this survey indicating that UBI is not for them, a bifurcated market may eventually develop, with those who choose to be monitored representing a separate class of drivers who are underwritten in a different way, supplementing at first and perhaps later supplanting traditional pricing factors. In the end, serving the "naysayers" may become a specialty market niche for some carriers.

Still, this research, along with our interviews with insurer executives and media reports of UBI programs being tested or rolled out across the country appears to indicate that there is indeed a significant consumer segment ready, willing, and able to at least test-drive telematics-based auto insurance programs. But that doesn't mean the road to achieving growth and profitability through telematics is without speed bumps, potholes, and other potential hazards.

Overcoming roadblocks

How might insurers differentiate themselves with telematics?

Navigating the obstacle course

INSURERS looking to make UBI part of their product line must first convince consumers it's worth their while to take the plunge and allow their driving to be monitored. Then, to retain those UBI accounts, carriers need to convince customers that monitoring benefits them and that the insurer's particular telematics services somehow sets it apart from the competition.

As mentioned earlier, to get drivers into telematics monitoring programs, the initial lure is usually a lower premium charge. Many UBI programs today provide a discount based only on participation rather than on actual performance, as carriers look to collect a critical mass of data and determine how to effectively leverage it for predictive modeling purposes. Conceptually a portion of this discount is an incentive to sign up for a UBI program, as well as the cost of purchasing the consumer's telematics data—a quid pro quo to compensate the buyer for allowing their driving to be monitored, thus providing valuable information to the insurer.

But as insurers build large, statistically and actuarially credible UBI data sets, it's likely that price cuts will have to eventually be earned based on actual driving experience and the correlations to losses that carriers discover during this early phase of telematics. Indeed, as the market matures we are starting to see some carriers pushing the discount to the end of the first policy term (in contrast with initial enrollment), or attempting to offer value-added services in lieu of an upfront discount in an effort to balance the cost of the program while giving consumers a perceived benefit that will still entice them to take part.

First-movers may sacrifice some margin in the initial stages of telematics, with discounts being part of the acquisition cost to enroll a new policyholder or gather additional data from an existing policyholder. But over the course of a driver's multi-year relationship with the insurer, the end game becomes clearer. If the driver heeds the safety tips received from the insurer based on their monitored driving behavior, loss costs may eventually decline, retention could increase, and margins might improve. In addition, the data gathered from telematics could help insurers improve segmentation, underwriting, and pricing accuracy, which in the end may also bolster profit margins.

In the early stages of telematics, first-movers have an opportunity to increase their market share by offering discounted coverage. However, once there is "saturation"—that is, as

the market adoption of all policyholders who are likely to opt into telematics nears completion— it is unlikely that UBI insurers can grow their business by selling telematics based on price discounts alone.

Therefore, to differentiate their UBI offerings and boost retention of their better risks, carriers will likely have to offer more value-added, telematics-based services (as outlined below). This is the stage in which insurers can start de-commoditizing their product and differentiating themselves from their rivals.

Moving beyond a price focus

While the availability of a discounted premium may be important to achieve initial consumer adoption, as UBI moves beyond its nascent stage, telematics offers the potential to create a whole new level of engagement by allowing for a much more frequent, mutually beneficial customer experience. That's the holy grail for insurers—establishing brand stickiness by offering ongoing value to policyholders beyond the price charged for coverage and claim service provided.

To differentiate themselves with telematics, UBI carriers are already becoming part of a policyholder's daily life by offering a number of value-added features, including:

- Providing immediate feedback on how customers could drive more safely
- Alerting drivers about potentially hazardous road conditions or traffic slowdowns
- Facilitating roadside assistance and or claim notification in case of an accident
- Locating lost or stolen vehicles
- Geo-fencing to allow parents to monitor a teenager's location and driving behavior (The same service could be offered to those concerned about elderly drivers.)

Additional niche markets could be targeted with specialized telematics services—for example, the ability to monitor how "green" a driver is by measuring the impact of driving behavior on their carbon footprint.

Carriers might also consider co-marketing location-based mobile services with other providers, such as towing, auto repair, and car washes. They might also incorporate non-vehicle-related service options such as alerts about nearby restaurants and retail outlets—perhaps in conjunction with points earned by good driving behavior in loyalty programs or through gamification, which could be redeemed at participating vendors.

