Report

Roland Berger

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Global automotive supplier study 2022

THE ECONOMIC ENVIRONMENT CONTINUES TO BE DIFFICULT FOR AUTOMOTIVE SUPPLIERS

LAZARD Roland Berger

MANAGEMENT SUMMARY

What was expected to be a year of recovery from the Covid-19 crisis turned out to be the year of semiconductor shortages and supply chain problems. At the end, the ongoing frictions in the markets have eradicated five years of growth for the global automotive supplier industry. And 2022 is also a challenging year for suppliers, according to a new study by Roland Berger and Lazard. In this first part of a three-part series, we detail the mounting pressures and financial health of the industry.

Starting with the Covid-19 pandemic, the automotive industry is going into the third consecutive crisis year with an above-average financial burden, especially for traditional automotive suppliers. With the semiconductor shortages, the war in Ukraine, and subsequently skyrocketing raw material prices and factor cost increases, multiple additional short-term challenges came on top of the pandemic aftereffects. Especially Europe as a market is facing structural problems and will most likely not have seen pre-crisis volumes by the end of the decade.

While electronics suppliers and aftermarket players could outpace their peers in terms of profitability, the majority of traditional players face deteriorating margins in this environment. In the light of these effects, also 2022, 2023 and most likely even 2024 will stay or be difficult for automotive suppliers.

Taking actual inflation into account, also refinancing for automotive suppliers will become much more difficult. Central banks are fighting the development with increasing interest rates, making capital more expensive in a time where it is most needed to finance technological change.

Cover photo Anski/Getty Images

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1/ Market overview

After what seems like a never-ending influx of ongoing and new crises, the automotive supplier industry is facing its third consecutive year without volume recovery. On top of that, a concerning number of complications are squeezing supplier margins also in 2022, creating an above-average financial burden.

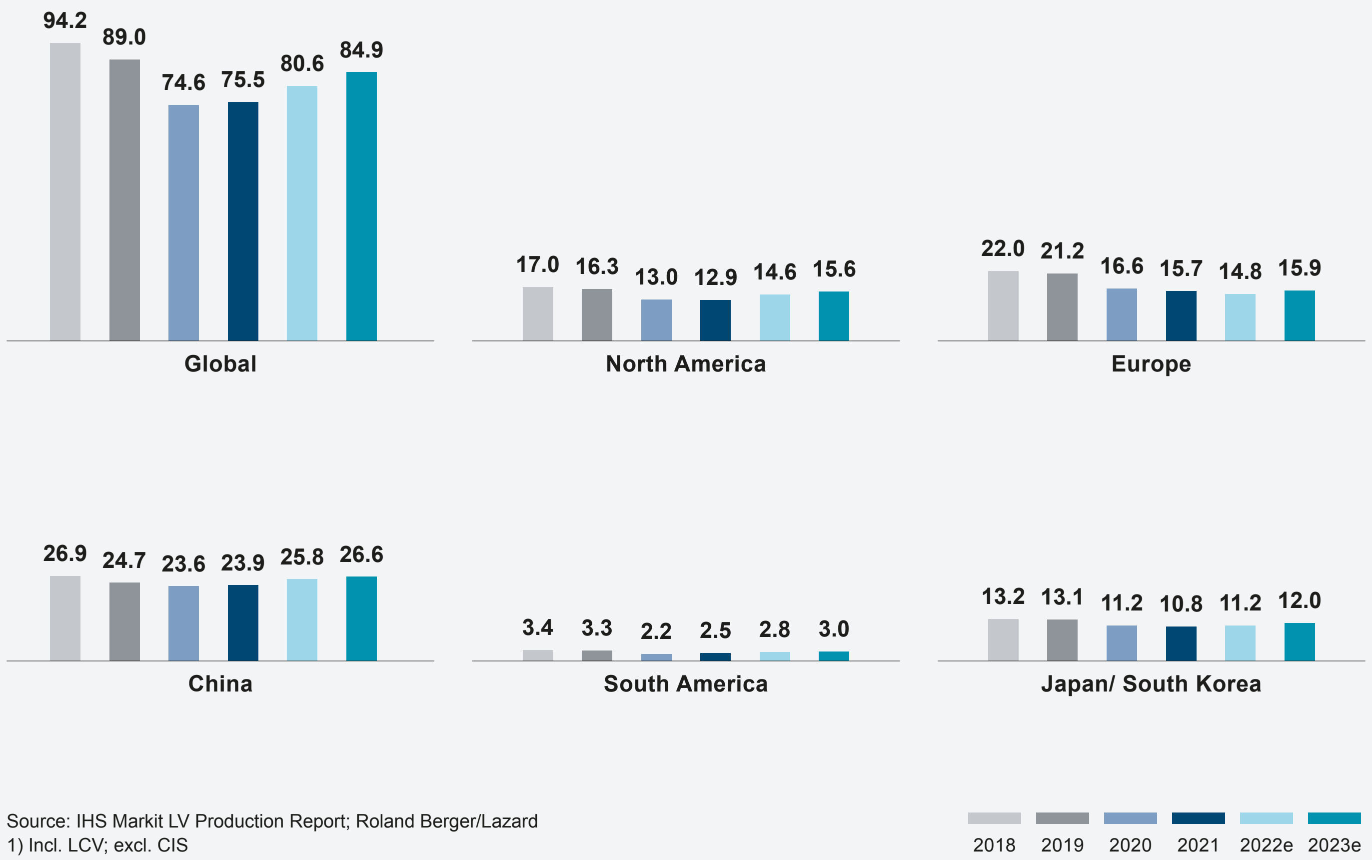
Lingering effects from the pandemic, continued chip shortages and rising energy costs caused by the war in Ukraine are the biggest challenges. But soaring inflation and interest rates, as well as global recession fears, are a close second.

