



Germany: Economic Chartbook

Team Economic Research Frankfurt

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DISCLOSURES AND ANALYST CERTIFICATIONS ARE LOCATED IN APPENDIX 1. MCI (P) 097/10/2022. UNTIL 19th MARCH 2021 INCOMPLETE DISCLOSURE INFORMATION MAY HAVE BEEN DISPLAYED, PLEASE SEE APPENDIX 1 FOR FURTHER DETAILS.



With our new German Economic Chartbook, we take the pulse of the German economy, both from a cyclical and a structural perspective.

What better time for its launch than the upward revision to our 2023 forecast. We now expect only a mild technical recession in the winter half-year, so annual GDP should move sideways rather than contract.

The abating energy price shock has also prompted a downward revision to our inflation forecast, although we remain concerned about wage dynamics and their impact on core inflation, given the increasingly structural tightness in the labour market. Still, the resulting loss of real purchasing power will prevent private consumption from boosting growth as it did in 2022, when the normalisation of the savings rate more than offset the decline in real disposable income.

Construction and capex spending are set to deteriorate. While capex could gradually gain traction over the course of the year, if the expected recession in the US turns out to be rather shallow and the Chinese economy recovers strongly, the interest rate, uncertainty and price shocks will hit construction investment hard.

Despite the “double bang”, the fiscal deficit should fall to around 2 ½% of GDP, courtesy of stronger growth and lower payments for the energy price brakes.

Loan growth, both with corporates and private households, may slow substantially.

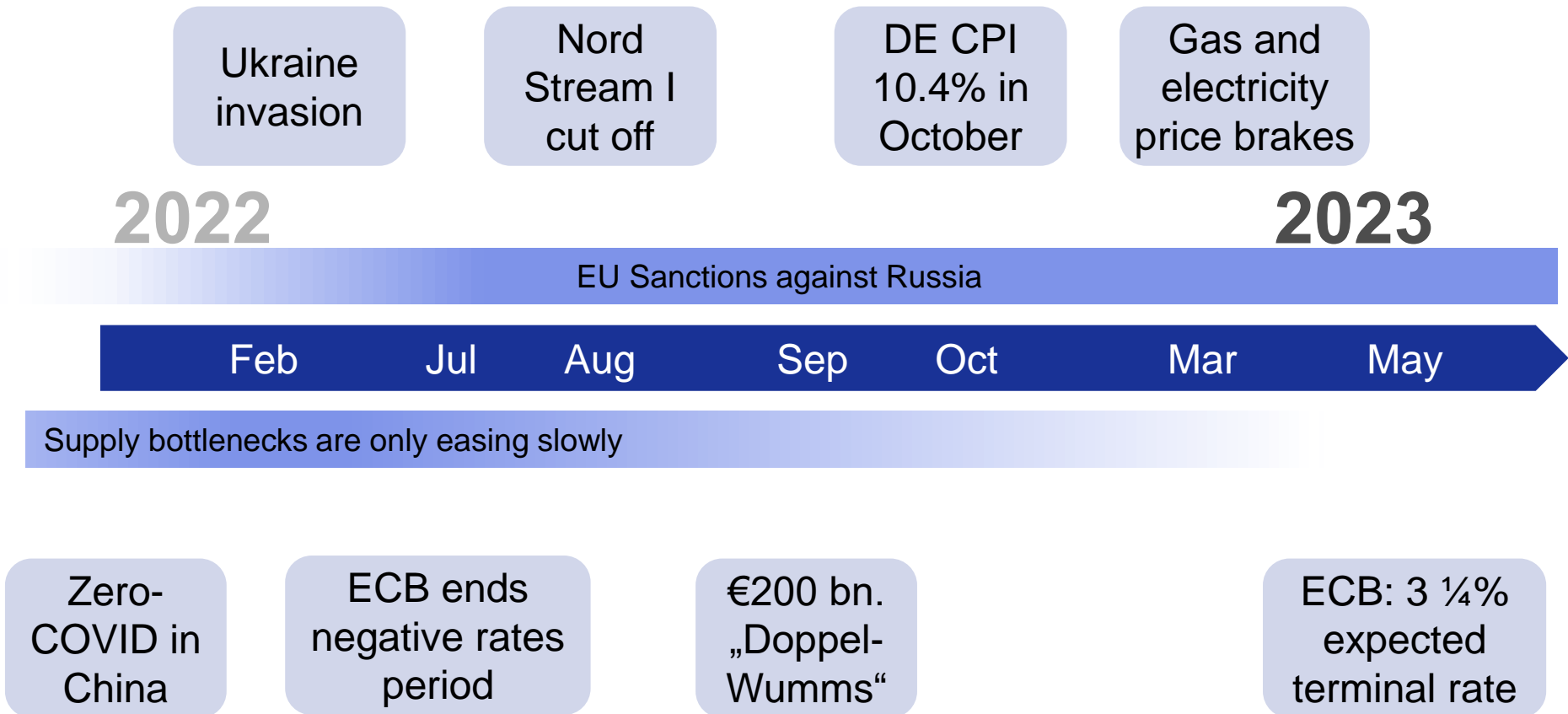
Taking a medium-term perspective, we look at the risks for the manufacturing industry and Germany’s geopolitical and competitive position.

[Focus Germany: Outlook 2023/24: New global realities](#)

[Focus Europe: Recession? What recession?](#)

[Germany Blog: 2023 forecast revised](#)

[Germany Blog: Gas supply monitor #8](#)





Forecasts: German GDP growth by components, % qoq; annual data % yoy

Subcomponents under review until 2022 Q4 data are published.

	2021	2022	2023F	2024F	2022				2023			
					Q1	Q2	Q3	Q4F	Q1F	Q2F	Q3F	Q4F
Real GDP	2.6	1.8	0.0	1.0	0.8	0.1	0.5	-0.2	-0.3	0.2	0.3	0.2
Private consumption	0.4	4.6	0.5	1.0	0.9	0.9	1.0	-0.9	-0.2	0.5	0.8	0.2
Gov't expenditure	3.8	1.1	1.1	1.4	0.7	0.5	0.0	-0.2	0.8	0.3	0.3	0.5
Fixed investment	1.2	0.2	-1.9	0.8	2.1	-1.3	0.2	-0.7	-0.8	-0.2	-0.3	0.4
Investment in M&E	3.5	2.5	-1.1	2.0	1.9	1.1	2.7	-2.3	-1.8	0.5	0.5	0.6
Construction	0.0	-1.6	-4.3	-0.4	3.1	-3.2	-1.4	0.0	-1.0	-1.0	-1.3	0.2
Inventories, pp	0.5	0.6	0.2	-0.2	-0.3	0.7	-0.1	0.1	0.0	-0.1	0.0	0.1
Exports	9.7	3.2	3.4	3.1	-0.3	0.5	2.0	1.4	0.3	1.0	1.0	0.7
Imports	9.0	6.7	4.3	3.1	-0.5	2.7	2.4	0.8	0.5	1.0	1.2	1.0
Net exports, pp	0.8	-1.3	-0.3	0.1	0.1	-0.9	-0.1	0.3	-0.1	0.0	-0.1	-0.1
Consumer prices*	3.1	7.9	6.5	2.5								
Unemployment rate, %	5.7	5.3	5.4	5.4								
Budget balance, % GDP	-3.7	-2.6	-2.6	-2.6								
Public debt, % GDP	68.6	67.7	66.1	66.0								
Balance on current account, % GDP	7.4	3.0	3.2	3.9								
Balance on current account, EUR bn	265.0	115.0	130.0	164.0								

*Inflation data for Germany based on national definition. This can lead to discrepancies to other DB publications. **Manufacturing (NACE C).

Sources: Federal Statistical Office, Deutsche Bank Research



Germany: Data release calendar

Date	Time	Data	Reporting period	DB	Latest
21 Feb 2023	9:30	Manufacturing PMI (Flash)	February	48.5	47.3
21 Feb 2023	9:30	Services PMI (Flash)	February	51.5	50.7
22 Feb 2023	10:00	ifo business climate (Index, sa)	February	91.0	90.2
24 Feb 2023	8:00	Real GDP (% qoq) - details	Q4 2022	-0.2	0.5
1 Mar 2023	8:00	Retail sales (% mom, sa)*	January	2.0	-4.9
1 Mar 2023	9:55	Unemployment rate (% , sa)	February	5.5	5.5
1 Mar 2023	14:00	Consumer prices preliminary (% yoy, nsa)	February	n.a.#	8.7
3 Mar 2023	8:00	Trade balance (EUR bn, sa)	January	9.9	10.0
3 Mar 2023	8:00	Merchandise exports (% mom, sa)	January	-1.0	-5.9
3 Mar 2023	8:00	Merchandise imports (% mom, sa)	January	-1.0	-5.7
7 Mar 2023	8:00	New orders manufacturing (% mom, sa)	January	1.5	3.2
8 Mar 2023	8:00	Industrial production (% mom, sa)	January	1.5	-2.1

*According to the Federal Statistical Office, a later publication of the data is possible. # Will be updated soon after the official CPI revision, which is scheduled for Feb 22.

Sources: Deutsche Bank Research, Federal Statistical Office, Federal Employment Agency, ifo, IHS Markit



2023 Event calendar: DE/EU/EA

February 17/19	Munich Security Conference
March 3	ECB Governing Council: Monetary policy meeting
March 14	ECOFIN meeting
March 23/24	European Council meeting
May 4	ECB Governing Council: Monetary policy meeting
May 14	Regional elections in Bremen
May 16	ECOFIN meeting
May 19/21	G7 Summit in Japan
June 15	ECB Governing Council: Monetary policy meeting
June 15/16	Eurogroup and ECOFIN meeting
June 26/28	ECB Sintra Forum on Central Banking
June 29/30	European Council meeting
July 27	ECB Governing Council: Monetary policy meeting
September 14	ECB Governing Council: Monetary policy meeting
October 8	Regional elections in Bavaria
October 8	Regional elections in Hesse
October 26	ECB Governing Council: Monetary policy meeting
October 26/27	European Council meeting
December 14	ECB Governing Council: Monetary policy meeting
December 14/15	European Council meeting

Source: Deutsche Bank Research



Global economy slowing but China's reopening expected to provide a counterbalance in 2023

- Economic environment has significantly improved, due to fading energy shock in Europe and China's quick reopening of the economy.
- Inflation is still driving monetary policy tightening by central banks, albeit at a slower pace.
- The Fed's tightening will likely lead to a US recession by mid-2023. Terminal rate: 5.6%.
- In the Eurozone a stagnation is now more likely in winter 22/23. Drag from energy shock is less severe.
- Core Inflation remains the ECB's key concern. Further tightening (terminal rate: 3 ¼%) and expected US recession limit the pace of EMU recovery.
- China's economy is expected to recover in 2023 due to the lifting of COVID restrictions. The housing market expected to recover by mid-2023 .