Making insurance "fun" with telematics

Gamification—the application of gaming concepts to a broader commercial experience—might also leverage telematics to spur consumer loyalty among policyholders. Insurers could provide rewards for improvements in driving behavior, relative to their own performance as well as against the broader policyholder pool, certain segments, or even specific groups of individuals. Insurers could thereby use telematics to make the customer experience more interactive, competitive, gratifying, and perhaps even fun—certainly not an attribute traditionally associated with insurance.

A big part of "gamifying" insurance would be to provide incentives for behavior that prevents losses, thereby generating value for insureds and carriers throughout the policy year. This would make insurance more of a proactive, prevention-driven engagement, rather than a reactive, price-driven commodity. The goal is to create value for both carrier and consumer while engendering greater loyalty come renewal time.

Such incentives could go beyond price discounts granted on the coverage itself. Indeed, "players" in the insurance "game" could earn loyalty points based on telematics monitoring, if they drive in a way that limits risk and prevents losses. For example, carriers could set

up a weekly or monthly driving competition for a family or among friends insured by the same company (which could perhaps provide an incentive for policyholders to refer others to their carrier).

The points earned could be directly traded not only for traditional insurance benefits, such as lower deductibles or higher limits, but to leverage affinity relationships, such as auto repairs, car washes, detailing, gas discounts, or other perks.

Through gamification, insurers might establish an ongoing, mutually beneficial relationship with policyholders rather than relying on price or claims service alone to compete. Consumers might be less tempted to change carriers at renewal based on a somewhat lower price offered by a competitor, if it means having to surrender the loyalty points they have built up, as well as no longer being able to play the particular "insurance game" offered by their provider.

This approach might especially appeal to drivers younger than 40, since they are already more apt to play games on their mobile devices. This also happens to be a more volatile consumer segment than older drivers when it comes to their proclivity to change auto carriers, as our research into personal lines consumers has revealed.[2]

Overcoming privacy concerns

One potential source of resistance to the notion of sharing so much personal driving data with insurers could be concerns about privacy. Some may shy away from UBI simply because they are not comfortable with a virtual backseat driver watching their every move behind the wheel. Others might be worried that hackers or those who steal or find their lost phones may be able to access, for their own nefarious purposes, where and when UBI policyholders are driving.

Those put off by the concept of monitoring may be solidly in the "naysayer" camp. However, those who don't oppose the idea of monitoring in theory but fear data privacy breaches could perhaps be reassured by full disclosure of the cyber-security measures, privacy policies, and end-user license agreements put in place by the insurer and/or any third parties holding personally identifiable information.

Others may be concerned that their data might someday be seized by more official channels, including law enforcement or private litigators seeking someone's driving history for criminal or civil actions. These concerns might be alleviated by putting them in context—for example, by pointing out the multitude of other technologies already in play to monitor driving, including "black boxes" installed by the manufacturer, the proliferation of traffic cameras, and even the data collected by their own smartphones just by being turned on, beyond any telematics insurance application.

Enhanced surveillance and/or geo-locational capabilities are part of the world we live in now, for better or worse. But on the whole, UBI carriers can emphasize that telematics offers enough potential advantages to drivers to make the product worthwhile in spite of privacy considerations.

Still, our survey examining consumer use of mobile technology for financial services found a significant segment, especially among younger respondents, open to trading personal data for some sort of value proposition. This is increasingly common in other industries, particularly among online retailers who analyze shopping patterns to recommend related products or services, as well as search engines that sell advertising based on the same sort of personal data mining.

Long term, to gain widespread adoption insurers will likely have to engage in proactive communication and education—specifically making clear what's in it for the consumer when it comes to sharing personal driving habits. If the potential gain is significant enough and they believe their data is relatively secure, more consumers will likely be willing to make the trade-off, despite any lingering concerns about personal privacy or cyber security.

The numbers game

Telematics depends on gaining actionable insights

Challenge No. 1: Collecting the data

BEYOND what policyholders will require in the form of discounts to initially participate, the ability of insurers to collect and correlate telematics data economically and effectively will be a key factor in determining the fate of UBI programs. What must carriers do to write such products profitably? How might smaller companies compete against the industry's data-rich giants? What data-mining insights will insurers have to achieve to make the most of the real-time driving information they gather?

Collection of data for UBI has traditionally depended upon the willingness (and sometimes the ability) of policyholders to plug monitoring devices into their vehicle's on-board diagnostic system. The cost of such equipment is covered by the insurer, as are data transmission charges.

More recently, manufacturers have often been including platforms in their vehicles that allow for telematics transmissions, but at the moment such systems lack standardization, and it will likely take several years for this capability to be included in a meaningful percentage of vehicles, given the pace of fleet turnover. These factors make relying on devices installed in the vehicle itself a problematic option for UBI carriers, at least in the short run.

