

IS GERMANY A STRANDED ECONOMY?

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EXECUTIVE SUMMARY

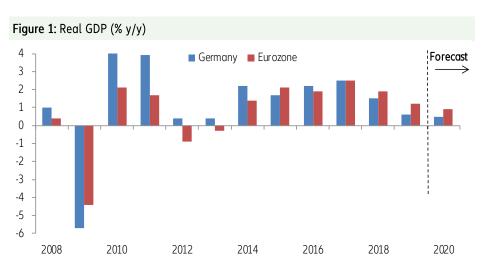


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- Recession avoided in 2019, but no rebound on the cards for 2020. At +0.6%, about half the rate for the Eurozone as a whole, German GDP grew at the slowest pace since the region's sovereign debt crisis. We do not expect 2020 to bring much relief with GDP growth likely to slow marginally to a seasonally-adjusted +0.5%. Moreover the risk that Germany's "golden" decade of uninterrupted economic growth the longest period of expansion since reunification will come to an end in 2020 remains on the table for now, given the cautious outlook for global trade and the automotive industry as well as lingering elevated political uncertainty over trade and Brexit.
- The subdued outlook for the German economy provides a glimpse of a "stranded" future. Europe's economic powerhouse is struggling to keep up with structural change, putting it at risk of becoming a "stranded economy" with its long-standing competitive advantage in industry and in particular the car sector becoming obsolete. While the German economy remains highly innovative, it is increasingly struggling to leverage its potential, given the lack of even a basic digital infrastructure, a growing digital skills gap and inadequate start-up funding.
- But a "lost" decade for Germany is not a done deal, yet.
 What is needed is a significant long-term investment plan
 focused on upgrading infrastructure, updating the education
 system, boosting research & development capabilities and
 creating a venture fund to co-invest in promising start-ups.
 But solely throwing money at the problem is not the solution.
 Instead the German economy's digital catch-up initiative
 needs to be accompanied by a "simplification shock" i.e. a
 notable reduction in red tape to allow for a better delivery of
 large-scale infrastructure projects, as well as to make life eas ier for corporates, particularly SMEs.



Source: Datastream, Allianz Research

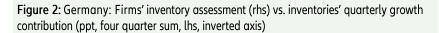
RECESSION AVOIDED IN 2019, BUT NO REBOUND ON THE CARDS FOR 2020

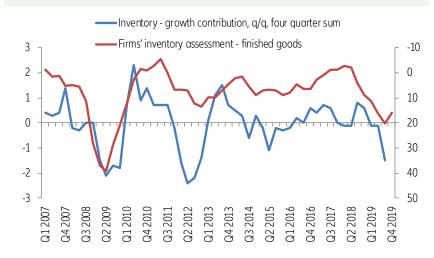
experienced a sharp deceleration in region's sovereign debt crisis in 2019. momentum in 2018. The combination of some key characteristics of Europe's largest economy – including its exportdependence, geographic export concentration (China, Italy and the UK account for almost 20% of exports) and large share of gross value added accounted for by industry - proved highly unfavorable in an environment of slowing global momentum and elevated political uncertainty. In addition, the dominance of the automotive sector turned from a core strenath to major vulnerability, as production registered a marked setback, thanks to a homemade regulatory shock related to stricter emissions norms

A recession was only narrowly avoided, thanks to a resilient German consumer and the ongoing boom in the construction sector. However, this is hardly a reason to celebrate, as a rebound in momentum is not in the cards for 2020. While the cyclical trough may be close - depending on the negative impact from the spread of the coronavirus which could even temporarily push the German economy into a technical recession in early 2020 – the German economy has yet to enter into a clear recovery mode.

Going forward the negative drag from inventories looks set to fade, but given

After four consecutive years of strong At 0.6%, about half the rate for the Eu- the cautious outlook for global trade economic growth above the potential rozone as a whole, Germany recorded and the automotive industry – which rate, the high-flying German economy its weakest GDP growth rate since the we recently downgraded further due to the expected negative impact from the coronavirus – as well as lingering elevated political uncertainty surrounding trade and Brexit, mini GDP growth rates can be expected at best in the coming quarters. Meanwhile the risk that Germany's "golden" decade of uninterrupted economic growth - the longest period of expansion since reunification – comes to an end in 2020 remains firmly on the table for now. Overall, we expect 2020 German GDP growth to register at a seasonallyadjusted +0.5% - less than half the economy's potential rate of growth.





Source: Refinitiv, Allianz Research

SUBDUED ECONOMIC OUTLOOK PROVIDES GLIMPSE OF A "STRANDED" ECONOMIC FUTURE

Germany's subdued economic performance in 2019-20 may well provide a pre-taste of what is in store for the world's fourth largest economy if its traditional growth engines of manufacturing and exports falter as the country fails to keep up with structural change. Missing the technology train would put the European economic powerhouse at risk of becoming a "stranded economy", with its long-standing competitive advantage in industry and in particular the car sector becoming obsolete. In such a scenario, Germany's recent "golden" economic phase, could well be followed by a "lost" decade.