Especially the war in Ukraine with its aforementioned side-effects, but also Covid-19 relapses in China, are new burdens for the market. To what extent they are the short-term impacts that they are seen as at the moment, time will tell.

Nevertheless, some suppliers, especially aftermarket players and electronics suppliers, could outperform the market, pushing the overall industry to a weighted average margin of 5.3% in 2021. Nevertheless, continuous short-notice volume volatility and supply chain frictions put a burden on profitability for the average automotive supplier as they hampered shop-floor optimization, efficient workforce planning and a stringent supply-chain management. The recent crises have shown that global supply chains pose an operational and financial risk to supplier operations. With growing fears of global recession, the recovery of the industry will depend on availability of raw materials and access to affordable energy throughout Western Europe. In our view, these changing market conditions necessitate a de-globalized supplier network to build resilience and overcome current and future disruptions.

The economic estimates, projections and valuations contained in this study were based on current market conditions, which may change significantly over a short period of time. Despite all uncertainties, however, production volumes are expected to recover only moderately at best. → A

A / Due to continued bottlenecks in automotive semiconductors and other constraints, global production volumes remain below pre-crisis levels
Production volume passenger cars[1)] by region, 2018–2023e [million units]



Source: IHS Markit LV Production Report; Roland Berger/Lazard
1) Incl. LCV; excl. CIS