Economic growth

Real GDP, % yoy

	2021	2022	2023F	2024F
US	5.9	2.1	1.0	0.3
Japan	2.2	1.0	1.0	0.8
Euroland	5.3	3.5	0.5	1.0
Germany	2.6	1.8	0.0	1.0
France	6.8	2.6	0.5	1.0
Italy	6.7	3.9	0.7	0.9
Spain	5.5	5.5	0.8	0.9
Netherlands	4.9	4.5	0.5	1.2
Greece	8.1	6.4	0.3	1.4
Portugal	5.5	6.6	0.1	1.3
Ireland	13.4	11.0	1.5	2.5
UK	7.6	4.0	-0.5	0.8
Asia (ex Japan)	7.3	4.1	5.3	5.6
China	8.4	3.0	6.0	6.3
India	8.3	7.0	6.0	6.0
Eastern Europe	5.9	2.5	1.9	3.2
Latin America (ex Venezuela)	7.0	3.6	0.7	1.9
World	6.3	3.3	2.7	3.1

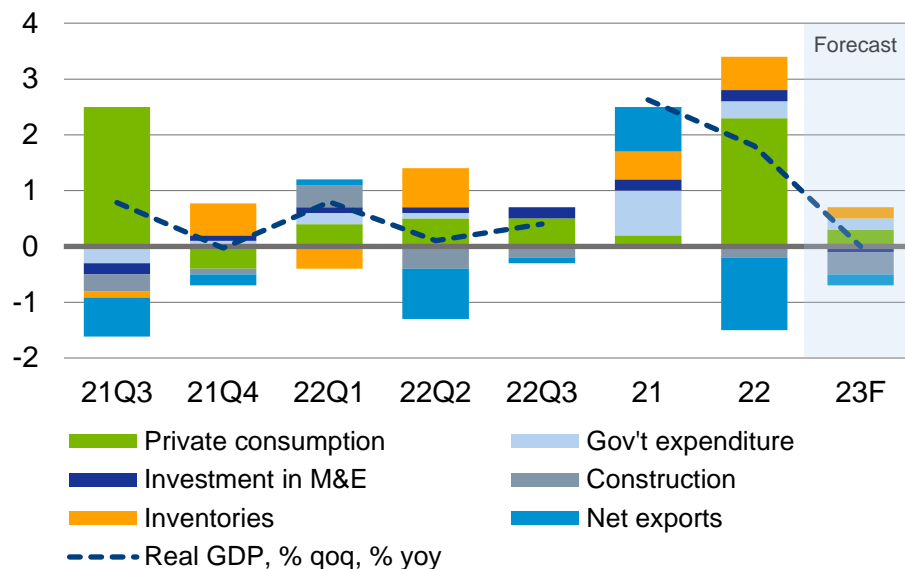
Sources: IMF, Bloomberg Finance LP, Deutsche Bank Research



Economic Outlook: German GDP expected to stagnate in 2023, despite a shallow technical recession in winter 22/23

German GDP and its components: Private consumption still robust until Q3

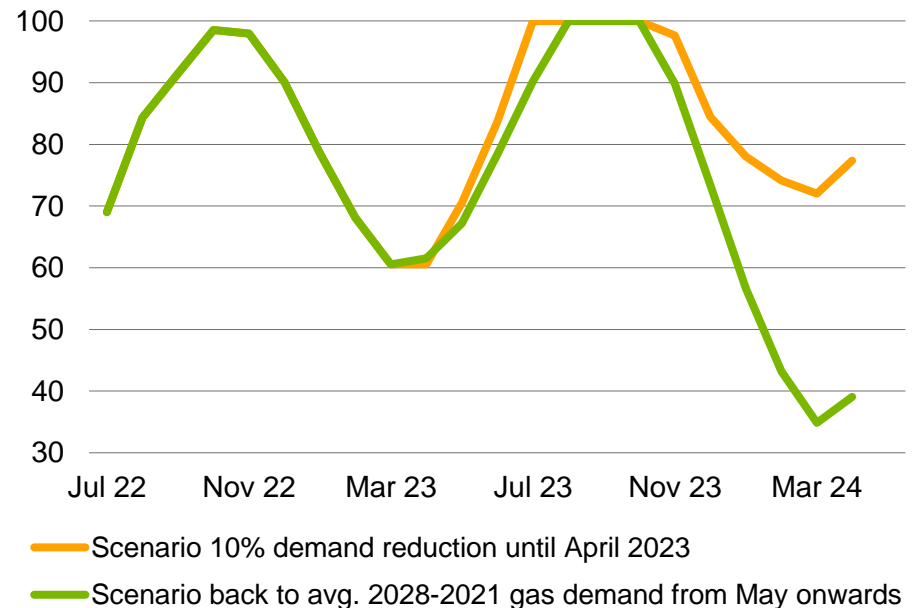
Contributions to real GDP growth, qoq, yoy, pp



Sources: Federal Statistical Office, Deutsche Bank Research

Comfortable starting point for next winter

Gas storage levels in Germany, %



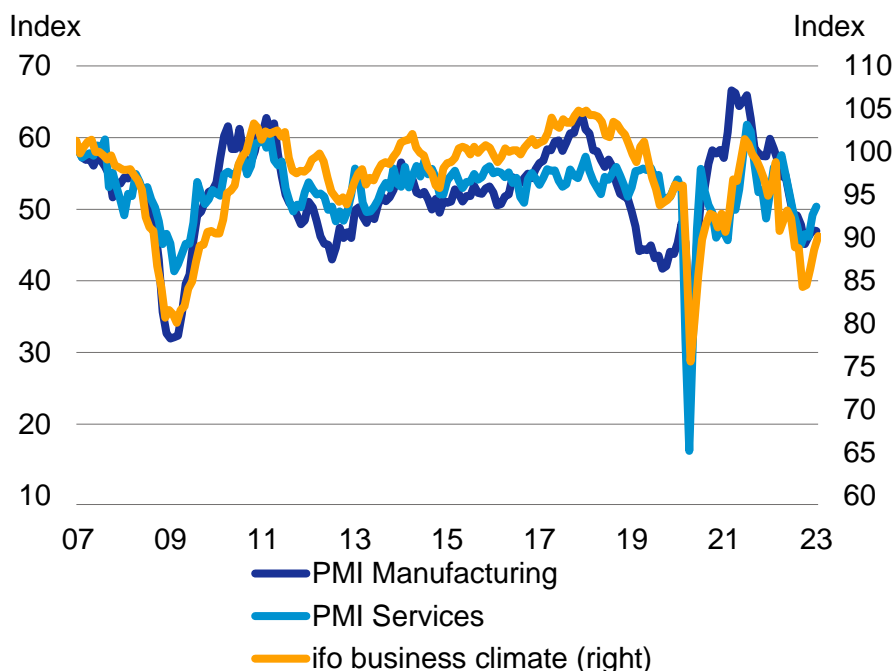
Source: Deutsche Bank Research

- The flash estimate of Q4 GDP growth showed a slight contraction (contrary to initial indications by the statistical office), so that a shallow technical recession is now possible in winter 22/23.
- The outlook for H1 2023 has improved due to favorable gas storage levels, a significant drop in wholesale gas prices, as well as increasing optimism following the rapid change in China's COVID policy.



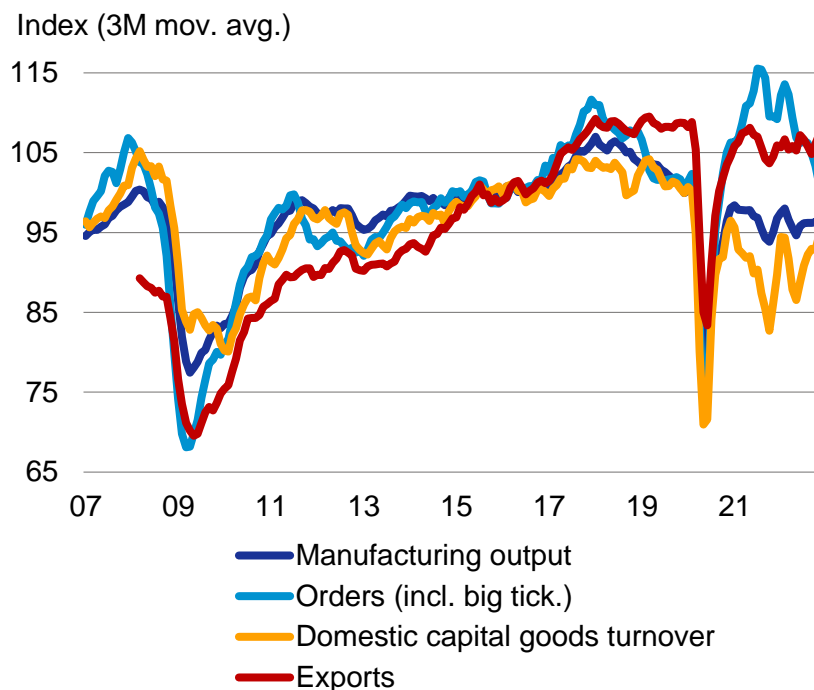
Economic environment improved, sentiment likely to stabilize further, hard data to follow in spring

Sentiment stabilises, recession fears recede



Sources: ifo, IHS Markit

Industry weathers energy crisis, output has slowed down



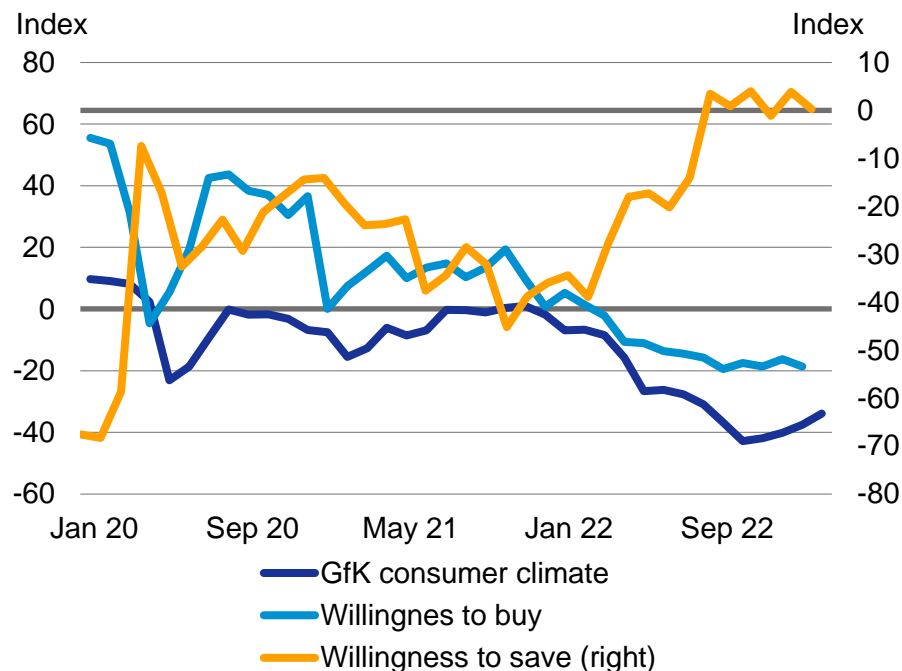
Source: Federal Statistical Office

- Significantly reduced gas supply risks, lower energy prices, China's reopening and the easing of supply bottlenecks should be positive factors for the manufacturing sector.
- The expected US recession in H2 and the increasing impact of tighter ECB monetary impact pose renewed headwinds in the second half of the year.
- Developments in Ukraine remain a significant risk factor.



