Vehicle Manufacturers in the Motor Insurance Market: Technology as Competitive Advantage

*I-Lab Whitepaper*

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Executive Summary

In their core products, both motor insurance and vehicle manufacturers struggle with falling profit margins. In order to add value to their products and anticipate commoditization they continue to expand into the profitable services market. As a consequence, a conflict of objectives has arisen, where insurers and manufacturers compete for customer access in distribution and service provision.

In this setting, automotive telematics play a decisive role. Innovative telematics applications with relevance to insurance have emerged, such as anti-theft tracking, usage-based pricing, preventive maintenance and automatically triggered assistance alerts. Their future development, possibly accelerated by regulatory initiatives, is likely to result in integrated solutions which feature exclusive channels for service provision.

An analysis of the motor insurance environment and the impact of insurance-related telematics leads to the following strategic conclusions.

- At the automotive Point-of-Sale, offerings of comprehensive product and service bundles become more and more important. In this setting, vehicle manufacturers are in a favorable position since they deliver highly emotional products – cars and mobility – with integrated services. Via their authorized dealerships, they have a valuable opportunity for the distribution of additional insurance products.

- Telematics technologies become a key enabler of customer access and customer retention. Integrated technology solutions with functionalities like emergency buttons, for instance, guarantee an exclusive distribution of services. Therefore, third party service providers face difficult challenges when they choose to remain independent. On the other hand, this development supports service aggregators with technological competence.

- For insurers, two strategic options exist. In a cooperative approach, they position themselves as suppliers of white labeled insurance competence to manufacturers. This business model requires core competencies such as global presence and highly industrialized processes. Alternatively, they focus on direct customer access with competencies in customer intimacy, service aggregation, and the provision of their own telematics technology.
Introduction

1.1 Situation in the Motor Insurance Market

Motor insurance is the largest category of non-life insurance in Europe, with €127.5bn written premiums in 2008. Of these, Germany accounts for €20.4bn, while Switzerland and Austria account for €5.7bn and €2.3bn, respectively (1). Although the total number of insured cars has increased in recent years, inflation-adjusted growth stagnated in Switzerland and Austria, and was negative in Germany at around -5% in 2008. Reduced operating expenses have improved combined ratios, but motor insurance remains a highly competitive market (2). Profitability in the motor insurance business is rather low when compared to other non-life insurance products. The loss ratio of all motor insurance types (liability, part cover, full cover) in Germany, calculated from incurred expenses divided by earned premiums, was 98.3% in Germany in 2008. In property, transport, and other liability insurance the loss ratio in 2008 has been 71.4%, 70.0%, and 67.0%, respectively. Nevertheless, motor insurance is considered an important customer acquisition tool for other products in the portfolio of an insurer, and competitors stick to the market regardless of low profitability.

The number of market participants has remained nearly constant in the last 5 years at slightly above 100 firms (3). However, it has become evident that vehicle manufacturers have developed a stake in the motor insurance market. To evade eroding profits in competitive and saturated markets, both insurance companies and vehicle manufacturers have applied a combined strategy. Besides cutting costs, they have expanded into activities that add value to their basic product, specifically in the profitable automotive services sector. Examples include lease packages with integrated insurance, motor insurance distribution and pricing through OEM financial services captives, assistance services for customers, and vehicle repairs. As a consequence of this development, a conflict of interests has arisen.

1.2 Scope of this Study

Focusing on the mentioned three central European countries, this paper aims at understanding both established characteristics and expected developments in this scenario. In our opinion, a strong determinant in this conflict of interest is the impact that internet of things technologies will have on motor insurance products. The internet of things closes the gap between physical objects and ubiquitous data networks. For insurance, that means that risks become more perceivable, allowing for better risk control, prevention, and reaction. In the automotive sector, such technologies are commonly referred to as telematics. A prominent example making the concept of
technology innovation in the insurance context more tangible is the introduction of usage-based insurance (UBI) in several countries. Here, a pioneering role was assumed by independent automotive aftermarket suppliers such as Octo Telematics which partner with insurance companies. Usage-based, or pay-as-you-drive insurance is experiencing only hesitant growth and has suffered severe drawbacks, for example in the UK where Norwich Union suspended its distribution in 2008. Nevertheless, Octo Telematics is quite successful in Italy with more than five partner insurances and over half a million subscribers, and tapping into the Austrian market in cooperation with insurer Uniqua (4).

