GENERALI INVESTMENTS

Core Matters

Germany's fading shine

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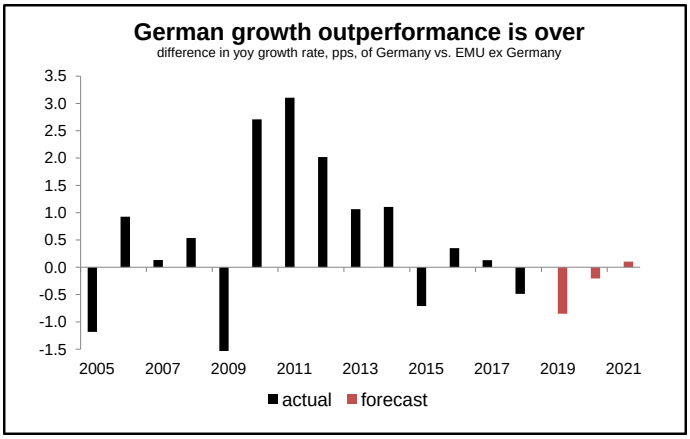
- For several years, Germany was Europe's powerhouse, with growth outpacing EMU peers by 1.2% (2010-17). This period has come to an end. Mounting structural headwinds require a more cautious strategic stance on the country.
- The export-led growth model will increasingly come under pressure with competition from EMs rising, the global trade order coming under pressure and the country being specialized in higher tech but not high tech goods.
- Alongside high taxes, a huge public infrastructure shortfall of € 450-500 bn dampens private investment and innovation. Key areas are public transportation and digital infrastructure. The key reason is policy failure, not the debt brake.
- The German labor force will decline by 9% over the next 20 years and total age-related costs will increase by almost 3 pp to 26.7% of GDP according to the EC. The median voter age will approach 60 years thereby hindering reforms.
- To take a more constructive strategic stance on German assets we would need to these key shortcomings being addressed.

The investment case for Germany is dwindling. Following the GFC, Germany's annual growth outperformed the rest of the euro area in from 2010 to 2017 by 1.2 pp on average. That said, in 2018 German growth underperformed and is expected to do so also in 2019 and 2020.



Looking ahead, we doubt that Germany will be able to power ahead with almost undamped medium term growth for structural reasons. A key weakness is seen in the **export-led growth model** that makes the euro area's largest economy highly dependent on global growth and hence very vulnerable to Chinese growth and emerging economies in general. There is no doubt that the German economy is very competitive. Yet, its high current account surplus is also due to **subdued private as well as public investment spending**. Seen from this perspective it suggests slower future growth and competitiveness. Especially the poor state of the infrastructure is frequently criticized. In this context the German debt brake has come into the focus. Looking five years ahead, the **German workforce will start to shrink meaningfully**. In fact, Germany will experience the strongest fall of the workforce among its euro area peers.

In what follows we will shed some light on these issues which we see as key determinants for the future stance of Germany relative to its peers. According to our analysis – taking political considerations into account – there is a window of opportunity of no more than five years that are left to initiate the necessary policies (enhance infrastructure spending and generally implement measures to cushion the negative effects from aging) in order to boost future productivity and dampen the negative effects from ageing on growth. With dramatic technological changes challenging the very much manufacturing-based German economy we see the need for a courageous reform agenda like Schröder's 'Agenda 2020' back in 2003 to prevent a persistent loss of competitiveness. Growth enhancing policies for Germany would also have positive spillovers to other euro area economies and the euro area as a whole.

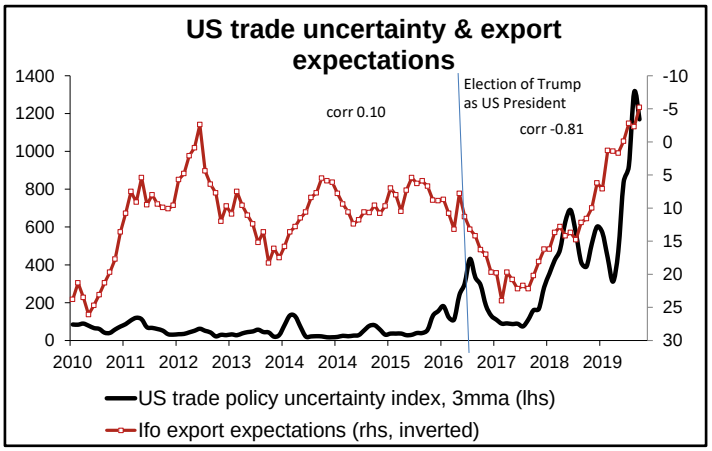
1. Germany strongly exposed to trade

Germany's export orientation is remarkable. In 2018, it was the third largest export as well as import economy in the world, after China and the US and by far the largest exporter within the EU. Its exports make up 8.1% of global exports and account for 48% of German GDP (2018). For a large economy this is very high. China, the largest exporter in absolute numbers and – on purchasing power parity (PPP) ground – the biggest economy in the world,

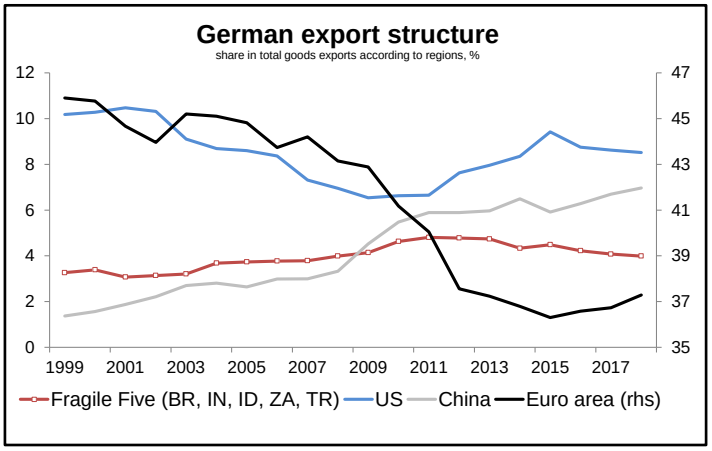
exhibits an export share of only about 20%. The bulk of German exports are goods (82%), albeit the share of services has been increasing (from 14% in 1999 to currently 18%). The openness (exports and imports in relation to GDP) is with a reading of 87% the highest among the G7 economies. Germany is highly integrated into the global economy with 59.1% (57.2%) of the exports (imports) traded with the EU. It does not come as a surprise that employment also relies heavily on open markets and international trade: Some 28% of jobs in Germany are directly or indirectly linked to exports, in manufacturing it is even 56%[1].

Against this backdrop it does not surprise that German activity is very much driven by the global economy. In fact, historically export dynamics determine overall activity.[2] Thereby, Germany deviates from the other two large EMU economies, France and Italy, whose business cycles are not primarily export but more domestically driven. For these reasons the **current uncertainties surrounding the global economy are especially painful for Germany**. In 2019, elevated US trade uncertainty went along with receding stagnating global trade. The US is the country's top export market (8.5% of goods exports in 2018) and Germany traditionally exhibits a trade surplus with the US (2018: € 48.8 bn or 1.5% of GDP) of which road vehicles (mostly cars) contribute about half. In case the US levied a 25% tariff on EU cars, an ifo study[3] finds that – when taking broader repercussions into account – the total loss of exports would amount to about € 12 bn (0.3% of GDP) and value added in the German car industry would fall by 5%. In contrast, simulations of a full blown Sino-American trade war show that the EU would be the main beneficiary, with Germany gaining the most.[4] The reason is that both opponents will have to replace imports from each other. However, these considerations do not cover all potential channels from trade disputes on activity with the confidence effect the potentially most important one. That said, the Phase 1 deal in the US-Chinese trade negotiations reduced the risk of a near term reescalation.