Going forward, however, it's more likely for a number of reasons that insurers will increasingly monitor policyholders' driving experience via their smartphones.[3] Such a move could help overcome consumer concerns about test-driving a telematics program, since they are being asked to just download an app rather than install a new piece of equipment into their vehicle. In addition, drivers can receive real-time feedback on their behavior through mobile devices.

From the insurer's perspective, a move to mobile would eliminate the cost of installing a proprietary monitoring device in the vehicle, as well as expenses for data transmission, making the implementation of UBI programs more economical. And since the app resides on what is, in effect, a mini-computer, initial data processing can be done on the device itself.

Insurers may also benefit because a mobile app gathers first-hand data on the behavior and performance of the driver carrying the smartphone, rather than the more traditional auto underwriting focus on the vehicle being driven. These are not mutually exclusive approaches. Indeed, monitoring of drivers together with more standard criteria about the

vehicle are complementary efforts that could help create a 360-degree view of the total exposure being underwritten by insurers.

Challenge No. 2: Achieving a critical mass of data

Once it's decided how to go about monitoring a policyholder's driving, the next step is to determine what kinds of data insurers should be collecting. Traditional underwriting models have depended upon a number of sources for correlated predictors of loss, including some directly related to driving (such as miles driven, accident history, and traffic violations) and others that serve as a proxy, including age, marital status, and insurance-based credit scores.[4] The proxy factors have at times been challenged for validity, with the use of credit scores in auto underwriting turning out to be particularly controversial, prompting legislative and regulatory restrictions in a number of states.

With UBI, however, insurers can monitor policyholder behavior directly, recording the times, locations, and road conditions when they drive, whether they rapidly accelerate or drive at high or even excessive speeds, how hard they brake, as well as how rapidly they make turns and whether they use their turn signals.

Insurers will need to collect a substantial volume of such data to achieve a critical mass in order to identify potential correlations and create predictive models that produce reliable underwriting and pricing decisions. Bigger carriers that have already launched UBI programs have the advantage of sheer numbers, in terms of the amount of data they can gather in a relatively short time. Smaller insurers, however, are likely not going to be able to collect a sufficient volume or spread of data on their own with their existing customers, which could discourage such carriers from entering the telematics market.

One way to clear this hurdle may be to work in concert with other carriers and third-party organizations. In this collaborative model, a group of insurers could pool their telematics data for broader insight and share the resulting telematics insurance score, as they do now for underwriting purposes when it comes to claims data. This could allow smaller companies access to a much wider and deeper data base than they could generate individually, while restricting access to personally identifiable information beyond that of their own policyholders.

Eventually, this path could allow smaller insurers to compete on a more level playing field with their bigger rivals, rather than having to concede the telematics field to the industry's giants by default.

For the moment, telematic data-gathering is a fractured process, with each carrier using its own information in isolation. One day, such data might be shared industry-wide through bureaus, as claims information and insurance-based credit scores are now. This could prevent UBI consumers who exhibit less than optimal driving behavior from simply moving on with a clean slate to a new carrier—with or without a UBI option—that is unaware of any reckless driving behavior recorded by their prior insurer.

For now, however, most carriers, acting on their own, would likely require over five years to gather an adequate amount of driving data to run a viable UBI program. That's where data pools and bureaus can make an impact, especially since the key differentiator for UBI is not in how they collect the data, but in how well they analyze and correlate it to make more precise underwriting and pricing decisions. Getting involved with such cooperative arrangements early on can therefore provide an advantage to carriers entering the UBI market over those going it alone, given the wider array of telematic data at their disposal.

Meanwhile, those carriers big enough to collect a sufficient volume of data on their own might benefit from access to a broader pool of driving experience, rather than basing their underwriting and pricing decisions

Even if telematics fails to take off immediately and ends up attracting a relatively small portion of the market at first, the insights gained from analyzing driving behavior and incorporating them into pricing models may still offset the investment in a data-pooling arrangement.

solely on their own policyholder information. Benchmarking a carrier's particular experience against a larger data set could validate their in-house correlations, as well as provide insights on potential outliers and anomalies.

Even if telematics fails to take off immediately and ends up attracting a relatively small portion of the market at first, the insights gained from analyzing driving behavior and incorporating them into pricing models may still offset the investment in a data-pooling arrangement. In addition, such an investment would likely be relatively modest compared to the amount a carrier might have to spend to catch up with early adopters further down the line, as well as the value of the market share that could potentially be lost should UBI quickly gain widespread adoption.