Figure 1 Drivers of the Conflict of Interest Between Insurers and Vehicle Manufacturers

Besides this snapshot example, a broad range of other insurance-relevant telematics technologies have appeared in the market, partly following regulatory initiatives. We provide an in-depth analysis of their value proposition and possible effects on the complex motor insurance ecosystem, where automotive OEMs play a key role in bringing new technologies to mainstream customers. From these findings, we derive a strategic assessment of the situation with recommendations for insurers.
2 Vehicle Manufacturers in the Motor Insurance Market

2.1 Insurance and Automotive Services

Motor Insurance and Automotive Services are interconnected fields of business. Vehicle manufacturers and insurance companies, though predominant in size, are not the only relevant market actors here. Rather, a complex ecosystem of market participants has developed, which can be structured into three distinct fields of business. The first category contains enterprises acting as sales channels for motor insurance products, such as traditional brokers and agents, but also OEM brand authorized car dealers. The second category is constituted by “middlemen” who incorporate motor insurance into products like fleet management solutions, rental or lease cars, and automotive finance products. Insurance technology providers like Octo Telematics also belong into this branch. The last category encompasses customer service providers offering assistance, repair and maintenance, as well as legal advice and damage appraisal for accidents.

![Figure 2 Third Party Participants in Motor Insurance and Automotive Services Markets](image)

Especially the customer services field has become a strong domain of insurers. Assistance and the active support of customers in the liability case carry several benefits for insurance companies. These include an added value to their products and the reduction of claims adjustment expenses through lower repair costs, and less cases of insurance fraud. Customer support initiative is also a precondition for active claims management. By directing repairs to partner garage networks, insurers can negotiate volume discounts and control costs. One prominent example is the partner garage network of HUK-Coburg with 1’200 partners, where 150’000 claims cases totaling around €250m have been directed through the insurer in 2008 (5). An issue of conflict is the fact that these co-operations between insurers and garages reduce overall repair and service revenue. From the viewpoint of a dealership with an affiliated repair workshop, this reduces sale incentives of insurance products that promote garage networks. Several insurers, lead by Allianz, have therefore introduced “fairplay”
agreements, guaranteeing revenue shares for their partners. In general, insurance companies as well as manufacturers must align their actions with the interests of third party market participants in order to successfully pursue their strategic goals in motor insurance in automotive services.

2.2 The Point-of-Sale Advantage

With respect to sales channels, car dealerships play an important role as a distribution channel for insurance policies. Customers perceive them as a convenient Point-of-Sale and expect offers when purchasing a vehicle. Demand does not only exist for motor insurance policies, but also for related products such as physical damage insurance, guaranteed asset protection, credit redemption agreements and legal protection insurance (6). Several publications in practitioner's magazines assert that insurance sales through car dealers still lag behind market opportunity. While in 30% of new car purchases in Germany insurance products were acquired at the Point-of-Sale, a market potential of at least 50% is considered realistic (7). Most major manufacturers offer such products either under their own brand, or under the brand of an associated insurer. While Mercedes Benz dealers act as an agent for HDI Gerling insurance policies, Volkswagen's VVD, a branch of Volkswagen Financial Services, offers its own branded insurance based on Allianz products, already since 1948 (8). Further examples of cooperation include BMW and Victoria, as well as Volvo and Basler, and the insurance products of GMAC, Toyota, and Renault.

2.3 Conflicting Objectives with Insurers

In the European automotive industry, manufacturing and distribution of vehicles accounts for about 44% of gross profits. Other major profit sources are the service and maintenance sector (14%) and the parts and accessories aftermarket (39%). When considering profitability in terms of return-on-invest, it becomes evident that the latter two outperform capital-intensive manufacturing. One reason for this is that OEM replacement parts are significantly more expensive than identical non-branded merchandise. This cost difference has to be borne by insurers in the form of elevated liability costs – which they frequently encounter by excluding OEM replacement parts from insurance coverage.
In opposition to the one-time return from vehicle sales, manufacturers aim at establishing a constant revenue stream from services throughout the lifetime of a vehicle. One strategy is to offer a mobility guarantee to customers who regularly purchase maintenance services from authorized dealers. By offering insurance with purchased vehicles, manufacturers want to tie in with the success of their existing financial services products such as leasing. Automotive finance has been described as “the 21st century profit center of the automotive industry” (10). The automotive Point-of-Sale finance market in Western Europe is expected to obtain more than 9 million finance cases worth €111bn by the end of 2010 (11). If loans for new and used vehicles together with leasing contracts are considered a part of the automotive value chain, they account for over a third of total profit. Furthermore, when offered financial and service products in combination with a new vehicle purchase, customers often surrender the usual rebate demands faced in sales talks (12).
To conclude, mapping the strategic objectives of manufacturers against these of insurers reveals several issues of conflict. These encompass insurance distribution, assistance services, replacement parts and service partners. As a result, insurers and manufacturers increasingly engage in direct competition.