2/ More disruptions, slower recoveries

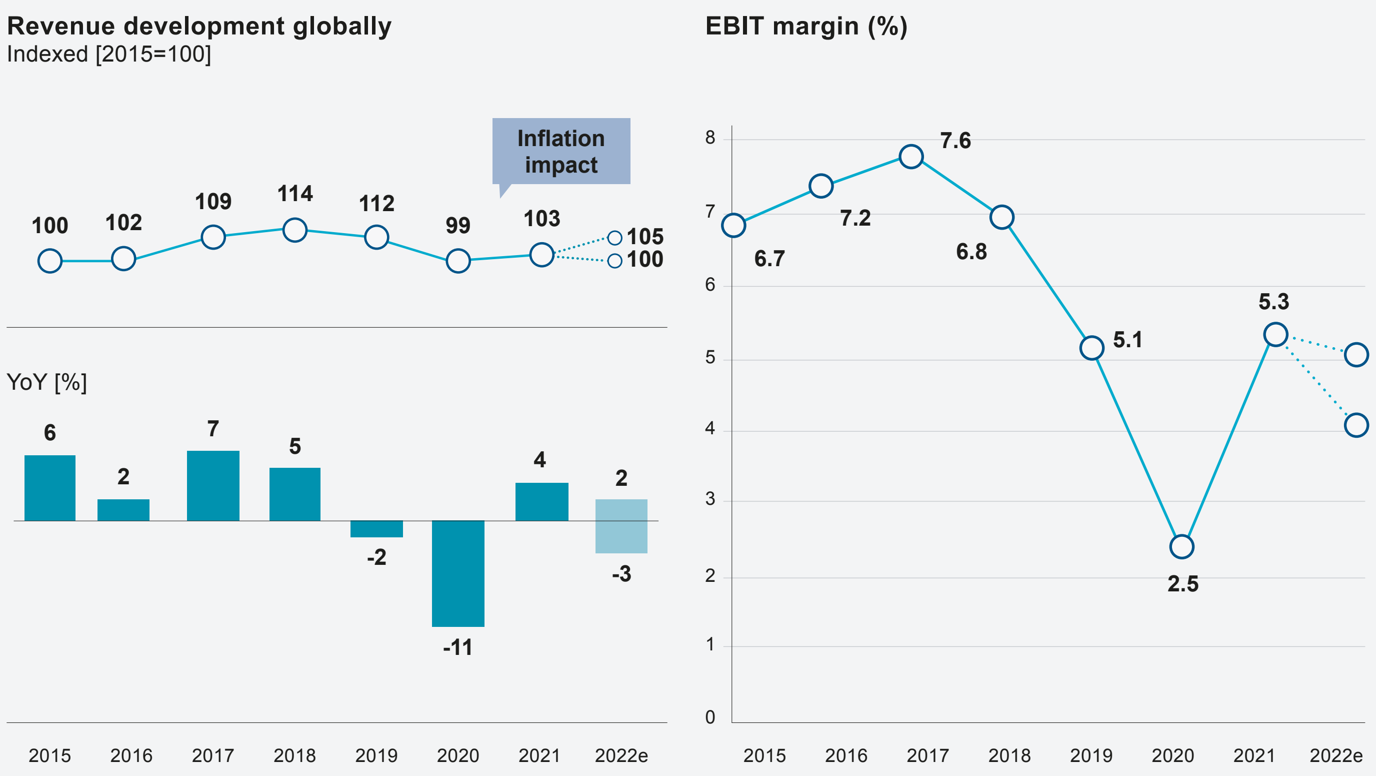
While steadily increasing over the last 20 years, automotive production volumes have significantly dropped on two separate occasions. Once in 2008 during the Global Financial Crisis, followed by a quick year of recovery in 2009. And again in 2020 after the Covid-19 pandemic. The subsequent chip and raw material shortages, however, coupled with war in Ukraine, have led to a much slower recovery. The industry is now facing its third consecutive year of lower volumes than pre-pandemic levels, with little to no positive signs of a widespread turnaround. To the contrary, the ongoing crisis has eradicated the last five years of growth of the industry. → B

At best Roland Berger and Lazard experts do not expect a return for the automotive industry to pre-pandemic revenue levels until 2025 at the earliest. Facing global recession concerns, however, those pre-pandemic levels could be several years out – not until the next decade at worst. If not globally, at least valid for Europe, which is facing structural problems. Being hit the most by regional topics but also having to deal with a more traditional setup of the industry. In other words, the automotive business is becoming more and more uncertain from an operational and strategic standpoint.

As news headlines indicate, suppliers have several other challenges to contend with, in addition to ongoing uncertainty around shortages, soaring energy costs and the highest levels of inflation in over 40 years. For example, executives must consider waning consumer demand, stemming from rising inflation and recession fears. On the manufacturing side, there is a significant shift in the priority of software and electronics in the manufacture of cars, which changes the existing supply chain setup as well as the future relevance of the established automotive suppliers.

B / The profitability of automotive suppliers is substantially lower than it was before 2019/2020 and players are expected to face further margin pressure

Key supplier performance indicators 2015–2022e (n=~600 suppliers)



Source: company information, Roland Berger/Lazard

Besides these macroeconomic effects, suppliers have to deal with operational challenges in their daily business, such as pressured supply chains and concerns about how to claim increasing raw material prices and factor costs. Ongoing legislation around pandemic containment and Russian sanctions could even further convolute the energy and raw material situation. With regard to the cost of labor, rates are spiking at levels the modern industry has never seen. And in capital markets, rising interest rates create uneasiness for all involved, from manufacturers and suppliers, to banks and end consumers.

On top of that, we see the availability of semiconductors as the biggest risk for the industry. In terms of a secured supply of neon gas from Ukraine but also in terms of increasing tensions in Taiwan. If the automotive industry can't get the chips they need, volumes will remain low. Similarly, raw material shortages brought about by the war in Ukraine are the other big concern, especially in terms of potentially prolonging material shortages and skyrocketing prices.

Given the specifics of the energy market in Europe as well as the direct dependency on Russia, rising energy costs are additionally acute in Europe.