Challenge No. 3: Operationalizing the data

Turning raw driving data into actionable correlations is a major challenge facing insurers looking to turn the corner and write UBI profitably. How might insurers crack the code, so to speak, with telematics?

In some ways, operationalizing usage-based telematics data is similar to the challenge that was faced by those seeking correlations with credit history, at least in terms of the advanced analytics going into both efforts. The major difference, however, is that while credit history is corollary data indicating an individual's likelihood of reporting an auto insurance loss, with telematics insurers are basing their decisions on experiential, primary data culled from actual driving behavior. Down the road, that distinction should result in greater credibility and acceptance for telematics in the minds of consumers and regulators.

The trick, of course, is determining exactly how telematics data points—alone and in tandem with other usage factors—might translate into a valid predictor of risk, and to ensure that no adverse selection would result if the data is eventually used for pricing.

Insurers will have to take into account what happened during a driver's trip, including event-related data (location, time of day, miles driven, weather conditions) and behavior-related information (how they drive—braking, acceleration, speed, turning). They must then analyze that data to generate correlations to the potential for an insured loss. The result will be the creation of an insurance telematics score, reflecting the totality of the many driving attributes being monitored. Those correlations will be incorporated into the carrier's underwriting and pricing models.

Telematics analytics also need to be sensible and contextual. Driving fast and cornering quickly in a car able to handle such behavior has different risk factors than doing the same in a less capable vehicle, while driving like that in rural Kansas has different risk factors than in suburban New Jersey. This is very different from the behavioral aspects of credit scoring, where the context on payment practices may not be easily visible.

As the use of UBI expands, more data is collected and correlated, and predictive models grow increasingly sophisticated, the advantage will likely shift to those who were among the first to make productive use of the information they've collected, putting them in a position to both segment and price risks more accurately. Such a competitive edge could be fortified by carriers that build a suite of value-added services to de-commoditize the insurance product and boost their retention rate.

As the telematics-based market is developed by early adopters, non-UBI carriers that decide to follow their lead will be stuck playing catch-up to implement a competitive program of their own. Those that decide against adding UBI to their product line will have to figure out how to reclaim any lost market share and retain what's left of their lower-risk client base without a telematics weapon in their marketing arsenal.

Challenge No. 4: Implementing a UBI program

Insurers interested in entering this market should keep in mind that there's more to UBI than monitoring a policyholder's driving behavior. There are a lot of moving parts and support functions to account for, such as:

- Data collection and transmission, whether it's through a mobile app or a device installed in the vehicle by the consumer or manufacturer
- Data management and storage capacity, along with advanced analytics
- Predictive models that accurately assess telematics data to generate actionable insights
- Underwriting and pricing systems, along with billing and policy administration
- Claims transformation to leverage telematics data in accident investigations
- Customer service capabilities, including the addition of value-added, telematics-driven options such as gamification
- Privacy and security measures

One other major concern is the potential for objections or concerns that could be raised by regulators, as noted in our next section.

Addressing oversight concerns

Regulators on board with telematics, but for how long?

Beyond the honeymoon phase

REGULATORS thus far have generally responded positively to the marketing of usage-based insurance products. That's likely because during this "honeymoon" phase there is little to no downside for participating consumers, who are free to opt into such programs and are rewarded with a discount for doing so regardless of how they drive. There hasn't yet been any "penalty" for those who are monitored and found to be lacking based on what's considered to be unsafe driving behavior. And there are no significant consequences thus far for policyholders who for whatever reason do not want their driving monitored.

However, as individual telematics programs and the overall market matures, insurers will eventually look to leverage the data they are gathering and analyzing to price exposures more accurately. At that point, a segment of safe drivers will likely benefit from UBI by earning lower rates, while other drivers could end up paying more. For some, that will be because their performance makes them less-than-prime risks under the telematics-based standards established by carriers. For others—even those who don't participate in UBI—the overall benchmark rate may be raised as telematics-based discounts proliferate for better drivers who are willing to have their driving behavior monitored.

Once the industry reaches that tipping point, consumer advocates as well as state and federal lawmakers and regulators may challenge some aspects of telematics-based programs. Some perhaps will call for greater transparency and even propose rating restrictions to prevent discrimination against drivers who don't opt into UBI programs.

