

Alternative Finance in the Automotive Industry

Pactum AG offers working capital finance solutions across various industries. One of these is the automotive industry with a focus on European supply chains. In order to make this process efficient, it is essential for Pactum to assess the automotive market in the current and projected economic environment and derive possible scenarios for the future. This paper's main goal is to outline our point of view and approach with regards to working capital financing in the automotive industry.

The automotive industry is going through a massive change. After more than 120 years, the business is under pressure from multiple angles. This decade may be as dynamic as the last century. The change is driven by five key forces:

Five Forces driving Change

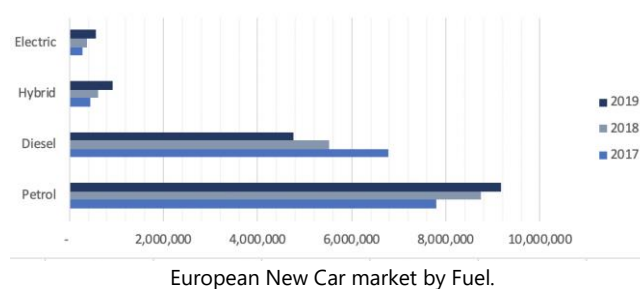
1. Using instead of Owning

The business model is changing from ownership to pay-by-use. This trend has its origins in the urbanisation trend combined with an increased use of financing/leasing offers and will reach a new level when autonomous driving becomes widely implemented. There is great potential in using the 94% of the time an average car is parked nowadays. Most likely, autonomous driving will start in inner cities and suburban highways where commuting routes are defined or in areas which are geographically restricted. One reason for this is the fact that autonomous and emission-free driving are mutually supportive. For example, autonomous vehicles create a clear case for electrical Powertrains within the inner city due to the minimal range requirements. The reciprocal effect of these two dimensions, electrical clean powertrains and low range requirements, results in a net positive effect. Therefore, it seems possible that the percentage of new car registrations, which are electric, will rapidly increase

when autonomous driving is available. Some experts estimate that more than 55% of new cars will be fully electrified by 2030. Most of the remaining new vehicles would still include hybrid drive technologies in combination with combustion engines.

2. Alternative and Combustion Powertrains

Alternative Powertrains will extend the choice of formerly combustion only offerings. We are already witnessing a subtle creep towards electric and hybrid powered vehicles as can clearly be seen in the below chart.

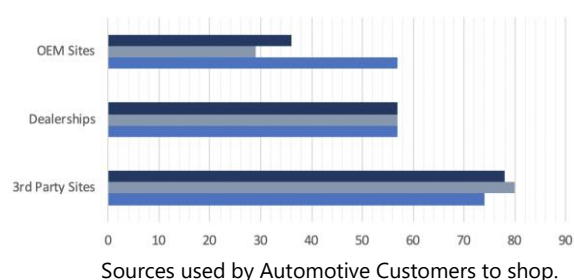


By today, most brands offer various hybrid or full-electric vehicles. A heterogeneous mix of combustion, electric and hydrogen engines is the most likely scenario for the future. The hesitant acceptance of the consumers is a strong indicator for this as only 7.2% of new car registrations were electrified in 2019. Many consumers are confused by the number of choices. In addition, every alternative has specific strengths that turn it into an environment friendly and economically wise solution in certain applications. Only the regulators seem to have a clear picture: Carbon dioxide regulation will tighten tremendously, and not just in Europe where the CO2 emission limit will drop to 95 g/km by 2021. China, the US, and Japan have also enacted laws to reduce emissions. One immediate result will be higher costs. As the easier challenges have already been addressed which leaves only the more complex and less cost-efficient problems to be addressed, the price of cutting future emissions is rising. This will push OEMs to invest more in e-mobility, meaning electrical/hybrid powertrains, including

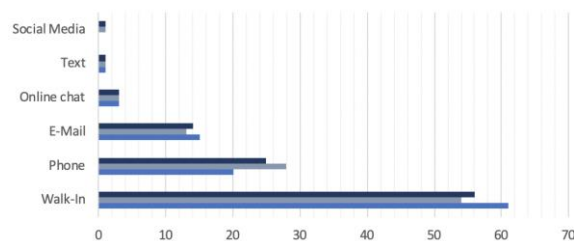
batteries, as well as in lightweight and aerodynamic drag-reducing technologies.