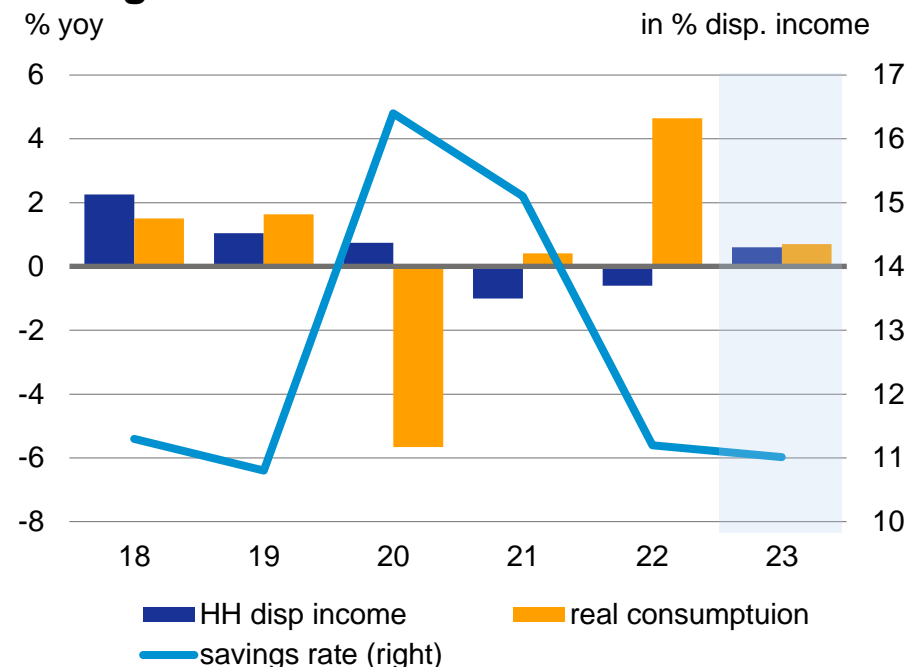
Loss of purchasing power limits growth in private household consumption in 2023 as savings rate has normalised

Consumer sentiment has bottomed out, saving is still the name of the game



Source: GfK

Consumption-boost from normalising savings rate is over



Sources: Destatis, Deutsche Bank Research

- Consumer confidence should improve in the wake of lower energy supply risks. In addition, sentiment could normalize more generally, as a rebound from a previously very pessimistic assessment (mean reversion).
- Despite signs that inflationary pressures are slowly easing, the loss of real purchasing power is likely to continue to weigh on consumer spending (mood).

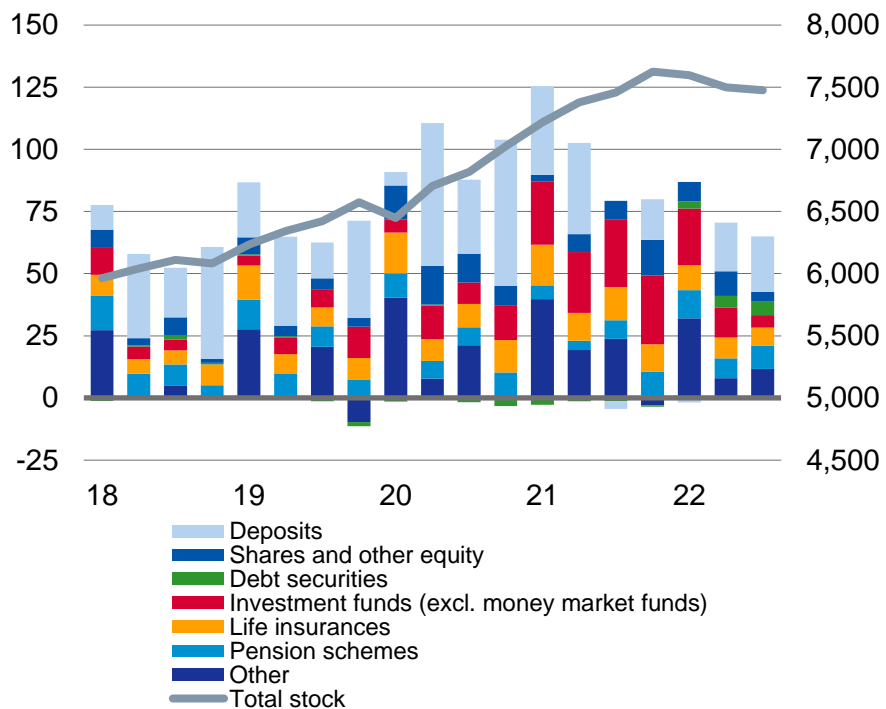
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Private households save and borrow less because of rampant inflation

Strong investments in capital markets – deposits currently less attractive

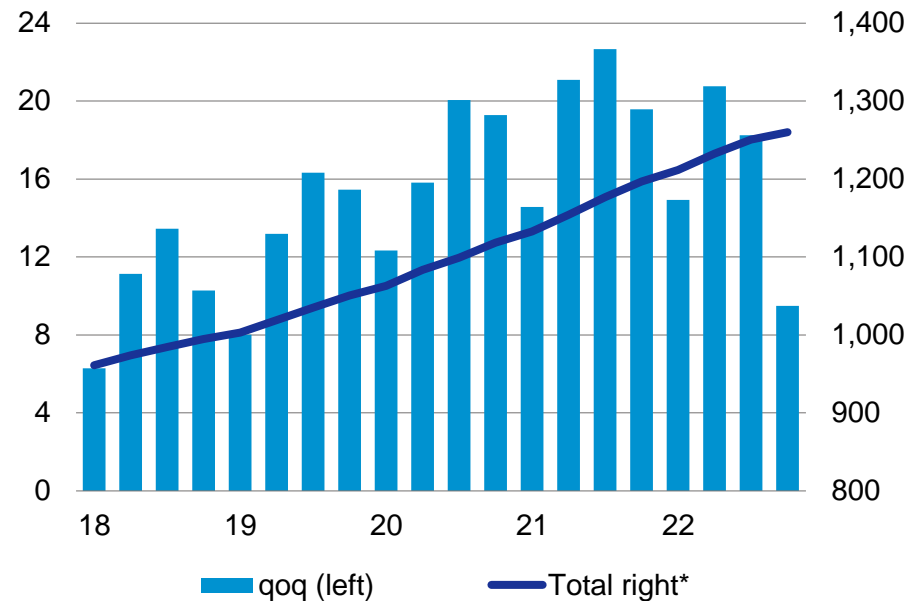
Financial assets of households, EUR bn; net flows (left), stock (right)



Sources: ECB, Deutsche Bank Research

Mortgages at a turning point

EUR bn



*includes significant reclassification in Q3 18.

Sources: Deutsche Bundesbank, Deutsche Bank Research

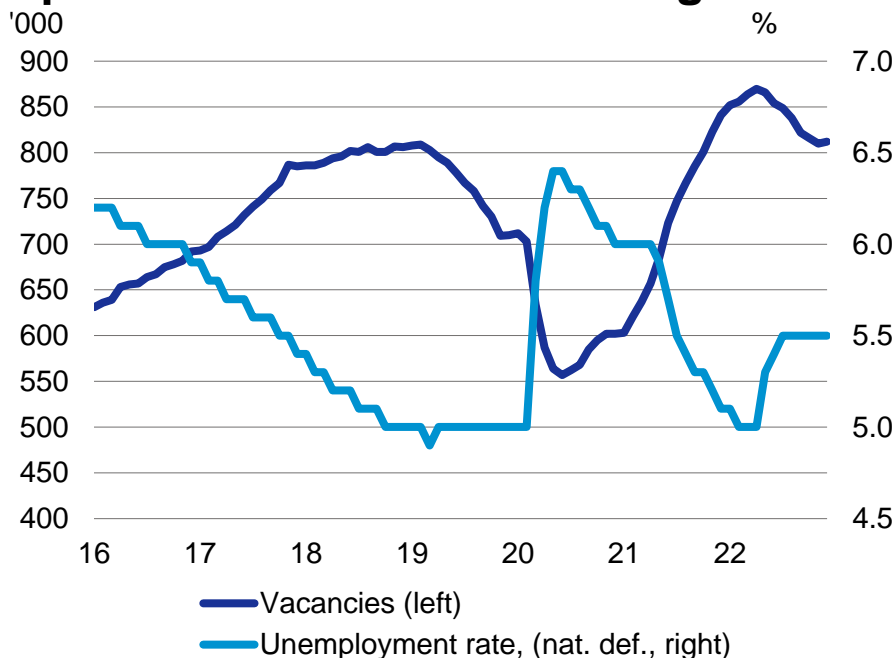
- Low but positive deposit growth likely due to liquidity preference in uncertain times and rising nominal rates.
- Robust investments in other financial assets, but real losses in financial wealth.
- Mortgage boom ended, but no shrinking of loan book expected.