The Brexit is another dampener for German exports. The trade surplus with the UK was at about € 45 bn (1.3% of GDP) in 2018. According to a survey among German firms[5] from February 2019, the imminent Brexit is already a burden for companies with concerns about tariffs and legal uncertainty high. In all EU economies the Brexit will in any case take its toll. Higher price mark-ups and lower productivity as a result of new tariffs, reduced competition in many sectors, less investment as well as innovation are key reasons. Along these lines a study of the Bertelsmann Foundation[6] calculates longer term economic losses for Germany of € 5.3 bn (0.15% of GDP) in case of a soft and € 9.5 bn (0.3% of GDP) in case of a hard Brexit. Short term losses would result according to the German Council of Economic Experts[7] from a reduction in bilateral trade, the effect from lower growth in the UK, the change of financing conditions and trade costs as well as political reactions. In case of a crash Brexit, German growth would recede by about 0.3% in 2020. After the landslide conservative victory in the December 2019 UK elections it now seems highly likely that the UK leaves the EU orderly in January 2020. However, the end of the transition period out of the common market is envisaged for year-end 2020 and PM Johnson aims to rule out an extension by law. The negotiation of a comprehensive trade agreement within one year is very ambitious so that the crash Brexit economic effects could merely be postponed.



In sum, the risk of a crash Brexit and potential US tariffs on EU cars have contributed to uncertainty already now and have the potential to harm the economy significantly.



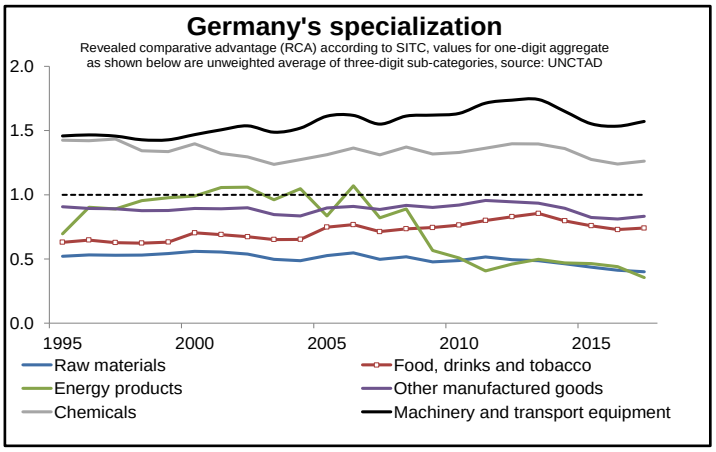
Furthermore, **Germany has a strong exposure to vulnerable economies**. Its goods exports exposure to the so called fragile five economies (Turkey, Brazil, India, South Africa and Indonesia) was 4.0% in 2018, compared to less than 1% in case of the euro area average. Likewise, Germany has intensified its trade with China substantially over the past decades. The share of goods going to China soared from just 1.4% in 1999 to 7.0% in 2018 while the intra-EMU trade share receded. As a result, Germany exhibits a high vulnerability to emerging market woes via the trade channel and will be affected by the slowing of the Chinese economy (from 6.1% in 2019 to 5.8% in 2021 according to our forecast) more than other EMU countries. Emerging market weakness also contributed to meagre

[1] See Federal Ministry of Economic Affairs and Energy (2019): Facts about German Foreign Trade where additional facts about German trade are also stated.
[2] For the 1999 to 2019 period the analysis of quarterly growth rates of GDP and exports shows that exports are Granger causal for GDP growth. This is not the case for France and Italy.
[3] See Felbermayr, Gabriel & Steininger, Marina (2019): Effects of new US auto tariffs on German exports, and on industry value added around the world.
[4] See Felbermayr, Gabriel & Steininger, Marina (2019): Trump's trade attack on China – who will have the last laugh? CESifo Forum, Vol. 20, 27-32.
[5] See DIHK (2019): The Impact of Brexit on German Businesses. Results of the IHK Business Survey Going International 2019.
[6] See Mion, Giordao & Ponattu, Dominic (2019): Estimating the impact of Brexit on European countries and regions. Bertelsmann Stiftung Policy Paper.
[7] See Sachverständigenrat (2019): Den Strukturwandel meistern. Jahresgutachten 2019/20, 58-59.

German growth in 2019. Its **export markets** grew according to the EC by only 1.9%, lower than the euro area average of 2.2% and considerably below the average of 3.7% of the 2013 to 2018 period. According to the EC it will recover to 2.5% in 2020 and 2.7% in 2021. While stronger than in 2019, export **growth will clearly remain below the past norm and also stay so muted beyond 2021** in our view, with Chinese growth moderation being a major factor.

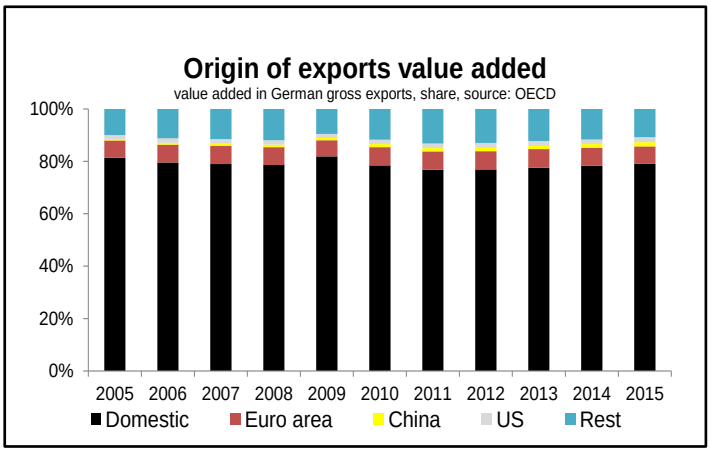
2. Longer term challenges to export growth

Germany's strong economic reliance on exports will make it more and more difficult to sustain strong growth for another reason. Competition from emerging economies on the traditional export markets will rise. Data show that Germany is specialized in medium-range technology products. A revealed comparative advantage (RCA) analysis for 2017 demonstrates that Germany exhibits its comparative advantage in machinery and transport equipment and chemicals (see graph below). Germany is also the fourth most complex economy according to the Economic Complexity Index (ECI) which condenses information about both the diversity of a country's export and their sophistication. Empirical analysis[8] for the 1990 to 2011 period finds that quality is the main driver of Germany's international success, that price and cost advantage determines competitiveness in some product groups and that R&D efforts have contributed to develop and maintain German competitiveness in manufactured products.