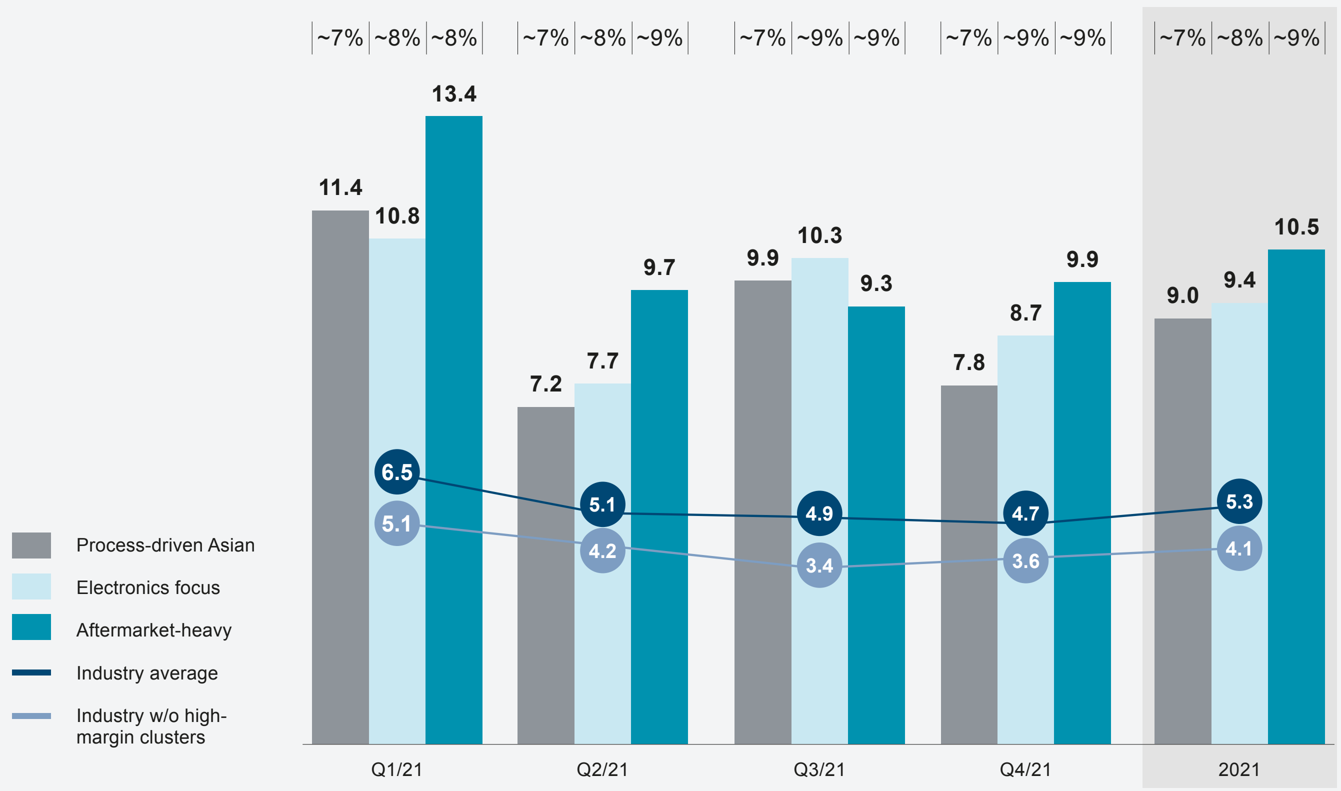
Taking all effects into consideration, also volume volatilities are expected to be a problem for the industry for a while. Mainly because of the interdependencies within the automotive industry where delivery constraints of suppliers force OEMs to adjust their production programs. These constraints subsequently impact even a broader base of suppliers with program and volume changes and thus amplify the problem.

3/ Understanding specific impacts

In terms of reduced volumes and supplier margins, these compounding challenges are affecting competitors to varying degrees of scope and intensity. For instance, the war in Ukraine is having the biggest impact on Europe, resulting in concerningly high energy costs and heightened consumer reluctance amid the added uncertainty. US consumers and the rest of the developed world (OECD) are showing signs of restraint as well, but more because of price sensitivity in combination with increasing inflation and interest rates. → C

C / The annual average in 2021 was driven by an excellent start into the year as well as a group of outperforming players with above-average margins

Quarterly supplier EBIT performance 2021 [%, n=~600 suppliers]



Source: company information, Roland Berger/Lazard

Looking at 2021, the challenges are anyway not even reflected in the financial numbers. The deep dive on quarterly results shows that semiconductor shortages and subsequently increasing volume volatilities started in Q2/2021 and worsened throughout the year. Supplier margins continuously deteriorated. Only aftermarket players, electronics suppliers and a selected group of Asian process specialists could elude this development.