Unlike the pushback experienced by carriers when they first employed insurance-based credit scores as a factor in their personal lines underwriting, telematics scoring—in which the insured "controls" the outcome by their driving performance—may be better received. However, another parallel might be the concerns expressed as insurers started raising property insurance rates in catastrophe-prone areas based on new predictive models proprietary to third-party forecasting firms, with some lawmakers calling for an examination of whatever assumptions or correlations had gone into those pricing decisions.

UBI carriers could eventually be called upon to respond to similar government requests to "look under the hood" of their auto insurance telematics scores and defend the validity of whatever correlations they draw to segment and price their coverage. In that case,

they will need to be able to demonstrate to regulators the utility of telematics data in better understanding the risks posed by a customer to an insurer, and then to allow that information to be a consideration in rate-setting.

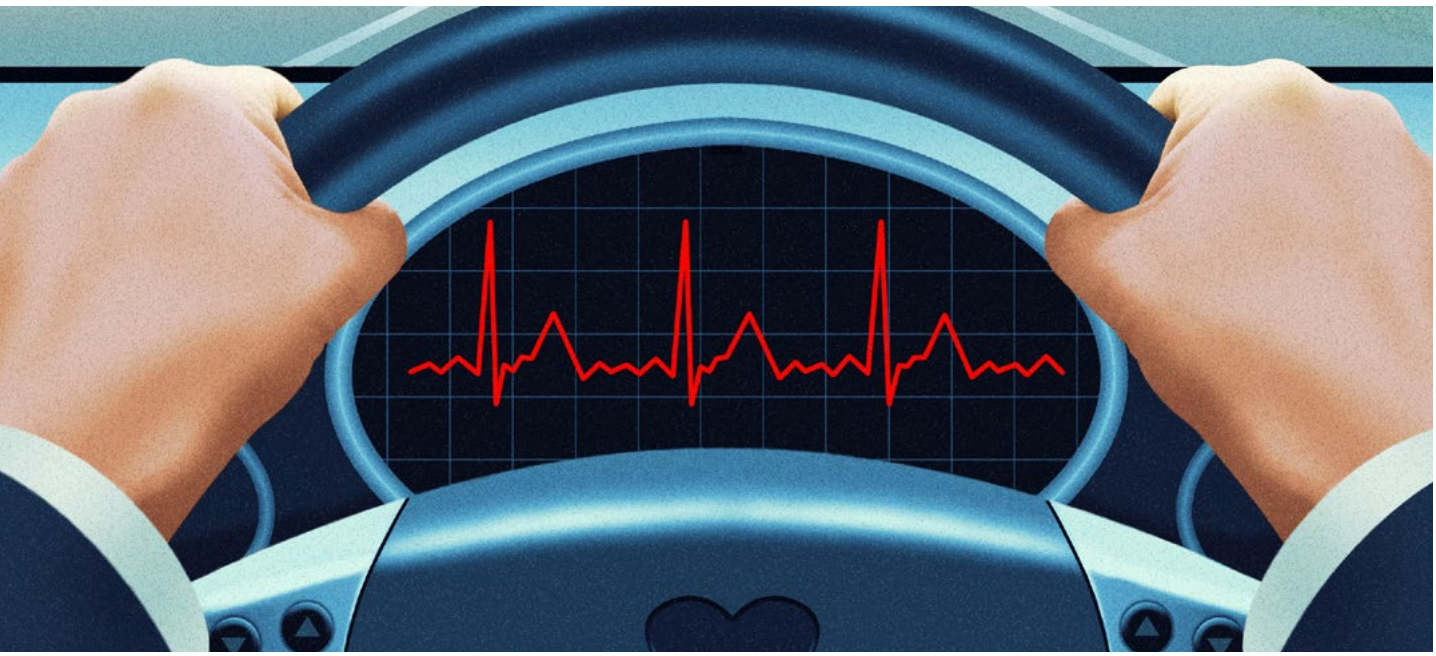
One factor insurers might cite to help justify their foray into telematics is the fundamental difference between UBI and credit-based pricing decisions, in that UBI products can be rated using first-hand driving data, rather than indirect proxy behavior such as credit history.

In addition, insurers might win over regulators if they can establish how UBI can benefit consumers and society overall by making the roads safer in a number of ways, such as:

- Offering real-time feedback to drivers on speed, acceleration, braking, and turning
- Providing incentives to policyholders to pay closer attention to their driving behavior through the potential to earn lower premiums
- Generating a "halo effect," as people may be likely to drive more carefully if they know they are being monitored.