Yet, it also becomes clear from the above graph that the degree of comparative advantage has decreased with respect to chemicals over the past years. Competitiveness in machinery has also receded as of late but is still around the levels from 20 years ago. Looking ahead, **German exporters will be increasingly challenged by EMs that caught up significantly**. China has over the past decades dramatically increased its competitiveness in machinery and transport equipment. A RCA analysis indicates that in 1995 it had a comparative disadvantage in machinery and transport equipment (RCA index of 0.69) but exhibits a comparative advantage now (RCA index of 1.25 in 2017). Looking ahead, it will become even more challenging for Germany to maintain its comparative advantage in higher technology goods given the rising importance of information and communication technology (ICT). These goods amount to about 5% of exports in Germany and the euro area but constitute 27% of Chinese goods exports. Some trade in ICT services is likely related to machinery goods (e.g. maintenance). That said, according to latest UNCTAD data China has in 2018 for the first time exported more ICT services than Germany.[9]

The prospects of German exports are also linked to the **future of globalization**. In the past it benefitted heavily from demand for higher technology goods. However, it also led to increased division of labor causing the domestic value added content of exports to recede from 81% in 2005 to 79% in 2015 (latest available). If this trend were to continue, it would become even harder to fuel the export motor running the German economy in an environment of diminishing globalization dynamics or even a reversal of the globalization trend. Not only increasing protectionism but also reshoring could undermine the export model over the coming years, something we address in our forthcoming publication "Has globalization peaked?".



Seen from a broader perspective, the global economy is currently undergoing significant changes to which Germany has to adapt. An outstanding example is the car industry. Within the manufacturing sector it is the biggest branch. In 2017, around 77% of the produced cars were exported and 820k persons employed.[10] The share of car exports in all exports was at 10% in 2018. It has come down from a peak of 15% in 2015 and, even more, 2018 was the first year after the GFC in which car exports receded and this development likely continued in 2019.[11] Apart from the global headwinds discussed before it reflects the structural change this industry is undergoing. Rattled by the Diesel scandal in 2015 and increasingly contested by competitors as e-cars are more and more preferred by customers and subsidized by governments, the German car industry has come under severe pressure jeopardizing medium term employment.[12] Looking ahead, the ability of German car producers to maintain their competitive position will be critical for German exports as well. More generally, the policy shift towards green production and products will additionally challenge the energy-intensive German industry. The goal is to increase the share of renewable energies in electricity consumption to

[8] See Foders, Federico & Vogelsang, Manuel (2014): Why is Germany's Manufacturing Industry so Competitive? Kiel Policy Brief No. 69.

[9] See https://unctadstat.unctad.org/wds data information economy according to which Chinese ICT service exports amounted in 2018 USD 47 bn and the ones on Germany (estimate) USD 38.6 bn.

[10] See German Federal Ministry of Economic Affairs and Energy homepage.

[11] Based on the development from January to September 2019, German car exports receded further. According to Eurostat (Motor Cars and Others Designed for the Transport of Persons) they are 12.4% below the 2017 peak.

[12] According to a latest report of the National Mobility Platform up to 410k jobs could be cut because of e-mobility by 2030.

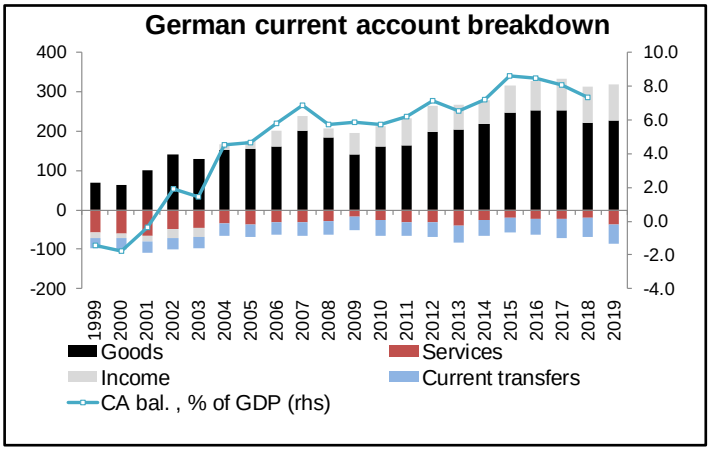
40% to 45% by 2025, to cut off all nuclear power plants by 2022, to reduce greenhouse gas emissions until 2030 by 55% compared to 1990 and to reduce primary energy consumption until 2050 by 50% compared to 2008. We expect political commitment to reach these goals and expect overall higher input prices for the German industry.

In sum, we think that **Germany will find it hard to maintain its export-driven growth model.** With **Chinese growth moderating, competition from EMs rising, uncertainty remaining high and the global trade order being challenged**, the growth contribution from net exports (0.3 pp or 15% of total growth on average in the 2010 to 2018 period) will fall. The EC forecasts a negative contribution in the 2019-21 period and we expect it to recovery only reluctantly thereafter.

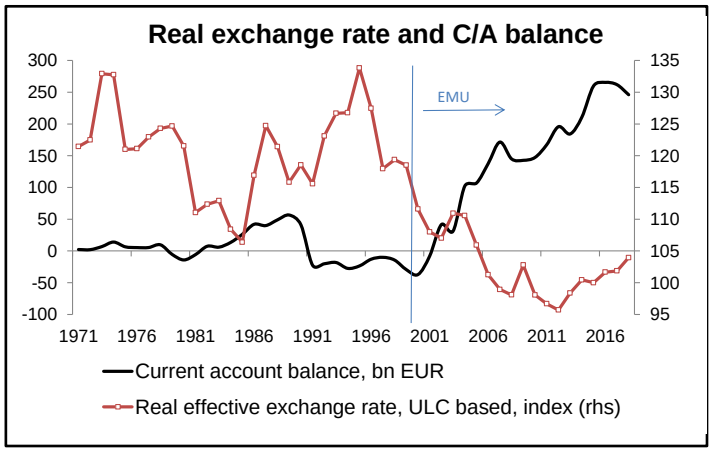
3. C/A surplus: strength or weakness?

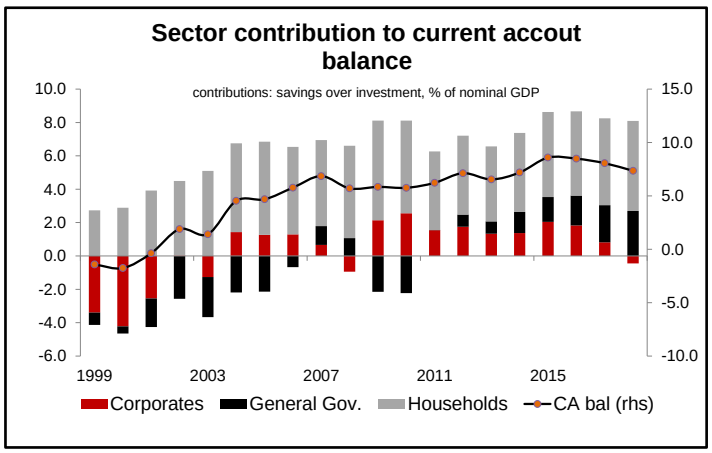
A striking feature of the German economy is its huge current account surplus. It turned positive in 2002, averaged 6.2% of GDP annually since then and likely stood at 7.0% in 2019, according to the EC. As a result, the German net international investment position (IIP) increased to 60% of GDP in 2018. This is very high considering that Germany is (according to PPP weights) the fifth largest economy in the world. A persistently high current account surplus (or deficit) implies that the economy is not in equilibrium. In case of Germany it **clearly exceeds the threshold of 6%** (3-year average) under the EC's Macroeconomic Imbalance Procedure (MIP) **and is not in line with the German stability** law that demands the economy to be externally balanced. The key question is whether this can somehow be justified by special circumstances, whether it is likely to persist and what the consequences are.