### 2.4 Customer Emotionalization

According to a 2005 Accenture study, non-life insurance products are more and more becoming a commodity due to price transparency and standardized risk coverage (13). Emotionalization – building a pervading brand image for emotional identification and sustaining a positive brand experience with products – is a promising remedy to this dilemma. It may help insurers to escape the commodity trap, at least with a certain fraction of their customer base.

An effective instrument for realizing customer Emotionalization in the insurance industry are assistance services. Besides adding value to insurance products or facilitating cost reductions, delivering a positive customer experience through assistance improves attitude and trust towards an insurer. It offers a channel for customer interaction in situations where clients perceive an imminent problem or risk
and are in need of support. Thus, the liability case becomes a "Moment of Truth" with high customer responsiveness. An uncomplicated and competent service experience here is appreciated by customers and rewarded through increased trust and brand loyalty (14). In the context of motor insurance, over two thirds of customers in Germany value 24h emergency services as important or very important, and around 40% do so for continued guaranteed mobility in case of an accident or break-down (15). To subsume, it can be said that when engaging in the assistance services market, insurers and manufacturers also compete for customer Emotionalization.

When one compares brand assets of vehicle manufacturers with those of insurers in markets today, a significant gap becomes evident. Manufacturer brands have successfully established attributes such as quality, reliability, sportiness or luxury. A main reason for this fact is the association of such attributes with the physical product automobile. When employing car dealerships for the distribution of insurance, or services in general, manufacturers profit from their brands. A Mercedes-Benz insurance product, for instance, will be expected to be in a premium range in terms of pricing and quality by clients, even before any dedicated marketing effort. With their financial services captives, manufacturers have already demonstrated their ability to utilize these effects. Furthermore, Insurance brands are not associated with products outside of traditional insurance amongst the general population, as the example of roadside assistance demonstrates. When considering whom to call in case of an accident, only the brand of ADAC automotive club has significant recognition in Germany (15). Overall, insurers face several challenges in developing their brands, which gives manufacturers an advantage in terms of customer Emotionalization.
3 Telematics Technology as a Driver of Change

The term telematics refers to in-vehicle systems that collect, evaluate, and transmit information. GPS positioning and GSM/3G/UMTS digital data transmission standards are key ingredients of such technologies. Besides conventional voice transfer, telematics systems transmit vehicle specific parameters and environmental data to either a stationary back-end infrastructure, or alternatively to surrounding traffic – functionalities which are summarized under the label "Car-2-X". Applications differ in technological maturity, customer acceptance, and in system providers, which can be aftermarket suppliers or OEMs. With respect to insurance technology, it is furthermore reasonable to differentiate between private transportation and the commercial vehicle sector.

3.1 Commercial Interests Advance Telematics

In the commercial vehicle context, telematics technology is widely used. It facilitates track-and-trace solutions which allow centralized, non-interactive monitoring of vehicle positions and routes, an fleet management systems (FMS). Furthermore, toll collection also often utilizes telematics systems as well. The German heavy commercial vehicle highway charge, for instance, is calculated based on travelled distance measured through on-board GPS units. In recent years, telematics have profited from falling costs both per unit and of wireless data transfer. Technology drivers include navigation-linked job management, electronic reporting, and the handling of invoice queries. In Europe, more than 1 million on-board units are installed today, with an average annual market volume growth of 32% (16). While in 2006 100% of telematics solutions came from aftermarket suppliers, OEM products such as Fiat's Blue&Me fleet management system are on the rise (16). Fleet management telematics are also of interest to insurers, as the example of an on-board unit for light commercial vehicles promoted by Allianz Suisse demonstrates. Their "Flotten Services" product offers a track-and-trace functionality, combined with crash recording and automated claims management. Besides reducing claims and claims adjustment expenses through this system, Allianz Suisse hopes to benefit from increased customer loyalty in the Swiss fleet insurance market in Switzerland, where they hold a CHF 66m share of the CHF 500m total market volume (17).
3.2 External Drivers Reduce Technology Barriers