Just as consumer hesitation about having their driving monitored might be alleviated by making clear what's in it for buyers, the same might be said when it comes to regulators, legislators, and consumer advocates. Thus, insurers need to effectively communicate how telematics-driven UBI programs generate fairer rates for better drivers while promoting safer driving overall.

The opt-in nature of these programs might also relieve the concerns of consumer advocates and lawmakers—but perhaps only as long as there is no financial penalty, direct or indirect, for those who choose not to have their driving monitored. At that point, carriers may have to demonstrate that policyholders who allow monitoring by definition make for better risks, in terms of providing more detailed information about how they actually drive.



Next steps

Where should insurers go from here?

Carriers take different paths

JUST as telematics-based underwriting might not be for all consumers, UBI may not be for all carriers, either. Earlier, we noted that research into mobile technology and financial services uncovered three categories when it came to consumer attitudes towards telematics: eager beavers, fence sitters, and naysayers. The same labels could be applied to auto insurers deciding whether they should take the plunge and enter the telematics-driven UBI market.

The eager beavers among insurers have already launched telematics programs and are well along in their efforts to analyze, correlate, and operationalize these new data streams. This category is populated by many of the industry's biggest players, so they enjoy two potential competitive advantages—the benefit of a head start and access to an enormous amount of data that can be generated in a relatively short time.

These early adopters, however, have largely implemented their UBI programs via monitoring devices installed in vehicles, which may not be the dominant evolving technology going forward. The next wave of entrants could go the smartphone route instead and thus avoid several startup hurdles mentioned earlier.

The fence sitters are carriers that may be interested in launching their own UBI program, but are holding back for one or more reasons. Some may feel it prudent to observe and learn from the mistakes made by early adopters. Others are waiting to see whether demand for UBI develops from their customers and agents before moving forward to launch a telematics product. Still others may be hesitating for fear of cannibalizing the best risks in their current book of business. Many may simply be stranded because they don't know how to proceed or feel they lack the resources and capabilities to take the plunge.

These fence sitters face a number of potentially critical strategic questions in the near term, such as:

- What will be the consumer adoption rate for UBI, and how quickly will the market materialize?
- What percentage of their book might UBI business represent?
- How much would they have to invest to build a telematics capability?
- What impact might telematics have on their risk segmentation and pricing scale?

- What insights must they generate from telematics data to compete effectively?
- How will they gather and analyze the critical mass of data they'll need to run a viable telematics program—on their own, or through cooperative arrangements with other carriers and/or vendors?
- What additional value-added services might they provide via telematics to differentiate themselves and de-commoditize their product while steering purchase and renewal decisions away from price?
- What about the risk of cannibalizing their current premium customer base with UBI, while losing premium dollars in the transition? On the other side of that coin, how might they counter the risk of standing pat while early adopters cherry-pick their lowest-risk policyholders and convince them to switch carriers by offering discounted UBI coverage?
- Is UBI primarily a strategy to generate new business, or for retaining the best risks in an existing book? Or are both goals achievable in tandem?
- How much of an advantage might first-movers enjoy? How far behind do carriers risk falling, and how much business might they lose, by waiting to enter the UBI field? How fast a follower do they need to be to catch up before they suffer significant erosion of their best risks?

No matter how you slice it, getting up to speed in the telematics market will take time. While fence-sitting carriers don't necessarily have to be fast followers, they will likely need to be reasonably quick followers. However, there may be a greater risk in waiting too long versus getting started too soon, as carriers falling too far behind the UBI leaders may not be able to catch up.

At a minimum, later adopters will likely face a greater burden in terms of leveraging telematics data and deriving value from it. Even if telematics develops more slowly than anticipated, the insights gained should benefit other elements of a carrier's business, such as in claims, with investigators gaining access to more real-time, objective evidence about the conditions surrounding an accident.

What about the naysayer carriers?

Then there are the naysayers—those carriers determined to make do with standard underwriting and pricing criteria. But even those standing on the sidelines by choice will likely be impacted by telematics, especially if UBI becomes the standard for a material portion of drivers over time.

> Based on our recent research, a sizeable percentage of consumers don't want UBI, at least for the time being.

Eventually, non-UBI carriers could end up being niche players catering to consumers who simply don't want insurers in their proverbial back seats, or who feel their driving behavior will not warrant discounts. This duality (the naysaying insurer and the naysaying customer) could define a new set of non-standard auto insurers.