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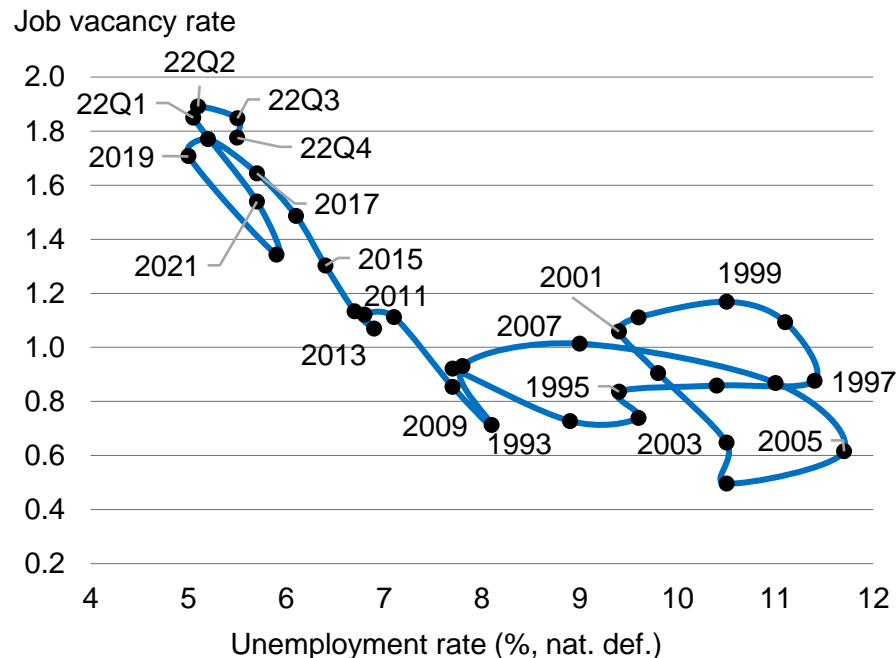
German labor market remains robust, but loses some momentum, job matching seems to become more difficult

Labour market remains robust Special factor: Ukrainian refugees



Source: Federal Labour Agency

Beveridge curve illustrates tight labor market or difficult matching



Sources: Federal Employment Agency, Deutsche Bank Research

- The labour market has been contributing to robustness of the German economy in winter 2022/23.
- Employment in general (2022: est. 45.57m, +590k yoy or 1.3%) as well as employment subject to social security contributions (Nov: 34.93m) climbed to new highs, exceeding pre-pandemic levels.
- In Jan., c. 470k employable Ukrainian refugees were registered with the Job Centers. Of these, 346k participated in labor market policy measures (e.g. integration courses).

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2023 wage round could bring relatively moderate percentage increases and strong one-off payments

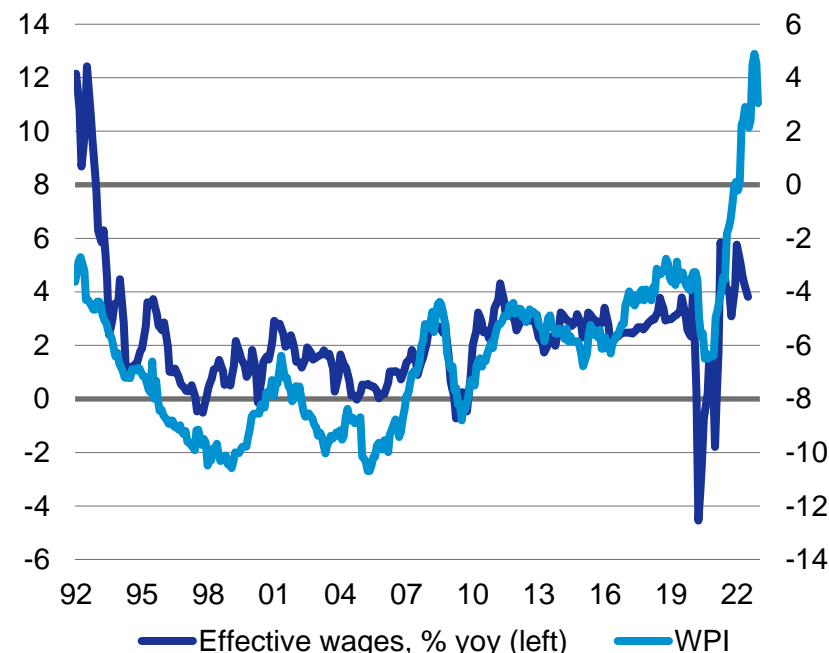
Wage negotiations in selected* sectors

Sector	Expiry date	Employees
Civil service (federal and municipal level)	underway	2,777,300
Deutsche Post AG	underway	160,000
Deutsche Bahn AG	Feb 28, 2023	119,200
Retail trade (Hesse)	Mar 31, 2023	592,700
Motor trade	Mar 31, 2023	409,500
Retail trade (North Rhine-Westphalia etc.)	Apr 30, 2023	1,583,900
Whole sale and foreign trade (NRW etc.)	Apr 30, 2023	1,175,300
Retail trade (Saxony-Anhalt, Thuringia, Saxony)	May 31, 2023	212,200
Retail trade (Berlin, Brandenburg)	Jun 30, 2023	234,400
Civil service (federal states, excl. Hesse)	Sep 30, 2023	938,800
Wood and plastics processing (various regions)	Nov 30, 2023	178,900

*Negotiations for more than 100,000 employees

Sources: WSI-Tarifarchiv, Deutsche Bank Research

German effective wages & wage pressure index (WPI)



Sources: Deutsche Bundesbank, Deutsche Bank Research

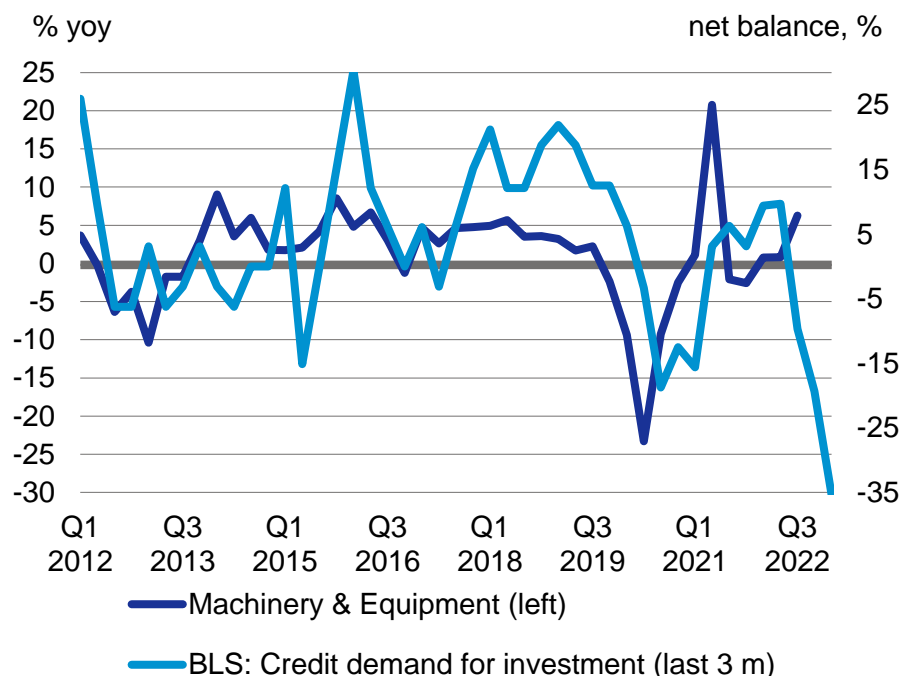
- Inflation compensation is likely to dominate the 2023/24 wage round. Tight labor market adds to wage pressure.
- 2nd round of collective bargaining in the public sector (federal and local government) on Feb. 22/23. Ver.di trade union is demanding a pay increase of 10.5%.
- On an annual average, collectively agreed wages could rise by a good 4% in both 2023 and 2024. Including the expected inflation compensation premiums, effective earnings are likely to rise by as much as 5 ½ and 5%.

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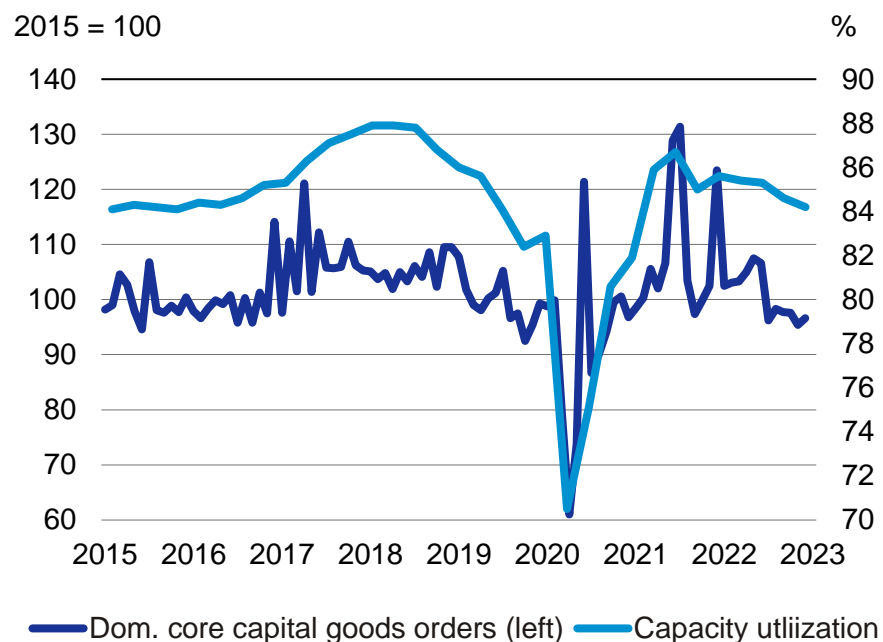
Investment spending: Projects on hold due to uncertainty shock, energy costs pose an additional headwind

M&E investment & BLS responses



Sources: ECB, Federal Statistical Office

Investment cycle weakening



Sources: Deutsche Bundesbank, ifo

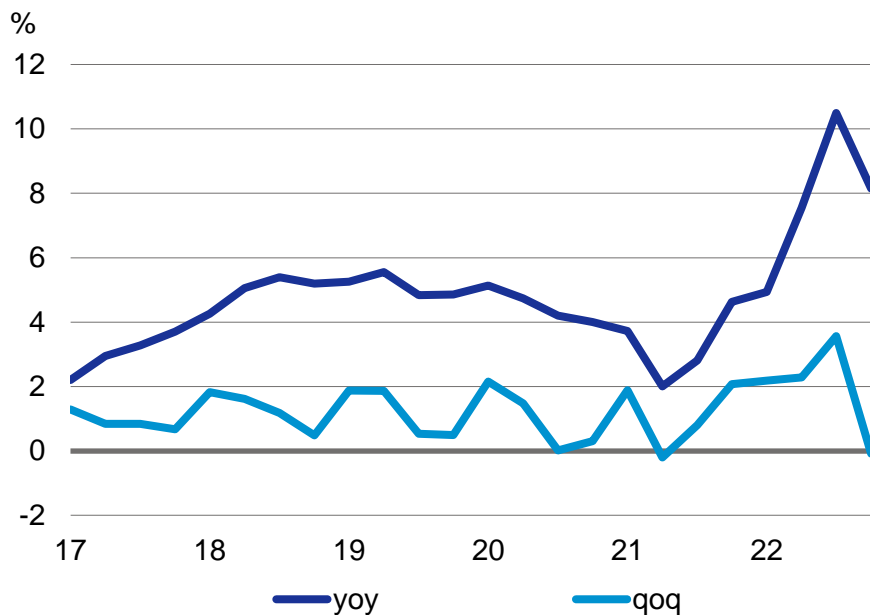
- Investment in machinery and equipment (M&E) increased by 2.5% (prelim.) in 2022.
- Once the impetus from pent-up (commercial) vehicle registrations fades, effects from the energy and uncertainty shocks could put a lid on capital spending.
- M&E investments are expected to decline by 1% in 2023 and should increase by c. 2% in 2024 and finally bring it back to the levels seen before the COVID crisis.