Warning signs hard to ignore

The flashing warning signs are hard to ignore, suggesting that Europe's largest economy is at risk of being left behind by the 21st century tech revolution:

 Apple's market capitalization recently surpassed the combined value of Germany's 30 largest listed

- companies. It does not help that Germany lacks a recent tech success story in the DAX index. After all, the youngest listed IT company, SAP, was founded almost half a century ago.
- Comparative figures for unicorn start-ups private companies that are valued in excess of \$1bn provide additional food for thought: Out of 445 firms that qualify as unicorns across the globe, only 12 are based in Germany, compared with 217 for the U.S., 106 for China and 24 for the UK.
- Meanwhile, on key technologies such as artificial intelligence (AI), the economic importance of which is often compared to the invention of the steam engine or electricity, Europe and in turn Germany are lagging behind. In fact, more than 80% of global AI investments come from just two countries: the U.S. and China. According to the leading AI ex-

- pert Kai-Fu Lee, Europe is not even competing for the bronze medal.
- Looking further at the micro level, Germany's business leaders appear to be asleep at the wheel: Recent surveys indicate that within the SME sector which accounts for 70-80% of Germany's economic power only every fifth company has a digitalization strategy and regards the topic as a priority.
- Lastly, Germany also punches below its weight when it comes to the number of start-ups founded per year. With 250,000 it clearly can't keep up with more than 6 million companies registered annually in China and the U.S., respectively. Globally, Germany now accounts for about 1.5% of all new businesses this is only half of its share in global economic output, which stands at about 3%.

STRUCTURAL HEADWINDS ARE ALREADY **BLOWING IN THE CAR SECTOR**

the country's still much-envied car sector, for the sector as the focus in production er making the top 10 most sold. The which accounts for 5% of GDP and a shifts from highly complex mechanical structural headwinds the sector is facing third of total R&D spending. Germany systems to electronics. A key challenge is are likely to be felt already in the short to has been a car country for more than a that the battery, for which production medium-term as consumers postpone should remain so. After all, the produc- located in Asia, makes up a significant and technological uncertainty. For in-2008/09 - was to some extent already the net impact on employment would ent - to decline on average over the driven by structural headwinds, including still be negative; studies estimate that coming four years. stricter environmental regulation (in par- over the next decade as many as ticular related to compliance with the 400,000 jobs could be at risk from the WLTP deadline on September 1, 2018), shift towards electric vehicles. So far, the switch to e-mobility and emerging German automakers have played only a trends such as car-sharing, suggesting secondary role in the e-vehicle segment, that a v-shaped recovery and a return to as reflected in their relatively small share business-as-usual is not in the cards.

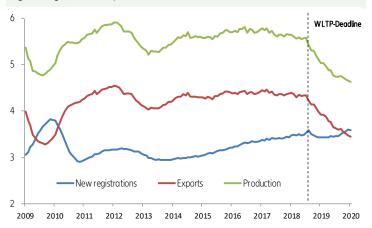
Out of the above mentioned factors, in

in global production. In fact, the world market leaders in the first half of 2019

For now, concerns that Germany's econ- particular, the transition to electric vehi- were Tesla, BAIC and Nissan, with no omy is falling behind largely center on cles will have far-reaching consequences model produced by a German car makcentury. It is not a law of nature that this facilities are for the time being mainly car purchases in the face of regulatory tion setback in 2018/19 – which in mag- part of the value added. Even if produc- stance we expect car sales inGermany – nitude was comparable to the trend in tion in Europe were to increase rapidly, which so far have proved relatively resili-

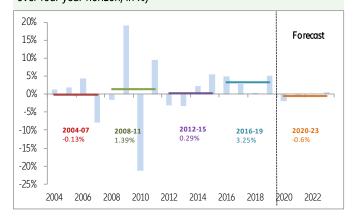
> The car sector provides only one example where Germany's long-standing competitive edge could become obsolete. But with digitalization transforming most sectors of the economy, much more is at stake.

Figure 3: Car production, exports & new registrations (12-month moving average, in million)



Source: Datastream, Allianz Research

Figure 4: Domestic car sales (annual change vs. average growth over four-year horizon, in %)



Source: KBA, Allianz Research.

WHY IS GERMANY STRUGGLING WITH THE DIGITAL TRANSFORMATION, DESPITE ITS POTENTIAL?

To clarify, this situation is not for a lack of ideas. In fact, Germany regularly features among the top economies in innovation rankinas. international thanks to high marks in the areas of R&D intensity, patent activity, productivity, high tech intensity and research concentration. Moreover, Germany has been making leading contributions in the fundamental research of key technologies. In fact, the foundations of modern AI were developed decades ago in Bavaria. Ernst-Dieter Dickmanns, a professor at the Bundeswehr University in Munich, began experimenting with robot cars as early as the mid-1980s. In 1995, he completed a trip of more than 1700 km travelling at a speed of up to 175 km/h. Today, German industry still holds half of all patents for autonomous driving.