3. Digitalised Cars and Experiences

“The car is the ultimate mobile device” as said by Tim Cook, CEO of Apple. The merge of modern state infotainment technologies into cars is a process that will turn many cars in customer-oriented infotainment vehicles. The driving experience could move into the background. Consumers want to combine mobility with communication. But the digitalization goes far beyond: When it comes to buying a car, research shows that digital channels are already the primary information source for customers when conducting initial research before narrowing down their short list of choices. There is still hope for the dealers though as walk-ins remain the most prolific form of initial contact with a dealership and customers still enjoying that hands-on purchase experience, the data speaks for itself.



Sources used by Automotive Customers to shop.



Initial contact with OEM and Dealership networks.

For many, the next step is online purchasing. Many brands offer this digital option today. They seem to balance the different expectations quite successfully. This might be an opportunity for OEMs, but it also

means the potential threat of competition from online retailers puts pressure on the existing dealership structure.

Just as phones got smart, so will cars. Cars on the road are being equipped with danger-warning applications, traffic information services, and a host of infotainment features and increasingly active safety features as well. The number of connected cars will rise by 30 percent per year for the next several years. Today, one in five cars is connected to the internet. Many of these cars belong to the premium segment, nevertheless increasingly connectivity finds its way into the value segment as well. Delivering infotainment services through the car like internet radio, smartphone capabilities, information/entertainment services, and driver-assistance is becoming widely available. New technical features for safe, comfortable, and eventually autonomous driving offer new ways to define a car brand. To deliver on this, OEMs have to manage shorter product and service development cycles, such as software and other technology updates. OEMs have to build new partnerships with software companies or develop themselves into a software company like Herbert Diess, CEO of Volkswagen, communicated during the annual news conference in January 2020 at the VW plant in Wolfsburg Germany:

“Software will account for 90 percent of future innovations in the car.”

“Today our 20,000 developers are 90 percent hardware-oriented. That will change radically by 2030. Software will account for half of our development costs”

As car owners spend about 50 minutes a day in their vehicles, there is a real opportunity to monetise digital media revenues and generate additional, highly profitable revenue streams. This could develop into a new source of income for OEMs and will progress into a battlefield with existing and new competitors. Ultimately, end consumers will seek applications that make driving more convenient and a seamless element of their daily routines and lifestyles.

4. Complexity and Cost Pressure

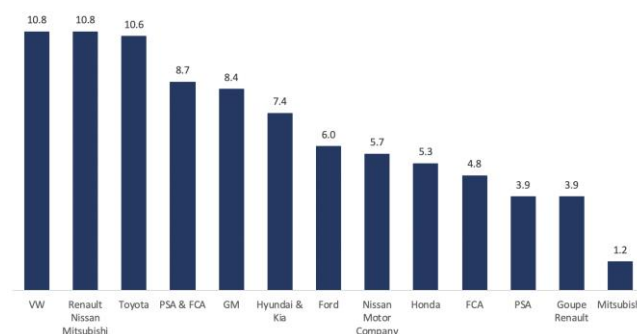
Customers have different expectations depending on their cultural and geographical background. This led to the increase in model derivations that we have seen in the last years. Hence, the trend to more platform sharing and more modular systems will continue. At the same time, regulatory pressures will tighten, and transaction prices in established markets will remain flat. The increase in regulations with respect to environmental and safety standards will raise costs but also increase complexity, as they need to be managed apart from domestic markets. The growing number of derivatives serving different vehicle segments and markets based on a single platform also raises complexity. Moreover, OEMs will have to intensify their development efforts for alternative powertrain technologies. The above mentioned, now available fully electric cars can only be seen as an initial milestone. Despite the current hype of electrical powertrains, it is still unclear what the prevailing technology of the future will be. This will require significant investments. Given all these pressures, plus flat net price development due to less budget available for new features, it will be more difficult to generate profits for OEMs.

5. Concentrating Industry Landscape

The OEMs have developed some of the most advanced partnerships with their suppliers. They are the perfect example of an economic symbiosis. Highly specialized engineering companies do much of the development work and highly specialized manufacturing companies produce ever more sophisticated components. The core competences of successful OEMs can be defined as the orchestration of these hundreds of parties and the curation of the brand. Nevertheless, the industry has seen a wave of concentration with a select few making up the bulk percentage of global sales.