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Surge in corporate lending not just driven by energy companies – normalization in 2023

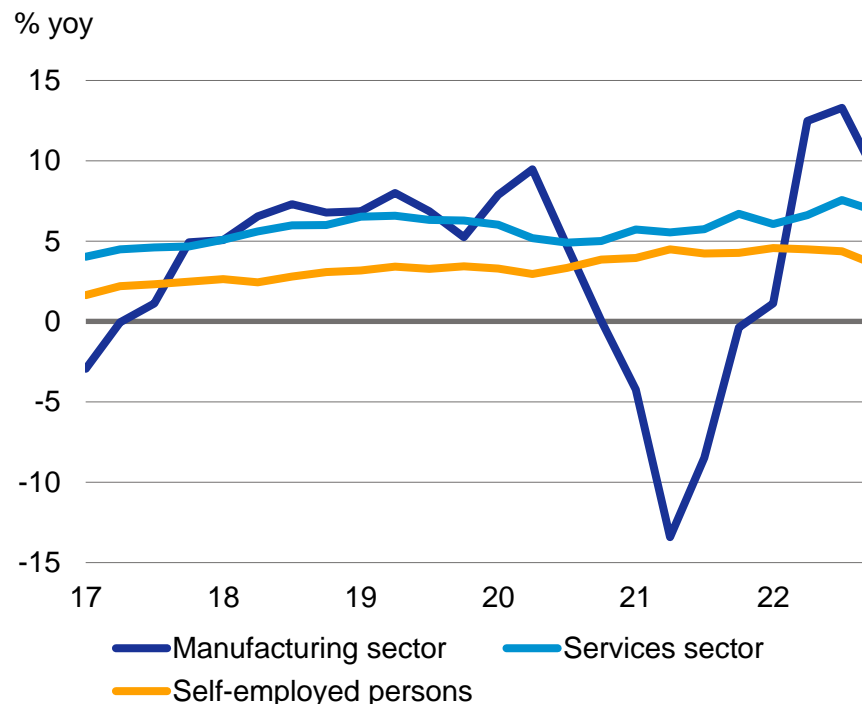
Loans to domestic companies and self-employed persons*



* excl. other financial institutions

Sources: Bundesbank, Deutsche Bank Research

... by industry



Sources: Bundesbank, Deutsche Bank Research

- Corporate lending is up unlike any time since reunification due to inflation, rising rates, recession fears, energy crisis, incl. emergency loans to energy firms. In Q4, tentative signs of normalization setting in.
- Short- and medium-term loans boom, while deposit growth is lagging behind substantially.
- In 2023, credit & deposit growth may slow significantly as uncertainty & inflation retreat, liquidity buffers shrink.

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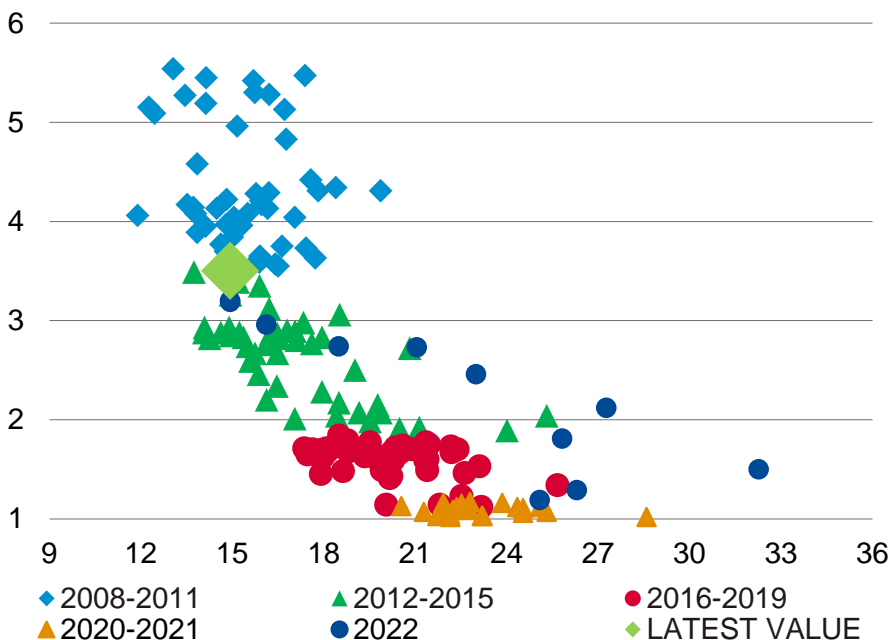


Two important headwinds for the housing market: Interest rate shock plus supply shortages

Volume of new mortgages

y-axis: Mortgage rate in %

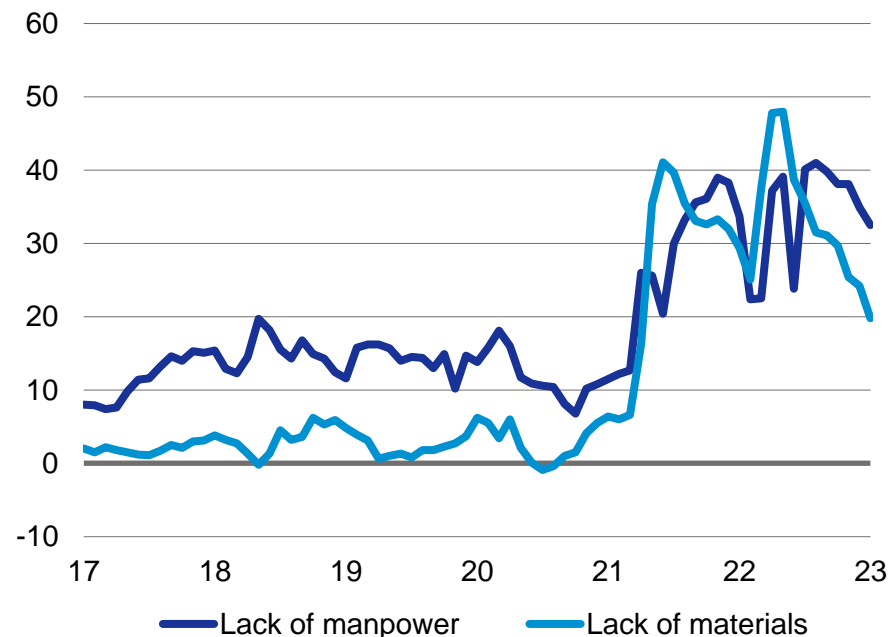
x-axis: New volume in EUR bn per month



Sources: Bundesbank, Deutsche Bank Research

ifo: Construction survey

Share of affirmations in %, seasonally adjusted



Sources: ifo, Deutsche Bank Research

- Inflation-induced interest rate shock propelled mortgage rates up from ~1% in 2021 to 3.5% in 2022.
- A lack of qualified workers and shortages of material increased building costs substantially.
- Both higher interest rates and building costs should have led to a severe drop of new dwellings in 2022 and 2023. We expect 279.6k and 246k (2021: 293k, 2020: 306k). 2022 data release in May/June 2023.

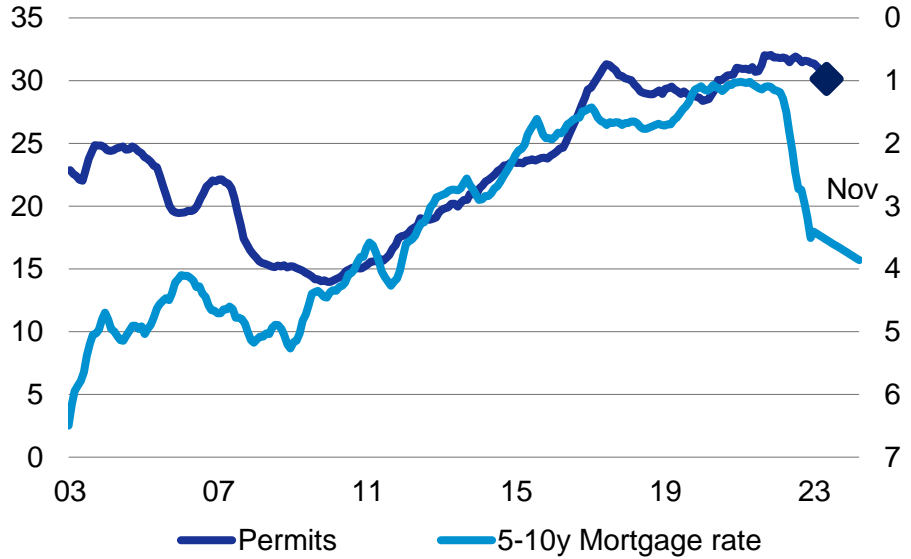
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Construction recession imminent, real estate market a mixed bag, housing boom is over

Permits: Residential

left y-axis: No. in '000 per month
right y-axis: in %, inverted

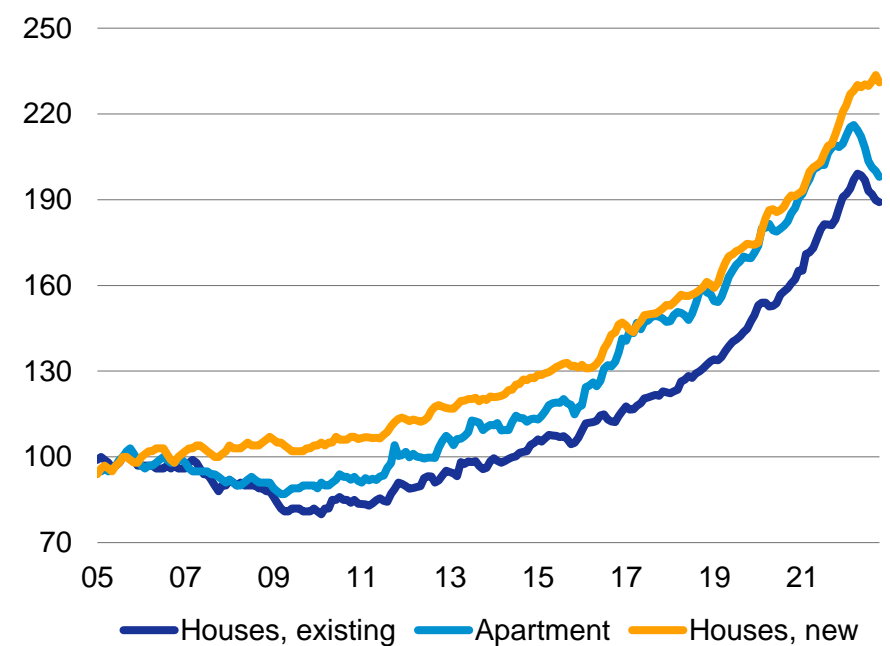


Permits: 12MMA, except Aug to Nov 2022

Sources: Deutsche Bank Research, Federal Statistical Office

House and apartment prices

2005=100



Sources: Hypoport, Deutsche Bank Research

- Nominal interest rate shock weighs on permits and house prices.
- If investors expected rental yields above mortgage rates, house prices may have to drop by 20%.
- But several arguments point to only a small price correction: negative real interest rates, huge fundamental supply shortage and rent growth has started to rise.