From national accounting it follows that the current account balance must ex post be equal to the difference between national savings and investment. Explanations for the persistent German current account surplus focus on both sides of this equation. A breakdown of the current account balance shows that in the first place persistently high surpluses in goods exports and, to a lesser degree, income from abroad are key drivers (see graph below).



Before the foundation of the EMU in 1999, Germany exhibited its highest surplus in 1988 (0.6 % of GDP). With a reading of € 49 bn this was about one fifth of the current levels (2015-18 average was € 258 bn). Before EMU, swings in the effective exchange rate dampened the oscillation of the current account. Obviously, with the start of EMU the exchange rate no longer reflects only German fundamentals but the member countries' average. The **ECB's extremely accommodative policy** has been targeting EMU as a whole with special attention to more fragile economies. This was a major factor why the German nominal effective exchange rate (BIS, narrow definition) increased from 1999 to 2018 by only 2.2%. Moreover, **domestic wage restraint** also came into play. Wage growth moderated strongly in the aftermath of the 2003 labour market reforms. Bundesbank data show that it averaged only 1.2% yoy in the 2004 to 2007 period, thereafter recovered only slowly and is still below the pre-EMU average (1980-1998) of 3.1% yoy. Likewise, the wage share in GDP has started to trend down in the 1990s, reached a low of 58.4% in 2007 and recovered by only 3 pp since then. Germany's real effective exchange rate has been rising since 2012 but is still way below the pre-EMU norm. Another important factor is the **decline in the oil price** coupled with a continued reduction of the economy's oil intensity. Oil imports declined from 148 mn tons in 1999 to 128 mn tons in 2018.





When analyzing the German current account surplus from the financing perspective, it is striking that in the 2011 to 2017 period **all sectors of the economy saved more than they invested**. A prominent explanation views this as the result of declining domestic investment. Indeed, the increase of the current account from roughly balanced in 2001 to 8.6% of GDP in 2015 coincided with a decrease of gross fixed capital formation (GFCF) in GDP by 2.9 pp, with non-financial corporates being the main driver (2.0 pp decline). As we will discuss later on, lacking public investment was a key factor. On the other hand, the savings rate also increased strongly (by 6 pp), with the swing in general government savings (+3 pp) the major driver. Also, corpo-

rate savings increased significantly (by 2.6 pp). Here, various tax reforms reduced the tax burden on corporate profits and lowered the incentive for debt relative to equity financing for firms. Domestic equity financing among German corporates has increased.[13] Moreover, a **strong outsourcing process in manufacturing also contributed to less domestic investment** (see also section 3). Fiscal consolidation in the presence of strong growth caused the government to become a net saver over the past years. Also the household savings rate has been slowly trending up. One explanation is that the windfall profits from declining oil prices were considered as transitory only. Another one is that since the early 2000s the social security system has been reformed towards more private responsibility, especially the pension system. As a result, retirement related savings increased. More generally, Germany is one of the fastest aging economies in Europe (see also section 4). A current account surplus seen from this perspective reflects pension related capital outflows.

All in all, the **exceptional development of the German current account balance seems to be the result of various transitory but also structural factors**. There is no agreement on the decisive factor. For instance, a study[14] for the 1995-2013 period identifies positive shocks to the German savings rate, strong demand for German exports as well as labor market reforms (initiated in 2003) and other positive supply shocks. A recent study[15] analyzing the German C/A surplus finds that mostly labor market liberalization, world demand and financial friction shocks can account for the excess corporate savings which are found to be a main driver of the C/A surplus. This study also suggests that wage moderation and a domestic investment deficiency are underlying reasons. There is also empirical support for the ageing channel. A recent Bundesbank study[16] finds that in the 2000 to 2018 period a C/A surplus of 2.8% (1.2%, if China is included) can be attributed to ageing.

Looking ahead, a key question is whether in the medium-to-long term the current account surplus will persist. Taking into account various fundamental factors the EC finds that as of 2017 it remains above what fundamentals suggest. According their assessment a C/A surplus of 3.0% is due to fundamental determinants whereas the rest (3.4 pp) can be explained by factors that can be more directly influenced by policy.[17] The major fundamental drivers identified are ageing (1.6 pp) and the manufacturing intensity[18] of exports (0.8 pp).

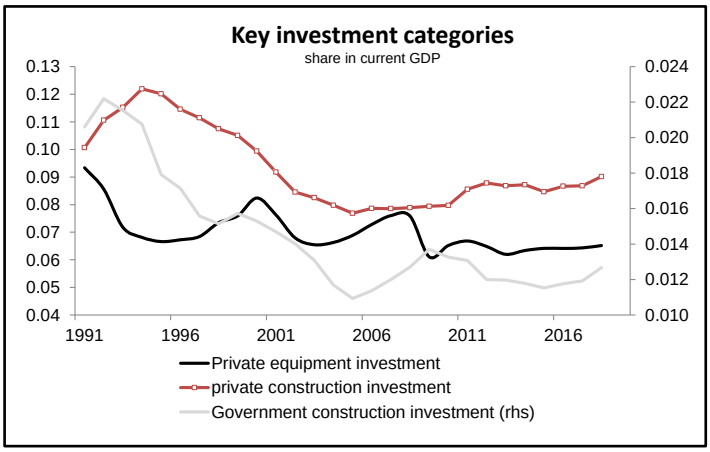
Summing up, the German C/A surplus reflects strength (high competitiveness) as well as weakness (subdued investment activity). Over the coming years, ageing will keep the current account in surplus but the end of wage moderation and less powerful global growth for instance will work in the opposite direction. We expect the **C/A surplus to fall below the EC's Macroeconomic Imbalance Procedure threshold (of 6% of GDP) again**. The EC sees it coming down to 6.4% by 2021 and the IMF sees it receding further to 5.8% by 2024. That said, **more reason for concern is the muted investment activity which might be an indicator of low future growth hence warranting policy action**.

4. Muted investment spending

Muted investment activity is not only a driver of Germany's imbalanced external account, but also for its future growth potential. While subdued investment is a global phenomenon, it is especially pronounced in Germany. The investment ratio fell from 25% at the start of the 1990s to a low of 19% by 2004/5 and recovered since then to 21% in 2018. In the 2002 to 2011 period it systematically undershot the euro area mean by on average 2 pp. Since then the German investment ratio exceeded the euro area one by 0.2 pp. Investment spending is crucial to maintain or even to increase the economy's capital stock and hence productivity and growth.