Upcoming legislation is likely to affect automotive telematics technology in general. An eminent instance is the eCall technology in the European Union's eSafety initiative, which aims at improving the response time of emergency services in case of an accident. Through automated detection or a manual trigger, accident data and GPS position would be transferred to first responders. Field experiments for such automated emergency calls are already underway, and besides delay in the official roadmap planning mandatory eCall by 2012, introduction as standard option is expected within the next five years (18). A possible extension labeled bCall is currently under discussion for automated break-down assistance and would use the same infrastructure and in-vehicle components. Another case of legislation pushing telematics is vehicle taxation based on driven kilometer, to be introduced in the Netherlands by 2012. The close relation to usage based insurance technology is obvious. Legislation is also motivated by sustainability: "Green" telematics promise to reduce traffic congestion with Car-2-X systems, optimize travel planning, and, possibly in combination with smart insurance, motivate the reduction of fuel consumption through cost transparency (19). These developments push appropriate technological standards and infrastructure, thereby reducing barriers of insurance telematics. Obligatory technology components reduce the cost of innovative functionalities building upon them. Furthermore, regulation may help to address privacy protection issues amongst customers, when accepted data collection and data security policies are established.

3.3 Insurance Telematics Applications Emerge

Dedicated insurance telematics applications are not new, especially in the passenger car segment. In the 1990s, when vehicle theft constituted a large fraction of claims in Europe, remote immobilizer systems and vehicle monitoring were subsidized by motor insurance premium discounts, resulting in a significant decline of theft-related claims (20). In recent years, however, several new applications arose. One example is the crash recorder for novice drivers with AXA Winterthur motor insurance in Switzerland, which stores velocity and acceleration measurements in an accident. The on-board unit is installed free of charge, in combination with a 15% premium discount. Besides affecting driver behavior, the main benefit of such systems is the attraction of new customers (21).
Currently, two other major insurance telematics applications are emerging: Automated assistance and usage based premium schemes. Automated assistance refers to systems that automatically detect and report break-downs or accidents, and initiate follow-up services from an assistance provider. From the viewpoint of an insurer, this allows for industrialized claims management, and early authority over the assistance process. Besides on-board unit solutions, Smartphone-based mobile claims assistance (22) or the integration within automotive electronics through an OEM, such as in BMW’s ConnectedDrive system, are an option. In usage based insurance, on the other hand, telematics are employed to register and communicate driven distance or time, road use, and even driver behavior. Premiums are based on risks the insured object is actually exposed to rather than on statistical inference. As of today, underlying technology is provided by a wide range of aftermarket suppliers in Europe, such as agentes AG, Cobra Automotive Technologies spa, NAVTEQ, and Octo Telematics. Although usage based insurance promises significant cost advantages for low mileage drivers, its development has recently stagnated outside of Italy, with major causes being the high costs of data transfer, as well as privacy protection issues.

3.4 Development Towards Standardized Solutions

An increasing amount of added value in automotive technology is in electronic components. Their performance, connectivity and scale is ever improving, whereas prices decline. While feasibility and affordability is given, non-technical drivers and barriers determine the success of new technologies. Innovative telematics applications are typically not conceived in a self-contained manner and then brought to market, but rather follow a slow ramp up phase, in which technology capabilities and customer acceptance converge.
Though it is unsure which exact path telematics solutions will take, a clear trend is the convergence of functionalities to an integrated technology solution. In commercial vehicles, aftermarket suppliers will supposedly maintain a large market share in telematics. One reason are the widely varying purposes of fleet management systems, which demand highly specialized solutions, and the variety of OEM brands that can typically be found within a car park. In the passenger car segment, the outlook is less clear. In the past, providers like Octo Telematics have successfully established niche markets, or engaged in OEM partnerships such as supplier Cobra did for their usage based insurance products (4). For integrated solutions, however, manufacturers hold significant advantages. New telematics technologies such as remote vehicle diagnostics will accelerate the integration process, which reduces redundancy in components and thus yields reductions in hardware costs. Finally, standardization of telematics is a prerequisite of all Car-2-X applications in order to allow for interoperability of systems. Similarly, a single telecom provider for telematics applications is preferable to separate subscriptions for each service.

Figure 7 Convergence of Telematics Functionalities
4 Strategic Assessment

4.1 Competitive Advantage through Telematics Technology

In the competition for customer access, services are increasingly bundled together and provided to the customer in form of a mobility package which includes insurance. This comprehensive, customer-oriented product approach is less likely to be viewed as a commodity (12). From the viewpoint of the customer, a physical automobile and the services delivered around it cease to be separate products and become the result of an integrated services value chain instead. A services value chain is defined in the literature as an "aggregation of core competencies in business process, business applications and common infrastructure, led by a business solution aggregator, to deliver mass-optimized and mass-customized business solutions" (23). Whether such a product is delivered in combination with a purchased vehicle, in a leasing contract or in car-sharing and rental services becomes less important to customers.