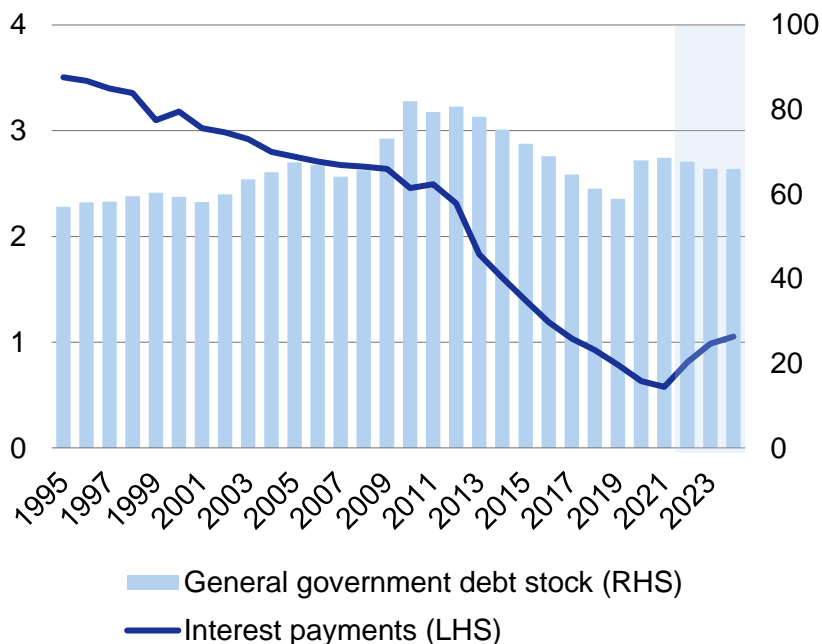
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Budget impact from energy price shock might be less severe than previously expected

Debt-to-GDP ratio is set to remain broadly unchanged

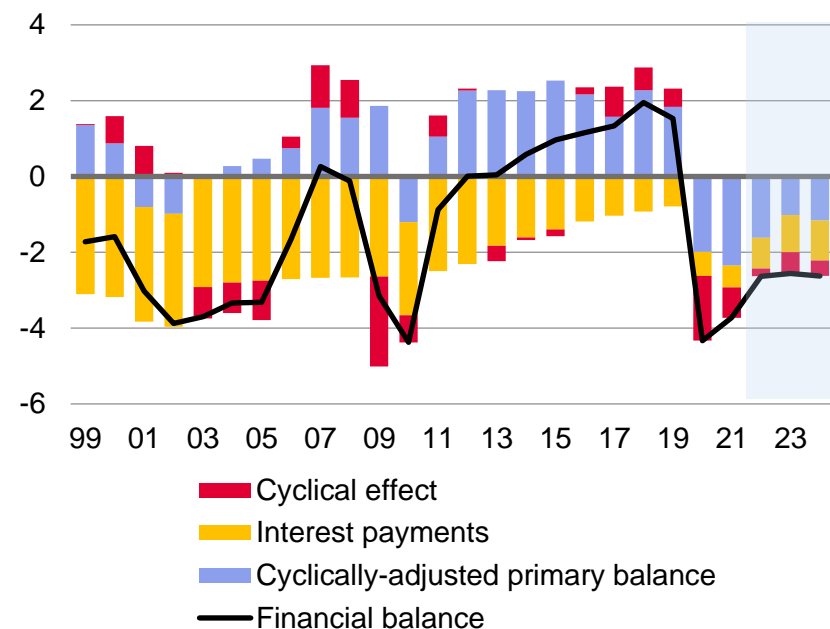
% of GDP (general government level)



Sources: WEFA, Federal Statistical Office, Eurostat, Deutsche Bank Research

General government budget outlook

% GDP (general government / national accounts)



Sources: Federal Statistical Office, AMECO, OECD, Federal Ministry of Finance, Deutsche Bank Research

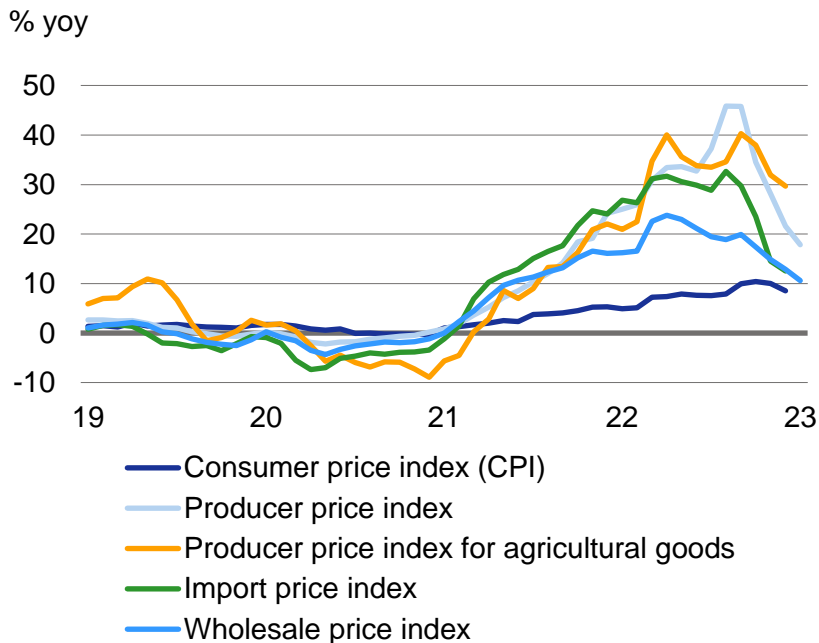
- The general government deficit narrowed to “just” 2.6% of GDP in 2022 (from 3.7% of GDP in 2021) owing to the petering-out of pandemic-related spending.
- Given the plunge in wholesale electricity/gas prices – which is set to reduce the government’s cost for the energy price subsidies – we expect the fiscal deficit to stay broadly unchanged in 2023.

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Expect headline inflation to subside soon but core inflation might prove sticky in 2023/24

Price developments at the upstream level



Sources: WEFA, Federal Statistical Office, Deutsche Bank Research

Headline rate is expected to decline sharply



Sources: WEFA, Federal Statistical Office, Deutsche Bank Research

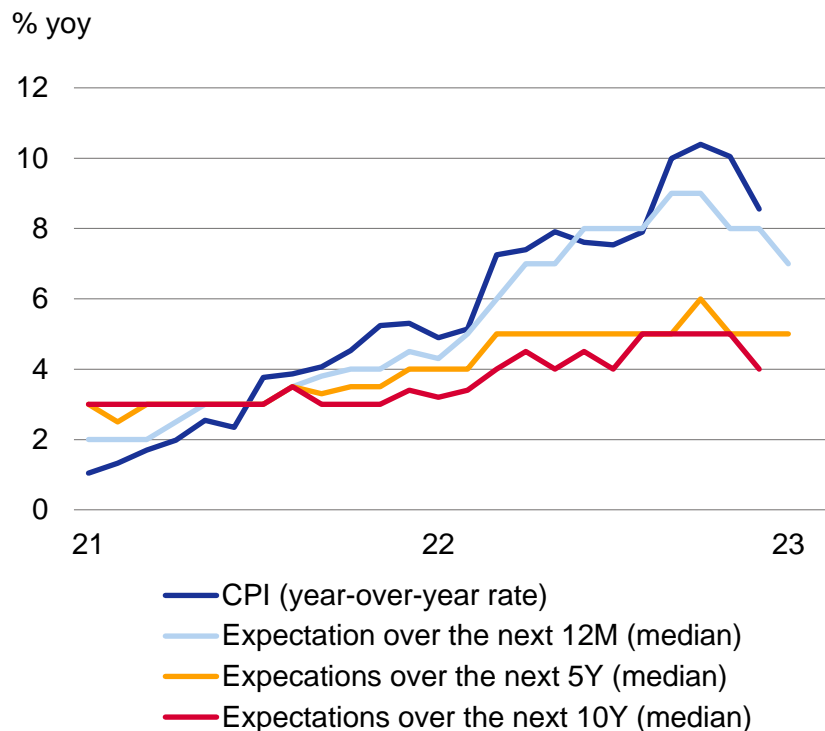
- Germany's headline CPI inflation rate averaged a record-high 7.9% in 2022.
- Because of base effects (for energy items such as heating oil and fuels) and the government's „energy price brakes“ (starting in January 2023), we project the annual average CPI inflation rate to fall to 6.5% in 2023.
- However, core inflation might prove sticky in 2023/24.