Taking a deeper look at investment activity it becomes clear that **construction-related investment was a main driver for the past weakness**. The hangover that followed the reunification boom in the 1990s dampened construction spending for more than a decade. Another factor is government construction investment. It trended down even in absolute numbers until 2005 and then recovered only reluctantly, remaining low in relation to overall production. Moreover, overall equipment investment lagged behind GDP expansion.

Looking ahead, construction investment will near term increasingly face bottlenecks while it remains supported by the extremely accommodative ECB policy stance in the presence of economic activity hovering around potential. Private construction investment advanced by on average 2.3% from 2010 to 2018 in real terms. While it could moderate following the latest boom, we do not expect it to fall off a cliff either.

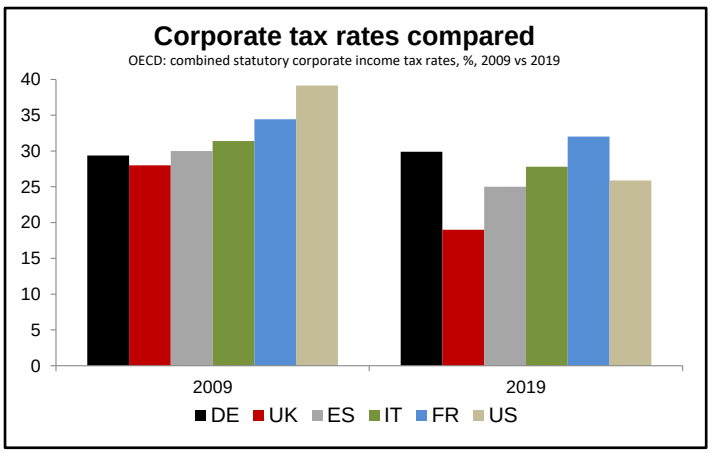


Less clear is the development of equipment investment and its implications. In fact, changes in relative prices make the investment weakness look worse than it is. Lower prices from data processing machines contributed to the

[13] See Felbermayr, Gabriel et.al. (2017): The German Current Account Surplus: Where Does It Come From, Is It Harmful and Should Germany Do Something about It? EconPol Policy Report 02 2017.
[14] See for instance Kollmann, Robert et al. (2014): What drives the German current account? And how does it affect other EU member states? EC Economic Papers 516.
[15] See Klug, Thorsten; Mayer, Eric; Schuler, Tobias (2018): The Corporate Saving Glutand the Current Account in Germany. Ifo working papers 280.
[16] See Schön, Matthias & Stähler, Nikolai (2019): When old meets young? Germany's population ageing and the current account. Deutsche Bundesbank Discussion Paper No 33/2019.
[17] See EC (2019): Country Report Germany 2019, p. 14.
[18] One reason is that specialization in manufactures reflects relative efficiency in the production of tradable goods which usually translates into a positive trade balance. See Coutinho ei al. (2018): Methodologies for the Assessment of Current Account Benchmarks. European Economy Discussion Paper 086 for a comprehensive overview on the EC benchmark account methodology.

corresponding fall of the investment ratio.[19] Still, the investment share remains historically low. There are a number of factors that contributed to this development according to the German Council of Economic Experts[20]: Until 2008 a strong outsourcing process in manufacturing made the existing capital stock for affected production stages superfluous. German energy costs are high in international comparison thereby dampening investment activity. Export companies' investment strongly depends on growth of its key markets which was subdued in the years following the GFC. More structurally, Germany – but also other countries – is experiencing a big demographic change. To satisfy the needs of a shrinking population less capital is needed. Related to the envisaged shortage of skilled workers firms might have adjusted capital stocks already.

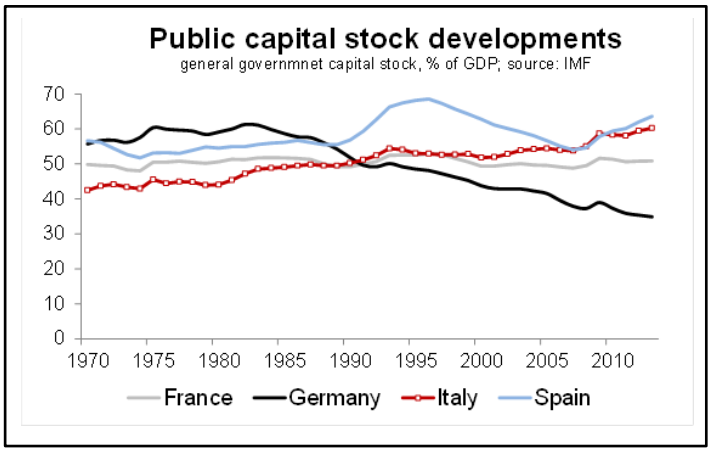
That said, the **ongoing technical and structural changes require enhanced investment spending**. The structure of investment spending is changing towards a higher share of intellectual property. Since 2014 it rose strongly (from € 100 bn to € 128 bn in 2018) causing its share in investment increasing to 3.8%. It comprises key activities like R&D, software and databases. According to the World Competitiveness Report, Germany ranks only 36 in the adoption of ICT, this is even eight ranks lower than in 2017. Within the EMU countries it is just middle-ranked.[21] Hence, there is plenty of leeway for higher investment spending. Generally, the digitalization of the economy proceeds only sluggishly. For the digital economy high speed internet is key. But in Germany the share of fiber optic connections in total broadband subscriptions is according to OECD data only at 2.1%. This compares to the highest value of 80.4% already reached in Korea and Germany only ranks 33th out of a sample of 38 industrialized countries.[22] Moreover, broadband is not available across all regions, especially rural areas do not yet have full coverage.[23] All in all, the change in the composition of investment towards intellectual property amid sluggish ICT adoption strengthens the suspicion that ICT constitutes a bottleneck for investment activity.



Germany is **losing ground in the international tax competition**. Following a series of corporate tax cuts that started about 20 years ago Germany regained attractiveness from a tax perspective. Since then, however, other countries also cut their corporate taxes so that corporate taxation is now at the upper end compared to its peers (see graph below). This is holding back investment activity. Moreover, over the past years the founding of new firms has considerably declined.[24] A recent analysis of the German Council of Economic Experts suggests that investment activity is positively linked to the start-up rate.[25] Hence, measures fostering the foundation of new firms would be conducive to investment activity.

