A&M INSIGHTS

How the disruptive change in the automotive industry affects the machine tool manufacturers: Core risks and opportunities

Machine tool manufacturing is a €17bn industry in Germany and one of the most important segments of mechanical engineering. Although machine tool manufacturing (MTM) is critical to the competitiveness of engineering and manufacturing in Germany, there are structural risks that will affect MTM businesses in the years ahead.

The accelerating transformation to e-mobility and other macro trends in the automotive industry concern leaders seeking to understand the consequences of MTM's exposure to this sector. The long-term strength of China as an export destination is another potential concern with its effects becoming more and more visible. In the months and years ahead MTM businesses must think carefully about key financial and operational metrics including capital allocation, total capacity, footprint, headcount and more.

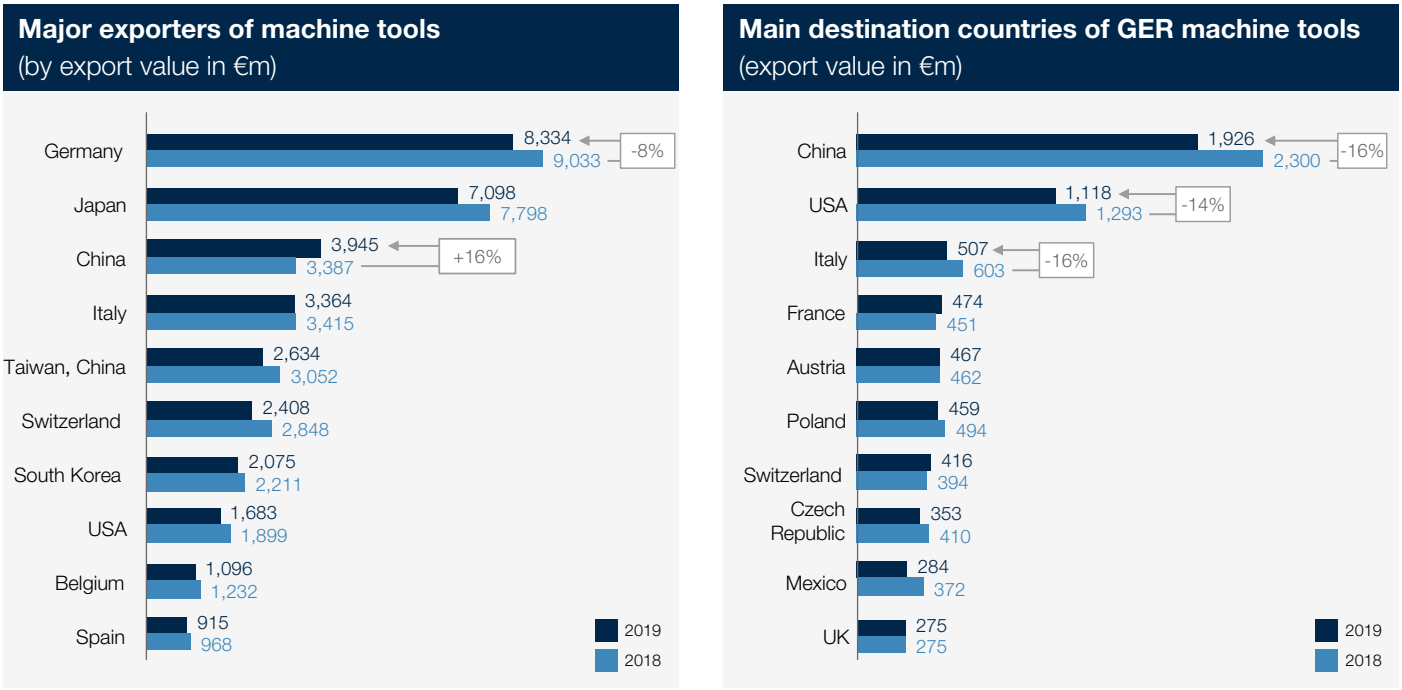
Sector background and key risks

The MTM sector is fragmented, with 48 percent of production value being generated by many companies employing fewer than 1000 people. A relative lack of size and scale may have contributed to MTM companies experiencing a greater decline in revenues in 2020 than the mechanical engineering sector as a whole (reducing by 28 percent against an 11% drop for the broader sector).

MTM is inevitably capital-intensive, meaning that lower demand and excess capacity can quickly create serious financial and operational challenges. Even before the COVID-19 pandemic, this trend had begun to take effect. Between 2018 and 2019, for instance, global machine tool production value reduced by 8 percent.