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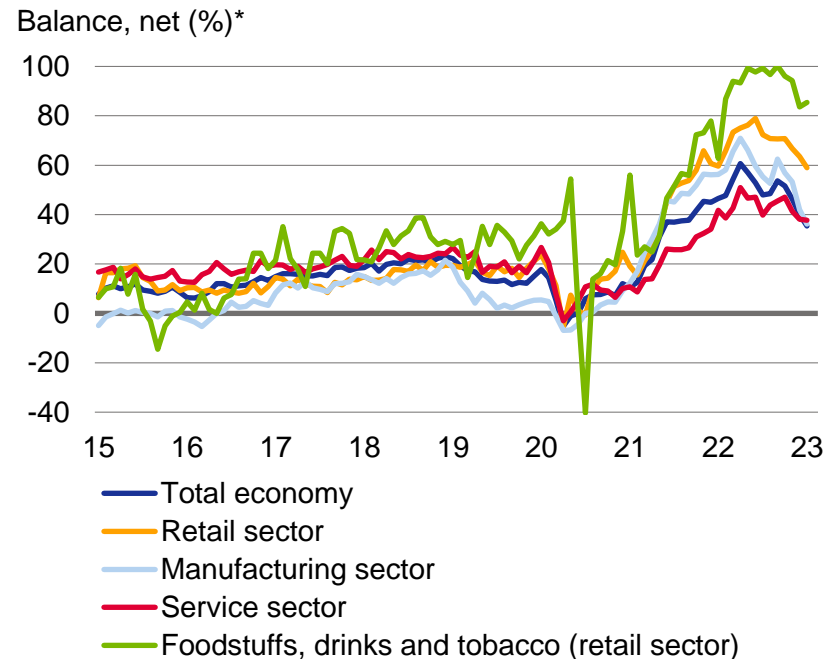
LT inflation expectations remain elevated, selling price expectations have continued to ease from very high levels

Inflation expectations by private households vs. actual inflation



Sources: WEFA, Haver Analytics, Federal Statistical Office, Deutsche Bundesbank

Selling price expectations (ifo survey)



* Balance of opinion (seasonally adjusted) regarding the expected selling prices over the next three months. Positive (negative) values signal upward (downward) price pressures.

Sources: ifo, WEFA, Deutsche Bank Research

- Private households' inflation expectation have eased lately, though remain at elevated levels.
- Firms' selling price expectations signal continued, though less pronounced upward price pressures.

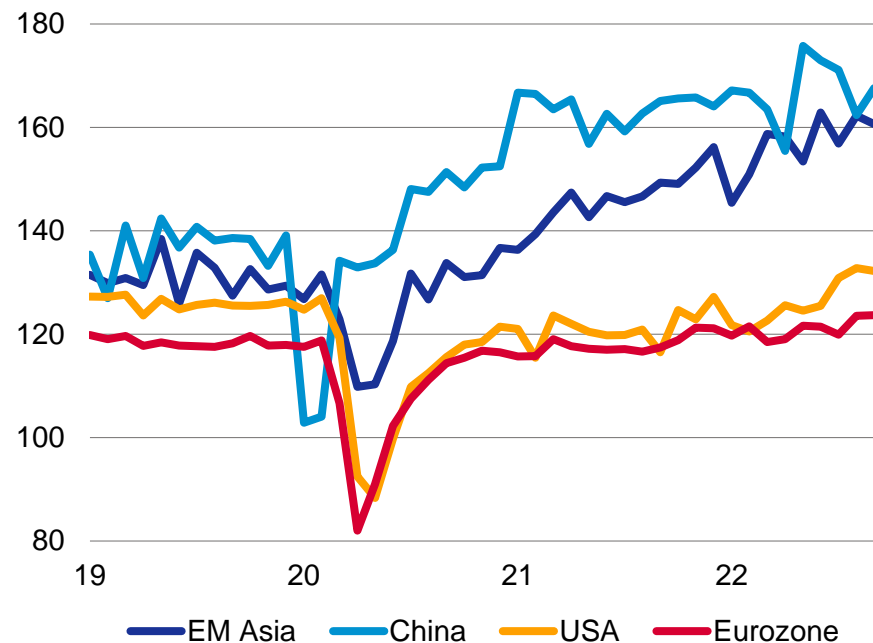
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German exports: Geopolitics and the recession weigh on the outlook

2019-2022: Real global trade

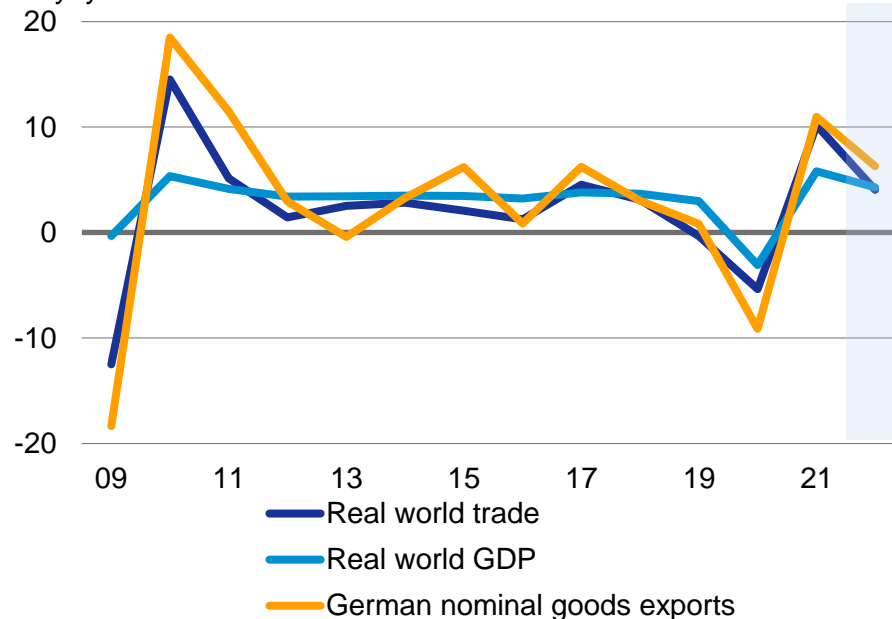
2005=100



Sources: CPB, Deutsche Bank Research

Global trade, global GDP and German export goods

% yoy



Sources: CPB, Deutsche Bank Research

- China's reopening is a positive factor for global trade.
- Re- and nearshoring as well as stagnation in Europe and expected US recession pose headwinds for global GDP growth and global trade.
- Structural outlook is also negative due to CBAM, supply chain acts, more trade barriers in particular in the semiconductor market and high geopolitical tensions.

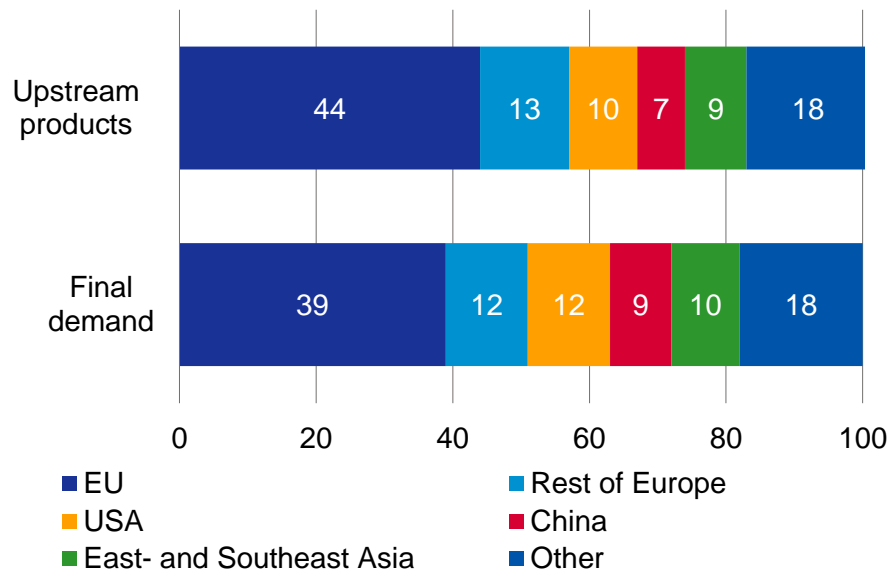
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The evolving relationship with China – implications for corporate Germany

Germany's dependence on foreign inputs and demand by region

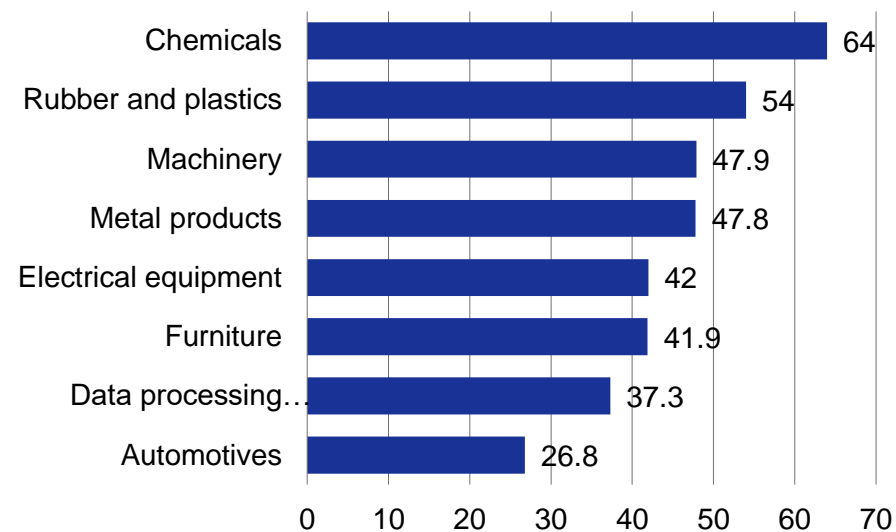
2018, in %



Sources: ifo, OECD ICIO, Deutsche Bank

German corporates plan to reduce imports from China

Survey answers on share of survey participants planning to reduce imports from China by sector, March 2022



Sources: ifo

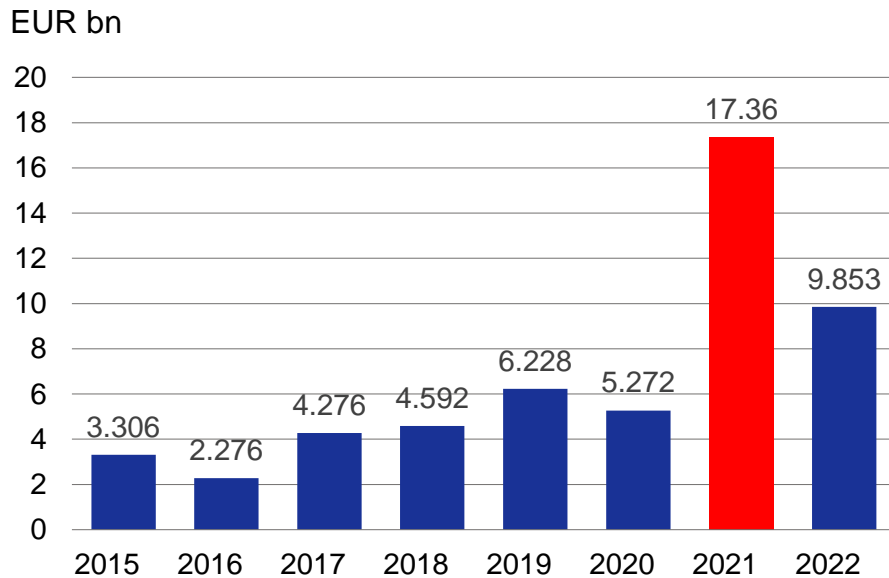
- No critical dependence on China on an aggregate level, but high vulnerabilities in crucial areas: sectors (automotive industry, mechanical engineering, renewables), critical raw materials (rare earths, clean energy metals), critical infrastructure (5G components) and DAX company revenue pools (see our [recent note](#))
- Germany and the EU are upgrading their policy toolbox for an era of patchwork globalization.
- Germany's new China strategy (part of the first National Security Strategy) to be released in Q1/Q2– moving risk management also to the national level.