5. Insufficient public capital endowment

Another driver standing behind muted equipment investment of the **private sector is a lack of publicly provided goods**. This comprises a quite heterogeneous bundle like infrastructure, education, research, defense and security and environmental protection. Empirically, there is evidence that private and public capital exhibit a low degree of substitutionality, especially in the advanced economies.[26] A recent study by the DIW, a German think tank, finds that a rise in public investment by one percent goes hand in hand with an increase in private investment by 0.27 percent in the first five years. Differentiating by individual types of investment the authors find that in Germany, private investment is strongly stimulated by public construction investment.[27]



It is a distinct feature of the German economy that the growth of its public capital stock has been lagging considerably behind output growth, amounting to only 35% of GDP (as of 2013, the latest available date). This is considerably below the levels of the other EMU economies suggesting undersupply in Germany. France's public capital stock for instance constantly exhibits a GDP share of 50%, the one of the US is even at 63%. We think that a share of at least 50% would be warranted not only when looking at European peer economies but also keeping in mind that even in the years after reunification (which caused the ratio to recede due to higher GDP) a ratio of around 50% had still been maintained. With this assumption being made a public capital gap of € 487 bn emerges. This is quite huge but also in line with other findings. A recent study from the German think tank IW[28] finds that € 450 bn

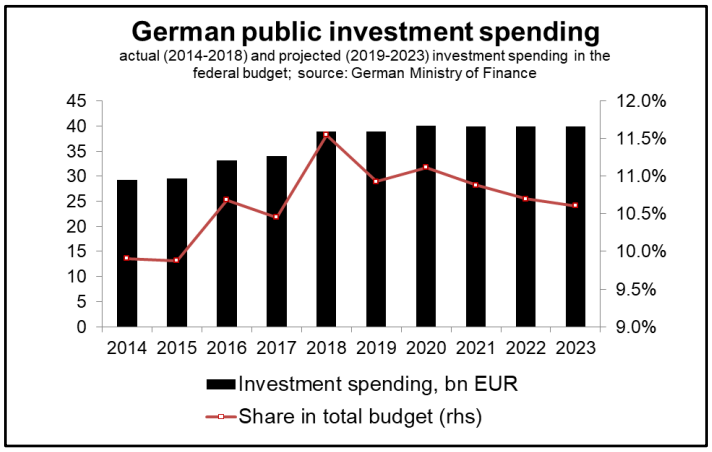
[19] See German Council of Economic Experts: annual report 2014, p. 232f.
[20] See German Council of Economic Experts annual reports 2016, p. 126f.
[21] Within the EMU17 group the globally highest ranking economies as of 2019 are Finland (13), Estonia (16) and Spain (19) while Cyprus (58), Italy (53) and Greece (52) exhibit the lowest adoption of ICT.
[22] See the OECD website Broadband Portal for this and additional data.
[23] See the German Ministry of Economy and Finance for a detailed card of broadband availability in Germany.
[24] According to the KFW Gründungsmonitor 2019 the start-up ratio (start-up founder per 100 working population) fell from 2.76% in 2002 to 1.06% in 2018.
[25] See German Council of Economic Experts: annual report 2019, p. 110f
[26] See An, Zidong et al. (2019): On the Substitution of Private and Public Capital in Production. IMF WP 19/232.
[27] See Clemens, Marius et al. (2019): Public investment a key prerequisite for private sector activity. DIW Weekly Report 31/2019, 255-261.
[28] Hüther, Michael & Kolev, Galina (2019): Investitionsfonds für Deutschland. IW-Policy Paper 10/19.

are needed over the coming decade in order to merely close the infrastructure gap and to maintain competitiveness. Huge infrastructure needs are obvious in the area of transport (roads, bridges) as well as digital transformation. According to a poll among firms[29] 58% of all firms reported that they were regularly constrained by insufficient infrastructure. This share rose to more than two thirds in 2018. Shortcomings concern all sectors, with construction (21%) and services (20%) being affected most. Not surprisingly, the main obstacles in 2018 were communication and roads.

Summing up, **lower corporate tax rates and the elimination of public infrastructure shortcomings would be key factors boosting investment activity** significantly in our view. The above mentioned IW study for instance expects a permanent rise of private investments by 1.4%. In as much as the needed public investment is fully complementary to private investment, we expect even more stimulus.

6. Is the debt brake hindering investments?

In the public discussion and even within the German government there is broadening agreement about the need to boost infrastructure expenditures. The 2018 budget showed higher federal investment expenditures and according to the projections of the 2020 budget these expenditures will stay at elevated levels. Yet its budget share is forecast to come down from the 2018 high of 11.5%. This pales compared to the needed more than € 450-500 bn to merely close the existing infrastructure gap calculated before.



In the discussion the German debt brake is frequently identified as an obstacle for public investment spending. As explained in the box on the right, the debt brake indeed limits the structural deficit to a ceiling of 1%. However, it explicitly allows an annual structural deficit of 0.35% of GDP or about € 12 bn. Germany has been exhibiting structural surpluses since 2013 and the government is targeting a structural budget balance of ½ % of GDP in 2020. Hence, in the past there had been more leeway for investment spending and also future leeway is not yet exhausted. The current fiscal buffer stands at slightly above € 100 bn. Moreover, the structure of expenditures is not set in stone. An increase in the share of investment spending – if needed also at the expense of other expenditures – is an option.

That said, **in practice public investment activity is hampered by long and cumbersome planning and approval procedures**, a point former Finance Minister Schäuble emphasizes very much.[30] Also, unlike other countries, the competencies for certain areas of invest-

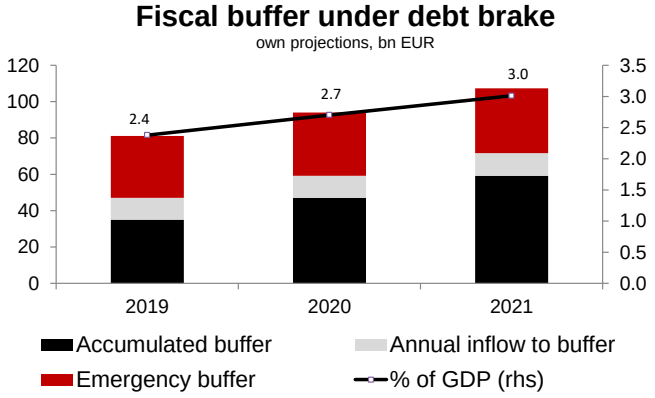
Box: The German debt brake

The regulation entered into force in 2011 as a substitute for the so far eligible constitutional "Golden Rule" that new debt must not exceed investment expenditures, with measures to fight disturbances of the economic equilibrium being exempted. This ruled proved ineffective. It was in the past frequently offset by declaring a disturbance of the economic equilibrium or by means of shadow budgets and did not prevent the debt ratio to advance. The new rule follows the spirit of the Stability and Growth Pact according to which budgets shall be balanced or in surplus over the medium term.

Following an adjustment period, since 2016 the debt brake allows for a federal structural budget deficit of 0.35% of GDP over the medium term. In 2020, the debt brake will also become binding for the regions (*Länder*) which will have to exhibit always a balanced structural budget. The definition of the key variables is in line with the EU methodology. Key is a so called control account which captures all non-cyclically caused deviations. Hence, a worse than expected economic activity has no impact (this would be captured by automatic stabilizers) but a wrong assessment of for instance a tax reform has an impact. If the medium term structural deficit ceiling is not reached it is left available for future use. In case the cumulated balance of the control account exceeds 1.5% of GDP, it is to be reduced. This reduction shall take place only in recovery phases and is limited to annual steps of 0.35% of GDP. Because this stretches the deficit reduction, the effective legal regulation already foresees a reduction of the structural deficit if the 1% threshold is reached.

Exceptions are possible in emergency situations (natural disasters or exceptional emergencies beyond the government's control). They need to be approved by an absolute majority of lower house (*Bundestag*) parliamentary members and requires a binding redemption plan.

As of year-end 2018 there was a plus of € 35.1 bn in the control account. Given that Germany will not exhibit a structural deficit in 2019 there would be a fiscal leeway of slightly above € 100 bn over the next two years until the 1% threshold would become binding.