The mergers of FCA and PSA is just the most prominent example on the OEM level in 2020. This merger changes the competitive landscape with the combined company becoming the 4th largest global OEM by volume and

3rd largest by revenue with annual sales of 8.7 million units and combined revenues of nearly €170 billion.



Global Automotive Sales including PSA & FCA merger 2018

A similar concentration development can be observed on the retail and supplier level. On the one hand, stand-alone dealers can hardly finance the needed investments into their locations (digital and brick & mortar). On the other hand, powerful suppliers are adding more value in alternative powertrain technologies and in innovative solutions for active safety and infotainment. All of this has a direct impact on the global production capacities as well. In addition, OEMs need to ensure that their suppliers' production footprints – especially in emerging markets – match future market demands and their own production plans while being robust enough for a possible disintegration of the world due to the learnings of the Covid19 pandemic and anti-multilateral political movements.

The Effects on the Industry

Effect on research and development

These changes lead to increased research and development costs. Car projects are becoming more expensive than ever. The development of a new car can cost EUR 1 to 2 billion and can go as high as 6 billion. The development of an electric powertrain can easily add EUR 100 to 500 million, its application alone EUR 25 to 50 million. An infotainment system and the necessary ecosystem may add EUR 100 million cost per year.

Effect on production

In the coming years, OEMs and suppliers will be battling against decreasing margins while having to invest heavily in customer-oriented innovations. The traditional automakers will have to consider how much they are prepared to invest into mobility services to ward off a potential decline in their core business. At the same time, the global demand for mobility in the form of new vehicles is growing. This demands additional investment in production capacity and flexibility for the necessary hardware. OEMs that implement flexible and scalable concepts now will be in a position to play an active role in shaping the future. There are bumpy times ahead as rising demand may not lead to rising production volumes for the first time in history. In addition, there will be huge geographic differences. Much of the expected growth will continue to come from Asia. That means building a local supplier base, designing an enhanced supply chain, and bolstering supplier capacities. This is particularly important because the imperative to improve green mobility means that suppliers will become more important. This is due to the fact that they add much value for the constantly improving combustion engines and the various electrified powertrain alternatives in parallel. On the one hand, conventional combustion engines-powered vehicles have to be optimized with the help of engine control systems, downsizing, and lightweight or automatic transmissions. On the other hand, there are the long-term possibilities of the various electric Powertrain alternatives – and these have not been core competencies of most OEMs. As mentioned above, OEMs should consider positioning themselves long-term in the areas of brand management, Powertrain design and/or manufacturing, battery packaging, and integration. Furthermore, electronics and software will play a dominant role in vehicle innovation.

A closer look at the available data of 2019 proves the challenging situation: Car production on the European continent contracted by 6.2% during the first six months of 2019, the result of falling demand in the European Union and Western Europe in particular.

Outside of the EU, production in Turkey (-13.2%) and Ukraine (-19.4%) continued to deteriorate, although Russian output maintained a positive momentum (+1.9%). North American car output decreased by 5.5% in 2019 when compared to the first six months of 2018. Production in the United States, which accounts for more than 60% of the region's total output, declined 6.5% to 3.9 million units during the first half of 2019. Six months into the year 2019, passenger car production in China decreased by 12.7%, with some 10 million units delivered in total. This significant decline mainly resulted from weak domestic demand and trade tensions with the United States. China nevertheless managed to maintain its leading position as the world's biggest car producer, representing almost 27% of global output. In Japan production volumes showed growth, increasing by 2.1% between January and June 2019 as a result of relatively stable domestic demand and strong exports. During the first half of 2019, 37.8 million passenger cars were produced around the world, that is 7.3% less than the year before.