From remote vehicle diagnosis and event notification, to usage based insurance or taxation – telematics technology will become a key enabler of the automotive services bundle. An important aspect of this development is that whoever ultimately provides the technological infrastructure is likely to determine the modalities of delivering automotive services to the customer. While today assistance companies, insurers, and vehicle manufacturers mostly operate call centers, thus leaving the first point of contact choice to the customer, an autonomous notification system is preset to contact its corresponding back-end infrastructure alone.

![Diagram](image_url)

Figure 8 Bypass of Conventional Claims Management Process through Automated Notification
In the future, a mobility services value chain possibly includes on-demand vehicle provision, usage based payments, maintenance, assistance and risk coverage. All these services are supported through an integrated technology solution which brings about cost benefits through scale effects and improved process control. Furthermore, this solution has a gateway function with respect to customer access, allowing for a specific customer experience in controlled situations. By emphasizing customer convenience and ease-of-use, it is likely to outperform fragmented solutions with different technology components from insurers, manufacturers or third party providers in competition.

Figure 9 Technology Solution Enables Customer Access

Threats to persisting business models of insurers as well as new opportunities become evident. Manufacturers have principal advantages through their technical core competencies and brand awareness facilitated by the physical product automobile. This position is strengthened by the standardization and functionality convergence of telematics systems. While aftermarket solutions, e.g. on-board units, have distinct advantages in the commercial vehicle market, for private transportation – especially in the profitable premium segment – insurers will have a difficult stand promoting technology-based services independently. Furthermore, in order to strengthen their technology competence, insurers should focus on technology innovation as the convergence of system capabilities and customer acceptance. The failure to do so
eventually results in rejection by the customer, a possible explanation for some failures with pay-as-you-drive premium schemes.

4.2 Recommendations for Insurers

Currently, cooperative business models between OEMs and insurers have created a somewhat fragile equilibrium. Following their success in financial services, OEMs are determined to integrate motor insurance in their automotive service portfolio. From their point of view, a major challenge thereby is the requirement to achieve insurance competence on a global scale.

In considering the options for insurers in this situation, the two categories of Non-life insurers introduced in a 2008 study by the Boston Consulting Group (24) are helpful. According to the findings of this study, motor insurers either dominate in a national / regional market (“Nonlife Mutual”) with specialized, customer-oriented products, or they pursue an international, large scale approach (“Multimarket Leader”). For motor insurance, this suggests two distinct strategic options. Either they cooperate with vehicle manufacturers and integrate their products into manufacturers’ processes. This promises large and safeguarded volumes, but results in "white label" insurance brands with low profitability. A prerequisite for such a strategy is the capability to provide their services on an international scale with high efficiency. Alternatively, insurers can focus on specific regions or customer segments. Therefore, they should look for direct access to customers, building strong brands as service aggregators. An advantage here is their knowledge of local markets. In order to compete with manufacturer distributed insurance, insurers have to develop competencies and partnerships in telematics technology.
5 Conclusion

As this paper has shown, a conflict of interest between vehicle manufacturers and insurers exists today, and there is some evidence that its severity will increase in the mid-term. Opportunities and risks in discussed technological developments are too grave to be neglected. Besides many unknowns regarding technology innovations and their acceptance in the market, two developments in telematics are rather clear. The first one is the foreseeable advent of regulation that requires telematics hardware and corresponding data transfer services in new cars. The second one is the continuing integration of functionalities into standardized systems, driven by costs, convenience and engineering logic.

The main consequence of the extended value chains of insurers and vehicle manufacturers is their competition as service aggregators for distribution channels and customer access. In a customer oriented perspective, service aggregators profit from Emotionalization and product convenience, facilitating a coherent customer experience. Automotive Point-of-Sale dominance is a definite advantage here. Furthermore, service aggregators can create synergies and cost efficiency by aligning service processes and achieving high volumes.

The relevance of technology lies in the determination of customer access modes. Automotive services and potentially also motor insurance will depend on a reliable telematics system, requiring service aggregators to co-function as technology providers. In recent years, insurers have increased their technological competence in areas such as claims management. When it comes to automotive technology, however, vehicle manufacturers are supposedly hard to overcome.

Finally, for the future relationship between insurers and vehicle manufacturers two strategic alternatives can be established, subsumed in the catch phrase "beat them or join them". Insurers with a local scope are not attractive as cooperation partners for internationally positioned vehicle manufacturers. They should strengthen their connection to the customer and focus on profitability through specialization. For globally established insurers, on the other hand, an opportunity lies in providing their core competencies to vehicle manufacturers, focusing on volume and efficiency.
References

1. **CEA.** *European Insurance in Figures.* s.l. : CEA Statistics N°37, 2009.