See also German Ministry of Finance: Kompendium zur Schuldenbremse des Bundes (in German) for more details

[29] Grömling, Michael & Puls, Thomas (2018): Infrastrukturmängel in Deutschland belasten Unternehmen. IW-Konjunkturumfrage.

[30] See "Es fließt nur nicht ab" in the Spiegel magazin about former Finance Minister Schäuble defending the balanced budget. https://www.spiegel.de/wirtschaft/soziales/wolfgang-schaeuble-verteidigt-politik-der-schwarzen-null-a-1294978.html

ment are allocated between the federal level (*Bund*), regions (*Länder*) and communities (*Gemeinden*). Hence, aggregate public investment activity also depends on the willingness of the non-federal entities. However, in 2019 the lower and upper house agreed on a constitutional change giving the federal state the right to invest also on the level of communities in the fields of education infrastructure, housing supply for social reasons and public railway transportation.[31] Moreover, the German construction sector is currently booming. Since mid-2017 the corresponding Ifo confidence (z-score) is more than one standard deviation above normal and so are order books. Bottlenecks are a practical obstacle for swift increase of public investment. That said, a longer term commitment to increased infrastructure spending would also induce an expansion of the construction sector thereby mitigating these restrictions.
We view the lacking public capital endowment of Germany first of all as the result of **past political failure to sustain a healthy investment activity since the 1990s**. Since then the share of public investment expenditures in GDP was in France and Italy almost twice as high as in Germany. Bureaucracy and overlapping competencies among the various levels of government are additional problems. **The debt brake per se is no obstacle**: It must not be mixed with the balanced budget benchmark ("*schwarze Null*") that is self-imposed by the government. The viable structural deficit of about € 12 bn could be added to the projected € 40 bn allowing annual public investment spending by about 1.5% of GDP. This would push public investment expenditures net of depreciation at least in line with potential growth.

That said, the big problem is that due to meagre past public investment spending the assessed **public capital stock gap** in the above discussed € 450 bn to € 500 bn range **cannot be closed under the debt brake regulation**. Mechanically sticking to the rule could aggravate private investment spending and widen the disadvantage Germany already has compared to other countries in key areas like digitalization. On top, the states (*Länder*) have to balance their structural budgets from 2020 onwards which will likely dampen their investment activities. Exceptions for the debt brake are very strict (see box) and would not apply here.

Scrapping the German budget rule would not eliminate the European rules. Accordingly, Germany would be allowed to exhibit a structural deficit of 1.0 % of GDP (or about € 35 bn) as its debt ratio, according to the latest EC forecast, falls below the 60% threshold from 2019 onwards. This would clearly ease matters but unlikely be a game changer either.

The debt brake was implemented for good reasons: reverting the rise in the debt ratio which restricts future fiscal leeway and hence imposes an ever increasing burden on future generations. In Germany it contributed to the reduction of the debt ratio from 82.5% in 2010 to just below the 60% threshold in 2019. Moreover, currently the interest rate on government debt (with 10-year Bund yields at around -0.30 %) is well below the expected nominal growth rate (of around 2% in 2020) thereby putting the debt ratio on a downward trajectory anyway. This is a kind of **fiscal goldilocks situation that should be exploited**. However, this does not need to be the case in the longer run given the exceptionally accommodative present ECB policy stance and the projected fall in potential GDP growth (see also next section).

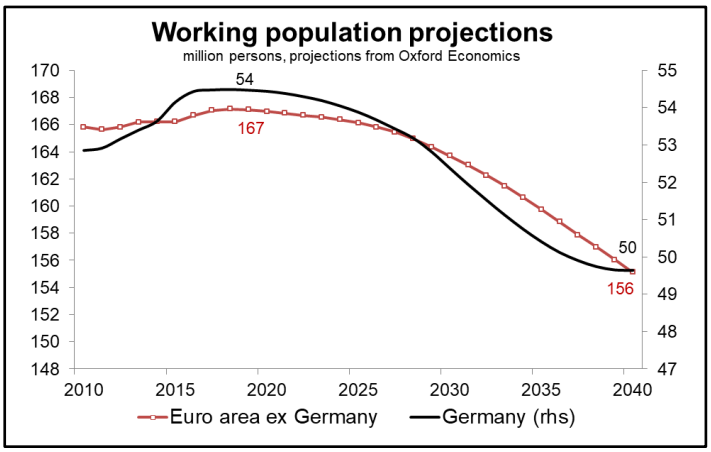
An interesting idea to balance the various aspects of the debt brake is brought forward in the above cited IW study. The authors pledge for a federal investment budget which would be a legal entity under public law and completely owned by the federal government. According to the authors, it would be in line with the debt brake and the European rules. Such a construction would also leave sufficient leeway for fiscal stimulus programs under the debt brake, for instance in case of a recession. Such a fiscal put would also be conducive to investment spending.

Whatever option German politicians chose in the end, a **strong boost in public investment activity is of essence to ensure competitiveness and growth**.

7. Ageing a severe long term challenge

The demographic transition has already started and will hit Germany harder than its European peers over the coming years. It ages faster than the euro area average. Its working population (15 to 64 years) is expected to fall in the 2020 to 2040 period by 9%, compared to 8% of the euro area ex Germany average and only 2% in France. By 2025, **ageing will start to bite labor supply seriously thereby dampening growth** and contributing to a fall of potential growth (from 1½ % now to ½ % by 2030). This implies that over the coming decades the share of people in the population that does not work will increase strongly. More precisely, the old-age dependency ratio, which measures the ratio of people older than 65 to the working population, will rise from 34% in 2013 to 58% in 2040 according to the German Statistical Office[32].

Admittedly, there is also uncertainty surrounding these projections. But we find it hard to think of compensatory factors – such as immigration for instance – markedly easing the projected fall of the working population by 4.8 million persons.



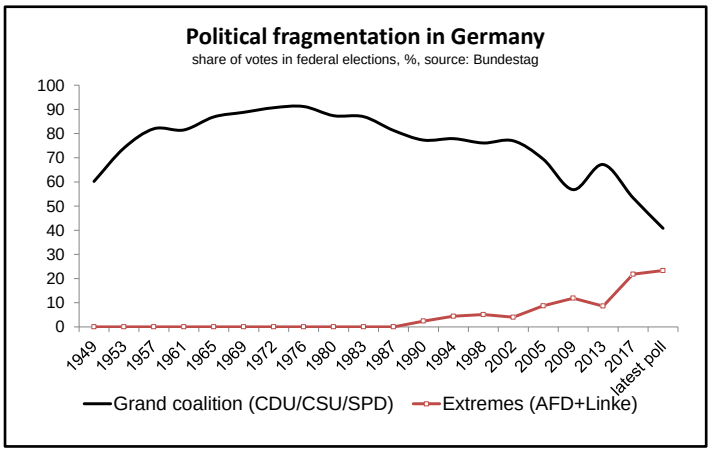
A key challenge for the coming decade is to cushion the fallout from a shrinking working population as good as possible. Increasing the incentives for working is an important perquisite. The German participation rate was al-

[31] See German Ministry of Finance (2019): Neue Möglichkeiten zur finanziellen Unterstützung der Länder in wichtigen Investitionsbereichen. Monthly Report May 2019, 29-32.