The growing influence of China as a manufacturer of complex machine tools is likely to have knock-on effects for German companies (see Figure 1 below). China is enhancing its domestic machine tool capacity, aiming to reduce reliance on imports from Western markets like Germany. **The export market for German machine tools is therefore likely to come under further pressure**.

Figure 1: Germany's status as the leader in machine tool exports is threatened by more domestic production in China



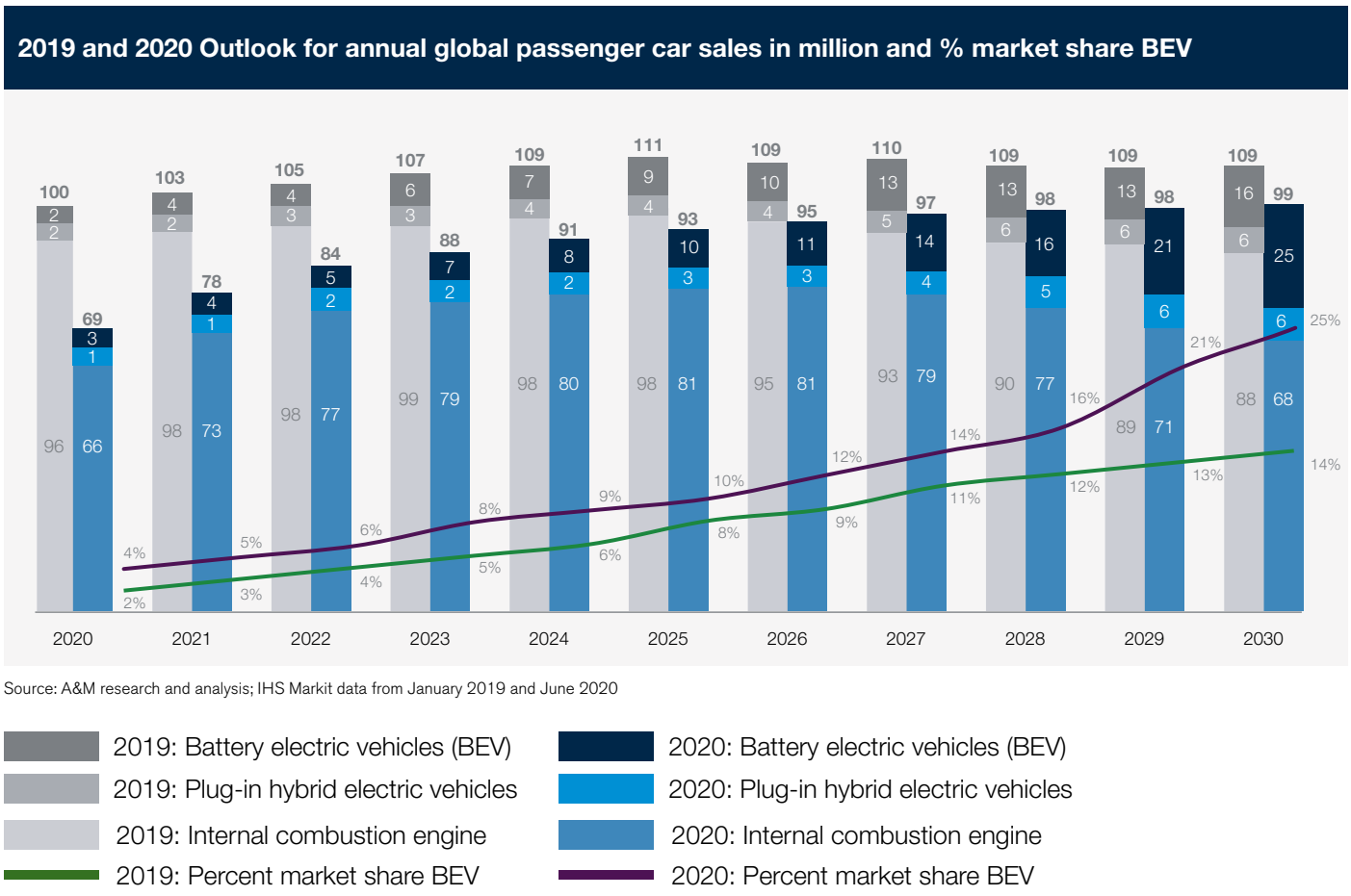
Source: A&M research and analysis ; VDW; Statistisches Bundesamt

MTM manufacturers are highly dependent on the automotive industry, with around half of all revenues directly linked to the sector and another 40 percent at least partially reliant on it. The entire automotive value chain, from OEMs through to Tier 3 suppliers, is undergoing significant strategic change in response to megatrends like autonomous driving, e-mobility, and the incorporation of Internet of Things (IoT) and artificial intelligence (AI) into the manufacturing process.