Reasons for that are new car technologies such as electrified powertrains, automated driving functions and other digitalized mobility offerings. Aftermarket players could benefit from a push toward used cars due to delivery constraints from OEMs caused by semiconductor shortages and subsequent difficulties within the supply chain. In both cases, the players were able to push through sufficient price levels. Asian process specialists benefited from a shorter impact of Covid-19 and a quick recovery in the local markets.

Adjusting average margins for 2021 by the high-margin clusters shows the picture for the majority of traditional automotive suppliers. Starting with average margins of 5.1% in Q1/2021, the numbers went down to 3.6% in Q4/2021, much closer to previous year profitabilities of 2.5% and also much closer to what is expected to be the average margin level in 2022.

Looking back, the Ukraine war caught the global recovery off guard, boosting raw material shortages and temporary bottlenecks of components such as wire harnesses as well as further aggravating the chip shortage. Adding insult to injury, China, the number one growth driver from the recent past, is also off due to a Covid-19 relapse and draconian local lockdowns that negatively impact consumers. Given these circumstances and the recession fears with increasing interest rates alongside them, supplier margins will remain under pressure throughout 2022, 2023 and most likely even 2024.

Although the situation for semiconductor supplies overall seems to ease, new technologies, digitalization and the electrification of powertrains are pushing the need for chips. To make matters more complicated, automotive technologies drive the demand for less modern and thus also even scarcer nodes, since the automotive industry lags the technology adoption of consumer electronics. The ongoing measures to improve the supply situation often prioritize the advanced chips used in consumer electronics, thereby limiting the impact on the supply of legacy ones used in automotive. Even if the situation eases, a full resolving takes time.

That's not the only ongoing concern for chip shortages, however. Rising tensions and military posturing between China and Taiwan are creating a second geopolitical challenge for automotive suppliers. Taiwan accounts for around 50% of the world's automotive semiconductors, and over 70% of microcontrollers used in automotive and industrial applications. The latter are especially difficult to replace, given their specialization. While most military experts believe that a short-term conflict is unlikely, it would have catastrophic effects, as global automotive production could decline by as much as 90% in the first 12 months.

Skyrocketing raw material prices will also have a big impact on supplier margins in 2022. Global steel capacity was significantly reduced during the pandemic in 2020. But demand recovered faster than supply could, leading to heightened steel prices from late 2020 and beyond. Since 2021, prices of lithium also rose and were further exacerbated by the war in Ukraine. In early 2022, raw materials supplies were beginning to recover and stabilize from the various coinciding disruptions such as Covid, the Suez Canal blockage and Brexit. But the recovery was quickly derailed by the increased fuel costs and disrupted global supply flow caused by war in Ukraine. It was the same for other raw materials such as copper, aluminum and resins.

Additionally, the automotive supplier industry has to handle other operational challenges, impacting both 2021 and 2022, as well. Supplier labor costs have risen sharply, and the availability of skilled laborers has dramatically dropped since the start of the pandemic. Due to inflation, hourly wages are rising even faster than before and having a significant impact on overall production costs and margins. Automotive workers are aging and younger generations demand