One question is whether non-UBI carriers can match the prices offered by telematics-driven competitors for the best drivers, and can they do so profitably by sticking with standard

pricing criteria? Another, perhaps bigger, challenge is how those without UBI products will compete with those offering an enhanced customer experience with telematics via immediate feedback to drivers and the potential allure of gamification and loyalty programs.

Carriers that choose not to go the UBI route will likely have to formulate and execute an alternative retention and growth strategy, if only to ward off the competitive threat posed by those employing telematics.

Based on our recent research, a sizeable percentage of consumers don't want UBI, at least for the time being. The challenge is whether an insurer can come up with an attractive value proposition for that naysayer consumer segment by relying on more traditional underwriting criteria while also introducing value-added services and product features to help differentiate and de-commoditize personal auto insurance.

What's the bottom line?

UBI has already significantly disrupted the auto insurance market, as more and more carriers look to change the way they assess and price risks based on telematic data.

For the next decade and beyond, UBI will continue to evolve as auto insurers generate more data and gain additional experience analyzing it to provide actionable insights. At the same time, they will likely look to differentiate their UBI offerings by introducing a wider range of telematics-associated benefits and services to connect with customers at a deeper level.

The goal for both UBI carriers as well as those who stick with more traditional underwriting criteria will be to somehow remain competitive in a society where behavioral monitoring may eventually become the rule rather than the exception for a growing number of insurance companies and policyholders alike.

Deloitte's proprietary telematics auto insurance data bureau, designed specifically for personal auto insurers, offers a unique, feature-rich, company-branded mobile phone application and cloud-based telematics solution that captures and scores driver risk and reports on policyholder driving behaviors while engaging drivers via value-added features through the mobile app and an online portal. Insurer data flows to a secure member-only bureau where insurers have full access to their company's UBI data and access to all other bureau members' de-identified data. Reach out to any of the contacts listed in this article for more information.

Added insight

Taking telematics beyond auto insurance

JUST as telematics for usage-based pricing is transforming auto insurance, mobile and sensory technologies that monitor a variety of other personal behaviors are likely to eventually transform additional lines, including life, health, and property coverage. This bodes well for consumers looking for premium discount options beyond auto insurance.

But from the insurance provider's perspective, besides leveraging telematics for more accurate underwriting and pricing, real-time monitoring devices could also help establish more frequent connections with—and increased loyalty from—their customers.

Cultivating strong client relationships has until now been largely problematic for most insurers, given the dearth of touchpoints throughout the insurance lifecycle. Traditionally, the insurer's opportunity to connect with a client only appeared at the point of sale, renewals, or during the claims process. Moreover, with the progression of insurance aggregator and price comparison websites, it's easier than ever for consumers to switch carriers if they have a bad claims experience or find a cheaper price.

The paradox for insurers is how to craft a client-centric strategy to strengthen customer loyalty and retention despite the unremitting pursuit of lower pricing. Emerging technology that can measure consumer behavior across a gamut of activities may potentially be a means to this end, as it offers tangible benefits for value-conscious consumers, while making insurers relevant in the everyday lives of their policyholders. This behavioral data provides novel approaches for insurers to better understand, serve, and retain consumers.

By harnessing continuously streaming "quantified self" data through smartphones or devices such as wearable or embedded body sensors, insurers could theoretically capture a huge array of personal data and use it to analyze a person's movement, environment, vital signs, and psychological and physical behavior.

For example, life insurers could potentially harness data from devices that monitor daily activity levels, heart rate, nutrient consumption, and sleep patterns to more accurately underwrite their policies. Eventually, consumers concerned about privacy may seek to own their own telematics data and be able to present that asset to whichever provider they apply to for coverage—the equivalent of a personal telematics resume.

For any type of insurer employing telematics, this may not immediately lead to higher market share or profitability. It may even put a short-term squeeze on revenues given the need to compensate participating consumers

with discounted pricing on top of investments to finance infrastructure supporting the new strategic initiative.

So, how then is telematics a "win" for insurers, auto and beyond?

For one, personalized behavior monitoring is poised to elevate the frequency of insurer-client touch-points, thereby strengthening relationships amid a clientele with diminishing brand loyalty.

For another, a greater understanding of customers will allow insurers to build products more tailored to consumer needs. (It is important to note here that consumers and likely regulators will expect a choice to opt in or out of monitoring features, based on privacy concerns and how the information will be used and shared.)