Since COVID-19 the transition to electric vehicles is speeding up, creating new pressures on automakers – who will still be financially reliant on internal combustion engine volumes for years to come. This long-term trend may have factored into Grob's decision in 2017 to acquire DMG Meccanica, a leader in electric powertrain manufacturing. Recent decisions of the European commission to prohibit the sale of new vehicles with combustion engines from 2035 onwards will lead to a further acceleration.

Figure 2 (below) tracks predicted market share for battery-powered electric vehicles alongside annual global car sales across categories. Data from June 2020 expects much higher total market share by 2030 than the same analysis conducted in 2019, before the pandemic.

Figure 2: Battery-powered electric vehicles are predicted to gain market share more quickly compared to estimates made pre-COVID production in China.



Source: A&M research and analysis; IHS Markit data from January 2019 and June 2020

2019: Battery electric vehicles (BEV)
2019: Plug-in hybrid electric vehicles
2019: Internal combustion engine
2019: Percent market share BEV
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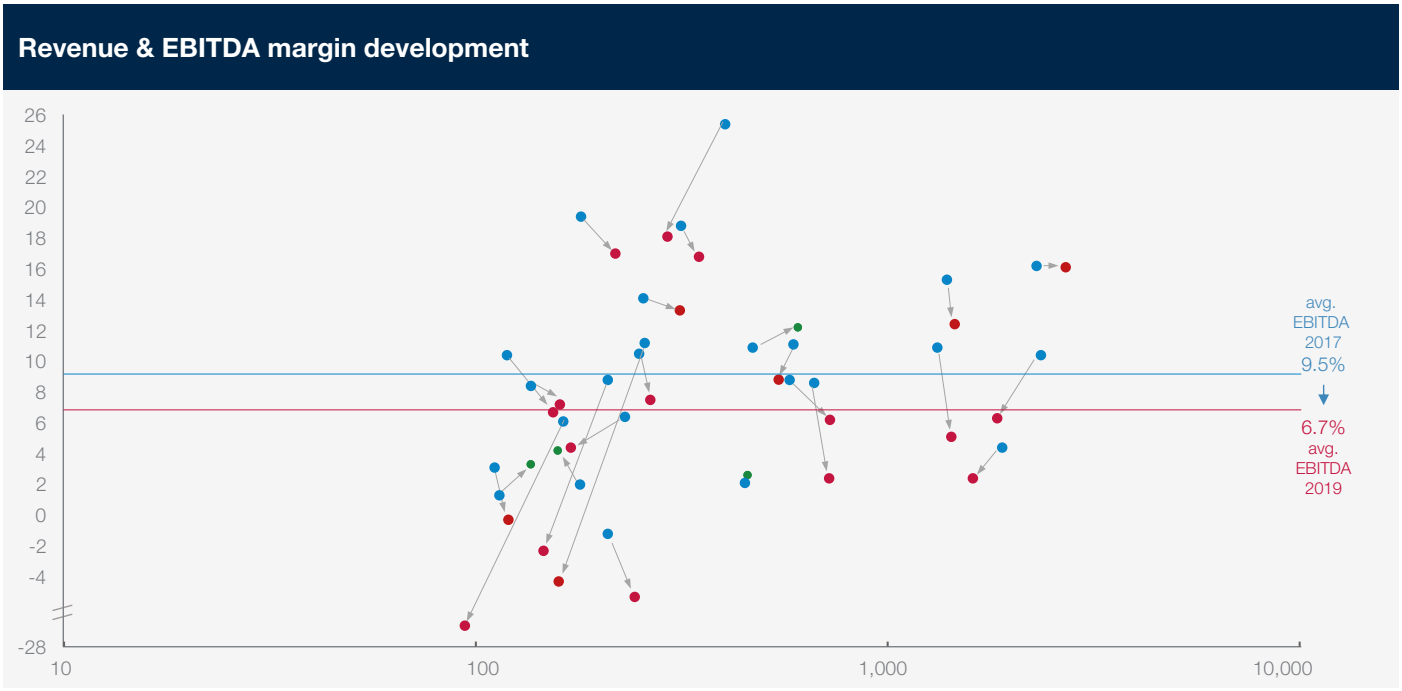
Earnings and margins of MTM manufactures, often producing for Tier-N automotive suppliers and thus positioned rather at the begin of the value chain, have been impacted by the different macro trends affecting the sector already before COVID-19. Figure 3 demonstrates that even before COVID-19, margins were coming under pressure, reducing average cross-sector margins from 9.5 percent in 2017 to 6.7 percent in 2019.