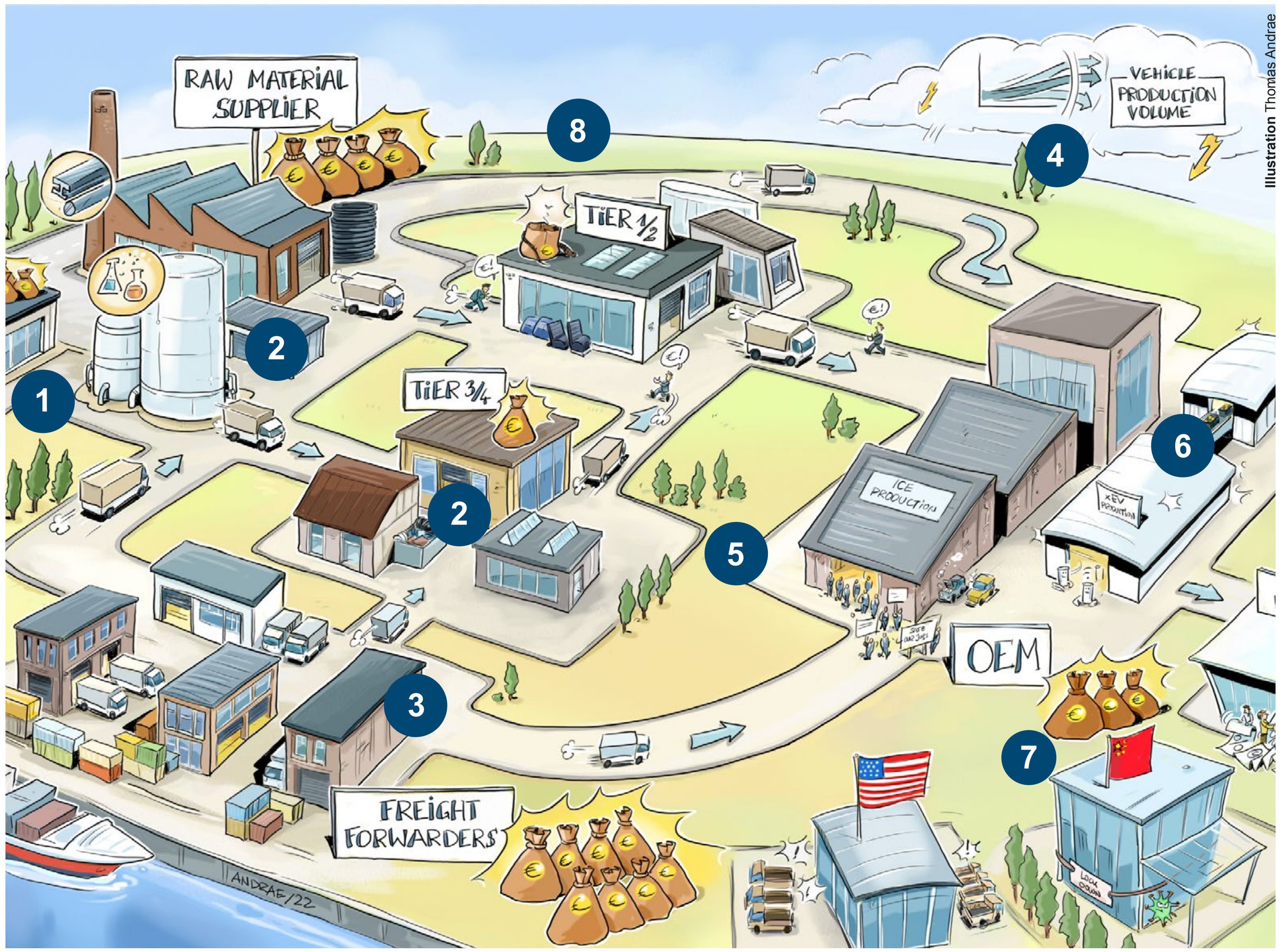


Illustration Thomas Andrae

greater workplace flexibility, which is a challenge that requires new factory setups. Furthermore, the lack of available professionals increasingly limits an automotive supplier's ability to grow its business for the future. It is a serious challenge, and it will become increasingly difficult to find affordable and skilled labor moving forward.

Lastly, short-term order volatility is a major issue facing automotive suppliers today. Significant deviations in actual orders, compared with the forecasts they receive, translate not only to sales decline, but also to an above-average EBIT burden, due to short-term mitigation measures within manufacturing plants. In extreme cases, volume corrections are made on a weekly basis (e.g. cancellations on Friday for the following week). Consequently, suppliers can't adjust structures accordingly, as it is almost impossible to adjust structural topics in such a short time frame. Summarizing the challenges, Roland Berger and Lazard identified eight industry-wide topics automotive supplier CEOs are confronted with.

8 SOURCES OF AUTOMOTIVE SUPPLIER SQUEEZE

1. **Semiconductor shortage** is still holding the industry hostage – only mid-term ease expected
2. **Geopolitical events and energy cost inflation** are pressuring supply chains, increasing costs for raw materials especially in Europe
3. **Freight costs at a record level** throughout the last 18 months, high, continuously cutting into supplier margins. Even if coming down, the damage has been done
4. **Vehicle production outlook uncertain** for the coming years and short-term orders very volatile, leaving suppliers with unclear volume forecasts
5. Facing a significant **industry transformation,** OEMs are keeping cost pressure on suppliers high
6. **OEMs are expected to insource certain systems** in new EV generations to compensate for the loss of value-add as compared with ICE vehicles
7. The **future of China** as powerhouse of the automotive industry is **uncertain**
8. **Financing costs will increase** because central banks will fight inflation risks

4/ Coping with these challenges and financial health

In terms of regions, company size and product focus, the considerable challenges are affecting competitors to varying degrees of scope and intensity. For example, US vehicle sales typically drop during periods of higher interest rates. And credit rankings for automotive suppliers are facing significant downgrades in light of all of these market challenges.