[32] See Destatis (2015): Germany`s population by 2060. Results of the 13th coordinated population projection.

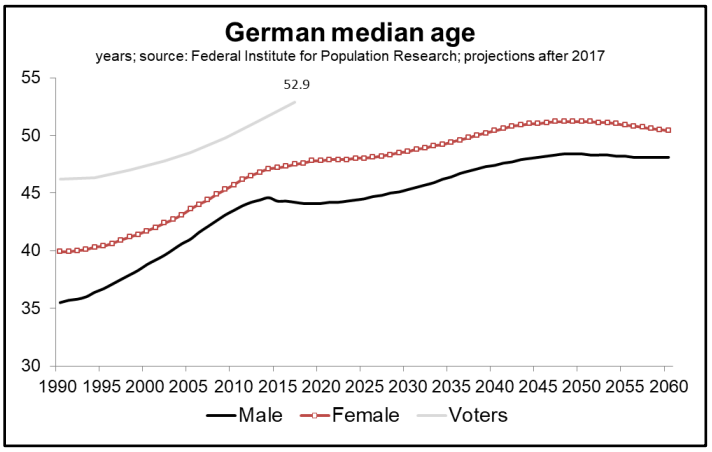
ready at 86.6% in 2018, the highest in the euro area. However, for it to increase further the incentives to work will probably have to increase meaningfully. In 2018, the German tax wedge[33] was at 49.5%, well above the OECD average of 36.1%. The reason behind this is to a certain degree the income tax rate (of 19.1% in Germany versus 15.7% in the OECD on average in 2018). But the bulk of deviation from the OECD average is due to social security contributions. With ageing proceeding along the above outlined path, **pressure on the social security system will increase further**.

Looking ahead, the situation is going to worsen. According to projections by the EC, the total age related costs (pensions, health care, long term care) will increase from 23.5% of GDP in 2016 to 26.7% of GDP in 2040 and to even 27.7% in 2060.[34] This limits the future budgetary leeway significantly. As we have argued in a publication ("The economic and financial impact of demographics") before, we expect ageing to lead to a significant fall in the growth potential. Therefore, with population dynamics being irreversible over the coming years, money needs to be spent in productivity enhancing projects like infrastructure. A fundamental overhaul of the social security system appears also inevitable. For instance, the Bundesbank[35] rightly argued recently that the pension age will have to increase beyond the 67 years that it will reach at the start of the 2030s.



While putting the social security system on a sounder footing is of essence from an economic point of view, the **political leeway to push through reforms has in our view already come down and will come down further**. First, the parliament has become much more fragmented over the past years. The share of extreme parties on the left (Die Linke) and on the right (AfD) has eroded the majority of the former people's partiers (the conservatives, CDU/CSU, and the social democrats, SPD). According to latest polls the joint share of the later is now clearly below the 50% threshold. With a higher share of extreme parties government formation becomes much more difficult and the willingness of these parties to compromise on crucial reform issues is likely low.

Related to this issue is the effect of ageing on decision making. It is important to be aware of the fact that the median voter's age increased from 46 years in 1990 to 52.9 years at the last general election in 2017. The further rise of the population's median age over the coming years leads us to expect that by 2040 the voter median age will likely be close to 60 years. Old people will rule the country. We find it hard to imagine that people close to retiring will agree on reforms harming them economically.



7. Conclusions: A small window for reforms left

Summing up, we find that the German economy faces three major obstacles over the coming years: First, a less supportive global economic environment stressing its export-led growth model. A noteworthy side effect is that the current account surplus will likely fall over the coming years while staying positive. Second, an unprecedented labor force decline affecting the German economy harder than its European peers. Third, an insufficient infrastructure endowment – especially digital infrastructure and transportation – holds back growth and also hampers private investment dynamics.

Therefore, 15 years after the 'Agenda 2010' labor market reforms by Chancellor Schröder an **overhaul of the German economic system is needed** to adjust the economic framework. Unless such reforms are taken we gauge that German growth will continue to underperform its EMU peers. A key signpost to watch for a turnaround is a binding commitment towards infrastructure spending which we see as a key perquisite for boosting productivity. Ways to circumvent restrictions from the national debt brake and the Fiscal Compact could be explored. From an economic perspective infrastructure spending is critical to foster the transformation of activity towards greener and cleaner production methods. Equally important in our view are a reduction of bureaucracy and an acceleration of planning procedures for public investments. Measures increasing labor supply via a higher participation rate would cushion the fall in labor supply. Here, the high tax wedge is a key obstacle. Its reduction would realistically imply further social security reforms. Seen from a broader perspective policy will have to support a tweak of the German growth model towards less export dependence in order to sustain a still healthy rate of economic expansion in the longer term. Measures to strengthen the services sector and domestic investment activity should be embraced.

[33] The tax wedge is defined as the ratio between the amount of taxes paid by an average single worker (a single person at 100% of average earnings) without children and the corresponding total labour cost for the employer. The average tax wedge measures the extent to which tax on labour income discourages employment. See the data at the OECD homepage.
[34] See European Commission (2018): The 2018 Ageing Report.
[35] Deutsche Bundesbank (2019): Langfristige Perspektiven der gesetzlichen Rentenversicherung. Monatsbericht Oktober, 55-82.

Time is pressing. Given the political restrictions arising from a now much more fragmented parliament, an ageing median voter and the fact that labor supply will start to shrink significantly by 2025, we think that **reforms** along the outlined path **need to be launched over the coming three to five years in order to improve the growth outlook**.

Short term, Germany is able to fiscally fight a recession (even while respecting its own debt brake). This can really be a plus in case of a more general slowdown, especially given that monetary policy has already reached its limits.

From a financial market perspective we are therefore cautiously constructive on German assets (especially equities and corporates) over the next year. **Longer term, however, we favor a more prudent stance on Germany until clearer signs emerge that key steps are taken to improve the long term growth outlook**. The relative appeal of German equities looks indeed at risk due to the threat of de-globalization and mounting competition from EMs as the MSCI Germany index is characterized by a very low domestic sales exposure of its members (only around 28% of sales are local). German equities also show one of the highest negative correlations to trade frictions (as Chinese equities do). Additionally, being a cyclical index, the MSCI Germany also potentially suffers from reduced growth due to slowing trade growth contribution to global GDP one.

More specifically, we recommend maintaining a prudent stance on the car industry and more generally on sectors more strongly exposed to exports like discretionary, industrials and material. They make 42% of the MSCI Germany index and are historically mostly affected by spikes in trade uncertainty. The cautious stance on these sectors also applies to corporates.

We would only be willing to adopt a more bullish stance on Germany in case key reform needs are tackled. We view the boost of infrastructure spending as a key signpost but would also turn more positive in case of other potential growth enhancing measures like corporate tax cuts and a reduction of the tax wedge.

Yields on German government debt are currently in negative territory up to the 15-year bucket. Given our macroeconomic and monetary policy scenario for the coming years (see also "Investment Returns: A 5-year perspective") we expect 10-year Bunds to rise to 0.7% within five years. In the case of a bold debt-financed infrastructure program we would expect a higher reading well beyond the 1% threshold.

Imprint

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