Effect on marketing and sales

The above-mentioned changes are reshaping the wholesale level already today. Due to changing consumer behavior and new technologies, it is very likely that the utilisation of each car will increase dramatically. Considering an increased usage efficiency of the fleet, fewer vehicles will be required in the future. The inventory in Europe could drop from more than 280 million cars to around 200 million in the coming years. For the US, experts forecast a reduction of 22% to 212 million vehicles. Due to the different market situation in China, the inventory there could grow to 275 million vehicles, regardless of the increase in utilisation. Despite the falling inventory, vehicle sales will visibly increase. Vehicles that are used in the traditional way will remain in the inventory for a comparatively long time. By contrast, autonomous, and in particular, shared-autonomous vehicles will be changed far more frequently, resulting in rising sales figures. Automotive importers and dealers should consider these effects when planning the needed sales and especially service

capacities. In contrast to the obvious reduction of maintenance work required for electric vehicles, the falling inventory both in terms of vehicles is something that should not be neglected and recognised as a serious systemic risk for dealers and dealer support.

In the future, it will no longer be enough to focus purely on development, production, sale and service of vehicles. Manufacturers and suppliers need to proactively enhance the speed of change of their business model in order to manage the consumers' expectations. The automotive value chain will no longer finish at the factory door. It will extend across all types of use over the entire lifetime of the vehicle through its eventual recycling. True ecosystems will win the battle. The customers and target groups of the automotive industry will no longer be just direct buyers of vehicles, but all users of the products – in private and shared usage models. Software-based, direct interaction with every user – supported by the brand experience which is already a key feature – can lead to higher revenues over the lifecycle of the customer relationship. Dealerships will remain an important pillar of that ecosystem. The range of services has to be extended and each dealership has to become a true brand experience and competence center. Car brands need to go where the customer is. They need to provide an engaging interaction and compelling experience across all touch points on the customer decision making journey and in the post-purchase experience. The path to purchase and the post-purchase experience are comprised of multiple touch points and are two of the most innovation-ripe areas for a truly superior customer experience. Innovative retail concepts, such as brand experience centers that feature high-tech digital, personalized visualization tools or "pop up" stores that advertise a specific product to create media attention, could help. This development would require joint investments from dealers and OEMs and intense cooperation to create a seamless experience for the customer throughout the pure online and digitally supported offline channels. Most likely this strategy will require a limited number of locations which require

substantial investments. Retail must reinvent itself in the automotive industry just as much as in other industries. The clear advantage of the car is that there will be always the need for a physical product in contrast to music or books.

SARS-CoV-2 Impact

The minimum outcome of the SARS-CoV-2 pandemic will be a sharp, short-term reduction in global sales, revenues and profits. The pandemic emphasizes pre-existing challenges and trends in many industries. In the automotive industry, it puts global supply chains under massive stress. Several outcomes are possible:

- **Changed consumer demand**
The dimension of the currently beginning recession are unclear. The situation is too complex for reliable forecasts. However, uncertainty and more frequent use of home office could lead to permanently lower customer demand for passenger cars. On the contrary, the increasing fear of infection might lead to a fear of using public transport boosting car sales to private people.
- **Higher production costs**
The pandemic showed the fragility of today's complex sourcing processes. For example, the ramp up of the German car industry is only possible with the components of Italian suppliers. This experience could lead to higher production costs due to multiple, more local sourcing.
- **Challenging refinancing**
Many financial service providers in the car industry implement quite loose selection criteria. These players may face challenges to supply not only the volume of capital required for key industries but also at levels which are attractive.

With the reduction in available capital and an increase in refinancing costs due to economic uncertainty as well as large-scale volatility in markets, there is a real opportunity for specialists to help bolster and strengthen companies working capital requirements through receivables financing in key areas of the automotive industry.

The Effects on the Industry's Financing

All of the above will most likely lead to an increased liquidity demand for the automotive industry. Higher research and development costs, higher sales and marketing costs and additional costs for ecosystems in a world with diversified powertrains and usage models.

Pactum's expertise is working capital financing. Pactum fully focuses on the relationship between two or more parties. Hence, the above addressed changes can be tackled more effectively and successfully if true, well balanced partnerships are building well-coordinated ecosystems which are not dominated by OEMs.

Two things are needed to cover the increased liquidity demand explained above:

- Improvement of the existing financing solutions
- Additional financing capacity

Working capital finance in the form of receivables financing may just be ideal for that.

It offers a set of solutions that optimizes working capital and boosts the liquidity position of corporations by unleashing cash trapped in their supply chain. The result is a win-win situation for the corporation and its customers at the same time. These solutions especially cater for the needs of successful, growing corporations that often rely heavily on liquidity for their growth strategies.