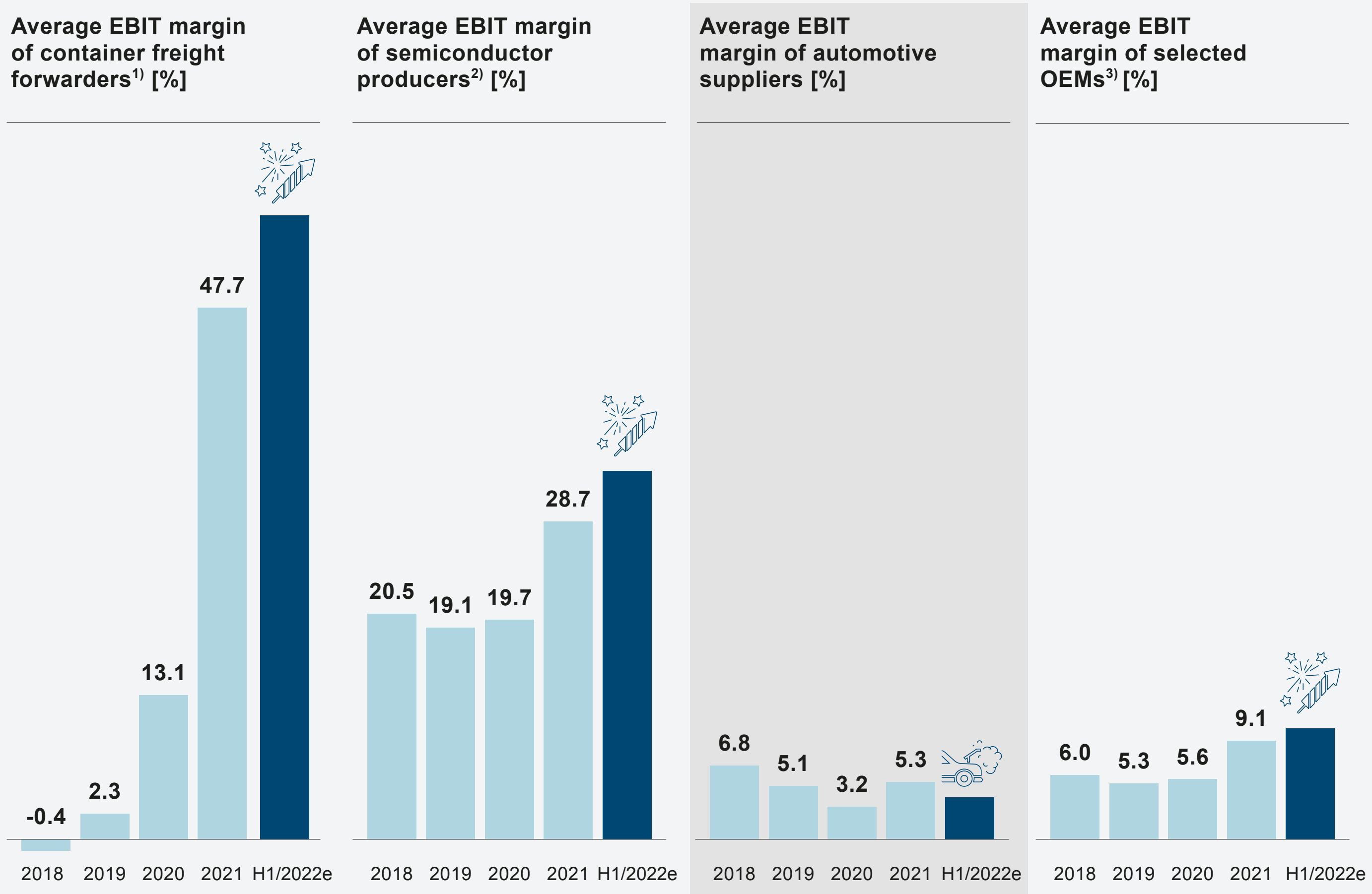
Since central banks traditionally fight increasing inflation by raising interest rates, this will make refinancing for automotive suppliers more expensive than it was in previous years with near-zero interest rates. With the combination of volume uncertainty, fear of recession and potential downgrades of supplier ratings, this is a very real risk for automotive developers. According to our study, we do not expect this credit climate to change within the next 12–18 months, making any immediate refinancing possibilities a challenge.

Of the several large automotive suppliers we studied, five faced a rating downgrade compared with 2019 (S&P), leading to an increased cost of debt.