Insurers can further provide incentives to consumers to opt into behavior monitoring by highlighting the benefits over and above the obvious premium savings. Insurer-client connections can be reinforced through real-time, behavior-related, value-added services. Among these are the following:

- Focused advertising and marketing messages
- Travel, retail, and service provider suggestions based on location
- Rewards for reaching fitness or healthy consumption goals
- Recommendations for more beneficial lifestyle choices

Moreover, to illustrate how telematics might provide tangible benefits to consumers beyond price savings, note that in auto insurance, monitoring users tends to improve their driving habits, leading to reduced accident rates.[5] This "nudge effect" could carry over to the use of telematics in other lines of coverage. Imagine the benefits to society if insurers also monitored health, fitness, workplace safety, home maintenance, and other behaviors.

As the technology used to measure behavior becomes more mobile-device-driven and increasingly cost-effective, it could help boost adoption as well.

However, while the cards seem to be stacked in favor of behavior monitoring adoption across the insurance universe, there may be a few hurdles that will need to be overcome. For example, implementation may require more nimble data management and warehousing systems, while privacy and data security programs might have to be fortified to reassure both consumers and regulators.

Insurers in general are unlikely to thrive through discounting programs alone—and telematics-based products are no exception. Ideally, telematics may offer a way out of having to compete solely on price, as strengthening customer bonds is elevated to a more prominent position in an insurer's strategy thanks to the benefits derived from behavioral monitoring.

Added insight

Telematics goes global, but speed bumps remain

THE number of global insurance telematics users is expected to increase at a compound annual growth rate of 90 percent, reaching 89 million in 2017, according to ABI Research.[6] However, the speed of uptake varies by region.

Europe is quickly developing the most commanding penetration of telematics insurance products. Italy is the region's current leader, but the United Kingdom is expected to close the gap by 2020. Conversely, the Asia-Pacific region is still struggling with barriers to UBI implementation, including regulatory restrictions on pricing, the relative lack of insurance telematics-monitoring capabilities, and the ratio of UBI expenses relative to insurance product costs.

The exclusion of gender from the auto insurance ratings dynamic in Europe due to concerns about the appearance of discrimination may also accelerate the adoption rate of UBI in the region, as those who see their premiums rise as a result look to validate their superior driving performance with telematics. Pursuit of fair pricing, particularly for younger drivers who pay higher premium rates based solely on their age, is also driving interest.

Perhaps even more influential to UBI adoption abroad is the push from several governments, including Italy and the United Kingdom, to motivate better driving behavior, which telematics surveillance is designed to promote. Indeed, vehicles fitted with telematics devices are becoming mandatory in several European countries, with others expected to follow suit.

Subject matter specialists at Deloitte UK suggest a conservative UBI adoption rate of 15–18 percent in the United Kingdom and Italy. They believe faster growth is unlikely due to uncertainties over monitoring device installation and consumer adoption, as well as whether such devices will endure as the preferred UBI data gathering method or eventually be supplanted by smartphones, as is expected to be the case in the United States.

However, while the United States and Europe are in the early throes of UBI adoption, with the attraction to consumers being the lure of cheaper premiums, the growth of telematics in China's auto insurance market is currently hindered by a number of obstacles.

Telematics in the Asia-Pacific region for now is available mainly as a luxury embedded in high-end autos to access concierge and location services from call-center operators. Regulatory restrictions over how insurance coverage is priced, a dearth of devices and other options, and the lack of uptake by insurance carriers currently hinder telematics growth for auto insurance and will likely remain barriers for at least the next few years.

As mobile technology continues to proliferate, however, the potential exists for mobile apps for telematics monitoring to hasten adoption in the Asia-Pacific market, if regulatory restrictions over pricing can be overcome.

Endnotes

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Rachel Moses, senior marketing specialist, Deloitte Services LP

Courtney Scanlin, insurance marketing leader, Deloitte Services LP

Aditya Udai Singh, assistant manager, Deloitte Services India Pvt. Ltd.

Contacts

Industry leadership

Gary Shaw
Vice Chairman
US insurance leader
Deloitte LLP
+1 973 602 6659
gashaw@deloitte.com

Deloitte Center for Financial Services

Jim Eckenrode
Executive director
Deloitte Center for Financial Services
Deloitte Services LP
+1 617 585 4877
jeckenrode@deloitte.com

Sponsors

John Lucker
Principal
Deloitte Consulting LLP
+1 860 725 3022
jlucker@deloitte.com

Sandeep Puri
Director
Deloitte Consulting LLP
+1 212 618 4436
sanpuri@deloitte.com

Author

Sam Friedman
Research leader, insurance
Deloitte Center for Financial Services
Deloitte Services LP
+1 212 436 5521
samfriedman@deloitte.com

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