Figure 3: Between 2017 and 2019, most MTM companies experienced erosion of EBITDA margins, with average margins for the whole segment reducing from 9.5 percent to 6.7 percent.

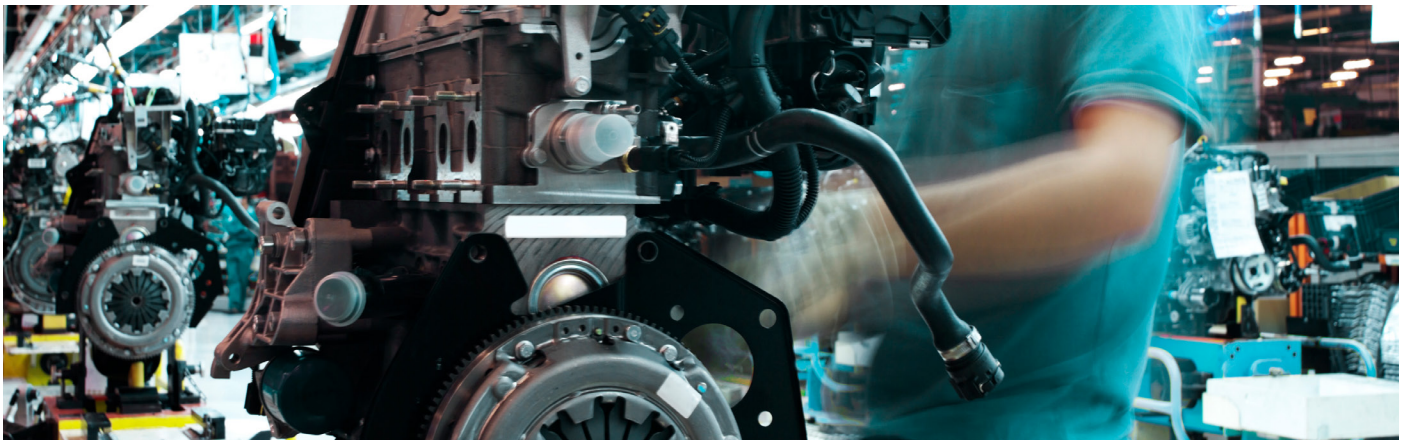


Source: A&M analysis, CapitalIQ

Blue indicates company's EBITDA/revenue in 2017

Red and green indicate EBITDA/revenue in 2019; green: improvement vs. 2017, red: decline vs. 2017

In this context, even manufacturers with best-in class margins need to explore new routes to market. Hermle's embrace of **product innovation in additive manufacturing** is an example of how to diversify a company's approach in uncertain times. But the overarching trend indicates more pressure on margins and earnings for high and low performers alike.



Steps to success for MTMs

All the above factors should prompt MTM companies to re-evaluate strategy, review operations and take a fresh look at the desired target operating model. Companies have a few key levers to explore:

Inorganic transformation drivers. Companies taking advantage of M&A opportunities could ease sector-specific pressures by opening up to new sectors and markets. Chiron's **acquisition of Mecatis** in 2020 is an illustrative example, wherein Chiron gained access to new customer groups in watches, jewellery, microengineering and medical engineering.

Look afresh at the product portfolio and value chain. Higher growth of the electric vehicle segment means MTM manufacturers have to contend with shrinking demand for internal combustion engines, mostly based on components manufactured by metal cutting processes. A clean-up of the product portfolio and concurrent reprioritisation of R&D spend are fundamental short-term initiatives. Meanwhile, footprint, sourcing and other capacity metrics may need to be revised to drive efficiencies through the value chain. On the other hand, the increasing market for assembly tasks brings opportunities to take some market share from existing assembly robot makers, since these tasks are based on MTM companies' core competencies of accurate positioning and highly reliable interlinkend machines.

A 'blank slate' approach to financial and operational basics. In transformational situations and crisis situations cash is one of the most important metrics of success for organisations, and MTM companies are no different. Ensuring that solid 13-week cash flow forecasting as well as robust mid-term financial planning are in place, and implementing zero-based budgeting (ZBB) to rationalise the overall cost structure, are just two examples of steps MTM companies can take.

German MTM companies have numerous challenges to confront if they are to remain globally competitive. Understanding how performance compares to other companies can help management teams navigate financial and operational uncertainty. A&M has developed robust industry benchmarks for MTM performance that can help companies overcome obstacles and preserve margins over the long term. Get in touch with our key contacts below to learn more about our work.

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