As a result, several automotive players moved from the investment grade into the non-investment grade bracket. This development is critical for automotive suppliers, as the capital required to finance industry transformation and overcome the above challenges is significant.

D / Looking at the automotive value chain reveals that predominantly suppliers are suffering from the current situation

EBIT development of selected value chain participants [%]



Source: Freightos Baltic Index, Alphaliner, CSIMarket, OEM final reports, company information, Roland Berger/Lazard
1) CMA CGM, COSCO, EMC, Hapag-Lloyd, HMM, Maersk, ONE, WHL, YML, ZIM
2) Cree, Elmos, Infineon, Intel, Nvidia, NXP, ON, Panasonic, Renesas, STM, Texas Instruments
3) Volkswagen, BMW, Mercedes-Benz, GM, Ford, Toyota, Hyundai

The belief that a traditionally fast-growing Chinese market can make up the difference is also being challenged. For instance, if China continues its strict "zero-Covid" strategy, the industry risks losing up to 1.5 million units in vehicle production. This strict policy could also result in the closure of supplier plants, closure of entire harbors (e.g. trans-shipping volume in Shanghai harbor has fallen by around 40% during the lockdown), and overall revenue losses associated with these shutdowns.

Nevertheless, on average the industry was able to achieve 2019 margin levels in 2021 again. The year started with a strong Q1/2021 and from an overall perspective seems to have been a passable year at the end for automotive suppliers. But as stated above, 2021 was a year of challenges, and the skidmarks are visible throughout the year already. That becomes even more visible when adjusting the margins by the top 25% of players, which were able to realize above-average profit levels. And instead of the recovery everyone was hoping for, 2022 became another crisis year again. So margins are expected to remain at historic lows.

A specific aspect of the current situations in 2021 and 2022 needs to be mentioned. Looking at the entire automotive value chain reveals that suppliers are suffering the most in the current market. While rising costs were quickly passed on to consumers by OEMs, suppliers are not in that position. On top of that, OEMs can benefit from the market situation by focusing on high-margin cars and cancellation of discounts, something that's so far proven difficult for suppliers to replicate. → D

As one might expect, on a detailed level the financial health of automotive suppliers in 2021 varies by region, company size and product focus. North America showed the highest profitability, closely followed by Europe and Japan. China, on the contrary, showing the highest margins from 2018 to 2020, came down to average levels in 2021 and will most likely remain at that level in 2022 as well, given the rigid zero-Covid strategy of the government and the limitations it places on the business climate. Overall, Europe enjoyed the strongest volume recovery after the pandemic. South Korea was the least profitable.

Contrary to previous years, large mega-suppliers with revenues of more than EUR 10 billion were most profitable, with an EBIT of 5.9% in 2021. Large suppliers with revenues of EUR 2.5 billion to 5.0 billion were the most stable in their margin levels, achieving 5.1% EBIT in 2021. For the same year, companies with less than EUR 0.5 billion in revenues were least profitable, with 2.8% EBIT margin. From a historic perspective, medium-sized companies with revenues of EUR 1.0 billion to 2.5 billion faced the largest profit deterioration, dropping from 8.7% margin in 2018 to 3.7% in 2021.

In terms of product focus, after a weak 2020, tire suppliers lead the pack again with margin levels of 9.3% EBIT in 2021. Exterior suppliers were the least profitable last year, facing commoditization pressure and increasing raw material costs. And interior suppliers struggled in translating technology trends into higher margins, achieving 4.4% EBIT.

Summarizing our view: very large suppliers with a broad product portfolio are in the best position to successfully maneuver these mounting and ongoing challenges. Since they are more crisis-resilient, they can better leverage regional or product diversification and financing options. Capabilities that will turn out to be very important in 2022 will also be in 2023 and the following years. The experts of Roland Berger and Lazard expect 2022 to end up being a very difficult year in terms of profitability for suppliers again. Coming from an already low margin level in Q4/2021 the above-mentioned crisis hit the industry and yet waits to be resolved while 2022 is already coming to an end. Looking into the details, the picture will most likely become even more indifferent based on the individual starting position of each supplier in 2022, their success in achieving client compensation for raw material prices and factor cost increases, and their refinancing needs throughout the year. And of course also based on the countermeasures the players have put into place.

5/ Looking ahead

We will examine the strategic implications and challenges suppliers are facing in part two of this three-part series. In the concluding part three, we will outline the ideal supplier agenda to achieve mid-term success, and how to overcome these considerable supplier challenges.

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