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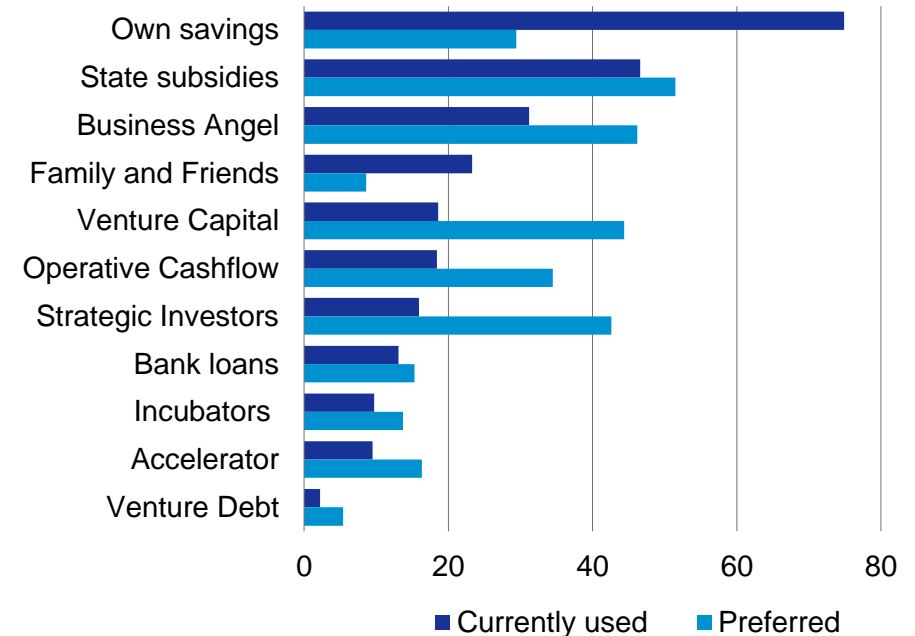
The turnaround in interest rates does (not yet) impact on the level of investments in German startups

Startup Investments Germany



Sources: Statista, DSM, Deutsche Bank Research

Funding Sources (2022)



Sources: Statista, DSM, Deutsche Bank Research

- After the record investments in 2021 (which were an outlier) the long-term upward trend in place since 2015 has been reestablished.
- More investment by business angels, VC and strategic investors desired by founders.

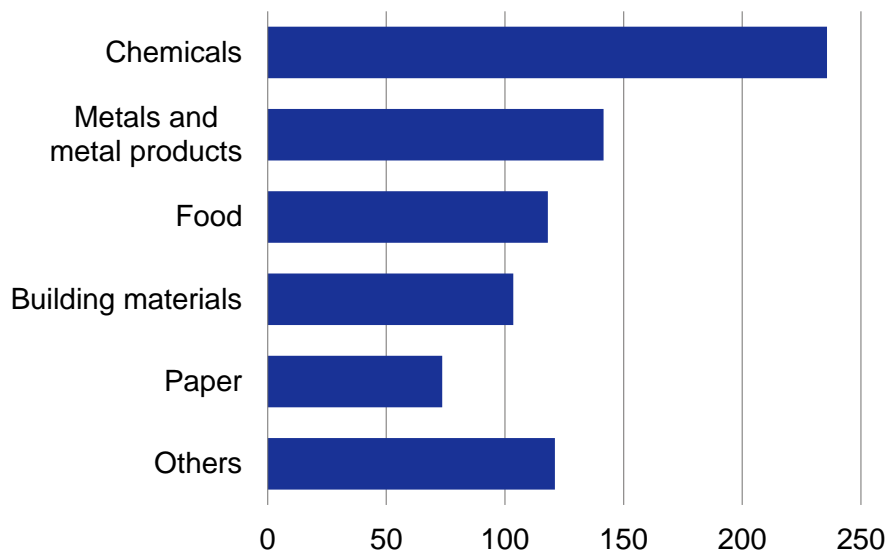
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High energy prices pose a structural challenge for Germany as a location for manufacturing industry

Chemical industry with high gas consumption

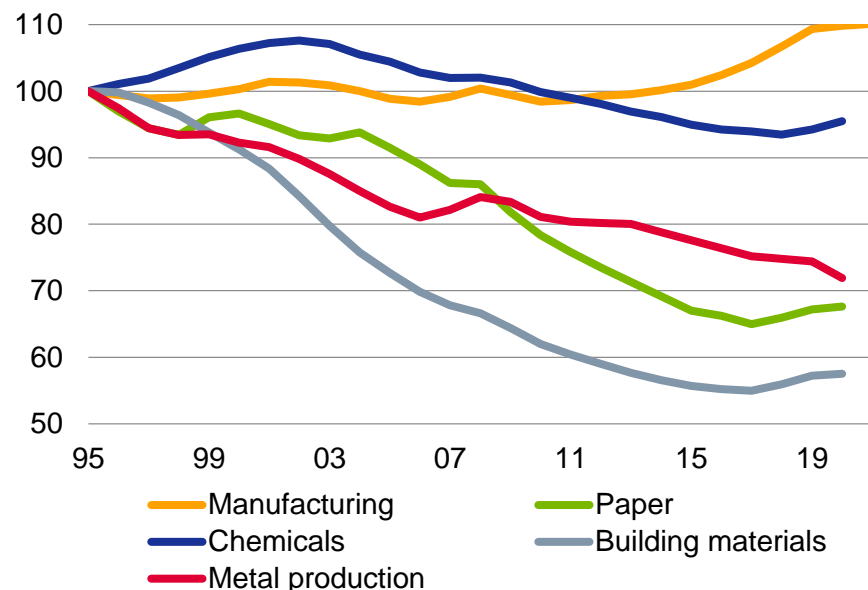
Gas consumption by industrial sector in Germany, 2020, petajoule



Source: BDEW

Declining capital stock in energy-intensive sectors

Real net fixed assets in industrial sectors in Germany, 1995=100



Source: Federal Statistical Office

- Switching from relatively cheap pipeline gas to more expensive LNG is an enormous challenge for Germany, expansion of energy supply required.
- Natural gas is still supposed to be the bridging technology in the power sector. Energy transition will be (even) more expensive. Electricity demand will increase (electrification, digitization)
- Energy crisis could be a "game changer" for Germany as an industrial location and is likely to structurally weaken the German export model.

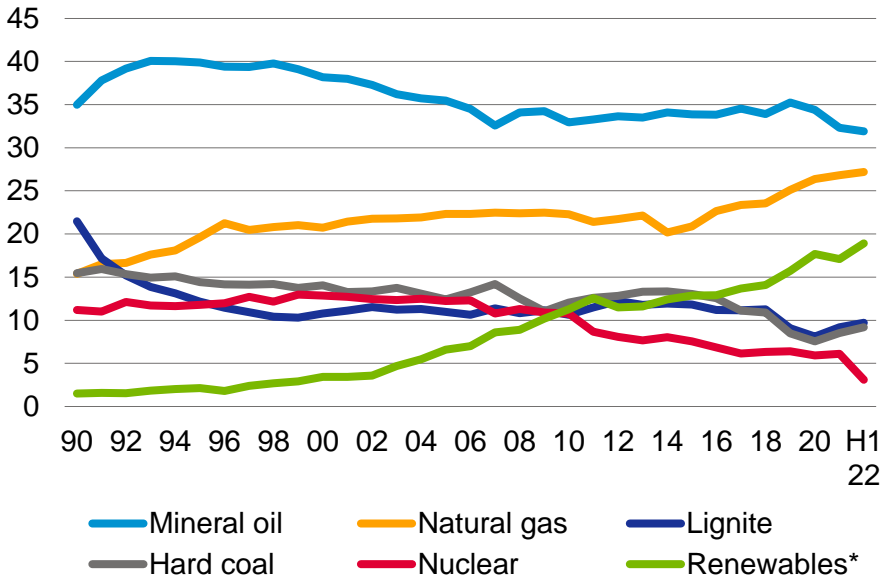
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Fossil fuels still dominate German energy supply – ambitious climate targets

Mineral oil and gas in the lead

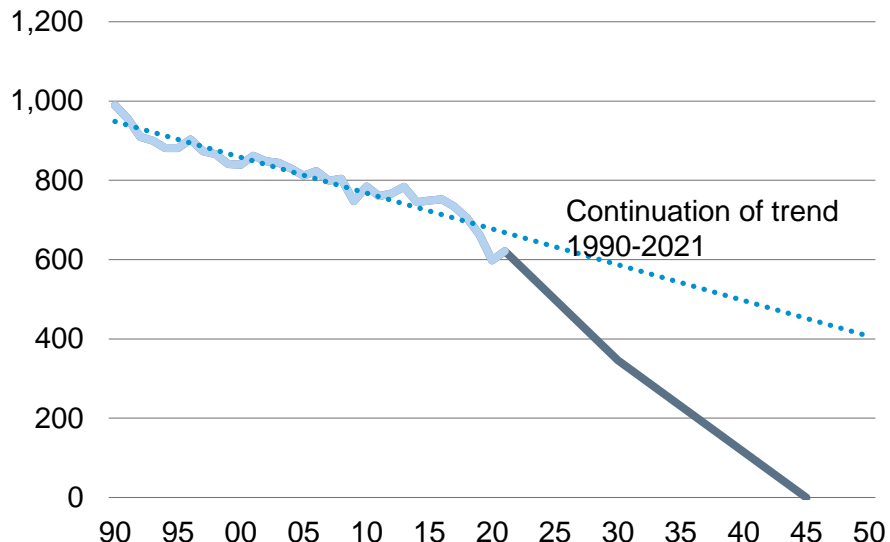
Share of energy sources in primary energy demand in Germany, %



* Including others
Source: BMWK

Germany wants to become climate-neutral by 2045

Energy-related CO₂ emissions in Germany, history and targets, m tonnes



Sources: Federal Environment Agency, AG Energiebilanzen, Deutsche Bank Research

- After all no gas shortage but gas prices likely to remain higher in Europe than before the crisis.
- Switching from relatively cheap pipeline gas to more expensive LNG is an enormous challenge for Germany.
- Prospects for German industrial companies better than for Germany as an industrial location.

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Appendix 1

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