So what is then holding back structural change in Germany, despite so much 2. potential? We see three key areas that need to be tackled in order to boost Germany's ability to master the digital transformation:

1. Basic digital infrastructure: Even on the basic requirements for a successful digital transformation, Germany is missing the boat. The goal of nationwide coverage with gigabit-capable internet connections is still a long way off. Too much copper remains where fiberoptic should be. The results of the World Economic Forum's Global

Competitiveness Ranking help provide an international context: With an overall ranking of 72 for fibre-optic internet connections and 58 for mobile broadband connections, when it comes to information technology use, Germany has fallen behind Russia, China, all the Baltic and Nordic countries. and several Gulf countries as well. This is annoying not just for households that are unable to stream films at home. It also holds back small and medium-sized businesses in certain regions because companies with weak Internet connections work less effectively. Moreover, fibre is also key for the deployment of 5G, which in turn is essential for the implementation of maior new use cases, such as the Internet of Things.

Tech talent pipeline: For one, there is arguably a lack of entrepreneurial spirit in Germany. In 2018, only a quarter of the German working population would have liked to be their own boss - a record low. As recently as 2000, the comparable figure was 45%. Moreover, the German economy's digital skill-set is in urgent need of an upgrade. Surveys show that the largest factor holding back digital competency in Germany is a serious lack of adequate equipment in schools. For instance, according

to the IEA's International Computer and Information Literacy Study only a quarter of German schools has wifi, compared to the international average of 65%. Meanwhile, in Germany only 3% of schools equip all teachers with their own laptops or tablets, compared to 24% for the international average and 91% in Denmark. Even more worryingly, in the Centre for European Policy Studies' EU index of readiness for digital lifelong learning Germany placed last.

Venture capital funds: Germany is lacking the necessary venture capital to turn great ideas into great business models and companies. While the country has a long tradition of innovation taking place in mid-sized companies, there is little awareness of the contribution that start-ups provide in adopting new technologies and developing marketable products. Insufficient financina for innovative companies – in particular in the later "scaling-up stage" - is frequently cited as a reason why they do not base themselves in Germany, or Europe for that matter. In fact, the absolute amount of risk capital in Europe is only about a sixth of that in the U.S..

A LOST DECADE FOR GERMANY IS **NOT A DONE DEAL, YET!**

becoming a "stranded" economy?

Clearly part of the answer is the government launching a significant longterm investment plan aimed at futureproofing the German economy, with a particular focus on upgrading its infrato enable digital life-long learning, start-ups.

However, solely throwing money at the problem is not the solution. According to a study by the Hertie School of Governance and the OECD, Germany does not do particularly well in the planning

20,000. Therefore, given the urgency of ligent e-government. the matter, critical infrastructure projects, such as an upgrade of the telecommunication infrastructure, should be given special regulatory treatment, including fast-track permits.

billion – about half the total amount competition invested in R&D in 2018. Ideas aimed at dominating digital companies.

Making sure that Germany's digital and implementation of major infra- cutting red tape include the relaxation transformation is a success is not just structure projects (rank 18 out of 36). of reporting requirements, as well as fundamental to safe-guarding the Excessive bureaucratic procedures and simplified approval procedures for country's economic prosperity but in the demanding legal regulations are SMEs – in particular in the area of startend it is also about retaining its digital named as the greatest weaknesses, ing a business, where Germany ranks autonomy and in turn protecting its This does not surprise, given that since 125th out of 190 countries, according free and democratic society. So what 1990 the number of building regula- to the World Bank's Ease of Doing Busican be done to keep Germany from tions has quadrupled from 5,000 to ness Survey – and the set-up of an intel-

Last but certainly not least, since market size matters, it is mission-critical for Germany to think and act European in its digital catch-up initiative wherever possible. This includes pushing for an structure, updating its education system Why stop there when in fact a expansion of the EU single market to "simplification shock" i.e. a notable re- cover also data and risk capital, as well boosting its research & development duction in red tape would also help as for the completion of the Capital capabilities, with a focus on applica- boost business activity? After all, exces- Market Union to make it easier for tion-oriented research, and creating a sive regulation and legal requirements start-ups to get funding and to scale venture fund to co-invest in promising are usually cited as the biggest obsta- up. Similarly, a coordinated broadband cles to doing business in Germany. Ger- expansion and a harmonized 5G many's Ministry for Economic Affairs rollout across the EU are also essential. and Energy estimates the annual costs Finally, European competition rules to firms from bureaucracy at EUR45 should be bolstered to avoid unfair market-

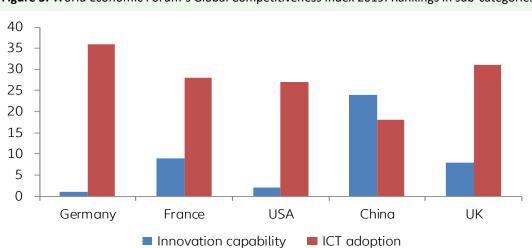


Figure 5: World Economic Forum's Global Competitiveness Index 2019: Rankings in sub-categories

Source: WEF, Allianz Research

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