Financing on Suppliers

Suppliers are the life blood of almost all major industries and play an important role in not only current product life cycle but also when it comes to the research and development of new and innovative technology. In this modern era where projects are not only time critical but also resource heavy, working capital finance can play a key role in providing liquidity between suppliers and OEM to finance innovation.

Supply chain finance creates advantages for all parties by freeing up critical working capital for suppliers in

order to deploy resources into innovative and groundbreaking products, weather any economic or geopolitical uncertainty and provide funding and at a competitive cost.

Pactum supports suppliers in maximizing their working capital efficiency by freeing up liquidity that would otherwise be tied up in their supply chain.

Financing on OEMs

The automotive industry is going through the above described revolution. With the demand that cutting-edge technology and clean energy should be integrated into the latest products and having to interact seamlessly with our day to day lives, the way in which we travel is changing. Today's competition is ever increasing, margins are tightening and capital requirements rising. These elements can result in marginal gains to help swing the pendulum for market share when developing and distributing new and innovative automotive models. The until then already large amounts invested by OEMs into their supply chains may just not be sufficient.

Innovative working capital finance can provide the structure to help free up more liquidity using tailored solutions that are engineered around the demands of the customer and allow to increase efficiency and flexibility. In this instance, OEMs can focus on what they do best: Innovate and bring the best possible product to market.

Financing on Wholesale & Retail

When it comes to buying a new or second-hand car, the initial point of contact still lies overwhelmingly with the dealerships, although many customers do much of their pre-purchase research online. A car is, for most part, one of the three biggest economic outlays a person will commit to during their lifetime, the other two being property and children, and can range from a passionate past time to an essential tool required to help them go about their daily life, especially in suburban and rural areas where public transport is not as prolific. Car dealerships play an essential role in facilitating the role of bringing the product to market

and making sure the customer gets the right product which best matches their lifestyle requirements. Dealerships have to outlay a large amount of capital in order to make sure they have the variety of models available to meet customer needs especially when competition is tight, and the overall quality of the top industry players is moving closer together.

Pactum sees an opportunity – outside of common floor plan finance models – to help dealers maximize their working capital efficiency and to help facilitate a larger part of the market share by freeing up cash which may be tied up short term until the floor plan finance is available. Our tailored model helps to fund a car through its manufacturing life cycle from when it comes of the production line until it is sitting on the dealership floor or is delivered to the end customer.

The solution helps dealerships free up critical working capital. Instead of being tied up in units which are not even available to view by the customers, the solution helps redistribute equity into key areas of the business which will help capture that critical market share.

For further information on our solutions, please do not hesitate to contact us.

Joscha Rosenbauer
CEO
rosenbauer@pactum.ch
+41 44 204 60 60

Derek Palmer
Manager Operations
palmer@pactum.ch
+41 44 204 60 69

Sources:

- Bloomberg, ACEA, PSA Groupe, FCA, Auto Motive News Europe, 2020
- Economic and Market Report – EU Automotive Industry First half of 2019, 2019
- Global Automotive Consumer Study – Deloitte, 2020
- The road to 2020 and Beyond – McKinsey, 2013
- Five trends transforming the Automotive Industry – PwC, 2018

About Pactum

Founded in 2016, Pactum is based in Zurich and regulated by FINMA. The asset manager focuses on providing working capital to major European brands. Pactum focuses on the highest quality obligors. This enables the company to offer transparent and secure investment opportunities for investors combining high loan volumes at attractive terms for clients.

Disclaimer

This document has been prepared by Pactum AG ("Pactum"). The content of this document is provided for information purposes only and does not constitute a request, an offer, an investment proposal or a recommendation to purchase or sell products, to execute other types of transactions, or to enter into legal transactions of any kind. Although Pactum makes every effort to ensure that the information in this document is accurate and complete, no guarantee is offered or implied for its accuracy, reliability, up-to-dateness or completeness. All information is subject to change at any time without notice. Although the content of this document has been prepared with due diligence and care, no warranty is made to its currency, accuracy or completeness. Liability for damages of any kind arising from the use of this information is expressly excluded.